



Australian Government
Productivity Commission

Regulation of Australian Agriculture

Productivity Commission
Inquiry Report

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The Productivity Commission

The Productivity Commission is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long term interest of the Australian community.

The Commission's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

Further information on the Productivity Commission can be obtained from the Commission's website (www.pc.gov.au).



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15 November 2016

The Hon Scott Morrison MP
Treasurer
Parliament House
CANBERRA ACT 2600

Dear Treasurer

In accordance with Section 11 of the *Productivity Commission Act 1998*, we have pleasure in submitting to you the Commission's final report into the *Regulation of Australian Agriculture*.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Paul Lindwall'.

Paul Lindwall
Presiding Commissioner

A handwritten signature in black ink, appearing to read 'Ken Baxter'.

Ken Baxter
Commissioner

Terms of reference

Inquiry into regulation of Australian agricultural sector

I, Scott Morrison, Treasurer, pursuant to Parts 2 and 3 of the *Productivity Commission Act 1998*, hereby request that the Productivity Commission undertake an inquiry into the regulatory burden imposed on Australian farm businesses.

Background

The Australian Government has identified the agriculture sector as one of the five pillars of the economy. It is promoting the economic potential of the sector by removing unnecessary regulatory burdens and promoting improved productivity and global competitiveness.

The Australian Government's deregulation agenda has focussed on reducing Commonwealth red tape. As part of its deregulation agenda, the Government is implementing reforms in agricultural and veterinary chemicals, biosecurity and export certification. However, there is an opportunity for better national outcomes for the agriculture sector by considering regulation at all levels of government. This is particularly applicable in the areas of transport, environmental protection, native vegetation management, land tenure, animal welfare and food safety in which the states and territories have significant responsibility.

While regulation targets valid objectives, such as protecting consumers from unsafe food, protecting the environment or supporting the export of goods, poorly implemented and administered regulation and the cumulative impact of regulation can have adverse effects on farm businesses. It can unnecessarily restrict farm management decisions and reduce investment.

Inconsistent and overlapping regulations between jurisdictions can also create adverse effects and raise costs for farm businesses.

Scope of the inquiry

The inquiry will focus on regulation with a material impact on domestic and international competitiveness of farm businesses and the productivity of Australian agriculture.

The inquiry will define priority areas for removing or reducing unnecessary regulatory burdens where doing so will/can contribute to improved productivity for farm businesses as well as the wider economy.

The inquiry will also review regulation of farm businesses to identify unnecessary restrictions on competition.

While focussed on the impact of regulation on farm businesses, the inquiry should also consider the material impact arising from regulation imposed along the supply chain such as regulations introduced to meet the requirements of international markets.

Consistent with its legislative remit, the Commission is to have particular regard to:

- areas of regulation that directly affect farm businesses, including those identified as areas of concern through the white papers on agricultural competitiveness and northern Australia. This includes regulatory arrangements affecting access to new technologies, investment opportunities, land tenure, relevant environmental protection and native vegetation laws, animal welfare and the Exporter Supply Chain Assurance System
- areas where there is greatest scope to reduce unnecessary regulatory burden and pursue regulatory objectives in more efficient (least cost) ways
- whether the current level at which matters are regulated (national, State and local) is appropriate and whether there is scope for better coordinated action across governments to reduce unnecessary overlap
- whether Australia's farm export competitiveness can be improved by minimising duplication between domestic regulation and importing country requirements
- relevant regulatory approaches adopted in other countries.

Specific requirements

In undertaking the inquiry, the Commission should:

- identify specific areas of regulation that are unnecessarily burdensome, complex or redundant
- identify priority areas for regulatory reform
- provide recommendations to alleviate regulatory burden identified.
- For the purposes of this inquiry, the regulatory issues affecting:
 - marine fisheries and aquaculture industries will be investigated as part of a separate Productivity Commission inquiry into the Regulation of Australian Marine Fisheries and Aquaculture Sectors.

Process

The Commission is to advertise nationally, consult with key interest groups and affected parties, hold hearings, invite public submissions and release a draft report to the public.

To expedite the review the Commission should consider relevant submissions to the white papers on agricultural competitiveness and Northern Australia and other relevant material in the public domain.

The final report should be provided within nine months of the receipt of these Terms of Reference.

S. MORRISON

Treasurer

[Received 20 November 2015]

Letter of extension



TREASURER

Peter Harris AO
Chairman
Productivity Commission
Locked Bag 2, Collins Street East
Melbourne VIC 8003

Dear Mr Harris

Thank you for your recent letters seeking extensions of the reporting dates for three Productivity Commission (the Commission) reports with timetables impacted by the caretaker period associated with the Federal election.

I understand that during this period the Commission was precluded from releasing draft reports and fully engaging with government departments and agencies.

On that basis, I agree to extend the due date for the Commission to present:

- the final report of its inquiry into *Intellectual Property Arrangements* from 18 August 2016 to no later than 23 September 2016;
- the final report of its inquiry into *Regulation of Agriculture* from 20 August 2016 to no later than 15 November 2016; and
- the study report of its inquiry into *Human Services* from 29 October 2016 to no later than 30 November 2016.

I have copied this letter to the Prime Minister, the Deputy Prime Minister, the Minister for Trade, Tourism and Investment, the Attorney-General, the Minister for Industry, Innovation and Science, the Minister for Health and Aged Care, the Minister for Communications and the Arts, the Minister for Social Services, the Minister for Human Services and the Minister for Education and Training.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Scott Morrison'.

The Hon Scott Morrison MP

28 / 7 / 2016

Parliament House Canberra ACT 2600 Australia
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The Commission is grateful to everyone who freely gave their time to discuss the very wide range of matters canvassed in the terms of reference, especially those who met with the Commission, participated in case studies and provided written submissions.

The Commissioners would like to express their appreciation to the staff who worked on the inquiry. The team was led by Rosalie McLachlan and included Lisa Chan, Imogen Curtis, Senna Eswaralingam, Cordelia Foo, Yvette Goss, Lisa Lee, Ana Markulev, Rohan Nelson, Bonnie Nguyen, Marianna Olding, Oliver Richards, Anne Rudolph and Isfaaq Timol.

Abbreviations

ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ACL	Australian Consumer Law
AGMIN	Agriculture Ministers' Forum
agvet	agricultural and veterinary
APVMA	Australian Pesticides and Veterinary Medicines Authority
ASIC	Australian Securities and Investments Commission
ATO	Australian Tax Office
COAG	Council of Australian Governments
CoOL	Country-of-origin labelling
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAWR	Department of Agriculture and Water Resources
EPA	Environment Protection Authority or Agency
EPG	Ethanol Production Grants
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FDA	United States Food and Drug Administration
FDI	Foreign direct investment
FIRB	Foreign Investment Review Board
FoFR	Australia and New Zealand Ministerial Forum on Food Regulation
FSANZ	Food Standards Australia New Zealand
GDP	Gross domestic product
GHS	Globally Harmonised System of Classification and Labelling
GM	Genetic modification, genetically modified
GMO	Genetically modified organisms

HVCI	Heavy Vehicle Charging and Investment
HVNL	Heavy Vehicle National Law
IAP	Intelligent Access Program
ICA	Interstate certification assurance
IIO	Irrigation Infrastructure Operator
IGAB	Intergovernmental Agreement on Biosecurity
MDBA	Murray-Darling Basin Authority
NBC	National Biosecurity Committee
NEBRA	National Environmental Biosecurity Response Agreement
NFF	National Farmers' Federation
NHVR	National Heavy Vehicle Regulator
NPI	National Pollutant Inventory
NRM	National resource management
NZ	New Zealand
NWC	National Water Commission
NWI	National Water Initiative
OAW	Office of Animal Welfare
OBPR	Office of Best Practice Regulation
OECD	Organisation for Economic Co-operation and Development
OGTR	Office of the Gene Technology Regulator
OIE	World Organisation for Animal Health
PC	Productivity Commission
PPP standard	Primary production and processing standard
PIMC	Primary Industries Ministerial Council
RIA	Regulatory impact assessment
RIS	Regulation impact statement
RSRT	Road Safety Remuneration Tribunal
RSPCA	Royal Society for the Prevention of Cruelty to Animals
SDL	Sustainable Diversion Limit
SKU	Stock keeping unit
VICH	International Cooperation on Harmonisation of Technical Requirements for Veterinary Medicinal Products

WHO	World Health Organization
WHS	Work Health and Safety
WTO	World Trade Organization

OVERVIEW

Key points

- Farm businesses are subject to a vast and complex array of regulations. Regulations are in place at every stage of the supply chain — from land acquisition to marketing — and are applied by all levels of government. The number and complexity of regulations affecting farm businesses means that the cumulative burden of regulation on farmers is substantial.
- The need for regulation is not disputed by farm businesses. In fact, some regulations, such as biosecurity and food safety regulations, were highlighted as providing clear benefits to Australian farmers. Rather, Australian farmers want ‘better’ (or less burdensome) regulation.
- Some regulations lack a sound policy justification and should be removed. Examples include restrictions on the use of land held under pastoral lease arrangements, state bans on cultivating genetically modified crops, barriers to entry for foreign shipping providers, mandatory labelling of genetically modified foods, and the regulated marketing of rice in New South Wales and sugar in Queensland.
- In other cases, regulation is the wrong policy tool. Regulatory changes to address community concerns about foreign investment in agriculture, for example, are costly and likely to be ineffective. A better informed conversation about foreign investment is needed.
- Other regulations and regulatory systems need to be reformed so they can more fully achieve their objectives.
 - Native vegetation and biodiversity conservation regulations need fundamental change so that risks and impacts are considered at a relevant landscape-wide scale. Environmental regulatory decisions also need to take into account economic and social factors.
 - Animal welfare regulations seek to achieve welfare outcomes that (among other things) meet community expectations. However, the current process for setting standards for farm animal welfare does not adequately value the benefits of animal welfare to the community.
 - The process for setting standards would be improved through the creation of a statutory agency responsible for developing national farm animal welfare standards using rigorous science and evidence of community values for farm animal welfare.
 - International evidence could be put to greater use in assessing agricultural and veterinary (agvet) chemicals, reducing the time and cost taken to grant registration.
 - Road access arrangements for heavy vehicles should be streamlined and simplified.
- Inconsistent regulatory requirements across and within jurisdictions make it difficult for farmers to understand their obligations and add to the cost of doing business. A more consistent approach would improve outcomes in the areas of heavy vehicle regulation and road access, and the use of agvet chemicals.
- Governments could also reduce the regulatory burden on farm businesses by:
 - improving their consultation and engagement practices. There is scope to better support landholders to understand environmental regulations, and to reduce duplicative and unnecessary information gathering regarding water management by farm businesses
 - doing more to coordinate their actions, both between agencies and between governments
 - ensuring that good regulatory impact assessment processes are used as an analytical tool to support quality regulation making, not as a legitimising tool or compliance exercise.

Overview

The key task for this inquiry was to identify regulations that impose an unnecessary (and therefore avoidable) burden on farm businesses. And, where there were legitimate policy objectives underlying the regulations, to look at whether the regulatory objectives could be achieved in a more efficient way.

Why regulatory burden matters

Regulatory burden matters because it can weigh heavily on farm businesses and undermine the agricultural sector's productivity and competitiveness.

Reducing regulatory burden, and improving the efficiency of the regulatory environment, is important for all sectors of the economy, but particularly for the agricultural sector given:

- its high dependence on international markets — around two-thirds of Australia's agricultural output is exported (with most producers being price takers in international markets)
- most Australian farms are small businesses, and regulatory burdens can have a significant and disproportionate impact on small businesses.

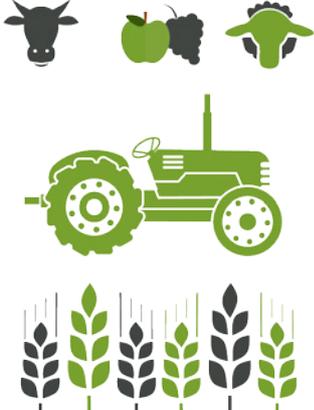
For farm businesses, reducing regulatory burden means less time spent dealing with regulation and more time spent on productivity-enhancing activities. For the community, less regulatory burden can mean lower prices (because farmers face lower costs), fewer taxpayer dollars spent on regulation and improved living standards. For governments, lower regulatory burden means that more resources can be devoted to higher priority areas.

There are regulations at every stage of the supply chain

Farm businesses in Australia are subject to a vast and complex array of regulations.

At every stage of the agricultural supply chain farmers face regulations — including for land acquisition and preparation, production and on-farm processing, transport of inputs and products to market, marketing and product sales (table 1).

Table 1 Regulation across the agricultural supply chain^{a,b}

<i>Key Australian Government involvement/regulation</i>	<i>Key stages of the agricultural cycle</i>	<i>Key state/territory government involvement/regulation</i>
<ul style="list-style-type: none"> • native title • environmental protection <ul style="list-style-type: none"> – biodiversity conservation – international treaties – natural, cultural and world heritage 	<p>Acquisition, leasing and preparation of land</p> 	<ul style="list-style-type: none"> • land tenure and use <ul style="list-style-type: none"> – <i>land use planning</i> – <i>building regulations</i> – <i>pastoral leases</i> • environmental protection <ul style="list-style-type: none"> – <i>native vegetation</i> – <i>natural and cultural heritage</i>
<ul style="list-style-type: none"> • agricultural and veterinary chemical standards • biosecurity <ul style="list-style-type: none"> – pest surveillance • export control • environmental protection <ul style="list-style-type: none"> – biodiversity conservation – international treaties – natural, cultural and world heritage • national land transport regulatory frameworks • water access and regulation • welfare of exported animals 	<p>Agricultural production and on-farm processing</p> 	<ul style="list-style-type: none"> • agricultural and veterinary chemicals • animal welfare • biosecurity <ul style="list-style-type: none"> – <i>pest and disease control and response</i> • food certification for export • <i>building regulations</i> • genetically modified crops • land use planning • livestock regulation and identification • transport <ul style="list-style-type: none"> – <i>road access</i> – <i>transport and use of machinery</i> – vehicle licensing • water access and regulation
<ul style="list-style-type: none"> • biosecurity <ul style="list-style-type: none"> – pest surveillance • export control • national land transport regulatory frameworks • shipping and maritime safety laws • welfare of exported animals 	<p>Transport and logistics</p> 	<ul style="list-style-type: none"> • transport regulations <ul style="list-style-type: none"> – <i>road access</i> – <i>transport and use of machinery</i> – vehicle and machinery licensing • animal welfare • livestock regulation and identification
<ul style="list-style-type: none"> • biosecurity <ul style="list-style-type: none"> – pest surveillance • export control • food labelling • food standards • welfare of exported animals 	<p>Marketing</p> 	<ul style="list-style-type: none"> • <i>food safety</i> • food packaging • biosecurity <ul style="list-style-type: none"> – pest and disease control and response • food certification for export • statutory marketing

^a *Italics* denote local government responsibility in at least one jurisdiction. ^b There is also a range of issues and regulations that affect all stages of the agricultural supply chain. Cross-cutting issues include investment opportunities and access to capital, as well as regulations relating to competition, foreign investment, immigration, industrial relations, work health and safety, and taxation.

All levels of government impose regulations that affect the agricultural sector.

- The Australian Government regulates national and interjurisdictional issues, including biosecurity and access to agricultural and veterinary (agvet) chemicals. The Department of Agriculture and Water Resources is responsible for around 90 non-fisheries related Acts. This is a small proportion of the regulations affecting farm businesses. Others include those from the environment, treasury, immigration, infrastructure and industry portfolios.
- State and territory governments administer regulations including in the areas of road transport, environmental protection, native vegetation management, land tenure and land use. As an indicator of the extent of regulation at the state and territory level, AgForce said that in Queensland, agriculture was affected by over 75 Acts and regulations covering 17 590 pages.
- Local governments implement regulations (often on behalf of state and territory governments) in the areas of land use, planning and (in some cases) environmental protection, as well as setting conditions for local road access by heavy vehicles and farm machinery.

Regulations addressing some areas, such as aspects of environmental protection, are covered by all three levels of government. There are also other regulations — such as those relating to water use, transport and temporary labour from overseas — that affect a range of businesses across the economy, but are of particular concern to some farm businesses.

Many farm businesses spoke about the large number of regulations that directly affect them. The Consolidated Pastoral Company (one of Australia's largest beef producers) estimated that it complies with, or takes account of, over 300 Acts, regulations and codes.

The cumulative burden of regulation provoked the most comment in consultations conducted on this inquiry. One participant (AgForce) said that:

The regulatory burden within Australian agriculture is effectively a cumulative one; resulting from the impact of many individual regulations of which each regulation, seen in isolation, does not appear to represent a significant imposition.

Another (the Tasmanian Farmers and Graziers Association) said that:

It is only when we have the accumulated burden of federal, state, local government and regional council associations that we begin to understand that with four or more layers of competing and often contradictory regulation it becomes near impossible to find an economical way through. When coupled with seemingly minor regulatory imposts, the competitive burden can become overwhelming. The malaise of regulation often leads to developments not proceeding on the basis that it is all too hard.

Australian governments have removed many agriculture-specific regulations in recent decades (in the early 1980s, there were more than 60 statutory marketing boards; today just one remains). Over the same period the volume and reach of regulations aimed at addressing environmental and social policy issues increased. Most of the concerns about

regulatory burden raised in this inquiry were about regulations that are not specific to the agriculture sector.

The breadth of regulation gives an indication of the number (and complexity) of regulations that can and do apply to farm businesses. It is clear that the overlay of different agencies and levels of government adds complexity and cost to doing business. This is in part because farmers face regulations across many areas and their farm operations and value chains can span borders.

1 Our approach to reviewing regulation

For the purpose of this inquiry, ‘regulation’ is defined as any laws or other government rules (such as standards and codes of conduct) that influence or control the way people and businesses behave. User charges and taxation are not in scope.

Given the broad scope (and depth) of the regulatory environment affecting farm businesses, the Commission was greatly assisted by inquiry participants to identify specific regulations of concern. We also undertook a number of case studies to get a better sense of the magnitude of the cumulative burden of regulation on farm businesses.

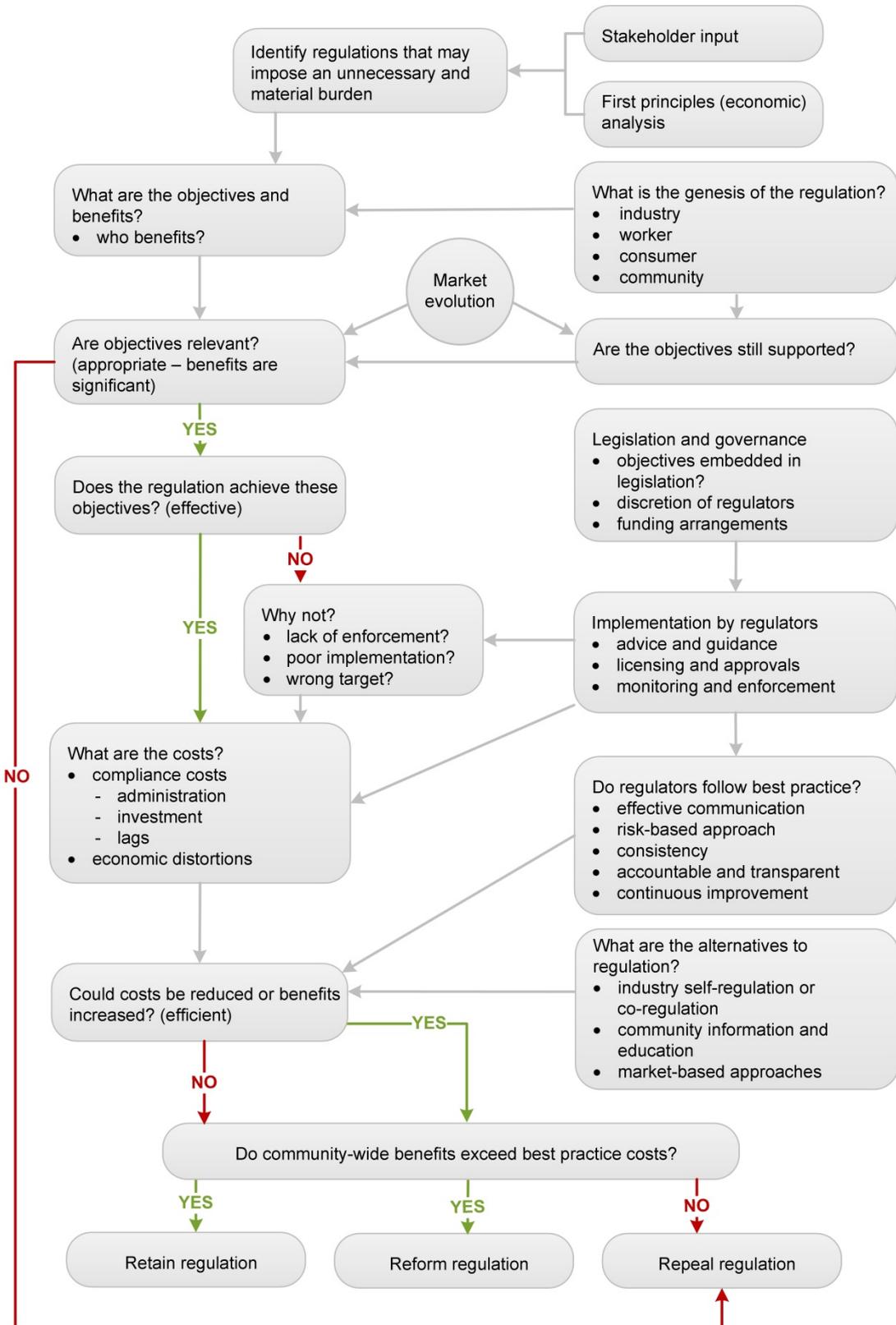
An unnecessary regulatory burden exists when the objective of the regulation can be achieved at a lower cost to the community. To assess whether regulations imposed unnecessary regulatory burdens on the agriculture sector, we asked four questions (figure 1).

- What are the objectives of the regulation?
- Are the objectives of the regulation clear and relevant (that is, do the objectives address an economic, social or environmental problem)?
- Does the regulation achieve these objectives (is it effective)?
- Could the costs of the regulation be reduced or the benefits increased (is there a more efficient way to achieve the same objective)?

The inquiry focused on unnecessary regulations that have a material impact on the competitiveness of farm businesses and on the productivity of Australian agriculture. However, regulations and suggested potential remedies were assessed against providing a net benefit to the Australian community, not just to the agricultural sector.

With only limited quantitative evidence on the costs of regulations, our views about whether regulations have a material impact were based on judgments about the potential gains to the Australian community from removing or amending regulations. Other factors taken into account included the number of businesses and consumers affected (directly and indirectly) and whether the regulation spanned multiple jurisdictions or agricultural industries.

Figure 1 **A framework for reviewing agricultural regulation**



2 Benefits, not just costs, are acknowledged

By design, regulation imposes costs on those affected, including farm businesses. However, the benefits of well-designed and -implemented regulation should outweigh the costs to the community as a whole. Good regulation should also achieve its stated policy objectives at least cost to the community. The agriculture sector openly acknowledged that well designed regulation is critical to its ability to function effectively and can benefit Australian farm businesses (box 1). For example, Australia's biosecurity regulatory arrangements were highlighted as providing a reputational advantage to Australian farmers and access to premium export markets.

Box 1 The agriculture sector recognises the benefits of regulation

National Farmers' Federation:

... acknowledges the need for effective regulation. Often regulation provides important protections for the business owners, workers, and the community, and sets a minimum level of performance required to meet community standards and expectations.

WAFarmers:

Agricultural producers and growers are not adverse to comply with appropriate regulatory obligations as these are seen as being beneficial to production systems and market access ... WAFarmers recognise the importance of effective and necessary regulation to maintain and uphold the industry's reputation as a producer of safe and nutritious food ... we support comprehensive food standards and regulation across the production and processing chain to ensure the integrity of the industry.

Voice of Horticulture:

... regulation can be of benefit to horticulture where it meets economic, social and/or environmental objectives and is designed and implemented efficiently and effectively.

Avoiding pest and disease incursions is critical to the viability of the horticulture industry. Australia's unique biodiversity and relative disease-free status must be maintained, along with horticulture's reputation as a supplier of fresh, high quality, clean produce. Freedom from many of the world's major pests and diseases provides a clear advantage in both domestic and global markets.

Australian Pork Limited:

Australia's favourable biosecurity status enables it to produce premium agricultural goods competitively, efficiently and sustainably. Current biosecurity protocols make Australia one of only a few countries that maintains a high disease-free status for pig herds.

Canegrowers:

Continued effort in biosecurity is important for the productivity and profitability of the Australian sugar industry. Stopping the entry, establishment and spread of exotic diseases and pests is vital for our industry's future. If unchecked, yield losses would be high and devastating to industry productivity and profitability.

Australian Chicken Growers Council:

Food safety is critical to the chicken industry, and regulation in this area is necessary to protect consumers and also the reputation of the product and the industry itself.

However, inquiry participants also identified regulations in a number of areas that impose unnecessary compliance and administrative costs. Farm businesses provided many

examples of unnecessary paperwork and excessive amounts of time and energy spent complying with regulatory requirements, such as applying for permits, filling out forms and reporting to regulators (box 2). Many farmers expressed frustration about delays and uncertainties involved in obtaining regulatory approvals. Some reported that they needed to engage consultants (at considerable cost) to help them comply with regulations.

Box 2 Burdens of regulation — some examples from farmers

A Queensland producer described what was required each time he moved his oversized agricultural machine between farms along 25 kilometres of a public road:

- two transport permits from the state transport department — one for the machine, and one for the route taken
- a railway crossing permit from the state’s rail authority (this had to be lodged four days in advance, and the vehicle was required to cross the railway within the nominated time frame otherwise a new permit was required)
- two police drivers (the producer had to pay for the personnel time)
- a permit from the local council and the telecommunications and electricity infrastructure companies. While the permits lasted 12 months, they took five days to process.

These types of application processes are time consuming, administratively burdensome and interfere with weather-dependent farming activities.

A landholder in New South Wales who sought to clear 1.2 hectares of land for a blueberry farm near Coffs Harbour found that state government approval was not required as the clearing was considered to be clearing of ‘regrowth’ under New South Wales native vegetation laws. However, because the proposed clearing area included the habitat (or potential habitat) of seven species listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth), the landholder was required to submit 60 pages of documents and 18 maps to the Australian Government Department of the Environment. The outcome was that Commonwealth assessment and approval was not required, as only five of the protected plants were in the proposed clearing area (and thousands remained elsewhere on the property).

Other regulations were identified as reducing flexibility, constraining the use of more efficient production techniques and discouraging investment. Examples include:

- pastoral leases that require land to be used for a specific purpose
- environmental regulations that can reduce the availability of land for grazing and cropping, and limit farmers’ capacity to respond to changes and to use new technologies. The Australian Farm Institute described New South Wales’ native vegetation laws as ‘a cumbersome and tangled web of productivity-sapping regulations’
- state and territory moratoria (effectively bans) on genetically modified (GM) crops, that deny farmers access to technological advances.

In sum, farmers (and other participants) called for better (or less burdensome) regulation, not the elimination of regulations. And in some areas, such as competition policy, some

farm businesses were seeking more rather than less regulation. The NSW Farmers' Association captured the views of farm businesses when it said:

Regulation should enhance productivity, not impinge it, and this must be the bottom line. Whilst there is often a negative interpretation given to regulatory burden ... many rules and regulations are necessary for the effective operation of business.

3 Some common themes

Questionable, unclear or conflicting regulatory objectives

Some questionable objectives were uncovered when we asked the question: 'is the objective of the regulation affecting farm businesses clear and relevant?' Examples include:

- the regulation of genetically modified organisms (GMO) for *marketing purposes* when there is evidence that industry (both in states without regulatory restrictions and internationally) can successfully manage the co-existence of GM and non-GM crops. There is also limited evidence of GMO-free marketing benefits at the bulk trade level
- the re-regulation of sugar marketing in Queensland has the stated objective of allowing sugar cane growers more choice in who markets their sugar. However, the regulation restricts the marketing choices of sugar millers when they should have the property rights over the sugar that they crush. There is no market failure (or other reasonable objective) to justify the re-regulation. The evidence also suggests that the growers' preferred choice of marketing arrangements is likely to reduce the productivity and profitability of the industry (by constraining investment and structural adjustment)
- one of the Rice Marketing Board's objectives is to secure the best possible price for Australian rice in export markets. However, the Australian rice industry can achieve price premiums in international markets without incurring the costs of single-desk marketing
- coastal shipping regulation — the objective of the reforms made in 2012 was to create a regulatory framework that 'maximises the use' of Australian vessels, but the effect is to increase the barriers to entry for foreign flagged vessels and the price of shipping faced by Australian farmers.

Where regulations were found to lack a sound policy justification, the Commission recommended that they be removed.

In other cases, it was difficult to answer questions about the effectiveness of regulations because the objectives were unclear or conflicting. For example, some states' native vegetation laws outline social and economic interests alongside environmental interests, but also aim to improve native vegetation (with an absence of guidance on how decision makers should weigh the objectives).

In the area of animal welfare regulation, the objectives are unclear because they are tied to community expectations, and these are not well understood or articulated (nor are the welfare implications of various farming practices well understood by the community). Limited understanding and agreement about community values in this area has also contributed to conflicts in the development of animal welfare standards and guidelines, particularly between industry and animal welfare groups.

And in foreign investment policy, there is discord between the Australian Government's stated policy objectives and the likely impact of recent regulatory changes. The government recently made changes to the foreign investment framework for agriculture that impose additional costs on foreign investors (and the wider Australian community), create uncertainty and risk deterring foreign investment.

Duplicative roles and inconsistencies across jurisdictions

When we asked the question, 'is there a more efficient way to achieve the regulatory objectives?', we found that better coordination across jurisdictions and agencies would simplify arrangements and reduce the regulatory burden on farmers.

There is scope to reduce duplicative and overlapping regulation between the tiers of government in a number of areas (while still achieving their regulatory objectives), including:

- overlap and duplication between the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) and state native vegetation regulations. For example, a farmer wanting to clear trees may need approval from both the Australian Government and the relevant state government. Initiatives such as developing consistent assessment processes for the listing of threatened species and one-stop shops for environmental assessments and approvals should make it easier for farmers to navigate the regulatory requirements in this area
- overlapping Australian and state government responsibilities in the management of water resources. Farmers said that they are required to submit the same or similar data to different agencies. Data sharing should be significantly increased in this area.

In other areas, inconsistent regulation across jurisdictions is a source of an unnecessary regulatory burden that adds to the cost of doing business and makes it more difficult for farmers to understand their obligations. A more consistent approach would improve outcomes in the areas of:

- *animal welfare* — inconsistent regulation makes it difficult to effectively inform consumers, and inconsistent standards create uncertainty for industry
- *biosecurity* — while different regulations across jurisdictions can reflect specific risks, in some cases regulations can unnecessarily hinder access to interstate markets and add to the cost of transporting products between jurisdictions

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- *agvet chemicals* — differences between control-of-use regimes (such as differences in permitted ‘off-label’ uses) lead to confusion for users and add to compliance costs (and the variation is not always justified on regional factors)
 - *heavy vehicle access regulations* — differences across the road network lead to increased compliance costs for producers, such as costly changes to vehicle configurations and loads to meet different requirements. More should be done to reduce unnecessary restrictions and variations across the road network while still achieving amenity objectives and addressing risks to public safety and infrastructure. This requires building a better understanding of road user needs.

Differences in how rules are enforced (particularly in the area of planning decisions across local governments) can create uncertainty for farm businesses. Leadership from state and territory governments is important to guide local government planning and development and improve consistency in approaches. Accountability could be improved by increasing the transparency of council decisions. Community confidence in local government decisions and processes could also be improved through regular independent auditing.

Excessive prescription and rules that are disproportionate to risk

Less prescriptive regulations in a number of areas could reduce costs to farm businesses without jeopardising the underlying objectives of the regulation. Some regulations are designed with the operation of other industries (like manufacturing) in mind, making them incompatible with the operating conditions of farming businesses. Regulations relating to noise, odour, air emissions and waste discharge can be appropriate in more densely populated areas, but when applied on an isolated farm they can have an unnecessary dampening effect on the productivity of agricultural industries. Cotton Australia, for example, noted that ‘allowed dust limits, which may be entirely reasonable in a coastal city environment, can be lower than the ambient dust levels in areas where cotton gins are located’.

Examples of disproportionate responses to risk were also uncovered in this inquiry, including in the areas of agvet chemicals (not making full use of international evidence in assessments), some native vegetation and biodiversity conservation regulations, and the regulatory requirements for agricultural machines to use public roads.

In other areas (including biosecurity and animal welfare), participants called for greater reliance on industry-led initiatives, such as quality assurance schemes, to improve regulatory outcomes and reduce the costs of complying with regulation.

Ongoing changes to regulations create uncertainty

Changing regulations create uncertainty for those affected. Farmers stressed the importance of clarity and consistency in the objectives of regulation, and having sufficient

time to adjust to regulatory changes. For example, fears of future changes to native vegetation regulations can create perverse incentives by encouraging landholders to plant exotic plants instead of native plants, or to clear native vegetation as insurance against future policy changes. Frequent changes to water regulations also create uncertainty for farmers and can undermine the confidence of farm businesses to innovate and invest.

Regulators need to be better communicators

Governments could also reduce the regulatory burden on farm businesses by improving the way they consult and engage with farmers.

A number of farm businesses (especially small farm businesses) said that they struggled to navigate their way through the complex web of rules. GrainGrowers, for example, said that:

A key issue for farmers navigating the regulatory space is the lack of clarity around what regulations apply to different activities and how best farmers can work within their legal boundaries. The time spent attempting to work out regulatory requirements, including the many potential ‘missteps’ that can occur along the way due to misinterpretations or lack of knowledge, are themselves a form of red tape.

Complexity adds to compliance costs and can lead to a higher incidence of inadvertent non-compliance by farm businesses. Environmental regulations were identified as an area where complexity is a particular concern, as was work health and safety. There is scope in both these areas to better support farm businesses to understand the regulations (and their intent) which could lead to better environmental and work health and safety outcomes.

There is also scope for governments to work more cooperatively with landholders and allow for flexible and innovative ways to meet regulatory objectives. More risk-based decision making has the potential to enhance stakeholder trust in environmental regulators.

Regulatory response when there are differences in risk perceptions

Regulations have been introduced in a number of areas in response to community concerns or incidents, including where some in the community perceive there to be a much higher level of risk than is suggested by the experts (based on scientific, technical and/or economic evidence). Examples include mandatory labelling of GM products and lower screening thresholds for foreign investment in agriculture.

More effective communication and public engagement by government agencies about benefits and risks could help address community concerns in these areas. Better communication strategies could also help to build community confidence in regulators, and provide a basis for more informed, evidence-based debate. A better informed debate could also reduce the likelihood that governments will resort to costly and ineffective regulatory responses to address community concerns.

Good regulatory processes are not always observed in practice

This inquiry (like many other reviews of regulation) found that regulation that imposes unnecessary costs on business can often be traced back to poor regulation-making processes. It is hard to dispute that good regulation-making processes are essential for good quality regulation and evidence-based policy making. Participants to this inquiry strongly supported these processes. The National Farmers' Federation, for example, said:

... adherence to good regulatory impact assessment is essential to limiting unreasonable regulatory creep into the future. ... policy makers should have both incentives to better utilise the [regulatory impact assessment] process, but also disincentives to discourage poor practice.

However, good regulation-making processes are frequently not followed in practice. The Commission found examples of:

- regulatory impact assessments (RIAs) that failed to rigorously assess the costs or benefits of regulations
- RIA processes that did not adequately consider alternative options
- regulations that were put in place despite a finding that the regulation would impose a net cost on the community
- RIA processes that appear to have been disproportionately influenced by particular stakeholders (box 3).

Stronger oversight of the quality of RIA processes is one way to reduce the incidence of regulations being put in place when there is no case for doing so. Wider and more systematic stakeholder engagement is another — drawing on a wider evidence base can improve the assessment of the costs and benefits of any proposed regulations. Stakeholder engagement is also an important step in determining whether regulation is the most appropriate policy tool to use and, where it is, to design it so that it achieves its policy objective in the simplest and most cost-effective way. A number of participants to this inquiry commented favourably on stakeholder engagement on the *Biosecurity Act 2015* (Cwlth).

RIA processes need to be used as an analytical tool to support the quality of regulation making, not as a legitimising tool or compliance exercise. RIAs enable potential regulatory burdens to be considered before they are imposed, and place regulatory burdens in context (that is, against the potential benefits). Some of the regulations that participants were most critical of were the ones that were found not to have been subject to good RIA processes.

However, improving the quality of regulation involves more than good RIA processes. No one-off inquiry (such as this) or red-tape reduction target will be able to eliminate or reduce the regulatory burdens that comprise a 'death by a thousand cuts'. As regulatory burdens (over all levels of government) change because of interactions with other regulations, it is not sufficient to merely examine the impact of new regulations.

Box 3 Good RIA processes are not always followed in practice

The Tasmanian Government prepared a regulation impact statement (RIS) to assess an extension of the moratorium on the commercial release of genetically modified (GM) organisms into the environment. A marketing advantage in domestic and international markets was noted as one of the main benefits of maintaining Tasmania's GM organism free status. However, the value of this was not quantified (but was assessed to be 'not insignificant'). The benefits of allowing GM crops were theoretically assessed as being relatively small. The RIS concluded that the (unquantified) benefits were likely to be substantial and to exceed the costs of extending the moratorium from 2014 to 2019. (By contrast, a cost-benefit analysis conducted as part of the review of the moratorium on GM canola in Victoria estimated that the Victorian moratorium imposed a net cost. The moratorium was allowed to expire.)

There were also examples of regulations being introduced despite findings that there would be a net cost to the community. In December 2015, the Queensland Parliament passed the *Sugar Industry (Real Choice in Marketing) Amendment Act 2015* which re-regulates the international marketing of Australian sugar. The amendments were introduced despite a highly critical RIS which found no case for the regulation and also that the costs would outweigh the benefits (and the overall returns to the sugar industry could be reduced). Similarly, the RIS for the (recently abolished) Road Safety Remuneration Tribunal found that the road safety remuneration system would lead to net costs.

The Commission found examples where only a limited range of options were considered in RISs. One example was the RIS assessing the value of egg stamping in improving traceability. This RIS did not consider alternative traceability systems, such as egg carton labelling or requiring restaurants and caterers to keep records of the eggs they were supplied with. The Commission found no evidence that egg stamping provides higher net benefits to the community than the alternatives.

Disproportionate industry influence in RISs was also raised as a concern by some participants. For example, for the newly endorsed sheep standards and guidelines, the assessment made in the RIS with respect to pain relief for mulesing was that the net incremental welfare benefits did not justify the additional compliance costs to industry. This assessment was based on the views of a reference group, which comprised representatives of 11 national livestock industry organisations, representatives from the eight state and territory relevant government departments, and the Australian Government, two animal welfare organisations and the Australian Veterinary Association.

Although it has been said many times, it bears repeating: policy makers within all government agencies need to be responsible for actively examining the impact of regulations under their remit, and using the results to implement policy and regulatory reforms that could benefit the community. The price of liberty from unnecessary regulatory burdens is eternal vigilance.

4 Issues by topic area

Land use and access regulations

About half of Australia's land area is used for agriculture, mostly for grazing. Land use for agriculture has come under increased scrutiny in recent years as a result of:

- expanding major urban centres and increasing residential populations in city fringe (peri-urban) areas
- a trend towards more intensive farming practices, which can affect the amenity of nearby residential areas
- growing environmental awareness and the conversion of agricultural land to national parks and conservation areas.

These issues have put pressure on regulators to intervene in land use conflicts, including to curtail particular land use activities. Managing these tensions, while ensuring that land is allocated to its highest value use, is a key challenge for policy makers. It involves balancing land use against other considerations, such as the environment and native title interests.

More effective management of Crown land by reforming leases

Restrictions on the use of Crown land place unnecessary burdens on farm businesses that lease Crown land. Pastoral leases generally require land to be used for a specific purpose, which can hamper the ability of farmers to flexibly respond to environmental, economic and other factors that affect their business.

Reform solutions to improve land use flexibility for leaseholders, and to promote more efficient use of, and investment in, land include:

- extending the length of leases or introducing rolling leases
- allowing the conversion of leases to freehold land
- streamlining land use restrictions, including implementing land management objectives directly through land use regulation, rather than through pastoral lease conditions.

In principle, those who benefit from any additional property rights, such as those from the conversion of leasehold to freehold title, should pay for the higher value of the land and any costs associated with implementing the change (including administrative costs). Aligning the incidence of the costs and the benefits of property rights helps ensure that the land is put to its most valuable use.

Planning, zoning and development processes remain problematic

Planning, zoning and development assessment processes were identified as a significant source of unnecessary burdens for farmers. The regulations and processes are unnecessarily complex, time consuming and costly and the adoption of leading practices has been patchy and slow. Also, planning regulations, such as building codes and the classification of intensive agriculture, can fail to meet their regulatory objectives because they are not adaptable or targeted for managing agricultural land uses. Ensuring that regulation is fit for purpose and implementing outcomes-based (rather than prescriptive) regulation would help address these problems.

Managing conflicts between agriculture and other land uses

Conflict between agricultural and other land uses is another area of concern for farmers, particularly residential land use, and resource exploration and extraction. While there is a role for government in promoting the efficient allocation of land rights and the timely resolution of land rights conflicts, policies that seek to protect existing land uses as an *a priori* objective are unlikely to be consistent with facilitating efficient land use.

Calls for a 'right to farm' and the 'right to say no' to resource development appear to be symptomatic of other concerns.

- Calls for a 'right to farm' arise from broader concerns about land use regulation, including frustrations with planning and zoning regulation, and regulator attitudes towards agricultural land use (especially local governments).
- Calls for a right to veto stem from concerns about the regulatory arrangements governing the allocation of resource exploration and extraction rights. In particular, participants were concerned about how the risks of resource projects are assessed and about compensation arrangements for land access.

Such concerns are more effectively managed through improvements to planning and zoning, and the allocation of resource exploration and extraction rights, rather than indirectly through right to farm or right of veto laws.

Environmental regulations

Farmers, as significant landholders, play an important role as managers of the environment. They have a strong incentive to conserve the environment where doing so benefits their farming operations (for example, by maintaining or improving the productivity of the land). But there are also clear public benefits in conserving native vegetation, biodiversity and threatened species and ensuring there is healthy soil and clear air and water (hence a role for government).

Conservation regulations impose unnecessary costs

Environmental regulations are complex — there are multiple pieces of legislation with many overlapping federal, state and (sometimes) local government requirements, as well as international conventions to which Australia is a signatory. But environmental regulations are essential, and so need to be effectively designed and implemented.

Native vegetation and biodiversity conservation regulations can:

- impose considerable costs on some farm businesses, including the cost of conserving species and ecosystems — farmers can bear a disproportionate share of the financial burden of conservation for the benefit of all Australians
- involve complex and costly processes (including the need to obtain and pay for detailed specialist advice about the presence of protected species on the property)
- in some cases be administered in a very bureaucratic and inflexible way. As the Victorian Farmers Federation put it, the regulations ‘focus on a tree-by-tree assessment of a complex ecosystem. The focus is on one piece of a jigsaw puzzle rather than what role that piece has in solving the puzzle’
- be rigid and contribute to landholders’ distrust of government, and limit their voluntary participation in environmental programs and actions (box 4). They do not always result in improved environmental outcomes and in some cases may even result in poorer environmental outcomes.

The nature of environmental regulations means that some degree of cost and complexity is an inherent part of effective regulation. But continuous improvement of environmental regulations is both possible and desirable.

Working with farmers to protect the environment

Native vegetation and biodiversity conservation regulations need to be changed so that they:

- consistently consider economic, social and environmental factors
- account for the impact of proposed activities on the landscape or the region (not just the impact on individual properties)
- are based on a thorough assessment of environmental risks.

Box 4 One farmer's experience when trying to improve environmental outcomes

The owner and operator of a large cotton farming business on the Macintyre river in southern Queensland told the Commission about his experience dealing with regulatory agencies and local councils when trying to improve environmental outcomes on his property. A recent flood event led to frog spawning and an increase in the water bird population on the farmer's property. The farmer sought to prolong this natural event by adding water from his farm to the natural flow. Timing was critical because, in order to benefit the bird population, the water from the farm needed to arrive before the natural flow dried up.

It took the farmer six weeks to negotiate with multiple agencies (at considerable cost) before permission was granted to supply water for this ecological application. The lengthy delays reduced the effectiveness of the water flow. According to the farmer, each agency was focused exclusively on its area of responsibility and they were unable to work together. For example:

- the authority in charge of stock routes initially rejected the proposal due to its potential to cause erosion, while the local council was concerned with flood risk
- the farmer had to build a pipeline under a main road to reduce the risk of erosion as well as increase the capacity of the culvert (to allow water flow) that was already in place
- a temporary weir was built at the head of this pipeline to make it more effective, but had to be removed following a complaint from a local resident.

The farmer reported that he had to convince an environment authority of the merits of the proposal. He hired a zoologist to monitor bird species before and after the flow. The farmer was also required to design the activity to fit within the regional irrigation management plan, and to gain permission from other landholders. He was also required to test the water quality before and after the flow.

According to the farmer, the environment agency insisted that the project be labelled as a 'pilot' so that it did not form a precedent committing them to similar projects in future. The farmer, however, would like to do similar projects more efficiently in future.

Although the flow did eventually take place, its biological effectiveness was reduced by the delay. The experience left the farmer with a sense that regulatory agencies exist to inhibit rather than enable innovative projects.

Source: Productivity Commission case study interview (appendix C).

Better use could be made of market-based approaches to native vegetation and biodiversity conservation at times. This could include governments buying environmental services (such as native vegetation retention and management) from private landholders. Requiring governments to fund conservation helps discipline governments' demand for conservation on private land (rather than risk treating it as a 'free good' where more is always better). Importantly, where governments choose to allocate land for conservation, they should provide adequate funding to meet the objective of conservation (this should include to control weeds and feral species which can affect adjoining properties).

The administration of native vegetation and biodiversity conservation regulations could also be improved. Governments need to improve the advice and support they provide to

landholders, and explain how different regulatory requirements interact. This would be facilitated by building the capability of, and landholders' trust in, environmental regulators.

Water regulation

Water is an essential input for farm businesses. It is used for irrigating crops, as drinking water for livestock, and for managing waste in intensive livestock and processing industries. The agricultural sector accounts for around two-thirds of Australia's total water consumption.

An important focus of water regulation has been creating markets in regions where this is viable, to allow surface water to be traded to its highest value uses. Farmers reported that water trading has increased the productivity of their businesses by giving them the flexibility to buy and sell water in response to changing market and seasonal conditions. While farmers said that there is room for improvement, they also said that the process of trading water is gradually becoming faster and more efficient.

As regulation of surface water matures, the attention of regulators is turning to groundwater and the interception of overland flows on farms. The regulation of groundwater and overland flows has the potential to increase the security of the water entitlements held by farm businesses.

Complexity and change in water regulation is contributing to the cumulative burden felt by farm businesses. The diversity of Australia's river catchments limits the potential to address this complexity by making it more uniform. More flexible governance arrangements may be needed to develop locally relevant regulations for accessing water. The Commission will examine these and other water-related matters in its future work program in light of its new responsibilities following the repeal of the *National Water Commission Act 2004* (Cwlth).

Regulation of farm animal welfare

Australians generally accept the rearing of animals for commercial purposes (revealed by their consumption of animals as food or in other products). They also place a value on farm animal welfare and benefit from knowing animals are being treated humanely.

Good animal management practices are an essential part of commercial livestock operations. Many welfare improvements increase the productivity and profitability of livestock operations, and producers have an incentive to improve animal welfare to meet changing consumer demands for higher welfare products. However, some welfare measures, such as those that reduce the intensity of production processes, may increase costs without offsetting gains to the business.

Farm animal welfare is a policy area that is expected to evolve over time as community attitudes evolve and as new scientific evidence becomes available. The policy challenge is to have arrangements in place that can transparently weigh up the costs of improved animal welfare against the benefits (the value of animal welfare to the community).

Farm animal welfare regulation could be improved

Since the 1980s, the welfare of farm animals in Australia has been governed by national Model Codes of Practice, implemented by state and territory governments (many were implemented as voluntary standards). The codes cover a number of categories of livestock (cattle, poultry, pigs and sheep) and include land transport, processing, and saleyard codes. In 2005, Australian governments agreed to convert the codes into mandatory standards and voluntary guidelines that reflect contemporary scientific knowledge and community expectations for animal welfare. However, progress has been very slow and the standard setting process does not adequately value the benefits of animal welfare to the community. A number of concerns about the current arrangements were raised, including that:

- animal welfare regulations are not meeting community expectations about the humane treatment of farm animals — not mandating pain relief for some invasive surgical procedures and unstunned (religious) slaughter were highlighted as examples (and the issue of unstunned slaughter is not being considered as part of the current process for setting standards for livestock at slaughtering establishments)
- there is a risk that regulations will be imposed on farmers based on emotive reactions rather than evidence-based policy (including evidence on what represents an improvement in the welfare of farm animals and how this is valued by the community)
- there is a patchwork of different standards, which imposes costs on businesses operating in more than one state, creates confusion for consumers and reduces competition between producers — free-range hen stocking densities were raised as an example
- conflict of interest is an issue — the main concerns were disproportionate industry influence and perceptions of conflicts of interests of agriculture departments (that are responsible for farm animal welfare policy).

There is scope for greater rigour in the process of developing national farm animal welfare standards, and importantly, for science and (soundly elicited) community values to play a more prominent role. Without reform to the process, there is a risk that the agricultural sector, and the Australian community, will continue to face a patchwork of different regulatory arrangements across jurisdictions that do not rigorously take into account economic and social considerations. There are three main areas where farm animal welfare regulations could be improved.

- The objective of the national standards and guidelines needs to be clearer.

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- Standards and guidelines should be more evidence-based, drawing on the existing body of evidence on animal welfare science and research on community views of animal welfare. Such evidence should also be used in RIA processes.
 - There should be more independence in the standards development process so that outcomes are not overly influenced by the views of any one group, either industry or animal welfare groups. Judgments made to balance conflicting views should be transparent and apply rigorous scientific principles. Surveys of community values for animal welfare should be statistically robust and transparent.

The Commission considered a number of options, including: establishing an independent animal science and community ethics advisory body to provide independent advice in the standards setting process; establishing an independent body responsible for developing the standards and guidelines; and the Australian Government being responsible for all aspects of farm animal welfare regulation.

After closely considering submissions and evidence from hearings on this matter, the Commission maintains the view that the most effective approach would be to establish an independent statutory agency — the Australian Commission for Animal Welfare (ACAW) — with responsibility for developing the national standards — the standards would be implemented and enforced by state and territory governments. ACAW would be responsible for managing the RIA process for the proposed standards, and would include science and community ethics advisory committees to provide independent and rigorous evidence on animal welfare science and community values. ACAW would also disseminate information to the community on best-practice farm animal husbandry practices and contemporary animal welfare science, including through the development and publication of standards and guidelines. ACAW would be able to offer assured scientific guidance (often missing in debates about animal welfare) which would help facilitate a more proactive, rather than reactive, response to community concerns about animal welfare.

ACAW would not result in a duplication of current regulatory processes or necessarily result in an increase in regulation (a concern that was raised by some industry participants). ACAW would replace (and improve upon) the national structure that is already in place for developing standards and guidelines. Importantly, ACAW would be an advisory body, not a regulatory body, and comprise a small number of members with specified skills and experience.

Live export regulation is costly but has led to some improvements

Following the public response to ABC's *Four Corners* footage of mistreatment of Australian animals in some Indonesian abattoirs in mid-2011, Australian trade of cattle for slaughter to Indonesia was temporarily suspended. During the suspension, the Australian Government and industry developed a new regulatory framework — the Exporter Supply Chain Assurance System (ESCAS). The ESCAS was first implemented in Indonesia in

August 2011 and then extended to all countries receiving Australian livestock during 2012. The ESCAS has the objectives of:

- providing assurance to the Australian community that the welfare of animals exported from Australia is maintained through to the point of slaughter in the importing country
- facilitating the livestock export trade so that exporters can increase market share overseas.

Industry and animal welfare groups support the ESCAS, although some animal welfare and animal rights groups would prefer a ban on live exports, and along with some other participants, argued for the system to be strengthened. There was also a renewed call for a ban on live exports following reports of inappropriate handling and slaughter of cattle at ESCAS facilities in Vietnam in June 2016.

The ESCAS has led to some improvements in welfare outcomes for Australian livestock in some overseas export supply chains. For example, the rate of pre-slaughter stunning has increased in Indonesia, as has awareness of international welfare standards in some overseas countries. LiveCorp said that as a result of the ESCAS there has been ‘widespread transformation across Australia’s markets and the involvement of the industry and exporters in supply chains’. The livestock export industry has made substantial investments in infrastructure, training and systems to meet ESCAS requirements.

However, industry is concerned about the administrative burden of the ESCAS. The regulatory burden on exporters could be reduced through greater cooperation between exporters, including the sharing of audits and implementing an industry quality assurance program.

Whether an industry-developed quality assurance program could be used by exporters to demonstrate compliance with the requirements of the ESCAS depends on whether it can be shown to assure the welfare of Australian live exports, in line with the Australian community’s expectations. It is critical that the community has confidence in the system used to regulate live exports. Incidents of mistreatment of animals in facilities that are within the purview of the ESCAS, and that are overseen by the Australian livestock industry, reduce community confidence in the trade and the regulator’s effectiveness.

Focusing government resources (\$8.3 million has been announced) on the implementation of an industry quality assurance program (the Livestock Global Assurance Program) should not be at the expense of continual review and refinement of the ESCAS.

The performance of the ESCAS should be reviewed on a regular basis (including to identify opportunities for reform to improve its efficiency and effectiveness). Regular, independent reviews will help to address any perceived or actual conflict of interest in livestock export regulatory arrangements, and ultimately help to further improve the welfare of Australian livestock exports. If, as is probable, ACAW is not established in time to review livestock export regulations by 2017, then the Australian Government should appoint an independent expert or committee to undertake the first review.

Genetically modified crops

Genetic modification technology can benefit both the agricultural sector and consumers. It has been used to create crops that are more resistant to weeds and pests, and that increase yields. It has also been used to improve the nutritional value, shelf life and other quality characteristics of food.

However, genetic modification technology may present risks to human health and safety and the environment, and for this reason GMOs are assessed at a national level by the Office of the Gene Technology Regulator (OGTR) — a respected regulatory body that relies on credible scientific evidence. The OGTR conducts risk assessments on GMOs, identifies risk management controls, and grants licences for dealings with GMOs. Before issuing a licence for use of a GMO, the regulator must be satisfied that any risks to health, safety and the environment can be managed.

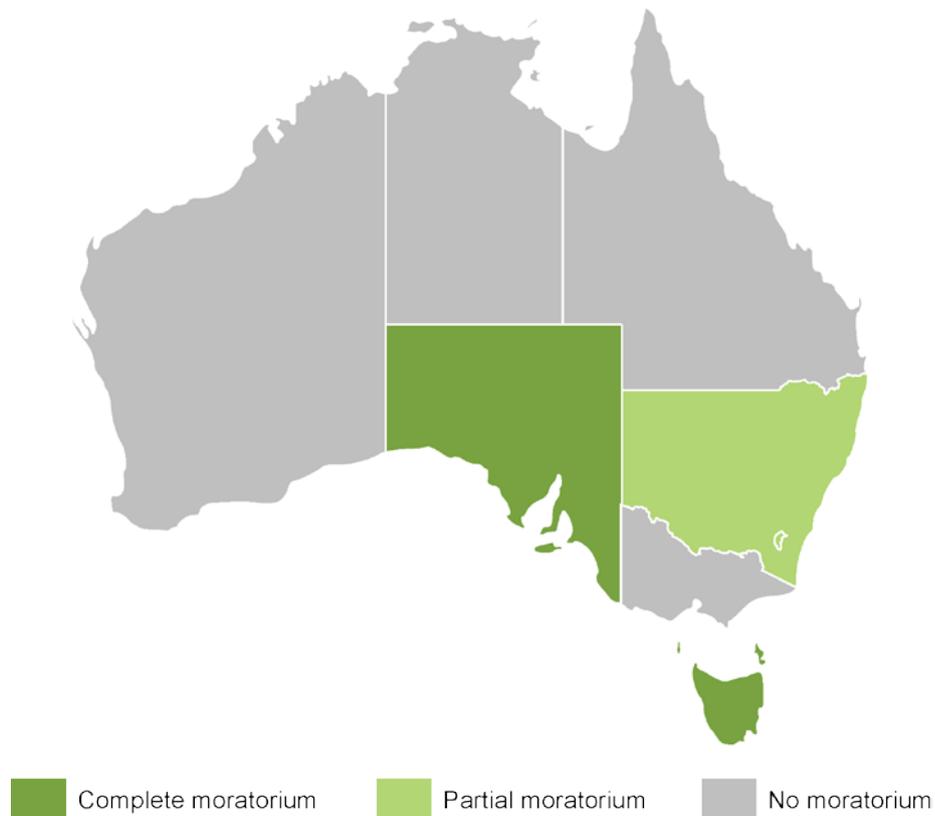
The OGTR has approved certain varieties of GM cotton and canola for release in Australia, having assessed these to be no less safe than their conventional counterparts. Food Standards Australia New Zealand (FSANZ) also assesses GM foods to ensure they are as safe as their conventional counterparts, and has approved some GM foods for release into the Australian food supply.

Despite this, a number of state and territory governments have imposed moratoria (partial or complete) on the cultivation of GM crops (figure 2), on the basis of market access and trade benefits such as price premiums for non-GM crops. There is mixed evidence about these benefits. However, the ability for GM and non-GM crops to coexist has been demonstrated both in Australia and overseas, and therefore the claimed benefits of the moratoria would be able to be achieved even in the presence of GM crops.

New South Wales, South Australia, Tasmania and the Australian Capital Territory should remove their moratoria. State and territory governments should also repeal the legislation that imposes moratoria or gives them the discretion to designate GM-free zones. This will provide certainty to businesses that the moratoria will not be re-introduced in the future.

Removal of the moratoria should also be accompanied by a coordinated communication strategy to improve knowledge in the community about the risks and benefits of GM technology, and the gene technology regulatory framework in Australia (as some consumers remain concerned about GM technology). This should help build confidence in Australia's regulation of GM technology. Government agencies responsible for food policy and regulation (including agriculture and health departments), the OGTR and FSANZ should actively coordinate their communication strategies, aided by trusted, neutral third-party experts or organisations, such as the Office of the Chief Scientist.

Figure 2 **Moratoria on the cultivation of genetically modified crops**



Regulation of agricultural and veterinary chemicals

Farm businesses require access to safe and effective chemicals to manage weeds, diseases and pests and to manage the health and wellbeing of their animals. Access to agvet chemicals depends on an array of regulations administered by the Australian, state and territory governments. At the national level, the Australian Pesticides and Veterinary Medicines Authority (APVMA) is responsible for administering regulatory controls of agvet chemicals up to the point of sale. This includes assessing chemical products for their impact on human health, the environment, and trade, as well as for their efficacy.

Registration and assessment requirements for products already registered overseas are often duplicative, with the result that farm businesses are prevented from, or delayed in, accessing important agvet chemicals. While the APVMA takes into account some international evidence, there is scope to do more. It could make greater use of data and assessments from reputable and comparable international regulatory agencies with similar outcomes in risk management. The Department of Agriculture and Water Resources is considering reform in this area. The Commission considers that this work should be pursued with high priority.

State and territory governments are responsible for controlling the use of agvet chemicals after retail sale. Differences between control-of-use regimes (such as differences in permitted ‘off-label’ uses) has led to confusion for users and added to compliance costs. A national harmonised control-of-use regime has been proposed, but progress has been slow and the proposed scheme only includes minimal harmonisation of off-label use provisions. Work on implementing a single control-of-use regime (that includes increased harmonisation of off-label use provisions) should progress more rapidly. The states and territories should have the regime in place by the end of 2018 — this will be ten years after the Commission’s review of chemicals and plastics regulation recommended moving to a national control-of-use regime. The lack of progress is disappointing.

Coordinating Australia’s biosecurity arrangements

Australia’s biosecurity system is vital to maintaining the competitiveness of the agricultural sector and protecting Australia’s unique environment. The entry of serious exotic pests, weeds or diseases into Australia would have a major impact on Australian farmers, including loss of production and access to premium export markets. Biosecurity activities also protect the community from harmful diseases and the natural environment from exotic threats. An effective biosecurity system should be risk-based, and not used to protect local industries from international competition.

The Australian Government has recently modernised biosecurity legislation by introducing the Biosecurity Act, which took effect in June 2016. The new Act is designed to reduce red tape and provide a more flexible risk-based approach to compliance.

Many inquiry participants were highly supportive of the new Act, but some concerns were raised about self-regulation by industry through approved arrangements and the potential for adverse impacts on Australia’s biosecurity system. Assessing the impact of approved arrangements is difficult given the Act only recently took effect. However, businesses were previously able to apply to self assess risks under the *Quarantine Act 1908* (Cwlth). The new approved arrangements mainly streamline this application process, reducing costs to businesses.

Australia’s biosecurity system will be most effective when resources are targeted to those areas of greatest return to the nation, from a risk management perspective (including whether resources are directed towards pre- and post-border activities or towards particular diseases, weeds or threats). Positive progress has been made towards a more coordinated approach to Australia’s biosecurity arrangements, and developing national priorities for investment. A national biosecurity strategy could improve progress.

The current independent review of the Intergovernmental Agreement on Biosecurity is assessing the effectiveness of the agreement and its capacity to support a national biosecurity system going forward. It is important that this review look at whether clearer national leadership could improve Australia’s biosecurity system, and consider ways to further involve industry in decision making.

Heavy vehicle and other transport regulations

Given the long distances between many of Australia's farms, intermediaries (such as sale yards and abattoirs) and end users, an efficient and cost-effective transport system is critical to the competitiveness of the agricultural sector.

Most transport regulation concerns for farmers related to heavy vehicle road access. Regulations on heavy vehicle road access are in place to address spillover effects from heavy vehicles and their use of the road network (including damage to roads and bridges, safety concerns, traffic congestion and noise pollution). Farm businesses concerns included:

- inconsistent heavy vehicle regulation between jurisdictions
- restrictions on access to the road network, especially on local roads at the start and end of a journey
- processing times for road access permits
- restrictions on moving oversized agricultural machinery.

The adoption of a heavy vehicle national law (HVNL) in most jurisdictions and the creation of the National Heavy Vehicle Regulator (NHVR) is a step in the right direction for improving road access. However, heavy vehicle operators continue to deal with variations in regulations across jurisdictions and delays in obtaining road permits. Improving the visibility of road access decisions across the road network could help to address these concerns. The NHVR should also be reviewed to ensure that responsibilities are appropriately assigned under the national system, and the system is operating efficiently.

It can take a long time to process road access permits because consent is required from state and local government road managers. The states and territories participating in the HVNL should try to increase the number of road routes that are gazetted for heavy vehicle access, for example by allowing industry to propose and undertake road route assessments for gazettal (as is currently the case in South Australia), or by directly funding assessments of state and local roads (as in Queensland). Ideally, permits and conditions would only be used when there is a significant risk to public safety, amenity or infrastructure that can only be managed on a case-by-case basis.

Road access restrictions can be partly attributed to the road funding model which does not link the cost of road use with road investment. A direct (or more cost-reflective) road user charging system could ensure a sustainable revenue base to cover road expenditures, and remove the need for road managers to restrict heavy vehicle access. (Pricing reform would also help address concerns over the effect of pricing distortions on investment in rail networks.) A Road Fund model (an institutional framework that involves a dedicated body responsible for managing the allocation of road revenues to road projects) would assist in ensuring that road investments are directed to where they have the highest value to road

users. Better data on road user needs and the state of road assets — particularly on local roads — is also required.

Farmers are required to obtain multiple permits and comply with other regulatory requirements (such as curfews and police escorts) to move oversized agricultural machinery on public roads. This can interfere with weather-dependent activities that are time sensitive and need to take place at short notice. Issuing permits for longer periods of time or for multiple journeys, or removing the need for permits by making greater use of gazettal notices, would give farmers far greater flexibility (and could be achieved without compromising the safety of other road users).

Heavy vehicle driver safety regulations are necessary to ensure safety on public roads. However, the former Road Safety Remuneration Tribunal imposed costs on businesses, including farm businesses, that were not well justified on the basis of public safety improvements. The system had significant overlaps with other heavy vehicle safety regulations, and poor regulatory processes were followed in its establishment. There was no evidence to suggest that such strong regulation of remuneration in the road transport sector was necessary. There was also no conclusive evidence of the link between remuneration and safety outcomes. The abolition of the Road Safety Remuneration Tribunal has reduced the burden of regulation. The resources reallocated from the Road Safety Remuneration Tribunal to the NHVR are being used to progress road safety initiatives, including some that cover all states and territories, and the review of the NHVR should assess its use of those resources.

Other significant unnecessary transport-related regulatory burdens on farm businesses include:

- coastal shipping regulations which, by giving preference to Australian-flagged ships for transporting domestic cargo between Australian ports, increase costs for farm businesses reliant on sea freight. As an example, Voice of Horticulture said that it costs \$7.00 to ship a box of fruit from Tasmania to Brisbane, but only \$5.60 to ship it from Tasmania to China. To increase competition in coastal waters, coastal shipping laws should be amended to substantially reduce barriers to entry for foreign vessels
- arrangements to support the biofuel industry, such as ethanol mandates and excise arrangements. These should be removed as they deliver negligible environmental benefits and impose unnecessary costs on farmers and the community.

Regulation of food labels

Governments in Australia regulate food to support public health and safety and inform consumer decisions about food. Food labelling regulations seek to ensure that labels convey correct and relevant information to consumers, while regulations regarding the production process protect consumers against unsafe practices. Food labelling concerns were raised in four areas — country-of-origin labelling (CoOL), free-range egg labelling, labelling of GM foods, and gluten-free labelling.

CoOL requirements have been confusing for consumers and have limited Australian producers' ability to differentiate their products. To address these concerns, a new CoOL framework was announced in March 2016. The new system requires products labelled 'made in Australia' to identify the proportion of Australian ingredients they contain. The new system is expected to help clarify the meanings of country-of-origin claims and save consumers time (by providing better visual elements on labels). What is unclear, however, is whether the new arrangements will deliver higher net benefits to the community as a mandatory or a voluntary system.

A voluntary system could result in higher net benefits because a mandatory system imposes costs on all producers, but not all consumers' purchasing decisions are driven by country of origin. It is essential that, as part of any future reforms to the CoOL framework, a RIS is used to assess the costs and benefits of voluntary labelling. This will establish whether a voluntary labelling system would result in higher net benefits to the Australian community compared to mandatory labelling.

The production methods used for eggs labelled as 'free-range' do not always align with consumers' expectations (or understanding) of those methods, and consumers lack confidence that they are getting what they are paying for. The Australian Government recently announced an information standard for free-range eggs to create consistency and allow consumers to compare different 'free-range' eggs. The standard provides a definition for the term 'free-range' (with a maximum outdoor stocking density of 10 000 hens per hectare) and requires producers who claim that their eggs are free-range to prominently disclose the stocking density on the label. Compliance with the information standard provides producers with a safe harbour defence against allegations that they are engaged in false and misleading conduct.

The new standard should provide greater clarity for consumers. However, because poultry welfare outcomes are affected by the production system used (and hen welfare is one of the key reasons why consumers purchase free-range eggs), there should be consistency between animal welfare and egg labelling standards. The new information standard for free-range eggs was established independently of the conversion of the Model Code of Practice for poultry welfare into mandatory national standards and voluntary guidelines, and may need to be revised after this conversion has occurred.

Some participants argued that labelling of GM foods should not be mandatory because GM foods are safe (and labelling imposes a cost on businesses). All GM foods must undergo a safety assessment by FSANZ, and therefore GM labelling is a consumer value issue, not a food safety issue. The Commission is not convinced that GM labelling should be mandatory — if consumers want to avoid GM foods, suppliers have an incentive to voluntarily label their product as 'GM free'.

Despite GM foods being assessed as safe, some consumers remain concerned, and want mandatory GM labelling so they can identify which foods to avoid. Consumers' concerns about the safety of GM foods would be better addressed by governments engaging with the

community, including by communicating the risks and benefits of genetic modification technology.

Gluten-free labels play an important role in ensuring the safety of food for some consumers. Australia's gluten-free labelling regulations are stricter than international standards, and evidence suggests that this is a barrier to the adoption of innovations such as the ultra-low gluten barley. While the Australian Consumer Law does not allow foods with detectable levels of gluten to be labelled 'gluten free' (even if the gluten present is unlikely to be harmful), producers are able to establish other claims to communicate the nature of their products. FSANZ should establish a standard defining the level of gluten that can be generally tolerated by gluten-intolerant consumers, which would provide producers with guidance on the kinds of claims that would not be deemed misleading.

Employing overseas workers

The ability to access overseas workers (particularly working holiday makers) is important for addressing labour shortages in the agricultural sector. Hiring local workers can be difficult because they can be reluctant to work on farms or relocate to rural areas.

The recent proposal to tax working holiday makers as non-residents generated some concern on the basis that it would dissuade overseas workers from coming to Australia. Following a review, the Government announced its intention to reduce the proposed tax on working holiday makers' income and increase the tax on superannuation that working holiday makers can claim when leaving Australia (the Departing Australia Superannuation Payment). Legislation to implement these changes is currently before Parliament. With this change, nearly all working holiday makers' superannuation would be collected as tax, but a portion would be collected by superannuation funds as management fees. Better ways of collecting the tax on working holiday makers' superannuation (such as the Australian Government collecting the superannuation directly) should be explored.

More generally, many temporary residents are unlikely to use superannuation to save for retirement and some farm businesses claimed that being required to pay superannuation for temporary residents is an unnecessary compliance cost. While there are costs to farm businesses in administering superannuation guarantee arrangements for temporary residents, any changes to address these could have broader and unintended economic effects.

Farm businesses also reported high compliance costs associated with the temporary work (skilled) 457 visa programme and noted features of the programme that limit their access to overseas workers. Many of the concerns raised by participants were addressed in a recent independent review of the 457 visa programme (the Azarias review).

Competition policy

Competition is a key driver of innovation and productivity in agriculture.

For most of the 20th century, governments used statutory marketing to shield many of Australia's agricultural industries from competition (a response to concerns about the concentration of market power among a relatively small number of wholesale merchants and/or supermarkets). However, during the late 1980s and early 1990s it became increasingly clear that restricting competition was impairing agricultural industry performance and imposing significant costs on taxpayers, consumers and downstream industries. The legislative review program under National Competition Policy provided the impetus to reform statutory marketing arrangements.

The Rice Marketing Board in New South Wales is Australia's only remaining statutory marketing board. One of the board's objectives is to secure the best possible price for Australian rice in export markets. However, statutory marketing is not necessary for the Australian rice industry to pursue price premiums in international markets. In a deregulated market, competing companies would have an incentive to retain grower loyalty by maximising price premiums without incurring the costs of statutory marketing. Repealing the *Rice Marketing Act 1983* (NSW) would create incentives to innovate and reduce marketing costs, and is likely to result in higher returns for rice growers.

The marketing of potatoes in Western Australia was deregulated in September 2016. The regulation of Western Australia's potato industry had its origins in concerns about reliable food supplies during World War II, but in recent years has reduced the choice of potatoes available to consumers and increased their cost. Deregulation should improve the future responsiveness of the industry to changing consumer preferences and reduce the cost of potatoes in Western Australia.

Legislation was passed in Queensland in December 2015 to enable sugarcane growers to direct how millers market sugar internationally. The legislation restricts competition and will deter structural adjustment in sugarcane farming, investment in milling capacity and innovation in sugar marketing. Reduced or degraded milling capacity is likely to reduce the productivity of the industry and if existing sugar millers decide to leave the industry there will be less competition.

Queensland Sugar Limited (QSL) was granted charity status in late 2015. Its stated charitable purpose is to 'promote the development of the Australian sugar industry' and support its 'long term prosperity and sustainability' for the benefit of the 'general community in Australia'. However, QSL's main activity is exporting raw sugar for the commercial benefit of 14 mills and around 3600 commercial sugarcane farming businesses in Queensland.

QSL's charity status provides it with tax concessions that benefit a small number of commercial milling and farming businesses (which affects the competitive neutrality of the market) in an industry which has cost Australian taxpayers almost \$2 billion since 1990.

Charity status also reduces the transparency of QSL's financial performance, and is likely to further impede structural adjustment in the sugar industry.

There were calls from the agricultural sector to amend the *Competition and Consumer Act 2010* (Cwlth) (CCA) to increase the adoption of collective bargaining by farm businesses (and in so doing help empower farm businesses to negotiate on more equal terms with traders and supermarkets).

Adoption of collective bargaining in the agricultural sector is low. However, this is not surprising as collective bargaining is only likely to be attractive to small groups of farm businesses with similar production characteristics. In diverse groups of farm businesses, the benefits to larger and more efficient farms of bargaining individually are likely to outweigh the costs of bargaining collectively. As such, government efforts aimed at encouraging the use of collective bargaining under the CCA are unlikely to significantly increase adoption by farm businesses.

Perceptions in the agricultural sector that the introduction of an effects test to section 46 of the CCA is likely to shield farm businesses from intense competition — passed on by traders and supermarkets — are not well supported by evidence. In any event, even if the perceptions were accurate, shielding farm businesses from these competitive pressures would not be in the interest of consumers. Competition serves the interests of consumers by lowering the cost, and improving the quality, of food.

Foreign investment in Australian agriculture

Australia, as a small open economy, relies (and has historically relied) on foreign investment to bridge the gap between national savings and investment. The benefits of foreign investment to Australia's agricultural sector, including access to new technology, skills, knowledge and global supply chains, were readily acknowledged by participants. However, many Australians are concerned about foreign investment in agriculture. The 2016 Lowy Institute Poll found that 87 per cent of those surveyed (1202 respondents) were against foreign investment in agricultural land, an increase of 6 percentage points from the 2012 poll.

Australia's foreign investment review framework aims to balance the benefits of foreign investment against any risks to the national interest. The Treasurer's prior approval is required for acquisitions of agricultural businesses and land valued above prescribed thresholds (which trigger review of foreign investment proposals by the Foreign Investment Review Board).

In 2015, the Australian Government made a number of changes to the foreign investment review framework for the agricultural sector, including:

- significantly lowering the screening thresholds for agribusiness (to \$55 million) and agricultural land (to \$15 million, based on cumulative land holdings) for private (non-government) investors from most countries
- establishing a national register of foreign ownership of agricultural land to provide more public information on foreign investment in Australian agricultural land
- introducing application fees for all foreign investment proposals.

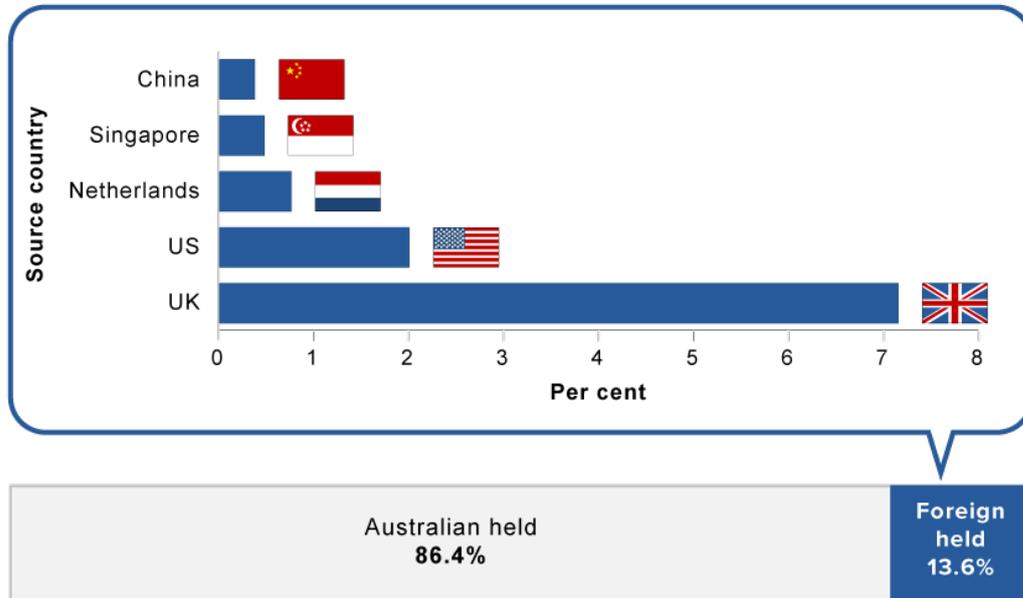
Prior to the changes, there were no agriculture-specific thresholds and agricultural proposals were assessed in the same way as general business acquisitions and private investment in developed commercial land.

The lower screening thresholds (combined with different thresholds depending on the investor's country of origin) increases the cost and complexity of investing in Australian agriculture. This ultimately risks deterring foreign investment in the sector without offsetting public benefits, particularly as other measures (such as the agricultural land register) are in place to provide information and increase transparency about foreign investment in Australian agriculture (figure 3).

It is difficult to objectively demonstrate that national interest considerations are different for foreign investors proposing to invest in agriculture compared to other sectors of the economy that have a higher screening threshold of \$252 million (including acquisitions in sensitive businesses, such as telecommunications, transport, defence and military related industries). Consistent policy is important for its credibility.

Accordingly, the Commission is of the view that the Australian Government should return the screening thresholds for agricultural land and agribusiness to \$252 million.

Figure 3 **Top 5 countries, proportion of Australian agricultural land that is foreign held**



Lower thresholds are not the most effective (or efficient) policy tool to address community concerns about foreign investment in agriculture. And in fact, if anything, public opposition to foreign investment in agriculture appears to have increased since the change to the thresholds in 2015.

The Australian Tax Office’s report on the register of foreign ownership of agricultural land should help dispel *some* of the myths about foreign ownership of agricultural land (for example, on the extent, distribution and origin of foreign ownership, figure 3). But facts can only go so far and may not address many of the concerns (such as those relating to food security and national sovereignty). Facts need to be effectively translated otherwise myths and misinterpretation will prevail.

To facilitate a more informed public conversation about foreign investment in agriculture, the Australian Government should request that the Productivity Commission, through its annual Trade and Assistance Review, analyse and report on the trends, drivers and effects of foreign investment.

Recommendations and findings

Land use regulation

RECOMMENDATION 2.1

Land management objectives should be implemented directly through land use regulation, rather than through pastoral lease conditions. State and territory governments should reform land use regulations to enable the removal of restrictions on land use from pastoral leases.

RECOMMENDATION 2.2

State and territory governments should:

- ensure that, where reforms to Crown lands confer additional property rights on a landholder, the landholder pays for the higher value of the land and any costs associated with the change (including administrative costs and loss of value to other parties)
- set rent payments for existing agricultural leases to reflect the market value of those leases, with appropriate transitional arrangements.

RECOMMENDATION 2.3

The Tasmanian Government should repeal the *Primary Industry Activities Protection Act 1995*.

FINDING 2.1

Regulation and policies aimed at preserving agricultural land per se can prevent land from being put to its highest value use.

A right of veto by agricultural landholders over resource development would arbitrarily transfer property rights from the community as a whole to individual landholders.

Environmental regulation

RECOMMENDATION 3.1

The Australian, state and territory governments, in consultation with natural resource management organisations, should ensure that native vegetation and biodiversity conservation regulations:

- are risk based (so that landholders' obligations are proportionate to the impacts of their proposed actions)
- rely on assessments at the landscape scale, not just at the individual property scale
- consistently consider environmental, economic and social factors.

RECOMMENDATION 3.2

The Australian, state and territory governments should continue to develop market-based approaches to native vegetation and biodiversity conservation. Governments could achieve desired environmental outcomes by buying environmental services (such as native vegetation retention and management) from private landholders.

RECOMMENDATION 3.3

The Australian, state and territory governments should review the way they engage with landholders on environmental regulations, and make necessary changes so that landholders are assisted in understanding the environmental regulations that affect them, and the actions required under those regulations. This would be facilitated by doing more to:

- recognise and recruit the efforts and expertise of landholders and community-based natural resource management organisations
- build the capability of, and landholders' trust in, the organisations that administer environmental regulations (including local governments).

On-farm regulation of water

FINDING 4.1

Complexity and ongoing changes in water regulation contribute to the cumulative burden of regulation on farm businesses. However, the diversity of Australia's river catchments makes streamlining and harmonising regulation difficult. More flexible governance arrangements may be needed to develop locally relevant regulatory settings for accessing water.

RECOMMENDATION 4.1

The Australian Government should implement the findings of the Interagency Working Group on Commonwealth Water Information Provision to reduce duplicative and unnecessary water management information requirements imposed on farm businesses.

Regulation of farm animal welfare

RECOMMENDATION 5.1

To facilitate greater rigour in the process for developing national farm animal welfare standards, the Australian Government should take responsibility for ensuring that scientific principles guide the development of farm animal welfare standards. To do this, a stand-alone statutory organisation — the Australian Commission for Animal Welfare (ACAW) — should be established. The functions of ACAW should include:

- determining if new standards for farm animal welfare are required, and if so, to develop the standards using good-practice public consultation and regulatory impact assessment processes
- publicly assessing the efficiency and effectiveness of the implementation and enforcement of farm animal welfare standards by state and territory governments
- publicly assessing the efficiency and effectiveness of the livestock export regulatory system and making recommendations to improve the system to the Australian Government Minister for Agriculture.

ACAW should comprise no more than five members (including a Chair) appointed by the Australian Government following consultation with state and territory governments. Members should be appointed on the basis of skills and experience, not as representatives of a particular industry, organisation or group.

It should also include animal science and community ethics advisory committees to provide independent, evidence-based advice on animal welfare science and community values.

RECOMMENDATION 5.2

State and territory governments should review, by the end of 2017, the way in which their farm animal welfare regulations are monitored and enforced, and make necessary changes so that:

- there is separation between agriculture policy matters and farm animal welfare monitoring and enforcement functions
- a transparent process is in place for publicly reporting on monitoring and enforcement activities
- adequate resourcing is available to support an effective discharge of monitoring and enforcement activities.

State and territory governments should also consider recognising industry quality assurance schemes as a means of demonstrating compliance with farm animal welfare standards, provided that the scheme complies (at a minimum) with standards in law, and involves independent and transparent auditing arrangements.

RECOMMENDATION 5.3

The Australian Government should appoint an independent expert or committee to publicly inquire and report, by the end of 2017, on the efficiency and effectiveness of the livestock export regulatory system.

The review should include an assessment and make recommendations for reform on:

- industry-developed initiatives, such as quality assurance programs, as a means of compliance with livestock export regulations
- recognition of equivalence of regulatory arrangements in livestock export markets
- the effectiveness of the auditing arrangements used to demonstrate compliance with livestock export regulatory requirements, including mandatory rotation of auditors and requirements for auditors to have expertise in animal welfare and animal husbandry.

If the Australian Commission for Animal Welfare (recommendation 5.1) is established in time, it should undertake the first review. It should also undertake subsequent regular reviews of the livestock export regulatory system.

Regulation of technologies

FINDING 6.1

There is no economic or health and safety justification for banning approved genetically modified (GM) organisms.

- The Office of the Gene Technology Regulator (OGTR) and Food Standards Australia New Zealand (FSANZ) assess GM organisms and foods for their effect on health, safety and the environment. Scientific evidence indicates that GM organisms and foods approved by the OGTR and FSANZ are no less safe than their non-GM counterparts.
- The successful coexistence of GM and non-GM crops is possible and has been demonstrated both in Australia and overseas. This means that if there are any market access or trade benefits (including price premiums for non-GM products), they would be achieved regardless of whether GM crops are in the market.

RECOMMENDATION 6.1

The New South Wales, South Australian, Tasmanian and Australian Capital Territory Governments should remove their moratoria (prohibitions) on genetically modified crops. All state and territory governments should also repeal the legislation that imposes or gives them powers to impose moratoria on genetically modified organisms by 2018.

The removal of the moratoria and repeal of the relevant legislation should be accompanied by coordinated communication strategies designed to increase public knowledge about the benefits and risks to the Australian community from genetic modification technologies. The Australian, state and territory governments, the Office of the Gene Technology Regulator and Food Standards Australia New Zealand should actively coordinate their communication strategies.

Agricultural and veterinary chemicals

RECOMMENDATION 7.1

The Australian Pesticides and Veterinary Medicines Authority should make greater use of international evidence in its decisions on agricultural and veterinary chemicals (including by making greater use of data and assessments from trusted comparable international regulators). Reforms currently underway in this area should be expedited.

RECOMMENDATION 7.2

The Australian, state and territory governments should implement a national control-of-use regime (including harmonisation of off-label use provisions) for agricultural and veterinary chemicals by the end of 2018.

Transport

FINDING 9.1

Despite the commencement of the Heavy Vehicle National Law and the establishment of the National Heavy Vehicle Regulator, there remain significant variations and inefficiencies in heavy vehicle regulation, including costly delays in processing road access permits.

RECOMMENDATION 9.1

States and territories that are participating in the Heavy Vehicle National Law should, as a high priority, increase the number of routes that are assessed and gazetted for heavy vehicle access. Permits should only be required in locations where there are significant risks to public safety or infrastructure that must be managed on a case-by-case basis.

There are arrangements in South Australia to allow road users to propose and undertake road route assessments for gazettal, and in Queensland to fund road route assessments and gazettals on both state and local roads. These arrangements should be considered for adoption in other jurisdictions or expansion in respective states.

RECOMMENDATION 9.2

The Australian, state and territory governments should pursue road reforms to improve the efficiency of road infrastructure investment and use, particularly through the introduction of direct road-user charging for selected roads, the creation of Road Funds, and the hypothecation of revenues in a way that incentivises the efficient supply of roads.

RECOMMENDATION 9.3

The National Heavy Vehicle Regulator, road managers, and relevant third parties (such as utilities and railway companies) should ensure that requirements for moving oversized agricultural machinery are proportionate to the risks involved. To achieve this they should, wherever possible, make greater use of gazettal notices or other exemptions for oversized agricultural machinery, and issue permits that are valid for longer periods and/or for multiple journeys.

FINDING 9.2

The road safety remuneration system (including the former Road Safety Remuneration Tribunal) imposed costs on businesses, including farm businesses, without commensurate safety benefits, and its abolition has reduced this burden.

RECOMMENDATION 9.4

The Australian, state and territory governments should review the National Heavy Vehicle Regulator (NHVR) as part of the planned review of the national transport regulation reforms. The review should:

- assess the efficiency and effectiveness of heavy vehicle regulations, including the scope to improve the allocation of responsibilities under the national system
- identify ways in which new funds allocated following the abolition of the Road Safety Remuneration Tribunal could best be used by the NHVR to improve road safety in all states and territories.

FINDING 9.3

Privatisation of major ports has the potential to increase economic efficiency, provided the public interest is protected through structural separation, regulation or sale conditions. Increasing the sale price of ports by conferring monopoly rights on buyers is not in the public interest.

RECOMMENDATION 9.5

As a matter of priority, the Australian Government should amend coastal shipping laws to substantially reduce barriers to entry for foreign vessels, to improve competition in coastal shipping services.

RECOMMENDATION 9.6

Arrangements to support the biofuel industry — including excise arrangements and ethanol mandates — deliver negligible environmental benefits and impose unnecessary costs on farmers and the community. The Australian, New South Wales and Queensland Governments should remove these arrangements by the end of 2018.

Food regulation

RECOMMENDATION 10.1

The Australia and New Zealand Ministerial Forum on Food Regulation should amend its policy guidelines to make labelling of genetically modified foods voluntary, and Food Standards Australia New Zealand should remove the requirement in the Food Standards Code to label genetically modified foods.

RECOMMENDATION 10.2

Food Standards Australia New Zealand should establish a standard defining the level of gluten in foods that can be generally tolerated by gluten-intolerant consumers, taking into account:

- the varying levels of gluten sensitivity among gluten-intolerant consumers
- scientific evidence on the risks of gluten to these consumers
- the costs and benefits to the Australian community.

RECOMMENDATION 10.3

Food Standards Australia New Zealand should remove the requirement for egg stamping under the Primary Production and Processing Standard for Eggs and Egg Products, unless it can be shown through a transparent and rigorous cost–benefit analysis that egg stamping is more effective and confers higher net benefits compared to alternative traceability methods.

RECOMMENDATION 10.4

The Department of Agriculture and Water Resources and state and territory food safety authorities should determine whether regulatory food safety audits could be reduced by recognising compliance with commercial quality assurance programs.

Competition regulation

RECOMMENDATION 12.1

The New South Wales Government should repeal the *Rice Marketing Act 1983*.

FINDING 12.1

Statutory marketing of potatoes in Western Australia reduced consumer choice and increased the price of potatoes in Western Australia. Deregulation of the industry will allow potato production in that state to better respond to changing consumer preferences and reduce the cost of potatoes for consumers.

FINDING 12.2

There is no market failure or other reasonable objective to justify the re-regulation of the Queensland sugar industry.

RECOMMENDATION 12.2

The Queensland Government should repeal the amendments made by the *Sugar Industry (Real Choice in Marketing) Amendment Act 2015*.

RECOMMENDATION 12.3

The Australian Government should legislate to exclude agricultural commodity trading companies from being granted charity status and receiving the associated tax concessions.

FINDING 12.3

Collective bargaining arrangements are only likely to be attractive to small groups of farm businesses with similar production characteristics. Government efforts to encourage collective bargaining under the *Competition and Consumer Act 2010* (Cwlth) are unlikely to result in a significant increase in adoption among farm businesses.

FINDING 12.4

The perception in the agricultural sector that introducing an ‘effects’ test to section 46 of the *Competition and Consumer Act 2010* (Cwlth) is likely to shield farm businesses from intense competition in retail grocery markets is ill-founded. In any event, doing so would not be in the interest of consumers.

Foreign investment in agriculture

RECOMMENDATION 13.1

The Australian Government should increase the screening thresholds for examination of foreign investment in agricultural land and agribusinesses by the Foreign Investment Review Board to their previous level of \$252 million (indexed annually and not cumulative).

RECOMMENDATION 13.2

The Australian Government should request that the Productivity Commission, in its annual Trade and Assistance Review, analyse and report on the trends, drivers and effects of foreign investment.

RECOMMENDATION 13.3

The Australian Government should set application fees for foreign investment proposals at the level that recovers the costs incurred by the Foreign Investment Review Board in reviewing proposals, and should closely monitor the fees to ensure no over- or under-recovery of costs.

1 About this inquiry

This inquiry is about regulation that affects farm businesses.

The Australian Government asked the Productivity Commission to identify regulations that impose an unnecessary burden on farm businesses, with a focus on those regulations that have a material impact on the competitiveness and productivity of Australian agriculture. And, where there are legitimate policy goals underlying the regulations, to look at whether there is scope to achieve the regulatory objectives in a more efficient way.

Regulation can benefit farm businesses (and the community more broadly) where it meets economic, social or environmental objectives. While regulation imposes costs on those affected, the benefits of well-designed and -implemented regulation should outweigh the costs to the community as a whole. Good regulation should also achieve its stated policy objectives at least cost to the community.

1.1 Why regulatory burden matters

Regulatory burden matters because it can weigh heavily on farm businesses and undermine the agricultural sector's productivity and competitiveness. As the Australian Bureau of Agricultural and Resource Economics and Sciences said:

Although some regulations benefit farmers, other regulations, which are unnecessarily burdensome, complex or redundant, can constrain productivity growth and impose heavy costs on farm businesses. (Gray, Oss-Emer and Sheng 2014, p. 31)

The National Farmers' Federation (NFF) also said:

The opportunities for the agricultural sector in the coming years have been well documented through Government initiatives such as the *National Food Plan* and the recent *Agricultural Competitiveness White Paper*, along with industry reports such as the *Blueprint for Australian Agriculture*. Despite this, the sector is being limited in its efforts to seize these opportunities through a tangle of complex regulations which increase costs to industry and government, and limit our competitiveness as individual businesses and a nation as a whole. (sub. 61, p. 6)

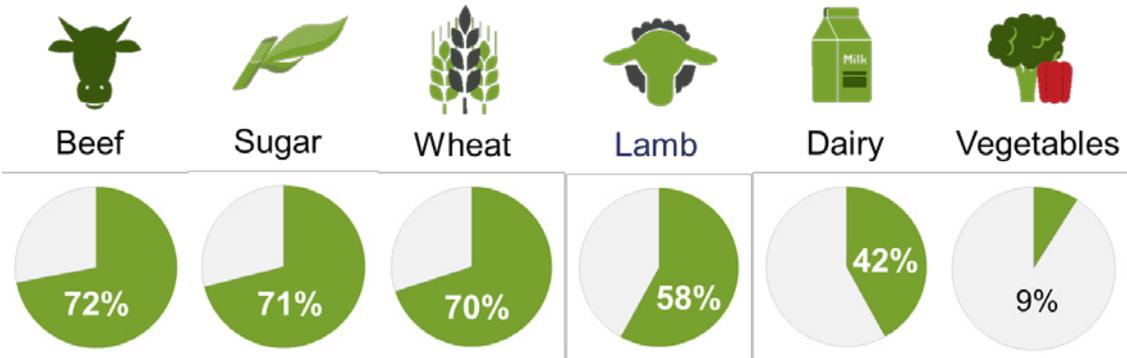
For farm businesses, reducing the regulatory burden can mean less time spent dealing with regulation and more time spent on productivity-enhancing activities. The Australian Dairy Farmers said:

When regulation is unnecessary, it often adds an avoidable cost to dairy farmers, which has to be absorbed by the business. This can have the effect of constraining growth or limiting a farmers' ability to allocate funds to necessary aspects of the business. (sub. 63, p. 2)

For the community, less regulatory burden on businesses can mean lower prices (because farmers face lower costs), fewer taxpayer dollars spent on regulation, and improved living standards. For governments, lower regulatory burden means that more resources can be devoted to higher priority areas.

Improving the efficiency and effectiveness of the regulatory environment is important for all sectors of the Australian economy, but particularly for the agricultural sector given that Australian farmers export a significant proportion of their production — about two-thirds of Australia’s agricultural production is exported (although this varies by commodity, figure 1.1) (DFAT 2015b).

Figure 1.1 Share of production exported, selected agricultural commodities^a
2014-15



^a 'Beef' includes veal and 'lamb' includes mutton. 'Production' refers to volume of production, except for vegetables, where the gross value of production was used.

Sources: Productivity Commission estimates based on ABARES (2015a) and ABS (2016k).

Exporters of many agricultural products (such as beef, wheat and wool) are price takers in global markets. This reduces their capacity to absorb or pass on costs to consumers, which means that regulatory burdens can weigh heavily on their competitiveness (Grafton, Mullen and Williams 2015). As the Tasmanian Farmers and Graziers Association said:

We are continually told that farmers must operate in a global market — and we do. That means our prices are set by factors well beyond our control; and we have limited capacity to claw back more of the retail dollar to cover increasing on-farm costs. (sub. 16 , p. 3)

Dependence on international markets is also expected to increase as the global market for food and fibres expands (Australian Government 2015a; Gray, Oss-Emer and Sheng 2014).

Also, most Australian farms are small businesses (box 1.1), and regulatory burdens can have a significant and disproportionate impact on small businesses. There are two main reasons for this:

- where there are fixed compliance costs (such as learning about the regulations and establishing systems to comply with regulations) small businesses typically have a narrower revenue base over which to spread these fixed costs
- small businesses often do not have specialised staff to handle regulatory matters and complying with regulations means managers are diverted from other farm business activities.

As AgForce said:

The large majority of broadacre livestock and grain enterprises in Queensland are small businesses ... and the majority of these businesses are operated without any employees, particularly for specialist beef and livestock-grain operations. As a result, many producers lack the time and financial resources to stay abreast of their many responsibilities and incorporate ongoing regulatory changes. (sub. 17, p. 2)

Box 1.1 Some facts about Australia's agricultural sector

Australia's agricultural sector is diverse, with a range of agro-ecological zones and products including meat and poultry, grains, horticulture, milk and wool.

Over the past three decades, the sector's share of both GDP and employment has fallen from 5 per cent to about 2 per cent. In 2014-15, the gross value of Australian farm production was about \$55 billion.

Farmers own or manage about half of Australia's land mass and agriculture accounts for about two thirds of Australia's water use.

Australian farms vary in size, ranging from small family-owned/operated businesses to large agricultural corporations, but most Australian farms are small (measured by turnover). In 2014-15, there were about 123 000 businesses mainly engaged in agricultural production employing about 275 000 people.

The largest 10% of businesses (with receipts greater than \$1 million) account for about 50% of broadacre output ...



... while the smallest 52% (with receipts less than \$200 000) account for about 15% of output.

Multifactor productivity growth for the agricultural sector has averaged about 2 per cent per year over the past three decades, although it has slowed in recent years.

Sources: ABS (2012, 2014a, 2015a, 2015d, 2015f, 2015g, 2015h, 2016i); ABARES (2016a, 2016b); ACIL Allen Consulting (2014); Gooday (2015); NRAC (2012).

1.2 There are regulations at every stage of the agricultural supply chain

At each stage of the agricultural supply chain there are regulations in place, including for land acquisition and preparation, capital and labour use, transport of inputs and outputs, marketing and product sales (table 1.1). The NFF said:

The types of regulation impacting farm business are diverse and come from many sources. (sub. 61, p. 7)

All levels of government impose regulations that affect the agricultural sector.

- The Australian Government is mainly involved in regulating national and interjurisdictional issues, including biosecurity and access to agricultural and veterinary chemicals. The Department of Agriculture and Water Resources is responsible for about 90 non-fisheries related Acts. This is a small proportion of the regulations affecting farm businesses. Others include those from the environment, treasury, immigration, infrastructure and industry portfolios.
- State and territory governments administer regulations including in the areas of road transport, environmental protection, native vegetation management, land tenure and land use. As an indicator of the extent of regulation at the state and territory level, AgForce said that in Queensland, agriculture was affected by over 75 Acts and regulations covering 17 590 pages (sub. 17, p. 2).
- Local governments implement regulations (often on behalf of state and territory governments) in the areas of land use, planning and (in some cases) environmental protection, as well as setting conditions for local road access by heavy vehicles and farm machinery.

Regulations covering some areas, such as aspects of environmental protection, are covered by all three levels of government. There are also other regulations, such as those relating to water use and temporary labour from overseas, that affect a range of businesses across the economy, but are of particular concern to some farm businesses.

Table 1.1 Regulation across the agricultural supply chain^{a,b}

<i>Key Australian Government involvement/regulation</i>	<i>Key stages of the agricultural cycle</i>	<i>Key state/territory government involvement/regulation</i>
<ul style="list-style-type: none"> • native title • environmental protection <ul style="list-style-type: none"> – biodiversity conservation – international treaties – natural, cultural and world heritage 	<p>Acquisition, leasing and preparation of land</p> 	<ul style="list-style-type: none"> • land tenure and use <ul style="list-style-type: none"> – <i>land use planning</i> – <i>building regulations</i> – <i>pastoral leases</i> • environmental protection <ul style="list-style-type: none"> – <i>native vegetation</i> – <i>natural and cultural heritage</i>
<ul style="list-style-type: none"> • agricultural and veterinary chemical standards • biosecurity <ul style="list-style-type: none"> – pest surveillance • export control • environmental protection <ul style="list-style-type: none"> – biodiversity conservation – international treaties – natural, cultural and world heritage • national land transport regulatory frameworks • water access and regulation • welfare of exported animals 	<p>Agricultural production and on-farm processing</p> 	<ul style="list-style-type: none"> • agricultural and veterinary chemicals • animal welfare • biosecurity <ul style="list-style-type: none"> – <i>pest and disease control and response</i> • food certification for export • <i>building regulations</i> • genetically modified crops • land use planning • livestock regulation and identification • transport <ul style="list-style-type: none"> – <i>road access</i> – <i>transport and use of machinery</i> – vehicle licensing • water access and regulation
<ul style="list-style-type: none"> • biosecurity <ul style="list-style-type: none"> – pest surveillance • export control • national land transport regulatory frameworks • shipping and maritime safety laws • welfare of exported animals 	<p>Transport and logistics</p> 	<ul style="list-style-type: none"> • transport regulations <ul style="list-style-type: none"> – <i>road access</i> – <i>transport and use of machinery</i> – vehicle and machinery licensing • animal welfare • livestock regulation and identification
<ul style="list-style-type: none"> • biosecurity <ul style="list-style-type: none"> – pest surveillance • export control • food labelling • food standards • welfare of exported animals 	<p>Marketing</p> 	<ul style="list-style-type: none"> • <i>food safety</i> • food packaging • biosecurity <ul style="list-style-type: none"> – pest and disease control and response • food certification for export • statutory marketing

^a *Italics* denote local government responsibility in at least one jurisdiction. ^b There is also a range of issues and regulations that affect all stages of the agricultural supply chain. Cross-cutting issues include investment opportunities and access to capital, as well as regulations relating to competition, foreign investment, immigration, industrial relations, work health and safety, and taxation.

Moving from farming-specific to general regulation

Australian farmers were critical of, what they claim to be, an increasing and excessive regulatory burden. While Australian governments have removed many agriculture-specific regulations in recent decades (in the early 1980s, there were more than 60 statutory marketing boards; today just one remains), over the same period the volume and reach of regulations aimed at addressing environmental and social policy issues increased.

Both the nature and pace of this change is likely to have contributed to the burden reported by farming businesses. For example, the NFF told the Commission that:

In addition to the myriad of local and state government environmental regulations farmers have to comply with on a daily basis, farmers are also regulated by the 1,000-odd page *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) ... Further, as the footprint of environmental laws is extended with new listings – an activity that does not require consent today may require approval if a new listing comes on line. This results in considerable confusion for farmers. (sub. 61 , p. 10)

The NSW Farmers' Association also commented that:

As small business operators, farmers are exposed to a range of regulatory mechanisms. In addition, as landholders they must also comply with numerous environmental requirements, and as food producers there are a number of food safety standards that they must meet. (sub. 72, p. 6)

Most of the concerns about regulatory burdens raised in this inquiry were about regulations that are not specific to the agricultural sector.

1.3 What the Commission has been asked to do

The terms of reference for this inquiry (set out at the beginning of this report) ask the Commission to:

- identify specific areas of regulation that are unnecessarily burdensome, complex or redundant
- identify unnecessary restrictions on competition
- assess whether the current level at which matters are regulated is appropriate and if better coordination across governments would reduce unnecessary overlap
- have particular regard to areas where there is greatest scope to reduce unnecessary regulatory burden and pursue regulatory objectives in a more efficient (least cost) way
- identify priority areas for regulatory reform
- provide recommendations to alleviate regulatory burdens identified.

The scope of the inquiry

For the purpose of this inquiry, ‘regulation’ is defined as any laws or other government rules (such as standards and codes of conduct) that influence or control the way people and businesses behave.

Regulations at all three levels of government that have a material impact on the competitiveness of farm businesses and on the productivity of Australian agriculture were considered in this inquiry. Regulations imposed along the supply chain (including regulations introduced to meet the requirements of international markets) were also examined.

Areas not in scope included:

- related but distinct primary sectors, including fisheries and forestry — regulatory issues affecting marine fisheries and aquaculture are being investigated as part of a separate Commission inquiry
- non-regulatory policies, such as user charges and taxation — these are potentially important for improving the productivity and competitiveness of the agricultural sector but are not regulatory in nature.

This inquiry did not examine the multiple and complex regulatory frameworks associated with water planning or establishing water markets. Following the abolition of the National Water Commission in 2015, the Commission has taken over its review functions. The Commission will look into water policy reform in more depth as part of upcoming inquiries on the progress of the National Water Initiative and on the effectiveness of the implementation of the Murray Darling Basin Plan.

1.4 Our approach to reviewing regulation

A key question for this inquiry was whether regulation, and the way it is implemented, imposed an *unnecessary* regulatory burden. An unnecessary regulatory burden exists when it is possible to achieve the objective of the regulation at a lower cost (including lower compliance and administrative costs and less distortion to the economy).

Some of the ways in which unnecessary burdens can arise include:

- poorly targeted or excessive regulatory coverage — where the regulation covers more activities than was intended or warranted, or where the reach of regulation has become more extensive over time
- redundant regulation — well-designed and implemented regulation can become ineffective or unnecessary with changes in circumstances or technology
- overly complex or prescriptive measures which reduce the flexibility of regulators and those regulated to respond to changing circumstances

-
- heavy-handed regulators, such as those who conduct overly frequent inspections
 - inconsistent or overlapping reporting requirements, either within or between governments, which can generate confusion and extra work for businesses (PC 2007, 2011c).

Regulations can also sometimes have unintended effects and can cause businesses to adjust their production decisions and processes. This can also inhibit innovation and competition or reduce incentives to improve productivity.

Best practice or good regulation achieves worthy objectives at least cost (box 1.2). Regulation should be appropriate (addresses a real economic, environmental or social concern), effective (achieves the objective of the regulation) and efficient (does not impose unnecessary distortions or burdens).

Box 1.2 What is good regulation?

According to the Organisation for Economic Cooperation and Development, good regulation should:

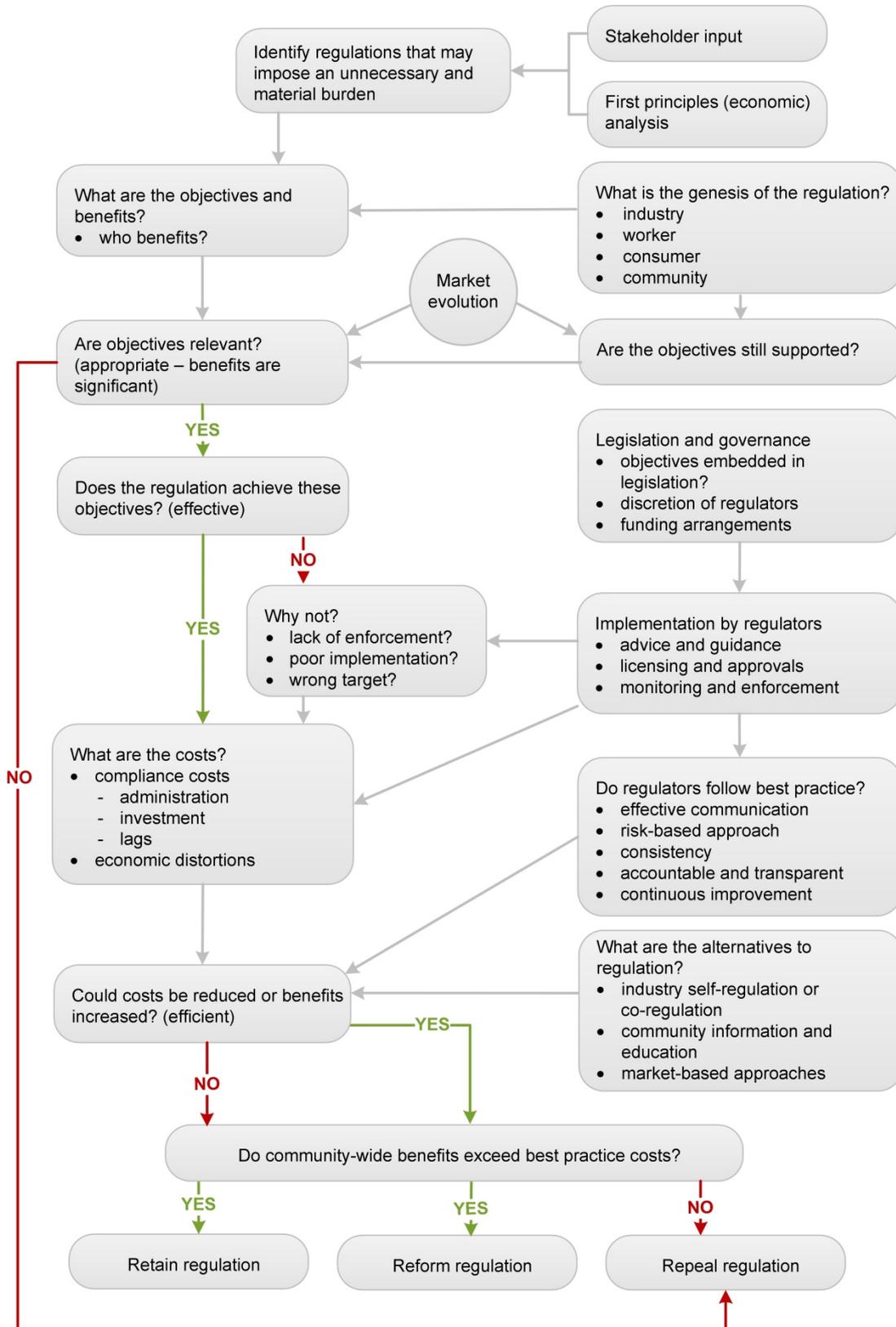
- serve clearly identified policy goals, and be effective in achieving those goals
- have a sound legal and empirical basis
- produce benefits that justify costs, considering the distribution of effects across society and taking economic, environmental and social effects into account
- minimise costs and market distortions
- promote innovation through market incentives and goal-based approaches
- be clear, simple, and practical for users
- be consistent with other regulations and policies
- be compatible as far as possible with competition, trade and investment-facilitating principles at domestic and international levels.

Source: OECD (2005, p. 3).

To identify regulations that impose unnecessary regulatory burdens on the agricultural sector, the Commission asked four questions (figure 1.2).

- What are the objectives of the regulation?
- Are the objectives of the regulation clear and relevant (that is, do the objectives address an economic, social or environmental problem)?
- Does the regulation achieve these objectives (is it effective)?
- Could the costs of the regulation be reduced or the benefits increased (is there a more efficient way to achieve the same objective)?

Figure 1.2 A framework for reviewing agricultural regulation



When reviewing regulation it is essential to revisit the objectives of the regulation — that is, to establish that there is a clear and valid rationale for the regulation. Even if regulation was initially appropriate, changes can occur in markets and technologies and in people’s preferences and attitudes over time which can mean that the rationale for the regulation is no longer valid.

However, an in-principle reason for regulation does not of itself justify regulation (or another policy tool). Because government action involves costs, it is also necessary to demonstrate that the benefits to the community (the difference, compared to the counterfactual, that the regulation will make), outweigh the costs.

Regulation is just one policy option, so the cost-effectiveness of other policy tools must also be considered. It is therefore crucial to ask if the regulations (and the supporting institutional arrangements) are the best solutions. Do they provide a higher net benefit to the community than other feasible options (box 1.3)? And once it has been established that regulation is the best policy tool, it is important to ensure that the regulation achieves its stated policy objectives at least cost to the community.

Box 1.3 Regulation or another policy tool?

Policy makers have a range of options available for achieving policy objectives. These include:

- *Doing nothing* — in some cases the most cost-effective option will be to do nothing, including, for example, when government action is unlikely to change behaviour (or would make it worse), or where the costs of a policy are expected to outweigh the benefits.
- *Information, education and advertising campaigns* — governments can influence the behaviour of individuals and businesses by providing information and advice. The Register of Foreign Ownership of Agricultural Land is an example of governments providing facts to increase transparency and help dispel some myths about foreign investment in agriculture.
- *Financial incentives* — taxes, penalties and government payments influence the behaviour of individuals and businesses. An example is governments buying environmental services (such as native vegetation retention and management) from farmers.
- *Self-regulation, voluntary codes of conduct* — industry formulates rules, standards and codes of conduct, and is responsible for enforcing them. These ‘light handed’ regulatory options can have lower costs and offer more flexibility than government regulation.
- *Co-regulation* — this is a hybrid form of regulation in which industry typically develops and administers particular codes, standards or rules, and the government provides formal legislative backing to enable the arrangements to be enforced.
- *Regulation* — governments prescribe the behaviour it expects from individuals and/or businesses by setting the rules.

Factors that are relevant to the choice of policy tool include: the extent of risk, the severity of the problem and the need for flexibility and certainty.

Sources: Australian Government (2014c); Better Regulation Task Force (2003).

Given the broad scope (and depth) of the regulatory environment affecting farm businesses, the Commission was greatly assisted by inquiry participants to identify specific regulations of concern. The inquiry focused on unnecessary regulations that have a material impact on the competitiveness of farm businesses and on the productivity of Australian agriculture. However, regulations and suggested potential remedies were assessed against providing a net benefit to the Australian community, not just to the agricultural sector.

With only limited quantitative evidence on the costs of regulations, the Commission's views about whether regulations have a material impact were based on judgments about the potential gains to the Australian community from removing or amending regulations. Other factors taken into account included the number of businesses and consumers affected (directly and indirectly) and whether the regulation spanned multiple jurisdictions or agricultural industries.

1.5 Benefits, not just costs, are acknowledged

The agricultural sector openly acknowledged that regulation is critical to its ability to function effectively (box 1.4). The NFF, for example, said it:

... acknowledges the need for effective regulation. Often regulation provides important protections for the business owners, workers, and the community, and sets a minimum level of performance required to meet community standards and expectations. (sub. 61, p. 6)

Australia's biosecurity regulatory arrangements were also highlighted as providing a reputational advantage to Australian farmers and access to premium export markets. Australian Pork Limited, for example, said:

Australia's favourable biosecurity status enables it to produce premium agricultural goods competitively, efficiently and sustainably. Current biosecurity protocols make Australia one of only a few countries that maintains a high disease-free status for pig herds. (sub 36, p. 4)

However, inquiry participants also identified regulations that impose unnecessary compliance and administrative costs on farm businesses and that reduce flexibility, discourage innovation and restrict the use of more efficient production techniques. The Queensland Farmers' Federation, for example, said:

We remain concerned ... that the current excessive amount of regulation acts as a hindrance to productivity and stifles innovation. (sub. 32, p. 2)

The NFF also said:

Each day farm businesses battle through a myriad of burdensome, complex and duplicative regulations which make it difficult for farmers to ensure Australia has an ongoing, reliable and sustainable source of domestically produced food and fibre. (sub. 61, p. 7)

The West Australian Pork Producers Association noted that:

Over time ... the amount of regulation and cross-over between agencies has reached a tipping point where there are incessant calls for reducing 'red tape'. Producers are frequently frustrated by the protracted processes they are confronted with when they want to expand or improve productivity through innovation. Some of these regulations have created uncertainty for investors, over-cautious decision making and excessive time-frames. (sub. 24, p. 3)

Box 1.4 Inquiry participants recognise the benefits of regulation

NSW Farmers' Association suggested that:

While there is often a negative interpretation given to regulatory burden, the Association recognises that many rules and regulations are necessary for the effective operation of business. The task for government is to ensure that regulations foster effective operation and do not compromise the competitiveness of Australian businesses. (sub. 72, p. 6)

WAFarmers said that:

Agricultural producers and growers are not adverse to comply with appropriate regulatory obligations as these are seen as being beneficial to production systems and market access ... WAFarmers recognises the importance of effective and necessary regulation to maintain and uphold the industry's reputation as a producer of safe and nutritious food ... we support comprehensive food standards and regulation across the production and processing chain to ensure the integrity of the industry. (sub. DR226, pp. 1–2)

AusBiotech said that its members:

... recognise that the application of good regulation is critical to build confidence and certainty; it underpins public investment and ensures the competitiveness of Australian agriculture. Ambiguous or absent regulation elevates risk and is a strong barrier to innovation and as a result undermines economic benefit. (sub. 20, p. 2)

Voice of Horticulture recognises that:

... regulation can be of benefit to horticulture where it meets economic, social and/or environmental objectives and is designed and implemented efficiently and effectively. (sub. 42, p. 1)

Australian Chicken Growers Council stated that:

Food safety is critical to the chicken industry, and regulation in this area is necessary to protect consumers and also the reputation of the product and the industry itself. (sub. 51, p. 6)

EDOs of Australia said that:

Environmental laws exist to protect the environment and conserve natural resources in the public interest, for the benefit of all Australians, including farmers. (sub. 60, p. 4)

Vegan Australia submitted that:

Animal welfare regulations are in place to ensure that community expectations for the humane treatment of animals are met. (sub. 25, p. 2)

The cumulative burden of regulation provoked the most comment in consultations conducted on this inquiry. AgForce said:

The regulatory burden within Australian agriculture is effectively a cumulative one; resulting from the impact of many individual regulations of which each regulation, seen in isolation, does not appear to represent a significant imposition. (sub. 17, p. 2)

The Tasmanian Farmers and Graziers Association also said:

It is only when we have the accumulated burden of federal, state, local government and regional council associations that we begin to understand that with four or more layers of competing and often contradictory regulation it becomes near impossible to find an economical way through. When coupled with seemingly minor regulatory imposts, the competitive burden can become overwhelming. The malaise of regulation often leads to developments not proceeding on the basis that it is all too hard. (sub. 16, p. 2)

The Consolidated Pastoral Company, Australia's largest private beef producer (operating 20 stations across Queensland, Western Australia, and the Northern Territory), estimated that it complies with, or takes account of, 327 Acts, regulations and codes (including 46 environmental Acts and regulations across four jurisdictions). It also noted that:

The wide range of laws, regulations and codes, and the complexity of some of these regulatory systems, across not only three tiers of Government but also between the three northern jurisdictions of Western Australia, the Northern Territory and Queensland unnecessarily adds to the cost of doing business for northern beef producers. (sub. 71, p. 3)

The cumulative burden of regulation reflects the diversity of farm activities and the degree to which these activities are regulated. The time and effort required to keep track of regulation also expands when activities or issues are regulated by multiple agencies in different jurisdictions, and when regulations are subject to ongoing change. What this suggests is that reducing even relatively small regulatory burdens could make a difference to farmers.

The cumulative burden can also be compounded when regulatory demands coincide with each other or with the operational pressures of the farm business. The Australian Bureau of Statistics, commenting on the burden of responding to surveys, noted that:

Stakeholders indicated that there were a number of factors contributing to this survey burden – including: the sheer volume of survey requests farmers receive from multiple organisations (both government and industry); the time required to provide a response, which many found too short; the timing of the surveys, particularly where these are received at times of peak business activity; and the cumulative impact of all of those factors. (sub. 59, p. 1)

Previous reviews found a heavy burden of regulation

In 2007, the Commission examined regulatory burdens on the primary sector and found that from the perspective of farmers, mining companies and other primary sector businesses, governments imposed a heavy burden of regulation. The Commission made a number of recommendations to remove or reduce regulation (PC 2007).

In 2013, the Australian Bureau of Agricultural and Resource Economics and Sciences also released the findings of a review of selected regulatory burdens on agricultural and forestry businesses (Gibbs, Harris-Adams and Davidson 2013). The review found that the Australian Government could take action to reduce the unnecessary burden in 8 of the of

the 32 issues investigated and that for a further 4 issues there was scope for the Australian Government to address cross-jurisdictional issues.

A number of studies have attempted to quantify the regulatory burden facing Australian farmers (box 1.5), and found that it can be substantial.

Box 1.5 Estimating the regulatory burden on farm businesses

ProAnd Associates (2016) — *Regulatory costs in the red meat and livestock industries*

This study identified major regulatory costs for different types of businesses in the red meat and livestock industries. These costs included:

- items identified or underpinned in legislation affecting the red meat and livestock industries
- costs to others that are passed on to enterprises in the red meat sector
- non-legislated industry initiatives, whose roles would otherwise be filled by regulation
- industry-imposed costs such as Meat and Livestock Australia marketing and research and development levies
- on-costs, payroll tax, superannuation, training and recruitment costs, leave entitlements, workers' compensation costs and occupational health and safety
- bank charges, utilities and fuel.

For the year 2014-15, regulatory costs were estimated to be about 10-15 per cent of total revenue for beef producers, 16 per cent for sheep producers, and about 4 per cent for the feedlot sector.

Stenning & Associates (2013) — *Measuring red tape: understanding the compliance burden on Tasmanian businesses*

This report used a survey-based method to quantify various regulatory costs incurred by Tasmanian businesses, including:

- time spent on regulatory compliance
- the cost of external assistance to meet regulatory requirements
- delay costs.

For the agriculture, forestry and fishing industry, it was estimated that businesses that employ staff spent 19.9 hours per week meeting regulatory requirements, whereas businesses that did not employ staff spent 3.2 hours per week.

Holmes Sackett (2014) — *A snapshot of the red tape costs on farms in Australia*

This study estimated the cost of complying with regulatory requirements, including:

- overhead expenses, which relate to whole farm management and cannot be attributed to any specific enterprise
- the time cost required for completing red tape related tasks.

This study estimated that grazing farms spent an average of \$24 625 and 16 days per year performing tasks relating to regulatory compliance, while mixed farms spent \$43 935 and 29 days per year.

Sources: Holmes Sackett (2014); ProAnd Associates (2016); TDPIPWE (sub. 62, att. 1).

However, it is important to note that these estimates of regulatory burden do not necessarily equate to ‘unnecessary’ regulatory burdens because:

- the costs calculated were only those which relate to the business administration of regulation (‘red tape’). Other costs incurred by government or relating to the economic distortion of the regulation were not considered
- not all the costs in the estimates were regulatory costs (such as industry-imposed costs and labour-related costs)
- all administrative costs of regulation were included rather than those that were ‘unnecessary’.

That said, quantifying the costs of unnecessary regulatory burdens is not easy. This is in part because some compliance activities are unavoidable or would have been undertaken by businesses in the absence of regulation.

1.6 Conduct of the inquiry

The terms of reference for this inquiry was received from the Treasurer on 20 November 2015. To help interested parties to prepare submissions, the Commission released an issues paper in December 2015. Following the release of the draft report in July 2016, the Commission conducted eight formal public hearings located across several capital cities and regional centres. Hearing transcripts are available on the Commission’s website.

The Commission consulted with farmers and peak industry groups in the agricultural sector as well as with Australian and state government agencies, academics and other interested parties, as well as with their counterparts in New Zealand. The Commission also undertook case studies involving semi-structured interviews with farm businesses in northern New South Wales and southern Queensland (appendix C).

The Commission received 312 submissions, as well as a large number of brief submissions from private individuals and organisations expressing opinions on the regulation of farm animal welfare in Australia. A list of those who made submissions and/or participated in discussions is in appendix A. Submissions are available on the Commission’s website.

The Commission also received a large number of personal responses and views from private individuals expressing opinions on the regulation of Australian agriculture. These are also available on the Commission’s webpage.

2 Land use regulation

Key points

- Land is essential for farming. About half of Australia's land is used for agricultural production, with the majority of land used for livestock grazing on native vegetation.
- Land use regulation is in place to address a range of economic, social and environmental objectives. For land use regulation, the challenge is to promote efficient land use while striking a balance between different uses (including agriculture, residential and resource exploitation) and objectives (such as economic development and conservation).
- Pastoral leases offer less security of tenure than freehold land, which, in principle, can create uncertainty for leaseholders and investors. However, evidence about whether tenure inhibits the ability of farm businesses to raise capital or undertake investments is mixed.
- Restrictions on the use of Crown land hamper the ability of farmers to flexibly respond to environmental, economic and other factors.
- Reforms recommended in recent reviews on Crown land and pastoral leases have the potential to improve security of tenure and land use flexibility for leaseholders and promote the efficient use of, and investment in, land.
 - Restrictions on land use should be removed from pastoral leases and land management objectives should be implemented directly through land use regulation.
 - Prima facie, the conversion of pastoral leases to freehold land will encourage investment and allow land to be put to its highest value use, although there may sometimes be a case for Crown ownership of land.
 - In general, where reforms to Crown land confer additional property rights on a landholder, that landholder should pay the higher value of the land and any costs associated with the change.
- There is a role for governments in promoting the efficient allocation of land rights and the timely resolution of conflicts. However, policies that seek to protect existing land uses as an *a priori* objective are likely to impose a net cost on the community.
 - Conflicts between residential and agricultural land uses should be managed directly through planning regulations, rather than indirectly through 'right to farm' laws.
 - Granting farmers a right of veto over land access by resource companies introduces additional transaction costs to the allocation of mineral rights and is not consistent with facilitating efficient land use.
- Planning and zoning regulations represent a significant source of unnecessary burdens for farmers. The adoption of recommendations from recent reviews of these regulations has been patchy and slow. Regulations often fail to meet their objectives because they are not sufficiently adaptable or targeted for managing agricultural land uses. In many cases, these problems could be addressed by ensuring that regulation is 'fit for purpose' and adopting outcomes-based regulation.

Land is essential for farming and grazing. About half of Australia's land is used for agricultural production, with the majority of land used for livestock grazing on native vegetation, followed by dryland cropping and grazing on modified pastures (2015b). For many farmers, farming land is not only their place of business, but also their home.

Farmers are facing increasing pressures to find more productive and innovative ways to use land in order to keep up with the demand for agricultural products. Land available for agriculture is unlikely to increase over time given increasing competition from other land users, and as a result of land degradation, climate change and water availability (DAFF 2012).

Land use by the agricultural sector has also come under greater scrutiny from the community in recent years as a result of:

- changing patterns of settlement, including increasing residential populations in city fringe (peri-urban) areas that historically were used for agricultural production
- the adoption of intensive farming practices, which can affect the amenity of nearby residential areas
- heightened community concerns about the environmental and animal welfare impacts of farming practices.

There is also increased pressure on regulators to intervene in land use conflicts between farming and other activities. This includes calls for governments to curtail particular land use activities (such as intensive farming) and to protect incumbent farming activities, including through 'right to farm' laws and a right of veto over resource exploration on farming land.

Effective land use regulation is critical to ensuring that land is put to its highest value use, for the benefit of the community as a whole. The highest value use for land varies case by case and, in some instances, not using the land could be the most efficient use of the land. Given Australia's geography, a lot of our land is likely to be best suited to farming or grazing.

The challenge for regulators is to manage the tensions between competing demands for land in a way that facilitates the allocation of land to its highest value use. This includes balancing land use and development against other considerations such as the environment and native title interests. It also involves resolving conflicts between competing land uses, such as agricultural production, resource exploration and residential areas.

This chapter looks at the role of government in land use (section 2.1) and briefly outlines current land use regulations (section 2.2). It then examines the regulatory burdens associated with land use for farm businesses, including those relating to:

- agriculture on Crown lands, in particular pastoral lease arrangements (section 2.3)
- planning, zoning and development assessment processes (section 2.4)

-
- land use conflicts between residential and agricultural developments (section 2.5)
 - land access conflicts between resource and agricultural sectors (section 2.6).

Many of the unnecessary regulatory burdens identified in this chapter can be mitigated by governments ensuring that land use regulations:

- are fit for purpose and directly address the regulatory problem
- minimise transaction costs associated with land use dealings
- allocate landholding costs on a ‘user pays’ basis.

2.1 The role of government in land use

Rights and interests in land are intrinsically legal constructions that rely on government for their recognition and enforcement. When property rights are clear, secure and can be traded freely, they will usually be acquired by those willing to pay the most for them. This, in principle, allows land to be put to its most valuable use, which maximises community welfare (box 2.1).

However, private ownership of land or the private exercise of land rights can sometimes lead to inefficient outcomes and there may be a case for government intervention.

- The way land is used can have spillovers that affect third parties (Rama et al. 2012). A feedlot, for example, can produce noise and odours that reduce the amenity of nearby residential areas (a cost unlikely to be taken into account by the feedlot operator). Regulation can be used to manage this type of ‘externality’.
- Efficient agglomeration (or clustering) of similar land uses may not occur without some form of intervention. Regulation to facilitate agglomeration can result in positive externalities beyond the benefit received by the individual landholder. Examples include transport efficiencies, knowledge spillovers and labour pooling (Krugman, Obstfeld and Melitz 2015).
- Land assets can be overexploited (in the case of common resources, such as forests) or under-provided (in the case of public goods, such as biodiversity values). Regulation can be used to manage the use of common resources and the provision of public goods. For example, development approval processes can help protect native vegetation and biodiversity values, and preserve areas of environmental and cultural significance.

Regulation can also be used to help manage competing uses and users of land (where the benefits outweigh the costs to the community). This can be done by assigning land to a particular use (for example, through land use planning regimes) or facilitating the co-location of different types of land uses (for example, pastoral leases and native title rights can coexist on the same piece of land). That said, land use conflicts cannot be fully eliminated. This is because patterns of settlement and land use are constantly evolving over

time. Nevertheless, regulation can help ensure that effective processes are in place to manage and resolve these conflicts.

Box 2.1 What is the ‘value’ of a land use activity?

The overriding objective of land use regulation is to facilitate land being put to its highest value use. The ‘value’ of a land use refers to the total benefits (positive value) and costs (negative value) of using a piece of land for a particular purpose. The value of a particular land use depends on the parcel of land in question and assessments need to be made on a case-by-case basis. For example, the use of land for conservation is most valuable in areas with high biodiversity values.

Community-wide value

The value of a land use refers to its costs and benefits to the community as a whole. This not only includes the value that accrues to the person using the land, but also accounts for any impacts on third parties or the broader community. This means that the value of a land use is often affected by what adjacent or nearby land is used for. For example:

- the use of land for resource extraction or for industrial purposes is often accompanied by emissions (such as noise and odour), which may affect the amenity of neighbouring properties
- agricultural land use can provide habitat ‘corridors’ for native wildlife, which is an environmental benefit enjoyed by the community as a whole.

More than the monetary value

The value of a land use is not limited to monetary or financial benefits. It also includes non-monetary costs and benefits associated with that land use, such as environmental and social impacts. For example:

- the value of residential land use includes the social benefit of providing people with a place to live and facilitating social communities
- the value of using land for farming not only covers the value of agricultural outputs produced, but also includes the value of the environmental impacts (e.g. degradation of water quality) and social impacts (e.g. contribution to food security) associated with the use of the land.

These impacts can be difficult to identify and quantify, but that does not mean they should be ignored.

Long-term value

The value of a land use should be assessed on a long-term basis. Hence, a moderate-income land use (such as agriculture) may be of higher value than a high-income use that renders the land less productive in the long term (such as resource extraction).

2.2 How is land use regulated?

Private interests in land can be held as freehold, leasehold, or native title (box 2.2). These different forms of land interests are often described as conferring a ‘bundle of rights’ on the title holder, and can include the right to use, transfer, manage or possess land. The precise content of the rights conferred depends on the nature of the land interest in question. Specific legislation or regulations can modify the rights and responsibilities that accrue from holding title in land. For example, environmental and planning laws may restrict a landholder’s ability to undertake certain activities or developments on their land.

State and territory and local governments share responsibility for land use regulation. Land use regulation varies across jurisdictions, but each is underpinned by a land use planning regime that provides an overarching scheme for land use management, and comprises:

- *legislation*, which includes state and territory Acts governing planning, zoning, development assessments and the environment
- *statewide and regional plans, strategies and policies*, which set out objectives and actions relating to the use, development, and protection of land
- *local planning schemes*, which involve land use zoning and development standards, as well as local strategic plans and planning overlays (these are required to be consistent with state policies and guidelines (PC 2011d).

In addition, all jurisdictions have regulation for managing specific land use issues, including those that relate to:

- land tenure, including leases of Crown land (such as pastoral leases)
- the resolution of land use conflicts, including legislation regulating land access by resource companies.

These regulations also interact with Australian government regulation, the most prominent of these being the native title regime (box 2.3).

Box 2.2 Rights and interests in land

Freehold

A freehold (or fee simple) estate is the most complete form of land interest that can be held by a person. It grants a perpetual interest in land and allows the estate holder to deal with the land, including selling, leasing, or mortgaging the land. However, freehold title does not grant absolute ownership of land, as the Crown may withhold certain rights (such as, in Australia, subsurface mineral and resource rights), and the estate holder must comply with laws that can restrict the way the land is used (such as planning and environment laws). Most properties in Australia are held as freehold.

Leasehold

A leasehold estate is created when Crown land is leased to a person or corporation by the government, either for a specified term or in perpetuity. Crown leases are administered at the state and territory level, meaning that leasehold arrangements vary between jurisdictions. Crown leases in each jurisdiction are also typically governed by several different regimes.

In some cases, leasing regimes are tied to the type of land to be leased. For example, in Victoria, leases of reserved forests, Crown reserves and unreserved Crown land are each managed under separate pieces of legislation. Other regimes centre on the identity of the lessee or the purpose of the lease. For example, in Western Australia, different regulatory regimes exist for pastoral leases, leases to Indigenous parties and leases as part of the War Services Land Settlement Scheme. Some regimes are general and not restricted to certain types of land or land uses, such as Crown leases in the Northern Territory and leases under the *Crown Land Management Act 2009* (SA).

Native title

Native title recognises the interests and rights of Indigenous people in relation to land, and can include the right to the possession, use and occupation of land or the right to access land for particular purposes. The native title rights and interests held by particular Indigenous people depend on both their traditional laws and customs, and what interests are held by others in the area concerned. Native title can coexist with other rights and interests in land, such as pastoral leases, on the same piece of land.

The nature of native title varies internationally, as a result of differences in historical, legal and other factors. For example, whereas native title in some overseas jurisdictions (such as Canada, the United States, New Zealand and Norway) is affected or influenced by constitutional or treaty recognition, this is not the case in Australia.

Other mechanisms for land access

Access to Crown land may also be granted through a licence, permit or a *profit-à-prendre*. In general, a licence or permit allows a person to occupy, access or use the land in a specified way. A *profit-à-prendre* gives the holder the right to take natural resources (such as timber and wild game) from the land. Unlike a lease, these rights do not confer an interest in the land and cannot be transferred to another party.

Sources: Australian Trade Commission (nd); Butt (2001); Dow and Gardiner-Garden (1998); Kimberley Land Council (2014); Queensland Government (2015d); VDSE (2012); WA DRDL (nd).

Box 2.3 About native title processes

Native title describes the interests and rights of Indigenous people in relation to land. It can include the right to the possession, use and occupation of land or the right to access land for particular purposes.

The *Native Title Act 1993* (Cwlth) allows for recognition of native title through various claims and mediation processes.

- *Native title determination*: A native title determination is a decision by the Federal Court of Australia that native title does or does not exist in relation to a particular area of land or waters.
- *Compensation*: The Federal Court of Australia may determine that native title holders have the right to be compensated because native title has been extinguished in whole or in part, or because governments plan to undertake acts that extinguish native title in the future.
- *Future acts*: Activities occurring after 1 January 1994 that affect native title ('future acts') are governed by the future act regime. Future acts can include the making or amendment of legislation, or the grant or renewal of licences and permits, such as those for resource exploration and extraction. This regime specifies what future acts are permitted, the procedures to be followed before the future act can be done, the effect that the act will have on native title, and whether compensation will be payable for interference with native title rights.
- *Indigenous land use agreements (ILUAs)*: An ILUA is an agreement between a native title group and others about the use and management of land and waters. ILUAs allow people to negotiate flexible and pragmatic agreements to suit their particular circumstances. An ILUA can be negotiated and registered whether there is a native title claim over the area or not. When registered, ILUAs bind all parties and all native title holders to the terms of the agreement.

Sources: Australian Government (2015e); Kimberley Land Council (2014); National Native Title Tribunal (2011, 2015).

2.3 Agriculture on Crown land

A significant proportion of agricultural activity takes place on land that is leased from the Crown. Across Australia, the predominant form of agricultural leasehold is pastoral leases — this is where Crown land is leased for the purpose of grazing livestock on rangelands. Pastoral lease arrangements exist in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory. They make up approximately:

- 36 per cent of land in New South Wales
- 52 per cent of land in Queensland¹
- 34 per cent of land in Western Australia

¹ Includes pastoral holdings, grazing homestead perpetual leases and grazing homestead freeholding leases.

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- 40 per cent of land in South Australia
 - 45 per cent of land in the Northern Territory (Australian Government 2015e; South Australian Government, sub. 57; Queensland Government 2013b; WA DoL 2015a).

Pastoral leases are generally situated in the arid and semi-arid regions and tropical savannas (PC 2002).

The rationale for leasehold land

Pastoral lease arrangements were initially established in the mid-18th century to manage early pastoral occupation while preserving future government options for land allocation and use (Holmes 2000; PC 2002b). Over time, the policy objectives of pastoral leases have changed (box 2.4). In the past two decades, pastoral leases have been used as ‘instruments for the delivery of emergent national policies on Indigenous land rights, on sustainability in resource use, on biodiversity protection, and on facilitating non-pastoral enterprises and interests’ (Holmes 2014, p. 428). Pastoral leases continue to facilitate the cultural objective of retaining grazing as a form of land use.

Box 2.4 Pastoral leases and policy instruments

The policy objectives of pastoral leases have shifted over time. Holmes (2000) identified six key phases in the development of New South Wales legislation underpinning pastoral lease arrangements, with similar trends occurring in other jurisdictions.

1. 1847 – 1861: Pastoral leases provided temporary low-cost access for early pastoralists while preserving future options on land allocation and use.
2. 1861 – 1884: Pastoral leases were used as a means for ‘unlocking the land’ and facilitating closer settlement.
3. 1884 – 1950s: Pastoral leases were used to facilitate even closer settlement, with the sequential, managed subdivision of pastoral leases into family-sized holdings.
4. 1950s – 1970s: Pastoral leases had no clear policy function. New South Wales tinkered with the system and responded to lessees’ concerns about tenure upgrading. Rents were reduced and other concessions were made.
5. 1980s – 1996: Pastoral leases were used as a mechanism for encouraging sustainable use and the conservation of biodiversity, with controlled public access and the emerging use of rangeland monitoring.
6. 1997 – present: Pastoral lease management evolved to account for the recognition of native title claims and the practicalities of coexisting titles.

Sources: Holmes (2000); PC (2002b).

In some cases, pastoral leasehold also facilitates the co-location of native title and non-Indigenous property rights. This is because, unlike freehold land, a grant of a pastoral lease over Crown land does not necessarily extinguish native title (*Wik Peoples v The State*

of *Queensland* (1996)). In this way, Crown leasehold is an essential instrument for maintaining the continued coexistence of native title rights and agriculture.

Key concerns relating to pastoral lease regulation

The main concerns raised in this inquiry about pastoral lease regulation were that:

- pastoral leases offer less security of tenure than freehold land, which can create uncertainty for leaseholders and investors (making it potentially more difficult or expensive to obtain finance)
- pastoral lease conditions restrict the use of land for non-pastoral activities and additional approvals are often required to undertake these activities.

The Western Australian Government, for example, in light of the restrictive conditions imposed by pastoral leases, questioned whether pastoral leases continued to be the right form of tenure:

While pastoral leases may have an important role historically in the agricultural development of the regions concerned, they may not necessarily be the most appropriate instrument in the more volatile market conditions which now typify most agricultural industries. In part, this may be due to the restrictive nature of the land tenure. (sub. 54, p. 10)

Similar concerns were raised in recent reviews of pastoral leases (Australian Government 2015e; CSIRO and JCU 2013; NSW Government 2013, 2014a, 2014b, 2015b; QSDIIC 2013; WA DRDL 2011; Western Australia Public Administration Committee 2014). In its White Paper on Developing Northern Australia, the Australian Government pointed to the importance of removing restrictions on pastoral leases:

Much more of the land across the north can potentially be used for a variety of agriculture projects ... Removing unnecessary restrictions imposed on pastoral leaseholds will help to unlock the potential of this land, to the benefit of pastoral leaseholders, including Indigenous leaseholders and the Australian economy in general. (2015e, p. 35)

A number of jurisdictions have proposed or are implementing reforms to their lease arrangements (box 2.5).

Lack of tenure security can create uncertainty

Previous studies in this area found security of land tenure to be a key concern for many pastoral leaseholders, due to the uncertainty it creates for land users and other investors (CSIRO and JCU 2013). Uncertainty can arise as a result of short lease terms (box 2.6) — for example, while WA legislation allows for a term of up to 50 years, some leases were granted for as little as 18 years (Western Australian Government, sub. 54). There can also be uncertainty about lease renewal and extensions — for example, lease renewal provisions in Western Australia and Queensland include clauses that may allow part or all of an expiring term lease to be resumed for public purposes, such as conservation reserves.

Box 2.5 Recent developments in pastoral lease regulation

- In New South Wales, proposed reforms include allowing certain perpetual pastoral leases to be converted to freehold. The NSW Government has also indicated that it intends to revise the list of activities permitted on pastoral leasehold land.
- In Queensland, changes to the pastoral lease arrangements now allow for rolling leases for grazing, agricultural and pastoral purposes for terms of up to 50 years. Other reforms include simpler arrangements for converting leases to freehold titles, and revised rental arrangements on term leases.
- In Western Australia, the Rangelands Reform Program has proposed the introduction of a new type of leasehold, the Rangelands Lease. This lease will allow land to be used for a wider range of purposes including tourism, Indigenous land management practices, grazing, horticulture and broad scale agriculture.
- In the Northern Territory, amendments to the *Pastoral Land Act* in 2014 allow permits to be granted for up to 30 years for non-pastoral use on less than half of all pastoral leasehold land. This includes uses such as horticulture, aquaculture, tourism and forestry.

Sources: Australian Government (2015e); NT DLRM (2015); Thynne Macartney (2014); WA DoL (2015b).

Box 2.6 Lease tenure in Australia

Across Australia, pastoral leases are issued as either term leases or perpetual leases:

- A term lease is a lease that is issued for a defined period of time. Term leases may be renewed or extended, although there is no guarantee that renewal or extension will be granted.
- A perpetual lease is a lease that is granted in perpetuity and therefore does not require renewal or extension (provided that lease conditions are met). Perpetual leases for pastoral purposes are not granted in all jurisdictions.

State	<i>Term lease</i>		<i>Perpetual lease</i>	
	Initial term	Renewal or extension	Term of renewal or extension	Availability
NSW	Up to 40 years	At any time	Up to 40 years	Yes
Qld	Up to 50 years	In last fifth of lease or, for rolling leases, during the last 20 years	Up to 50 years	Yes
SA	42 years	Rolling 14-year term	14 years	No
WA	Up to 50 years	During last ten years	Up to 50 years	No
NT	Up to 25 years	Before last year	Up to 25 years	Yes

The process for lease renewal or extension of term leases varies across jurisdictions. Renewals or extensions are usually subject to certain land management conditions being met by the lessee. By contrast, in South Australia, each lease is subject to assessment by the Pastoral Board every 14 years and, subject to meeting certain land management conditions, the lease is extended by 14 years to maintain the original term of 42 years.

Sources: PC (2002b); Queensland Government (2015d).

Evidence presented to this inquiry on the practical implications of leasehold tenure was mixed. Some participants argued that a lack of tenure security can make long-term investment less attractive, and that uncertainty around lease renewal and extensions can make it difficult for farm businesses to obtain financing (GrainGrowers sub. DR247; Larry Acton, sub. 55; Western Australian Government, subs. 54 and DR285).

Other participants said that the form of land tenure can be a barrier to capital investment, but identified the main impediments to improved productivity as ‘inflexible conditions of use, ... increasing annual rents and cumbersome and expensive processes to convert to freehold tenure’ (NFF, sub. DR216, p. 16; WAFarmers, sub. DR226, p. 3).

While noting that pastoral leases may no longer be the right form of tenure, the Western Australian Government (sub. 54) said that pastoral lease tenure per se is not an issue for most financial institutions. Other factors, such as risk and the ability to repay loans, were said to be more important determinants of the ability to secure funding (WA DoL 2013). The Ag Institute of Australia also expressed doubt that the length of lease terms had any practical implications for security of tenure:

Given the length that pastoral leases are normally granted for (typically 40+ years), the suggestion that this results in less security for the leaseholder is spurious. Major investments in the form of pastoral leases are held by large public (e.g. AACo) and private companies (e.g. Jumbuk Pastoral Company, NAPCo, Minderoo); overseas investors are keen to participate. (sub. DR182, p. 13)

Similarly, the Australian Property Institute said that uncertainty associated with lease renewals was overstated:

There is a pattern there of more or less automatic renewals, and so that’s something that the rural lending areas of the banks and financial institutions are fully aware of. (trans., p. 152)

The South Australian Government also said:

There is no evidence to suggest that the system of pastoral lease tenure in South Australia limits open market transfers of pastoral leases compared with other forms of tenure. Pastoral lease terms are for a maximum of 42 years but there has been a number of examples in recent years where properties with less than 28 years remaining on their leases have been purchased at high market value. (sub. DR295, p. 4)

Restrictions in pastoral leases can impede land use diversification

In general, pastoral leases require land to be used for a specific purpose, with limited scope for activities unrelated to the pastoral (or agricultural) use of land, including ecotourism and conservation. The permitted uses of land under pastoral leases in different jurisdictions are summarised in table 2.2.

Table 2.2 Permitted land uses for pastoral leases

	<i>Pastoral^a</i>	<i>Agricultural</i>	<i>Related uses^b</i>	<i>Other uses</i>
NSW: <i>Western Lands Act 1901</i>	✓	✗	✗	✗
QLD: <i>Land Act 1994</i>	✓	✓	✗	✗
SA: <i>Pastoral Land Management and Conservation Act 1989</i>	✓	✗	✗	✗
WA: <i>Land Administration Act 1997</i>	✓	✗	✓	✗
NT: <i>Pastoral Land Act 1992</i>	✓	✗	✓	✗

^a Refers to the grazing or pasturing of stock. ^b Permits certain activities undertaken as supplementary or ancillary to the primary pastoral use, including agricultural and horticultural activities and tourism.

Sources: PC (2002b); WA DoL (nd).

Past inquiries into rangeland management found that improved access to diversification options can help increase investment (WA DRDL 2011). The ability to diversify can also give farm businesses the flexibility to adapt to changing market conditions and other environmental factors (Limestone Association of Australia, Inc., sub. DR152). That said, not all land is suitable for diversification, as land can sometimes only have one viable use.

Reforming pastoral leases

Recent reviews (including those outlined in box 2.5) identified a number of reforms to improve pastoral lease arrangements. Each jurisdiction faces a unique set of considerations when regulating pastoral land, such as environmental factors and the prevalence of native title claims. As a result, regulation that is appropriate for one jurisdiction may be ill-adapted to the circumstances of another — there is no one-size-fits-all approach to reforming pastoral lease arrangements.

Extending the length of leases

Security of tenure for leaseholders can be improved by:

- extending the term of leases: in its *White Paper on Developing Northern Australia*, the Australian Government proposed increasing the term of leases to 99 years (Australian Government 2015e)
- introducing rolling leases or creating rights of renewal: recent reforms to the Queensland pastoral lease regime now allow for rolling leases for grazing, agriculture and pastoral purposes for terms of up to 50 years (Queensland Government 2015d). The Western Australian Government is also currently pursuing reforms that would ‘provide pastoral lessees with certainty that their lease will be renewed for the same terms and conditions, provided lessees are able to demonstrate compliance with the terms of their pastoral lease and the *Land Administration Act 1997*’ (Western Australian Government, sub. 54, p. 11)

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- converting term leases to perpetual leases: in New South Wales, the Western Lands Advisory Council has deemed that ‘perpetual leases are appropriate and effective in limiting damage to sensitive rangelands’ (NSW Government 2014b, p. 25).

The Commission supports reforms that extend the terms of leases. These reforms will increase the security of tenure for leaseholders and help to facilitate investment in the agricultural sector.

Streamlining land use restrictions

Productivity gains could also be made by removing land use restrictions in pastoral leases (Australian Government 2015e; CSIRO and JCU 2013). For example, the removal of land use restrictions can improve land use flexibility and encourage a wider range of investment in the area.

Many jurisdictions are in the process of reforming their regulatory arrangements to allow or facilitate land use diversification, including expanding the list of activities permitted on pastoral leasehold land (box 2.5). The Commission supports efforts to remove land use restrictions in pastoral leases where practicable.

Some current restrictions, such as stocking requirements, are in place to ensure that land management objectives are met. There is scope to streamline pastoral lease conditions by implementing these objectives directly through land use regulation, rather than through pastoral lease conditions. Some participants expressed concern that this would lead to a degradation of land management practices on leasehold land, such as overgrazing (Environmental Farmers Network, sub. DR174). However, the removal of land management conditions from leases is not intended to reduce or eliminate land management requirements; rather, those requirements should be contained in land use regulation (including primary and delegated legislation). This would also improve the transparency of land use management and could reduce the cost of administering pastoral leases.

However, there may be some exceptions where it is preferable to implement conditions through the lease instrument. This includes conditions that are impractical to implement through regulation, such as where the condition is specific to a small number of leases or varies between different leases. In other instances, it may be preferable to implement a condition through the lease if doing so improves compliance or enforceability.

RECOMMENDATION 2.1

Land management objectives should be implemented directly through land use regulation, rather than through pastoral lease conditions. State and territory governments should reform land use regulations to enable the removal of restrictions on land use from pastoral leases.

Alternative forms of leasehold

One approach to facilitate non-pastoral land use is to change its tenure — that is, to convert all or part of a pastoral lease to a different form of lease, such as a Crown lease or commercial lease. The availability of different forms of leases varies between states and territories. Jurisdictions should ensure that processes for converting a pastoral lease to other forms of tenure are not unduly burdensome.

Jurisdictions should also consider whether new or additional forms of tenure are an appropriate way of improving land use flexibility for leaseholders. For example, in Western Australia, a proposed ‘rangelands lease’ would allow land to be used for ‘multiple and varied uses’, provided the use is ‘broad scale and consistent with the preservation and ongoing management of the rangelands as a resource’ (WA DRDL 2011, p. 8). The new rangelands lease regime would operate alongside the pastoral lease regime.

Conversion of pastoral leases to freehold land

In some jurisdictions, leaseholders (in some instances) can apply to convert their pastoral lease to freehold land. For example, in Queensland, perpetual leaseholders (but not term leaseholders) may apply to convert their lease to freehold land (*Land Act 1994* (Qld) s. 166). In general, the purchase price is calculated on the basis of the unimproved value of the land, plus the market value of commercial timber on the land belonging to the state (Queensland Government 2016).

Respondents to the NSW Crown Lands Legislation White Paper said that pastoral leases (including term leases and perpetual leases) are disadvantageous to graziers relative to freehold land (NSW Government 2015b). The majority of Western Lands lessees who made a submission to the Crown Lands Legislation White Paper supported the conversion of perpetual leases to freehold land and some argued that developers were more reluctant to invest in leasehold land (NSW Government 2015b).

The Australian Government recently stated that ‘pastoral leaseholders should have the ability to apply for broader, more secure and tradeable forms of tenure, including freehold, in a manner that complies with the [*Native Title Act 1993* (Cwlth)]’ (Australian Government 2015e, p. 37).

However, a number of participants stressed that leaseholding is not inherently ‘inferior’ to freeholding (Australian Property Institute, trans., p. 146; Centre for Ecosystem Science, sub. DR200; NSWFA, sub. DR161). For example, the NSW Farmers’ Association said that the majority of leaseholders in the Western Division were satisfied with leasehold tenure, especially in light of the cost of converting to freehold:

The majority of leaseholders in the Western Division are happy with their leasehold status, but some would like more flexibility with their covenants ... This cost of conversion for most grazier leases would be far greater than the cost of converting a cultivation or agricultural lease due to the sheer size of most grazier leases, which make up the majority of the Western

Division in NSW. As such, the costs are likely to far outweigh the benefits of conversion in most cases. (sub. 72, p. 8)

Crown leasehold may also be socially beneficial where it facilitates coincident land use. For example, pastoral leases can facilitate the continued coexistence of native title rights and agriculture, and preserve public access to land (Centre for Ecosystem Science, sub. DR200).

To account for this, the conversion of pastoral leases to freehold should (and does) occur on a voluntary basis, giving pastoralists the option to continue under leasehold tenure. Conversion applications should also be (and are) assessed on a case-by-case basis by government, with the government retaining the power to deny or impose conditions on applications.

Principles for reform to Crown Land

Reforms to Crown leases should aim to promote more efficient land use. Prima facie, allowing the conversion of pastoral leases to freehold land would encourage investment and allow land to be put to its highest value use. However, in some instances, it may be appropriate for the Crown to retain ownership of land, including where other land interests exist or alternative future land uses are envisaged, such as native title rights or transport corridors.

Reform should only proceed if there are net benefits. Assessing net benefits involves weighing the benefits of reforming pastoral lease arrangements against any costs of doing so. These costs include any loss of value to other parties (including native title holders and the public) as well as any procedural and administrative costs associated with implementing those reforms (for example, resolving conflicting interests in the land). The net benefits of any particular reform will depend on the circumstances of the jurisdiction in question, including geographical factors and how property rights are currently allocated.

Reforms that allow the transfer of value from other parties to leaseholders will need to consider issues such as compensation or payment. Where a reform confers additional property rights to leaseholders, there will be a transfer from government (on behalf of the community as a whole) to the leaseholders.

As a general rule, the recipient of any additional property rights should bear the opportunity cost of that allocation. This is because aligning the incidence of the costs and the benefits of property rights helps ensure that their allocation is efficient and that land is put to its highest value use. By contrast, changes to regulations or policies generally that affect the value of existing property rights, typically do not call for compensation (PC 2001b).

This suggests that a leaseholder whose tenure is extended or converted to freehold should pay the market value for that extension or conversion. In addition, the beneficiaries of the

reform should be responsible for any loss of value to other parties as well as any procedural and administrative costs associated with that change:

In principle ... the beneficiary of the broader tenure should be responsible for the costs of conversion, including potential native title compensation. This ensures that moves to broader tenure happen where the economic gains are greatest and consistent with native title interests. (Australian Government 2015e, p. 38)

That said, the efficient allocation of property rights could be hindered if the prices that landholders currently face are distorted. For example, if a freehold estate can be purchased at market value, but pastoral lease rent payments are set well below market price, the incremental cost of converting to freehold will be artificially inflated. In this case, a leaseholder may be unwilling to pursue conversion even if freeholding is more efficient than leaseholding. For this reason, state and territory governments should align rent payments with the market value of the pastoral lease.

There are, however, some challenges with putting this principle into practice. For example, in some instances, the market value of a lease may be difficult to determine empirically, particularly if there is insufficient information about the market or where there is only one prospective purchaser for the lease. In addition, governments will need to carefully consider how quickly to implement changes (such as phasing in changes to rent payments) and how to manage the transition process, particularly where the incumbent leaseholder's existing rent payments are significantly below market value.

RECOMMENDATION 2.2

State and territory governments should:

- ensure that, where reforms to Crown lands confer additional property rights on a landholder, the landholder pays for the higher value of the land and any costs associated with the change (including administrative costs and loss of value to other parties)
- set rent payments for existing agricultural leases to reflect the market value of those leases, with appropriate transitional arrangements.

Native title processes

In some parts of Australia, changes to current land uses may be constrained by native title interests. Reforms to pastoral lease regulation may also trigger native title processes as a 'future act' (box 2.3).

Some participants noted that native title interests can constrain changes in land use (AgForce, sub. DR246; Limestone Association of Australia, subs. 48 and DR 152). Others said that native title processes are complex, lengthy and costly (Consolidated Pastoral

Company, sub. 71; NFF, sub. 61; NTDPIF, sub. 67; Sheepmeat Council of Australia and Cattle Council Australia, sub. 88, attachment; Western Australian Government, sub. DR285). For example, the National Farmers' Federation said:

In some instances, consideration of native title claims has taken decades, and remains unresolved. Of the claims that remain unresolved a substantial number involve disputes with overlapping claims or the composition of the claim group. (sub. 61, p. 8)

Native title processes can be burdensome for farm businesses and regulators. However, native title processes recognise legitimate interests in land and are essential to ensuring that those interests are given due weight in land use decisions. Native title processes are also inherently complex (Australian Property Institute, sub. 66), especially given the nature of the evidence that must be considered.

Participants provided very little evidence about the extent to which the regulatory burden imposed by native title processes is *unnecessary*. In particular, participants did not provide specific examples of instances where proponents had incurred unnecessary costs as a result of the current regulatory arrangements. And, while some participants called for reform or proposed specific amendments to the *Native Title Act 1993* (Cwlth) (Consolidated Pastoral Company, sub. 71; NFF, sub. 61; NTDPIF, sub. 67; Western Australian Government, sub. DR285), there was little discussion of what regulatory shortfalls these reforms should or would address.

The Australian Government has undertaken to improve native title processes for farm businesses and Indigenous Australians. In its *White Paper on Developing Northern Australia*, the Australian Government outlined plans to:

- improve the efficiency of native title processes through the COAG's Investigation into Indigenous Land Administration and Use
- finalise all current native title claims within the next ten years
- invest \$10.6 million in pilot land tenure reform projects, to be developed in consultation with investors, Indigenous Australians and other stakeholders
- invest \$20.4 million to better support native title holders to engage with potential investors (Australian Government 2015).

2.4 Planning, zoning and development assessment

Planning, zoning and development assessment processes underpin the management of land use across Australia and play an important role in balancing the social, environmental and economic impacts of development.

State and territory governments have primary responsibility for planning and development activities within their jurisdictions. State planning frameworks set out the general principles for planning and development, and lead agencies engage in broad strategic land

use planning and guide more detailed, regional and local plans. In most jurisdictions, land use planning at a local level and development assessments are devolved to local governments, but consistency with state-level instruments is required and there is significant scope for improvements in this area.

Concerns about planning and zoning regulation and development assessment and approval processes are not new. The Commission has previously undertaken a number of studies in this area (PC 2011d, 2012b, 2013a, 2014e). Many of the concerns raised in this inquiry were in line with those raised in previous reviews. These include concerns about:

- unnecessarily complex regulation and processes
- the time and cost associated with development assessment processes
- prescriptive and over-restrictive regulation
- poorly designed or targeted regulations.

(Concerns relating to environmental regulations affecting land use, such as native vegetation regulation and its implementation, are discussed in chapter 3.)

Most state and territory governments have recently conducted, or are conducting, major reviews of their planning and zoning regulations. However, progress implementing the recommended reforms has been patchy and slow.

Previous Commission studies have also identified an increase in the stated objectives for planning, zoning and development regulation over time (PC 2011d). This has led to an ‘objectives overload’ and regulatory objectives that are unclear and conflicting (PC 2011d, 2012b, 2013a). For example, the Victoria Planning Provisions states two conflicting objectives for the Farming Zone:

- to ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture
- to encourage the retention of employment and population to support rural communities (Animal Industries Advisory Committee 2015).

It is difficult to assess the efficiency and effectiveness of regulation when regulatory objectives are poorly articulated or inconsistent.

Complexity of land use regulation and duplication of processes

The complexity of land use planning arrangements and duplication of regulation between different levels of government was a key concern for participants. The NSW Farmers’ Association said that ‘poor regional planning is a result of excessive compliance [requirements] combined with a lack of strategic planning’ (sub. 72, p. 7). The National Farmers’ Federation (2013b) also argued that there is ‘planning overload’ across multiple jurisdictional levels and across different policy areas. The regulatory framework for

planning, zoning and development assessments is complex. The Commission's Planning, Zoning and Development Assessment report described the regulations and agencies in this area as 'one of the most complex regulatory regimes operating in Australia' (2011d, p. xxvi). The report also noted that:

By its very nature, the task of planning and zoning land to enable those land uses which will optimise the welfare of communities and the nation is complicated and is becoming more so ... A large number of policy agendas impact on planning and zoning considerations ... The inherently challenging features of this task include: positive and negative impacts on others (such as on neighbourhood character, traffic congestion, air and sound pollution), insufficient or 'asymmetric' information; future generations not being part of decisions that ultimately will impact on them; and conflicting outcomes of different stakeholders so that the costs of reaching community consensus on objectives are high. (2011d, pp. xx–xxi)

The task for planners is also expected to become more complex over time, in light of issues such as population growth, congestion, changes in environmental (including biodiversity) pressures and regulations, the continuing need to adapt to climate change and growing community expectations that they will be consulted on changes in their neighbourhood.

Coordination across different levels of government

Participants called for better coordination across the different levels of government. The Australian Chicken Growers Council said there was 'a strong case for a common set of guidelines for use in all state and local government areas' (sub. 51, p. 4). The Australian Forest Products Association also advocated for:

[T]he Federal Government to work with other jurisdictions (state and local government) to both review landscape management approaches across tenures and apply an improved holistic landscape management approach, where multiple values are actively managed, incorporating collaborative action across land tenures and managers. (sub. 11, p. 8)

While some state-level standardisation of land use regulation is desirable, this must be weighed against the advantages of administering planning and zoning regulations at the local level. In particular, local administration and enforcement may give greater flexibility for regulations to be appropriately adapted to suit local social, economic and environmental needs, especially where the consequences of decision making are borne by the local community. This is in line with what is known as the 'subsidiarity principle': that decisions should be made by the lowest level of government capable of considering all costs and benefits, provided that it has sufficient resources and capacity to do so (box 2.7).

However, in many instances, local governments are not adequately resourced to undertake the activities within their legislative remit (PC 2012b). A number of participants also suggested that local government does not have the skills or staff to deal with planning applications.

Box 2.7 **The subsidiarity principle**

‘Subsidiarity’ is the principle that decisions should be made by the lowest level of government capable of dealing with the issue. The reason for this is that smaller local governments have specific knowledge and expertise relevant to their communities (such as decisions about development approvals), and that knowledge can be used to assess the competing interests at stake at a lower cost, thereby maximising net welfare of the local community.

Whether a particular level of government is the right decision maker depends on a number of factors.

- *Whether it is capable of considering all costs and benefits.* Decisions are best made at a local level when their impacts are contained within that area. A decision is unsuited for local determination if its effects are felt outside the relevant local government area. This is because the local decision makers tend to act in the interest of their constituents, rather than the broader community.
- *Whether it is sufficiently resourced.* Proper decision making requires the relevant government body to be adequately resourced. This includes ensuring adequate staff and skills to properly assess the decision, as well as to deliver, monitor or enforce the outcome of the decision-making process.

Source: PC (2012b).

Australian Pork Limited, for example, said:

Local councils are often ill-equipped to deal with land planning applications. A lack of understanding of intensive land use such as piggeries exacerbates this situation. Many local councils have lost corporate knowledge and lack sufficient training and staff resourcing. (sub. DR282, p. 2)

One option for mitigating resourcing constraints is service sharing. For example, the Rural Council Planning Flying Squad program provides services to rural and regional councils across Victoria, on matters including major projects and developments, long-term land use issues and strategic plans, as well as providing immediate planning support (VDTPLI 2016). There is scope for greater adoption of service sharing, so that local governments can better achieve the scale and skills required for discharging their responsibilities.

Inconsistencies at the local government level

Inconsistent planning requirements between different local government areas was another area of concern. The Victorian Farmers Federation (2014a) said that such inconsistencies can make it difficult for farmers to understand their obligations under both planning and environmental law. To address this issue, reforms are underway in Tasmania that will see the introduction of a single planning scheme for the state (TDoJ 2015).

To some extent, these inconsistencies arise from the variation in local communities across Australia — differences in local issues and values can sometimes merit different regulatory approaches.

However, regulation at a local level can make arm's length decision-making difficult, especially in small communities. For example, Australian Pork Limited said that 'community pressure on council staff and councillors is also resulting in local councils becoming overly conservative, avoiding taking an informed position as this leads to community repercussions' (sub. DR282, p. 2).

Outcomes at the local government level can also be susceptible to bias, especially if decision makers are affected by the issue under consideration. The Australian Chicken Meat Federation, for example, suggested that outcomes of development applications are based on particular prejudices of local governments.

There are significant inconsistencies between local councils in the interpretation of planning requirements for similar operations, and the time, difficulty and success in obtaining approval varies between states and local councils. Under the current arrangements the outcomes of development applications often appear to depend on the particular bias of local authorities towards (or against) chicken meat production rather than the merits of the particular application. This has the effect of distorting which chicken companies are able to expand and which not, and contributes to the movement of location of chicken production from where it is most efficient to operate to where it is easiest to do business. (sub. 40, p. 2)

Concerns about regulator attitudes and behaviour are discussed further in section 2.5.

Length and costliness of development assessment processes

Development application processes, which are primarily the responsibility of local governments, can be complex and time consuming (PC 2013a). Farmers can also be required to complete multiple applications in order to obtain approval for a single development (Retailer and Supplier Roundtable Ltd 2014).

Many participants expressed frustration with the extensive delays, costliness and complexity of processes associated with obtaining development approvals (Australian Chicken Growers' Council, sub. 51; Australian Chicken Meat Federation; sub. 40; Australian Property Institute, sub. 66; Burdekin Shire Council, sub. 35; Cordina Farms, sub. 64; NFF, sub. 61; TFGA, sub. 16).

The main costs involved in obtaining a development approval include: preparing, submitting and providing supporting material, fees and charges, and the holding costs associated with the time taken to obtain planning approval (capital holding costs arise where businesses must pay interest on borrowed funds).

As highlighted by the Australian Chicken Meat Federation, for some regulatory requirements businesses engage external consultants and the costs can be considerable.

The costs of progressing a [development application (DA)] for a poultry farm are substantial. In states where odour modelling in support of a DA is required, the up-front consultancy costs associated with the preparation of a DA can start at \$50 000-60 000 by the time the Environmental Impact Statement has been prepared (including the cost of odour dispersion modelling). Depending on feedback, consultancy fees of the order of \$100,000 can easily be incurred simply in preparing the DA ... If a DA goes to court, the cost could be upwards of \$250 000 for the appellant alone. (sub. 40, pp. 2–3)

In addition to adding to the costs of development approvals, these costs can act as a disincentive for development or investment. The Australian Chicken Meat Federation also argued that high costs of approval can create incentives for overinvestment or overdevelopment in certain areas.

Once a site is identified which has a prospect of success, the emphasis of the developer is often on making the most of the opportunity by maximising the size of the farm put on it, and defraying the cost of the DA process over a greater production capacity. (sub. 40, p. 3)

Incentives to overdevelop can exacerbate negative spillovers from farming, such as emissions and environmental impacts. This can heighten conflicts between agricultural producers and neighbouring residential areas (section 2.5).

Prescriptive regulation

The prescriptiveness of development requirements and building codes was raised by groups representing farmers. The National Farmers' Federation, for example, argued that these regulations were inadequate or ill-adapted to agricultural developments, although in some cases there were 'exemptions for a range of agricultural ... structures' (sub. 61, p. 8). One farmer that the Commission interviewed said that zoning practices and requirements were out of touch with how land was used in practice (box 2.8).

Box 2.8 Case study: a farmer's experience with zoning regulations

The Commission interviewed the co-owner of a large vegetable processing business that has evolved from a much smaller single farm operation over the past 25 years. The business's large, high-tech processing facility stands on land that is zoned as agricultural land. The owners of the business are seeking to have the land rezoned as commercial land, so that they can borrow against it.

The business has been in protracted negotiations with local government over rezoning the site for some time. The council has requested a range of changes to the facility and surrounds to meet the standards set for commercial properties in urban settings. The farmer said that many of these changes are impractical or prohibitively expensive to implement.

Source: Productivity Commission case study interviews (appendix C).

In addition, Cotton Australia (sub. 23) said that local governments' one-size-fits-all approach to agricultural and urban developments is inappropriate, citing the example of a

planning approval for a farm shed that was held up for weeks because the application did not deal with how the spoil from the footing excavations would be disposed. According to Cotton Australia, the total spoil amounted to two truckloads, and the work was being conducted on a 40 000 hectare farm, offering plenty of opportunity for sensitive disposal of generated material.

The Australian Chicken Meat Federation questioned the requirements for water storage and hydrants for fire brigades.

New poultry sheds are required to comply with a range of costly infrastructure additions that have no or negligible impact on the safety of the operation. The most contentious issue in the 2016 Code is the requirement for water storage and/or hydrants for fire brigades. The types of fire that may occur on poultry farms tend to fall into two categories — one that can be extinguished by the farmer immediately and very rapidly (normal farm infrastructure would include a water supply to each shed which could be used by the farm staff to contain any spread of a fire) or one in which the affected shed is totally engaged and on the point of or has collapsed within 10 minutes of ignition. In the latter case, fire brigade response time would need to be less than 10 minutes for intervention to have any impact, and there is therefore little value in having storage tanks and hydrants for use by fire crews, and the requirement for these becomes an unnecessary cost and complication ... The cost of complying with these requirements is substantial. (sub. 40, p. 2)

Overly restrictive and prescriptive land use regulation can act as a deterrent to investment and operational expansion, particularly for small producers (Fitzgerald 2015). There has been little recent reform to address the prescriptive land use regulation affecting farm businesses, the exception being reforms in Victoria (box 2.9).

Box 2.9 Reforms to rural zones in Victoria

In 2013, the Victorian Government announced a series of reforms to rural zones in response to suggested improvements raised over several years by many industry bodies, local governments and members of the community. The reforms include:

- making most agricultural uses 'as of right' in most rural zones instead of requiring a planning permit
- removing permit requirements for farming-related development such as netting and crop support structures
- allowing for the sale of farm produce without the need for a planning permit and removing restrictions on the sale of processed produce
- removing the prohibitions on complementary business uses in some zones, such as landscape gardening supplies
- reducing or removing permit limitations in the Farming Zone and Rural Conservation Zone relating to tourism uses, enabling applications to be considered on their merits in order to encourage tourism.

Source: VDTPLI (2013).

Poorly targeted regulation

Some regulations fail to achieve their intended policy objectives. In some cases, this is because regulatory measures are not appropriately adapted to achieving their purpose. Tropical Pines, for example, pointed to regulation designed to protect the agricultural industry in Queensland that had the opposite effect.

When we investigated the planning laws it became clear that we won't be able to gain planning approval due to the Rural Industries Code. That code, which is state government legislation, will not permit the construction of a packing facility on Class A or Class B agricultural land. The stated purpose is to protect agricultural land. Our argument is that if we are unable to build a packing facility to support the packaging and sale of fruit for 12 farmers in the area, then that could be very detrimental to the long-term sustainability of the industry in that region. In other words there is no point in protecting agricultural land if farmers are prevented from packing and selling their fruit in a coordinated manner that provides them with a good farm-gate return and a sustainable farming business. (sub. 39, p. 5)

Some participants said poorly formulated regulation arose from a lack of understanding of agricultural land use, especially in relation to peri-urban areas and hobby farms (Nillumbik PAL, sub. DR159; Small Farm Stuff, sub DR102). For example, Ag Institute of Australia said:

Strategic planning for land use and access has traditionally been urban-centric with emphasis on residential, commercial and industrial land uses. There is a need in rural and peri-urban regions to ensure appropriately qualified agricultural practitioners are included in the development of land use strategies resulting in balanced, evidence-based land use plans. (sub. DR182, p. 4)

In other instances, regulation was thought to be ineffective or inadequate for addressing the perceived problem, particularly in relation to the definition of intensive farming, which can trigger the requirement to obtain additional planning or environmental approvals. Intensive farming is characterised by high levels of capital and labour relative to land, and can result in heightened public concern about environmental impacts (chapter 3) and animal welfare (chapter 5). It can be difficult to draw the line between intensive and traditional agriculture, especially as the intensity of a particular activity can vary over time due to drought. The definition of intensive farming varies between jurisdictions (box 2.10).

Participants identified the current arrangements in Victoria as being especially problematic. For example, the Australian Food Sovereignty Alliance said:

The current definition [of intensive animal husbandry] in Victoria is based on importing 50% of animals' nutritional needs. This is clearly inadequate, and does not helpfully distinguish between different systems and their impacts, be they environmental, social or welfare impacts. In Queensland, the definition for pigs is 21 standard pig units (SPU) – again divorced from actual land capacity assessments. (sub. 27, pp. 4-5)

Similarly, Australian Dairy Farmers said:

Australia's dairy industry is largely, but not exclusively, based on animals grazing pasture for all or part of the year. Different state definitions for 'intensive' or 'extensive' farming create different triggers for permit requirements and regulatory compliance burdens. Some of these definitions (for example in Victoria) are particularly restrictive for what current agricultural businesses would classify as normal dairy production practices. (sub. 63, p. 3)

Box 2.10 Differences in the definition of intensive farming

Victoria

In Victoria, intensive animal husbandry is defined as 'land used to keep or breed farm animals, including birds, by importing most food from outside the enclosures'. In *Yarra Ranges SC v Happy Free Range Pty Ltd*, the Victorian Civil and Administrative Tribunal determined that the relevant 'food' was the overall food needs of all the livestock on the land, bearing in mind the 'real and substantial purpose for which the land is used'. Also, the proportion of imported food should be determined according to the nutritional needs of the livestock, rather than the volume or weight of the food consumed. (In that case, the imported food was the primary source of nutrition for the animals and was not used for emergency or supplementary feeding.)

Queensland

The Queensland Planning Provisions defines intensive animal husbandry as 'premises used for the intensive production of animals or animal products in an enclosure that requires the provision of food and water either mechanically or by hand'. These provisions form the standard planning scheme provisions for all local governments in Queensland. In contrast to Victoria, this definition ties intensive farming to *how* food and water is provided, rather than its source.

Sources: *Yarra Ranges SC v Happy Free Range Pty Ltd* [2015] VCAT 1053; QDILGP (2016).

In support of this, in a report to the Yarra Ranges Council, Ag-Challenge Consulting said:

The definition of intensive animal husbandry may be too broad to reflect the different environmental and amenity impacts that would occur with different levels of intensity that are implemented in these enterprises. The definition should be reviewed to reflect the differing systems ... (2014, p. 42)

The Victorian Government acknowledges that 'the current land use definitions for animal husbandry operations are no longer adequate' (2016, p. 12).

The Victorian Animal Industries Advisory Committee (2016) recently undertook an inquiry into, amongst other things, the adequacy of the definition of 'intensive animal husbandry' in Victoria. The Committee recommended the adoption of more specific definitions for known intensive animal production systems (such as hatcheries, piggeries and cattle feedlots). Even so, it noted the need to retain generic definitions to cover intensive animal production systems that are not individually defined, and made recommendations for clarifying these definitions. These recommendations were broadly supported by the Victorian Government (2016).

The Committee also recommended developing contemporary Codes of Practice for all intensive farming systems and intensive supplementary feeding. The Committee said:

Codes provide all parties involved in the design, development, assessment and approval of intensive farms with a clear set of standards and requirements that aim to mitigate environmental and social impacts. They serve to provide more certainty and consistency in the planning assessment and approvals process for new developments, and provide a structured basis for assessment and verification of the ongoing compliance with appropriate operational standards. (2016, p. 50)

In response, the Victorian Government has undertaken to develop a general Code of Practice that will set out general principles applicable to the planning and operation of a range of animal industries. This will be complemented by industry-specific technical guidelines that detail the planning, design, construction, operation and management requirements for each relevant animal industry (Victorian Government 2016).

Leading practices should be adopted

The Commission has previously identified a number of leading practices for improving land use planning regulation. These include:

- clear, consistent and coherent regulatory objectives and policies
- broad and simple land use controls to reduce red tape, enhance competition, help free up urban land for a range of uses and give a greater role to the market in determining what these uses should be
- risk-based and electronic development assessment
- statutory timeframes for referrals, structure planning and rezoning
- undertaking periodic reviews to ensure that regulatory agencies have the necessary governance frameworks, resources, capacity and skills to efficiently administer their functions (PC 2011d, 2012b, 2013a).

Adopting these leading practices would improve transparency, efficiency and accountability. However, in the area of planning, leadership from state and territory governments is important, particularly to guide local government planning and development (and improve consistency in approaches across planning systems). Important in this regard are strategic land use plans that are integrated across different levels of government and different government departments and agencies.

Transparency and accountability could also be improved by making publicly available information on council decisions relating to planning applications. Community confidence in local government planning decisions and processes could also be improved through periodic independent auditing of assessment decisions and processes.

While there is no ‘silver bullet’ for reforming land use planning regulation, these leading practices address many of the unnecessary regulatory burdens faced by farm businesses —

especially in terms of streamlining regulation and processes. Of course, the success of reform efforts also depends on the way in which reforms are implemented.

However, some regulatory burdens are unique to, or have a greater impact on, the agricultural sector. This includes regulations that fail to meet their regulatory objectives because they are not sufficiently adaptable or targeted for managing agricultural land uses, such as building codes and the classification of intensive agriculture (as discussed above). These issues could be addressed by ensuring that regulation is fit for purpose and outcomes-based rather than prescriptive.

Fit-for-purpose regulation

Land use regulations and policies affecting farm businesses can be improved by ensuring that they are fit for purpose. Fit-for-purpose regulation should be:

- *targeted* — the scope of the regulation (that is, who or what the regulation applies to) should be clear and appropriate for addressing the regulatory problem
- *evidence-based* — there should be an apparent and demonstrable connection between the content of the regulation and the regulatory objective
- *proportionate* — the burden imposed by the regulation on government agencies and the public should not be disproportionate to the regulatory outcome achieved.

Ensuring that regulation is fit for purpose can help confine the incidence of regulation, reduce unnecessary regulatory burdens and limit unintended consequences. Governments should also undertake periodic reviews of regulation to ensure that they are, and remain, fit for purpose over time. As discussed above, participants identified regulations relating to rural zones and intensive farming as areas of particular concern.

Outcomes-based regulation

In many cases, the overly restrictive nature of land use regulation affecting farm businesses could be mitigated by preferring outcomes-based regulation (PC 2013a). This includes regulations that require farmers to achieve certain performance standards or outcomes, without prescribing how to do so or proscribing certain land uses or activities. For example, reforms to zoning regulations in Victoria now allow a broader range of complementary land uses to take place in rural zones, subject to certain standards being met (box 2.9).

Outcomes-based regulation can also give landholders flexibility and control over how they use and manage their land, while ensuring regulatory objectives are met. This can allow regulatory problems to be addressed efficiently and at least cost.

However, outcomes-based regulation may not be appropriate where outcomes are too difficult or costly to quantify or monitor. For example, the Animal Industries Advisory

Committee noted that an outcomes-based definition of intensive animal husbandry would be difficult to implement because ‘it attempts to classify uses based on information that is often simply not available at the time of the application: the use’s actual impacts’ (2016, p. 44). Similarly, if outcomes-based regulation does not give landholders additional choice or flexibility (for example, if there is only one way of achieving a regulatory outcome), it may not be appropriate to regulate based on outcomes.

2.5 Conflicts between farming and residential land use

Conflicts between agricultural and residential land uses have heightened over time by rural fragmentation, subdivision and urban encroachment, particularly in peri-urban areas (NSWFA, sub. 72; QFF, sub. 32; Western Australian Government, sub. 54). These factors have led to increased conflict between primary production and residential land use over matters such as noise, smell, and use of agricultural sprays (PIRSA 2013). The Australian Food and Grocery Council observed:

Many agri-food plants operate continuously and can therefore produce noise, light, odour and heavy vehicle movements at all times of the day and night. This often results in a conflict between ongoing operation of the agri-food industry and the amenity sought by new residents. (sub. 28, p. 11)

Similarly, Canegrowers noted:

We have instances where significant areas of land are becoming unsuitable for farming because of urban encroachment and other land use issues. Growers are continually being harassed for burning, not burning (trash), dust, chemical complaints, harvester noise etc. (sub. 22, p. 3)

And Australian Pork Limited said:

Land use conflicts are an increasing concern in peri-urban regions where urban expansion encroaches on productive farming land. New peri-urban residents often lack an understanding of farming practices, particularly of intensive animal industries. Consequently, intensive farms like pig farms, that have existed without objection for many years and decades, can find themselves attracting new or renewed (and at times unwarranted) attention. In particular, developments requiring local council permits may become a focus for community concerns unrelated to the development, for example animal rights. (sub. DR282, p. 1)

Land use conflicts can also arise as a result of changes in agricultural production methods, such as intensification. Sometimes, land use conflicts are accompanied by other issues — for example, intensive farming could raise environmental concerns for nearby residents, or a hobby farm may pose a biosecurity risk for nearby farm businesses. Some examples of land use conflicts between agricultural and residential uses are discussed in box 2.11.

Box 2.11 Examples of land use conflicts

Blackmore Wagyu Farm

Established in 1998, the Blackmore Wagyu cattle farm is located in Alexandra, within the Murrindindi Shire Council in Victoria. Blackmore Wagyu's beef is exported to 20 countries and is highly acclaimed locally and internationally.

In 2011, Blackmore Wagyu abandoned the use of feedlots, in favour of grazing cattle on its 150-hectare property. As a result, neighbouring residents and businesses raised complaints about increased odours, noises and birds in the area. In response to these complaints, the Murrindindi Shire Council required Blackmore Wagyu to apply for an intensive beef husbandry permit, but ultimately denied the application for a permit. Blackmore Wagyu is currently contemplating relocating its business.

Manilla Broiler Chicken Farm

In July 2014, Tamworth Regional Council approved Baiada's \$82 million development proposal for 70 broiler chicken sheds in Manilla. At peak capacity, the sheds would house almost three million chickens.

Residents in the area appealed to the New South Wales Land and Environment Court to have the approval struck down. The application cited a number of concerns, including noise, road safety, health concerns including respiratory illness, and impacts on water supplies and nearby farms. In April 2016, the Court refused the application on the basis that the development was 'acceptable on its merits', saying that concerns about emissions would be satisfactorily addressed by the proposed mitigation measures outlined in the conditions of consent.

Sources: ABC (2015a, 2015c, 2016).

How farm businesses are affected

While agricultural land use can affect the amenity of nearby residential areas, urban encroachment can also negatively impact farm businesses. For example, the Australian Chicken Meat Federation said:

Urban and lifestyle block encroachment onto traditional (or zoned) rural areas creates significant problems for the chicken meat industry, which to remain viable needs to operate in 'clusters' of a sufficient number of growing farms supplying to a processing plant that is within a reasonable transport distance of the plant. (sub. 40, p. 4)

Some participants said that land use conflicts were often resolved in favour of residential land users (Alan McKenzie, sub. DR.114; Australian Chicken Growers' Council, sub. 51; Australian Chicken Meat Federation, sub. 40; NT Farmers, sub. 8; Voice of Horticulture, sub. 42). Voice of Horticulture pointed out the following example of regulatory measures affecting output:

Some councils, like Yarra Valley in Victoria, have imposed limits on the use of tree crop netting that is visible from roads as it is perceived to decrease the rustic amenity of

day-trippers. However, netting is an essential risk mitigation measure and it is unreasonable for councils to impose these types of restriction. (sub. 42, p. 6)

However, proximity to population centres can also benefit farmers as it improves access to infrastructure, labour and amenities, as acknowledged by the Australian Food and Grocery Council:

Intensive agriculture such as feedlots and horticulture operations are often located close to population centres due to access to labour, energy (electricity, gas), water and transport links. Food processing facilities are often located close to population centres for the same reasons. (sub. 28, p. 11)

NT Farmers also noted that population growth in farming areas brought ‘increased focus ... on the north through initiatives such as the Federal Government’s Northern Australia development agenda’ (sub. 8, p. 1).

The ‘right to farm’

A number of participants expressed support for a ‘right to farm’ (Australian Chicken Growers’ Council, sub. 51; Australian Chicken Meat Federation, sub. 40; Canegrowers, sub. 22; Canegrowers Innisfail, sub. DR119; Grain Producers Australia; sub. DR201; NSW Farmers, sub. DR161).

Some participants emphasised the economic importance of farm businesses in supporting nearby residential areas. For example, the Australian Food and Grocery Council said:

The agri-food sector is often a key employer and driver of economic activity in an area, particularly a regional area. As a key economic asset in an area, established agri-food facilities should have priority in local planning policies. (sub. 28, p. 11)

Some participants also argued that purchasers who had notice of nearby agricultural activity should be given less opportunity for complaint. The Australian Chicken Meat Federation said:

The expectation should be that if you buy into these areas, they are for genuine agri-business, and there should be reduced opportunity for complaint against established and reasonable industry practice. (sub. 40, p. 4)

However, participants had differing views about how regulation or regulators should support the right to farm.

- Some participants considered the right to farm to be a form of social licence, on the part of regulators and the community, in favour of agricultural production (Centre for Ecosystem Science, sub. DR200; VFF, sub. DR189).
- Others saw value in implementing the right to farm in legislation (Canegrowers Innisfail, sub. DR119; NSWFA, sub. DR161), although there was no consensus about what form that regulation should take.

The right to farm can also be expressed in government policies that specifically express support for agricultural production. For example, the NSW Department of Primary Industries recently released a *Right to Farm Policy*, which expresses support for producers' right to farm, to the extent of what is lawful, echoing the *Right to Farm Policy* put forward by the Greater Hume Shire Council in 2012 (Greater Hume Shire 2012; NSW DPI 2015b).

'Nuisance shield' laws

Where agricultural activity affects the amenity of residential areas, a private mechanism for resolving these conflicts is through civil lawsuits. A claim of nuisance, for example, could result in a farmer being banned from engaging in or being required to pay damages for certain activities.

In Northern America, a common type of legislation designed to protect the right to farm is 'nuisance shield' laws, which are intended to protect farmers from nuisance complaints related to the continuance of their existing activities. With the exception of Tasmania, such laws have not gained much traction in Australia (box 2.12). In Tasmania, the *Primary Industries Activities Protection Act 1995* protects farmers from law suits in nuisance for certain activities that are incidental to efficient and commercially viable primary production.

Box 2.12 Prevalence of right to farm laws

Nuisance shield laws

Laws barring nuisance actions originated in the United States, with the first laws passed in 1963 in Kansas. The main purpose of these was to grant immunity to farmers from nuisance lawsuits brought by neighbours who were adversely affected by agricultural activity. By 1994, all states in the United States had enacted right to farm laws and similar laws are in place in all Canadian provinces.

In Australia, only Tasmania has 'nuisance shield' legislation. Like its Northern American counterparts, the *Primary Industries Activities Protection Act 1995* (Tas) was introduced to:

... specifically stop the common law action of nuisance being used to prevent farmers pursuing the normal, legitimate and statutorily authorised activities which form a necessary part of good agricultural practices. (TDPIPWE 2014b, p. 9)

Other approaches to 'right to farm'

In Western Australia, an Agricultural Practices Disputes Board was instituted by the *Agricultural Practices (Disputes) Act 1995*. The legislation was subsequently repealed due to the very limited number of disputes to resolve.

In Victoria, the *Sale of Land Act 1962* previously provided a general warning to purchasers about amenity impacts of surrounding agricultural activities. In 2014, this section was deleted, and replaced with a checklist that real estate agents must make available to buyers.

Sources: Griffith (2015); TDPIPWE (2014b).

Very few participants expressed support for laws barring nuisance actions from being brought against farmers specifically (NSWFA, sub. DR161; TFGA, sub. DR281). The majority of respondents acknowledged that such a law would not be a panacea for land use conflicts and that it would be difficult to formulate a single law that did achieve a ‘right to farm’ (NFF, sub. DR216; NSWFA, sub. DR161; VFF, sub. DR189). The Tasmanian Government also said:

Tasmania’s ‘right to farm’ legislation is only one of the regulatory mechanisms through which the Tasmania Government seeks to protect agricultural activities from encroachment. (sub. DR287, p. 2)

Participants to this and other inquiries also questioned whether right to farm legislation addresses a legitimate economic, environmental or social concern, or delivers a net benefit to the community. Ag Institute Australia said, ‘the terminology of “right to farm” is inflammatory and is often used to promote farming ahead of all other uses’ (sub. DR182, p. 5). Voiceless said:

Voiceless opposes the implementation of ‘right to farm’ laws or other regulations that seek to bypass community consultation, participation and objecting in the planning system, and more generally elevate the status of farming above other lawful land uses. (sub. DR166, p. 2)

And NSW Young Lawyers Animal Law Committee said:

The Committee appreciates that agricultural activity is important to both the Australian economy and local economies. However, this general proposition is (i) true of many industries in Australia and (ii) not necessarily true in respect of every instance of agricultural land use. (sub. DR284, pp. 3–4)

Similarly, in its submission to the review of the *Primary Industry Activities Protection Act 1995* (Tas), Environmental Defenders Office Tasmania argued that the law ‘elevates the economic value of farming above all other considerations’ (TEDO 2014, p. 1). Prioritising incumbent land uses is not appropriate because, as the Western Australian Government said, ‘the “appropriateness” of land use can change over time’ (sub. 54, p. 5).

There is also little evidence to demonstrate the prevalence of nuisance actions resulting from land use conflicts. In its submission to the Review of the Primary Industry Activities Protection Act, the Tasmanian Environmental Defenders Office stated that it was only aware of one instance where the legislation had been applied: *Williams Davies v Devonport City Council* [2002] TASRMPAT (TEDO 2014). (Although, as noted by the NSW Farmers’ Association (sub. DR161), the paucity of legal actions may result from the deterrent effect of the laws themselves.) Similarly, between 1995 and 2011, an Agricultural Practices Disputes Board was in place in Western Australia, but had very few disputes to resolve (eight in total) (Griffith 2015; NSW DPI 2015b).

It is also unclear whether restrictions on nuisance actions reduce the number of claims relating to agricultural land use conflict, given the availability of other forms of legal redress. As the Tasmanian Environmental Defenders Office observed:

Given the availability of other legal actions that are not restricted by the [Primary Industry Activities Protection] Act, including civil enforcement proceedings for an environmental nuisance under the *Environmental Management and Pollution Control Act 1994*, nuisance actions under the *Local Government Act 1993* and common law trespass, it is questionable that the [Primary Industry Activities Protection] Act has any significant impact in reducing claims in relation to farming activities. (TEDO 2014, p. 2)

Land conflicts should be addressed through the planning system

In principle, an effective regulatory regime would see land go to its highest value use. The highest value land use will depend on the circumstances of each case, such as the characteristics of the farm business and the residential area, and the magnitude of the nuisance. A policy that seeks to protect a certain land use by virtue of its incumbency risks generating a net cost to the community. This is especially the case if the magnitude of the nuisance changes over time (for example, due to new methods that enable an increase in the volume or intensity of production). In these instances, the highest value land use could change.

Nuisance actions protect the ‘right of private enjoyment’ from disturbance from many types of land uses — including business, manufacturing and other residential uses — and there is no principled reason why agricultural activity per se should be exempted. The availability of nuisance actions also does not prevent farm businesses from negotiating with neighbouring residents to allow the nuisance to occur. This could involve negotiating compensation or measures (by either party) to mitigate the nuisance.

In general, regulation that directly targets the regulatory problem is preferable to regulation that indirectly implements policy objectives. This helps reduce any unintended consequences of regulation and promotes regulatory transparency. For this reason, the Commission considers that nuisance shield legislation is not an appropriate mechanism for managing land use conflicts, as its function is to preclude a legal remedy, rather than to address the source of the conflict. As such, the Tasmanian Government should repeal the *Primary Industry Activities Protection Act 1995*.

RECOMMENDATION 2.3

The Tasmanian Government should repeal the *Primary Industry Activities Protection Act 1995*.

The Commission also considers that these land use conflicts would be more effectively addressed through improvements to the planning system (section 2.4). (Similarly, where

land use conflicts are accompanied by other issues — such as concerns about environmental impacts, biosecurity and animal welfare — these issues should be regulated directly, rather than through the vehicle of land use regulation.) Planning tools for managing land use conflicts could include:

- the development of clearly defined, forward looking land use plans that are tailored to different regions, which may help to manage rural fragmentation, avoid land use conflicts and mitigate the need for regulation (Griffith 2015; QFF 2015b)
- buffers between different land uses, in the form of separation distances or physical barriers (box 2.13)
- programs to educate prospective purchasers of rural living allotments about the realities of farming practices so as to avoid nuisance complaints at a later date (PIRSA 2013).

Box 2.13 **Buffers**

One way of managing land use conflicts is through buffers between different land uses, in the form of separation distances or physical barriers (such as vegetation). Buffers can be used to manage a variety of land use ‘spillovers’, including chemical spray drift, odour, noise, dust, smoke and ash, and sediment and water run off (QDNR and QDLGP 1997). Ordinarily, the landholder undertaking the new or encroaching land use is responsible for providing the buffer (SA EPA 2007; WA DoH 2012).

Many state and local governments have guidelines for recommended buffers, which provide technical guidance for determining the appropriate size and nature of a buffer for different types of emissions (NSW DPI 2007; QDNR and QDLGP 1997; SA EPA 2007; WA DoH 2012). However, it is not appropriate (or effective) for regulation to prescribe minimum buffer requirements for all situations, so as to allow the nature, frequency and magnitude of the relevant emissions to be taken into account (Australian Food Sovereignty Alliance, sub. 27).

Buffers are not a panacea for managing land use conflicts and should be used in conjunction with other planning tools (such as land use strategies and zoning) and regulations relating to the source of the emissions (NSW DPI 2007; SA EPA 2007). This is because buffers are costly to implement (for example, separation distances can waste productive land) and may not be the most appropriate or efficient mechanism for addressing particular land use conflicts.

Calls for a right to farm arise from broader concerns

In many cases, calls for a ‘right to farm’ arise from broader concerns about land use regulation. For example, the Victorian Farmers’ Federation said:

Farmers are frustrated by increasing regulation that impacts on their ability to farm sustainably and profitably. ‘Right to farm’ as a concept is born out of this frustration. (sub. DR189, p. 5)

In the main, these concerns are related to frustrations with planning and zoning regulation, which can be overly-prescriptive, poorly targeted, and not appropriately adaptable or targeted for managing agricultural land uses (section 2.4). These problems can arise from, and be exacerbated by, inadequate resourcing, capacity or skills on the part of local

government. As the Commission has previously found, many local governments lack the resources to undertake their regulatory functions effectively, with high vacancy rates in local government for town planners and building inspectors (PC 2012b).

Participants also raised concerns about how land use regulation is implemented and regulator attitudes towards agricultural land use, especially on the part of local government. For example, Alan McKenzie pointed to a lack of understanding about the needs of rural communities.

[I]t is almost impossible to build new modern premises ... outside a town area because TOWN planners see it as their duty to protect every square metre of farming country from inappropriate development. (As judged by them.) In many cases it has to be said that these enterprises need to be situated outside town areas due to the size of the machines they are handling in cropping areas. Once again we see URBAN trained planners having no idea about the needs of the rural communities and more particularly farming. (sub. DR114, p. 1)

Nillumbik PAL raised concerns about biases against farm businesses on the part of local government.

The process of peri-urbanisation is poorly understood and policy and planning initiatives are not underpinned with a solid theoretical basis. In the Nillumbik area this lack of theoretical understanding is compounded by a reluctance to meaningfully consult with the community. Council action borders on the negligent in its pursuit of an ideology which is based heavily on its own personal desires for this peri-urban area to remain unchanged in their image of it as a rural oasis for wildlife and tourists. (sub. DR159, p. 4)

Similarly, the Victorian Farmers' Federation said that discretionary powers were exercised in a manner that was adverse to farm businesses.

The VFF is aware of a recent example where a Local Council issued a litter abatement notice (s45ZB of Environment Protection Act) due to a complaint about mud on a local road in winter. The farm was an operating dairy and there had been significant rain over the preceding four weeks. A litter abatement notice is discretionary and should consider whether the litter was an 'unavoidable consequence of a lawful activity'. At the same time there was extensive mud on an urban road near the Council offices. (sub. DR189, p. 5)

Local government decisions relating to agricultural land uses can be problematic if they conflict with state-level strategic plans or land use policies. As noted above, coordination and consistency between state, regional and local plans is essential to good governance in land use planning (PC 2011d). But it is also important that state and local governments are 'on the same page' about broader land use policy and priorities. This is particularly crucial where the success of those policies depends on how they are implemented at the local level.

To this end, state governments have an important role to play in:

- considering what responsibilities should be devolved to local government and how those responsibilities should be framed

-
- ensuring that local governments are adequately resourced to perform those regulatory functions
 - clearly communicating with local government about land use policy and priorities.

2.6 Conflicts over land access for resource exploration and extraction

In recent years, high global demand for resources has led resource companies, particularly gas companies, to seek access to agricultural land, sometimes in conflict with farmers.

In 2013, the COAG Standing Council on Energy and Resources endorsed the Multiple Land Use Framework as a response to current and emerging land access and use issues. Its principles include coexistence and the maximisation of the social, economic and environmental values of land use (SCER 2013b). Although the framework specifies several guiding principles to promote a consistent approach to planning and policy development by state and territory governments, it is ‘at the complete discretion of jurisdictions to determine the scope of their individual framework and the nature in which they will implement it’ (SCER 2013a, p. 2).

In recent years, governments have also sought to take greater account of environmental, public health and agricultural risks when considering exploration and extraction licences. In 2015, the Australian Government released its Domestic Gas Strategy to provide a framework for responsible development of gas resources, ensuring that decisions are based on science and research (Department of Industry and Science 2015). It also contains principles for coexistence with agriculture and protection of farmers’ rights (box 2.14).

Box 2.14 Domestic Gas Strategy: principles for coexistence with agriculture

1. Access to agricultural land should only be done with the farmer’s agreement and farmers should be fairly compensated.
2. There must be no long-term damage to water resources used for agriculture and local communities.
3. Prime agricultural land and quality water resources must not be compromised for future generations.

Source: Department of Industry and Science (2015).

Participants raised concerns about laws that prioritised mineral and gas exploration over agriculture, with many stressing the importance of ensuring that resource exploration and extraction is not undertaken at the expense of the agricultural industry (Agforce, sub. 17; Andrew Rea, sub. 9, sub. DR309; Cotton Australia, sub. 23; EDOs of Australia, sub. 60).

How farm businesses are affected

In Australia, mineral rights are held by the Crown rather than privately (box 2.15). As a result, the Crown can grant exploration or extraction licenses to companies without a landholder's consent, subject to compliance with regulatory requirements and prohibited areas (Chen and Randall 2013; Hepburn 2011). When it does so, it authorises the licensee to exercise certain rights held by the Crown, including the right to access those minerals. In her submission to the Senate inquiry into the Landholders' Right to Refuse (Gas and Coal) Bill 2015, Professor Hepburn explained:

[T]he rights of the resource title holder may be accompanied by an express or implied access entitlement to access the resource by crossing the land. The private landholder is bound to uphold this entitlement and cannot deny the rights of the State in this context. The state is the absolute owner of the land. The state has reclaimed ownership of the resource. The tenure framework gives the State the power to disaggregate those resources and reclaim them. Access to the resource is a necessary consequence of resource ownership. Access entitlements may be constructed as an express requirement of the resource title or, pursuant to expressly conferred ancillary rights or, as a right which is implied and necessary. (Hepburn 2015, p. 5)

Box 2.15 Property and mineral rights in Australia

Ownership of resources

In many common law jurisdictions, there is a presumption that all minerals on or beneath the surface of the land belong to the landholder, with the exception of royal metals (gold and silver) (*Commonwealth v New South Wales* (1923) 33 CLR 1). In Australia, this rule has been modified by legislation in each of the states and territories, which vests the ownership of minerals in the Crown. By contrast, mineral rights in the United Kingdom and the United States are generally held in private ownership.

The ownership of resources by the Crown 'is grounded in the core assumption that the state is the appropriate owner of the resources because it has the capacity to ensure that those resources are properly utilized for the common benefit of all citizens' (Hepburn 2015, p. 2).

Allocation of exploration and production rights

A claim, lease or licence that grants the holder the right to explore for resources or undertake production is referred to as a 'tenement'. The three main forms of tenement are exploration licences, retention leases and production licences. A tenement is usually limited in time, and may be renewed or relinquished at its expiry (subject to certain rules and requirements).

In Australia, three main mechanisms are used to allocate exploration licences.

- First come first served: Exploration rights are allocated to the first party to apply.
- Cash bidding: Rights are granted to the party offering the highest cash bid.
- Work program bidding: Interested parties specify the activity they intend to undertake and the relevant authority decides which to accept based on how well the work programs meet regulatory and other policy objectives.

Sources: SECLC (2015); Hepburn (2015); PC (2013b, 2015c).

The effect of resource extraction on the land

Resource exploration and extraction can be intrusive and cause degradation of the surface land and underlying water sources. Peter Flanagan said:

It is about crop and pasture farmers versus coal seam gas miners. The government and the law say they can coexist, the farmers say they cannot. The issues are about pollution to or excessive use of water supplies and degradation of the land. The farmers say they do not wish to lose their land and the miners say they only want access to a bit of it. Neighbouring farmers say if the aquifers are damaged by too much water being removed or pollution introduced, then their livelihoods are at stake. (sub. DR107, p. 4)

Similarly, the Victorian Farmers' Federation said:

Whilst mining, unlike urbanisation, does not take the land permanently out of production, a mineral extraction licence may have short- to long-term impacts on productivity (ability to farm) or on the productive quality of the land post-mining (has the soil quality, aspect, drainage changed?). (sub. DR189, pp. 6–7)

In some instances, this can cause 'irreparable damage to the long-term productive capacity of the land' (NSW Farmers' Association, sub. DR161, p. 8). For example, in New South Wales, opal mining at Lightning Ridge resulted in collapses and serious structural instability of the surface land, leading to concerns by landholders about stock welfare, safety and damage to the environment (NSW DPI 2013b). In response to environmental and health concerns, the Victorian Government recently announced a permanent ban on the exploration and development of all onshore unconventional gas in Victoria, including hydraulic fracturing and coal seam gas (Andrews 2016). A five-year moratorium (beginning 2015) on hydraulic fracturing is also in place in Tasmania (Tasmanian Government, sub. DR287).

Land access negotiations

Nevertheless, licence holders must negotiate land access agreements with the landholder, sometimes involving payments of compensation. This is because:

Landholder rights relate to the use of the surface of the land. However access to those mineral rights often means infringing on the rights of the landholder. Therefore negotiation between the owner of the mineral rights and the landholder rights takes place such that the infringement on the rights is appropriately compensated. (AMEC 2013, p. 8)

In practice, most conflicts between agriculture and resource companies are resolved through negotiated agreements about the conditions of access, with compensation payable to the landholder (PC 2013b). However, negotiations can be costly for both parties. Resource companies are reported to have purchased pastoral leases to maintain access options for their activities, which would otherwise require them to consult with landholders. Rio Tinto, for example, has leased and managed the Karratha cattle station in the Pilbara from 1966 and recently subleased it to the Ngarlana Aboriginal Corporation (Rio Tinto 2015).

In many cases, rural landholders are at some disadvantage when undertaking access or compensation negotiations (PC 2013b, 2015c). In part, this stems from an asymmetry of experience and knowledge, as landholders are likely to have limited experience with such negotiations and have less knowledge about how prospective resource projects will impact agricultural land.

A further source of imbalance is the involuntary nature of the negotiations. That is, while a licence holder has to negotiate a land access agreement with the landholder, the latter party does not have a right to refuse access (St John 2014). A number of participants in this and other processes have argued that this power imbalance could be mitigated by allowing farmers to refuse land access by resource companies (SECLC 2015).

Compensation

In most jurisdictions, landholders have a statutory right to compensation for resource companies accessing their land. Participants emphasised the importance of ensuring that compensation arrangements are fair and adequate (Andrew Rea, subs. 9 and DR309; Cotton Australia, subs. 23 and DR262).

The Commission has previously identified shortcomings in the compensation provisions across jurisdictions and identified ‘scope for improvements to legislated compensation criteria to better reflect the costs to landholders from negotiating land access agreements and from the decline in the value of their properties’ (PC 2015c, p. 77).

One shortcoming is a lack of explicit compensation for the cost of obtaining professional advice (PC 2013b, 2015c). In Victoria and Western Australia, for example, the landholder is not explicitly entitled to compensation for the cost of obtaining legal advice. In New South Wales, compensation is only available for legal advice, but not financial or other expert advice. The NSW Farmers’ Association expressed concern that compensation in that state for legal costs was capped and limited to the initial stages of the negotiation of an access agreement (PC 2013b).

Landholders have also argued that the time and stress of dealing with resource companies seeking access should be compensable (PC 2013b). In this vein, Andrew Rea said:

[Y]ou have to deal with them in your own time. Most Resource Companies will not pay you for your time. Everyone has the right to be paid for their time. I do not have the right to refuse to provide my time free of charge. (sub. 9, p. 2)

Previously, the Commission recommended that state and territory governments should ensure that reasonable legal and other costs incurred during land access negotiations are compensable by resource companies. The Commission also emphasised the importance of making sure that landholders are aware that such compensation is available (PC 2013b).

A right of veto

In recent years, a number of federal members of parliament have expressed support for giving farmers a right of veto over coal seam gas operations (Chan 2015; Sprague 2015). In 2015, a Senate Committee inquiry relating to the Landholders' Rights to Refuse (Gas and Coal) Bill 2015 (which would have given effect to a right of veto) expressed in-principle support for such a right:

The committee supports the principle that an agricultural landholder should have the right to determine who can enter and undertake gas or coal mining activities on their land. Landholders who provide access should be fairly compensated for doing so and shown respect when entry on their land takes place. (SECLC 2015, p. 51)

However, the Committee ultimately recommended against passing the Bill on the basis that the drafting of some provisions created uncertainty or meant that they were impractical to implement. (For example, it would be virtually impossible for a resource company to know for certain that it had obtained written authorisation for access from every person who had an 'ownership interest' in land.)

The Committee also noted agreements between landholders and resource companies could improve landholders' rights. For example, in the Agreed Principles of Land Access between NSW Farmers' Association, Santos and AGL, the latter two parties undertook to not enforce arbitration for land access for coal seam gas activities in New South Wales, effectively giving landholders a right of veto (Sprague 2015).

Regulation should facilitate efficient land use

The overriding objective of land use policy is to facilitate the efficient use of land. In principle, property rights that are clear, secure and freely tradable will be acquired by those who value them most, resulting in an efficient allocation of land rights. In many cases, this is true regardless of who initially holds the property right, because the right can be sold to any person who is willing to pay more for it. However, this outcome may not be reached if transaction costs are prohibitive (Coase 1960).

Some participants expressed concern about how the most efficient (or highest value) use of land is determined (Ag Institute Australia, sub. DR182; Australian Food Sovereignty Alliance, sub. DR211; Centre for Ecosystem Science, sub. DR200; VFF, sub. DR189). This included concerns that assessments of 'value':

- did not include non-monetary value (including environmental and social benefits)
- did not take a long-term view or overvalued short-term gains.

In particular, participants pointed to the long-term sustainability of agriculture. For example, the Victorian Farmers' Federation said:

Land value / willingness to pay or short-term returns that prejudice long-term production should not be viewed as 'highest and best use' ... Agriculture is a sustainable industry which

contributes to the economy in the long term. Ensuring the ability of farmers to produce food and fibre close to markets should be seen as an imperative and as delivering the highest and best use of the land. (sub. DR189, p. 6)

The value of a land use comprises both monetary and non-monetary benefits and should be assessed on a long-run basis (box 2.1). And in many instances, agricultural production *is* the highest value use of land. However, the highest value use of land varies from case to case and agricultural production is not *always* the highest value use of land. Any policy intervention should be designed with the objective of facilitating the highest value land use and should not seek to predetermine what activities would constitute the highest value use.

A right of veto is inconsistent with facilitating the highest value land use

At present, the right to compel land access for the purpose of resource exploration and extraction is held by the Crown (on behalf of the community), who may grant licences to resource companies to exercise this right. This right is complementary to the Crown's ownership of subsurface minerals.

A right of veto would shift the power to make land access (and hence land use) decisions from the Crown to the landholder. This represents a transfer of decision-making powers from the community as a whole to individual landholders. Individual landholders are unlikely to be better placed than government to make land use decisions in the interests of society as a whole.

Additionally, a right to refuse access to *land* is a de facto right to refuse access to *minerals*, encumbering the Crown's ability to exercise its ownership of subsurface minerals. (By contrast, a landholder's permission to access land would not by itself grant access to minerals, given that ownership of minerals vests in the Crown.)

On this basis, the Commission considers that land access rights for resource exploration and extraction should vest in the Crown, given that it also owns subsurface minerals. This is because the right to access those minerals cannot be exercised without a right to access land, meaning that, if those rights are held by separate parties, additional transaction costs will be incurred when allocating and exercising exploration and production rights.

A right of veto is also inconsistent with the tenet that land title does not grant absolute ownership and the Crown's general power to compulsorily acquire property. In particular, there is no reason why an exception should exist for agricultural land *vis-à-vis* resource exploration and extraction.

Insofar as a right of veto is aimed at preserving agricultural land per se, such a policy risks generating a net cost to the community if land is not put to its most efficient use (PC 2015c). Also, any distributive justice considerations relating to land access negotiations should be addressed through compensation arrangements, rather than through a transfer of land rights from the community to individual landholders.

FINDING 2.1

Regulation and policies aimed at preserving agricultural land per se can prevent land from being put to its highest value use.

A right of veto by agricultural landholders over resource development would arbitrarily transfer property rights from the community as a whole to individual landholders.

Calls for a right of veto may be symptomatic of other concerns

Several participants suggested that calls for a right to veto arose from other concerns about the regulatory arrangements governing the allocation of resource exploration and extraction rights. For example, the National Farmers' Federation said:

The call from many farmers for a 'right of veto' for a development is symptomatic of two key concerns. The first is that Governments are not adequately assessing the risks of a project, and the cumulative risks of multiple projects on the land and water resources on which agriculture relies. The second is the imbalance that exists between farmers and resources companies in the negotiation of land access agreements, and the view that farmers are not fairly compensated for land access during exploration and development. (sub. DR216, pp. 17–18)

Similarly, the NSW Farmers' Association said:

We agree with the Commission in that a legislated 'right to say no' could mean that important resource development projects could be prevented by a small number of landholders (or even an individual landholder). For these reasons, we believe that more important than landholder veto is a) strengthened landholder rights, and b) a strategic approach to exploration licence allocation by the appropriate government. (sub. DR161, p. 6)

WAFarmers also expressed concerns about the lack of a strategic approach in allocating resource rights:

The call for policies to protect agriculture are in effect an alternative for the strategic land use planning that take into account longer term values for land use ... We continue to see project-by-project assessment, rather than strategic land use planning dominate the approach of government to resource sector development. The community is increasingly concerned that this approach does not adequately address the values that are important to them. (sub. DR226, p. 4)

There is scope to make better use of strategic assessments, particularly where considering the cumulative effects of development on the environment are likely to deliver superior environmental and regulatory outcomes to those achieved under other processes. Where strategic assessments are not in place (for whatever reason), it is especially important that the allocation of exploration and production rights is rigorously and transparently assessed (PC 2013a).

3 Environmental regulation

Key points

- Efforts to preserve our biodiversity depend in large part on the actions of farmers because around half of Australia's land is used for agriculture.
- There are clear public benefits in conserving native vegetation, biodiversity and threatened species, and ensuring that there is healthy soil and clear air and water. But environmental regulations are complex, and there are many potentially overlapping international, federal, state and (sometimes) local requirements. There are also international environmental agreements to which Australia is a signatory.
- While native vegetation and biodiversity conservation regulations aim to protect threatened species and prevent land degradation, they also affect the ability of landholders to manage their land, sometimes with serious adverse effects and perverse incentives. The regulations:
 - may limit farmers' capacity to respond to changes and to use new technologies
 - impose considerable costs on some farm businesses (farmers bear a disproportionate share of the financial burden of conservation for the benefit of all Australians)
 - often involve complex and costly processes (including the need to obtain and pay for detailed specialist advice about the presence of protected species on a property)
 - may in some cases be administered in a very bureaucratic and inflexible way
 - do not always result in improved environmental outcomes, and in some cases may even reduce environmental outcomes.
- To improve the current arrangements, Australian governments should continue to reduce regulatory overlap and duplication. Governments should also:
 - ensure that all native vegetation and biodiversity conservation regulations consider environmental, economic and social factors; account for the impact of proposed activities on the landscape or the region (not just the impact on individual properties); and are based on a thorough assessment of environmental risks
 - continue to develop market-based approaches to native vegetation and biodiversity conservation — this could include buying environmental services (such as native vegetation retention and management) from private landholders, to ensure that the community is willing to pay to achieve particular environmental outcomes
 - review the administration of environmental regulations, including the way regulators engage with landholders. Governments need to improve the advice and support they provide to landholders, and explain how different regulatory requirements interact.
- These changes could reduce the burden imposed on farm businesses by native vegetation and biodiversity regulations while maintaining, or even improving, environmental outcomes.
- While regulations relating to noise, odour, air emissions, waste discharge and other forms of pollution address negative spillovers, when applied in an agricultural setting they can have an adverse impact on efficiency and productivity. Full assessments of the impacts of applying regulations designed for unrelated industries, such as manufacturing, to the agricultural setting are essential for preventing such impacts.

As around half of Australia's total land area is used for agriculture (ABS 2016b), successful environmental management and the conservation of biodiversity depend in large part on the actions of the agricultural sector. Farmers and graziers play a vital role as environmental stewards and land managers, and contribute to many conservation efforts. Australia's current levels of biodiversity and other environmental assets are the result of this stewardship over multiple generations.

This chapter looks at how environmental regulations affect farm businesses. Section 3.1 describes the role of governments in environmental protection, while section 3.2 provides an overview of current environmental regulations. In section 3.3, the impacts of native vegetation and biodiversity conservation regulations are examined. Section 3.4 discusses strategies for improving native vegetation and biodiversity conservation regulations, and reducing the regulatory burden on landholders and farm businesses. The aim is for regulation to impose the minimum burden necessary, while ensuring that the agricultural sector is efficient in its use of resources and that it develops in a way that is ecologically sustainable. Section 3.5 looks at ways to improve other environmental regulations.

3.1 Why are governments involved in environmental protection?

Farmers have a clear incentive to preserve and care for the land, its native vegetation and biodiversity, where this maintains or improves productivity or delivers private benefits in terms of environmental amenity. As Property Rights Australia told the Commission:

... farmers do things to help the environment under their own steam all the time. They are the true environmentalists. (trans., p. 485)

Retaining native vegetation (combined with careful stewardship of cleared land) is one of the main strategies farmers use to protect the environment and promote conservation. Sustainable management practices can also contribute to property values, as a well-managed and maintained farm will command a higher price than one that has been overexploited. Landholders also value native vegetation because it can provide a range of inputs to the production process (such as fodder and shelter for stock, timber for fencing or reduced soil erosion), thereby contributing to agricultural productivity.

But while farmers cover many of the costs of conservation (including reduced availability of land for grazing and cropping), conservation provides benefits not just to farmers but also to others in the community.

- Some benefits extend to neighbours and others in the broader region, including visual amenity, prevention of soil and water degradation, reductions in salinity and the provision of habitat for fauna that provide pest control and pollination services.
- Other benefits extend more widely to all in the Australian community (and in some cases globally). These include the protection of threatened species and their habitats,

carbon sequestration and biodiversity. In fact, the benefits from the continued existence of species, habitats and ecosystems largely accrue to the wider community (PC 2004a).

The National Parks Association of NSW and the Nature Conservation Council of NSW pointed out that providing habitat for native birds and animals is particularly important in Australia, because it is:

... one of just 17 mega-diverse countries with a high proportion of endemic species, possessing two global biodiversity hotspots, being the only developed nation to be identified as one of 11 global deforestation fronts and having lost 27 mammal species from the mainland since European settlement ... (sub. DR209, p. 3)

Protecting riparian vegetation is also a component of Australia's long-term sustainability plan for the Great Barrier Reef (Australian Government and Queensland Government 2015). Native vegetation protects the reef by, among other factors, 'reducing soil loss and consequent water pollution in the rivers which flow into the Reef' (WWF Australia, sub. 85, att. 3, p. 3).

Because individual landholders cannot capture the public benefits, their incentive will be to underinvest in conservation from the perspective of the Australian community as a whole. As such, there is a potential role for government to be involved in native vegetation conservation and environmental protection, provided there is a net community-wide benefit.

Governments can (and do) directly provide native vegetation and biodiversity conservation services, including in national parks, state parks and other public reserves. But this can be costly and may not result in the level of conservation that the community is willing to pay for, for several reasons.

- Certain types of native vegetation are not well represented in public reserves, and there are often irreversible limits to the supply of land for public reserves.
- Conservation outcomes in public reserves partly depend on sound management practices on adjoining private land (and the reverse is also true).
- Native vegetation conservation can be provided at lower cost on private land than in public reserves, provided the private land can continue to be used for commercial purposes as well as for public-good conservation (Clarke 2002).

Government intervention to promote native vegetation and biodiversity conservation on private land, and natural resource management (NRM) more broadly, is justified where the benefits to the Australian community exceed the costs (both to private landholders and to the community in general). To achieve these benefits, governments have typically relied on regulation. Regulatory approaches for native vegetation and biodiversity conservation are used in most countries. The current stock of environmental regulations is also, in part, the result of significant changes in Australian society's views about how natural resources should be managed for current and future generations (box 3.1).

Box 3.1 **Changing attitudes and environmental policies**

Government policies have not always been geared towards environmental protection. From the 1850s onwards, vast areas of forest and scrub were cleared for grazing and cropping. For many years government requirements to clear areas of native vegetation, or to demonstrate use of the land by maintaining certain stock levels, were conditions in allocating freehold and leasehold land for farming.

The wish to provide land for soldier settlers after both World Wars led to the subdivision of large properties into smaller blocks, many of which proved to be too small to provide viable incomes once commodity prices declined, and were consequently overstocked. (McKeon et al. 2004, p. 22)

These policies had strong social support, but were not particularly successful in economic or environmental terms. Land clearing was significant and widespread, and intensive grazing and cropping was required to ensure even a subsistence level of return for labour. An over-expectation of the carrying capacity of the land, and a physical and/or economic inability to quickly destock the land during periods of drought, also contributed to environmental degradation.

Between 1970 and 1990, tax incentives and cheap government loans made land clearing financially attractive to farmers. There was also a view that society would benefit if more young people were settled on the land and took up farming, exemplified by the establishment of organisations such as the Young Farmers' Finance Council in Victoria in 1979.

More recently, governments have put in place legislation that restricts the ways in which farm businesses use their land, with an emphasis on sustainability. This reflects a shift towards the view that 'open slather on native vegetation removal is completely unacceptable for so many reasons' (Richard Nankin and Rosemary Cousin, sub. DR248, p. 14). It also mirrors an international trend: the stringency of environmental policies has been increasing across OECD countries over the past two decades (Albrizio et al. 2014).

Sources: Albrizio et. al (2014); DEWHA (2010); Dore, Binning and Hayes (1999); Finlay (2014); McKeon et al. (2004); PC (2004a).

Governments also have in place regulations that limit businesses' effects on air and water quality, and their emissions of odour, noise and waste. Where the costs of these emissions are not fully and directly borne by the businesses that cause the costs, they are known as negative environmental externalities, or 'spillovers'. Human health risks and ecosystem damage arising from pollution are examples of the negative environmental externalities that environmental regulations seek to limit. These externalities can also be a factor in conflicts over land use, particularly in the context of the interface between residential developments and established agricultural and pastoral activities in rural and regional areas (chapter 2).

The challenge for governments when developing environmental regulatory frameworks and policies is to achieve a balance between the benefits of agricultural production and the potential environmental costs, as well as to ensure that the frameworks and policies have clear and measurable objectives. The task for the regulators is to efficiently administer those frameworks and policies in line with their objectives, in the face of rapid change in the agricultural sector and in regional communities.

3.2 Environmental regulations: the current state of play

Governments in Australia have in place a wide range of environmental regulations. Estimates of the number of environmental laws vary, but according to the Australian Law Reform Commission, at a minimum ‘there are approximately 60 Commonwealth environment-related statutes in force’ (ALRC 2015, p. 224). There are also international environmental agreements to which Australia is a signatory, including the Convention on Biological Diversity and the United Nations Sustainable Development Goals.

State and territory governments are the main regulators of environmental matters, and have regulations to control clearing of native vegetation on private land, protect threatened species or biodiversity, and protect the environment more broadly.

Local governments also have a variety of plans and schemes that, while focused on land use planning, often cover aspects of environmental protection or management (chapter 2). Local government planning schemes are also used to give effect to state environmental priorities in many cases. In addition, local governments in most states have developed local laws to address local environmental issues. Local governments are also land managers, and so are affected by state and federal environmental regulations in the same way as other landholders.

While some of the environmental regulations introduced by each level of government were adopted after a thorough assessment of regulatory options and impacts, others were introduced in a more abrupt fashion as a reaction to environmental incidents that attracted public concern. The development of these regulations often lacked sufficient consideration of the nature of the problem to be addressed and the costs and benefits of the regulation relative to other approaches, including less prescriptive regulation (PC 2004a).

State and territory laws protecting native vegetation and biodiversity

State and territory regulations to control clearing of native vegetation on private land and to protect threatened species or biodiversity more broadly are relatively new — South Australia and Victoria were the first to regulate the clearing of native vegetation, in 1985 and 1988 respectively, with other jurisdictions following during the 1990s (Bricknell 2010; Tasmanian Government, sub. DR287).

There are notable differences between jurisdictions in the approach and coverage of native vegetation regulations. These variations allows differences between regions to be taken into account. But despite their differences, laws governing the clearing of native vegetation in each jurisdiction generally contain five main features (box 3.2). In some cases there are also differences within jurisdictions in the way in which native vegetation regulations are implemented and enforced. This is discussed in section 3.3.

Box 3.2 Common features of native vegetation regulations

Laws governing the clearing of native vegetation in each jurisdiction generally contain five main features.

4. **A definition of native vegetation.** Native vegetation is usually defined to include not only vegetation in its original state but also single trees, regrowth and/or patches of remnant vegetation.
5. **A requirement to obtain approval to remove native vegetation.** Approval processes vary within and between jurisdictions depending on one or more of the following factors:
 - the type of vegetation to be cleared
 - the size of the area to be cleared
 - the purpose of the clearing (with different rules applying to clearing for agriculture versus clearing for mining, for example)
 - the proposed clearing action (for instance, lopping a branch may be regulated in a different manner to complete destruction of a stand of trees. In some states, grazing of livestock is considered to be ‘clearing’ as it may damage vegetation in the grazed area)
 - land tenure arrangements (such as pastoral lease or freehold land)
 - whether the native vegetation was planted for harvest.
6. **Exemptions to the approval processes.** Certain types of clearing activities (such as keeping roads and fire trails clear, taking wood for personal use, removing vegetation close to buildings for bushfire prevention or removing regrowth that is less than a certain age) and clearing on certain tracts of land (such as land designated for community infrastructure) do not always require approval.
7. **Systems for assessing vegetation offsets.** Offsets are undertakings to protect and manage native vegetation (box 3.3).
8. **Monitoring programs** to keep track of changes in the quantity or quality of native vegetation, often using satellite imagery. For example, in the Northern Territory, ‘regular monitoring, including aerial photography and satellite image analysis and on ground inspections ensures compliance with the [native vegetation] controls’ (NT DLRM 2016).

While the stated objectives for restrictions on the clearing of native vegetation vary between jurisdictions, most aim for no net loss in the contribution made by native vegetation to biodiversity and healthy environments. Victoria’s native vegetation clearing regulations, for example, have the objective of ensuring that ‘permitted clearing of native vegetation results in “no net loss” in the contribution made by native vegetation to Victoria’s biodiversity’ (VDEPI 2013b, p. 24). Some jurisdictions mention ‘ecologically sustainable development’ — though there are diverging views on what ‘ecologically sustainable development’ entails and how it should be operationalised (PC 2013a).

Box 3.3 About offsets

Offsets are designed to increase the flexibility of conservation policies by allowing unavoidable environmental impacts from various activities to be counterbalanced by implementing measures elsewhere that improve or maintain overall environmental conditions.

The Australian Government and all states and territories except the Northern Territory have offset policies (though the offset policy in New South Wales only applies to major projects, and so rarely applies to agricultural projects). While offset policies vary, they generally:

- have the objective of ensuring either ‘no net loss to the environment’ or environmental gain — an example of the latter is the Significant Environmental Benefit in South Australia’s *Native Vegetation Act 1991* (and associated Regulations)
- must be used as a last resort, applied only after appropriate efforts have been made to avoid adverse impacts and to minimise and mitigate unavoidable impacts.

Offsets can either be direct (measures that directly improve, create, or avert the loss of habitat, on either public or private land) or indirect (measures that indirectly benefit the environment such as research funding for revegetation techniques).

There are also industry-led programs being used to achieve conservation outcomes, where doing so can also improve farm productivity. For example, the Queensland Farmers’ Federation said that its member industries have developed Best Management Practice (BMP) or Farm Management System (FMS) programs that assure accredited farmers they are delivering both market and public policy outcomes in one process, including best practice native vegetation and biodiversity conservation outcomes (sub. DR217).

In other jurisdictions, the objectives in the native vegetation and biodiversity conservation legislation have the potential to be in conflict. For instance, in New South Wales the *Native Vegetation Act 2003* aims ‘to provide for, encourage and promote the management of native vegetation on a regional basis in the social, economic and environmental interests of the State’, but also to protect native vegetation of high conservation value, to improve the condition of existing native vegetation and to encourage the revegetation of land.

There have been a number of reviews of native vegetation and biodiversity conservation laws at the national level (for example, HoRSCE 2014; PC 2004a; SFPARC 2010). The Australian, state and territory governments are also working together on joint reviews.

- A review of Australia’s Biodiversity Conservation Strategy 2010–2030 commenced in 2015, and has been prepared for consideration by Environment Ministers in 2016 (MEM 2015).
- The National Review of Environmental Regulation published an interim report in March 2015 (DoE 2015c). It identified areas for reform, including implementing a common assessment method for listing threatened species (section 3.4).

Native vegetation laws and policies are also under review in many states (box 3.4). In addition, Western Australia amended its Environmental Protection (Clearing of Native Vegetation) Regulations in 2013. The changes increased the area in which certain

prescribed clearing activities are permitted without a clearing permit from one to five hectares each year, and extended the exemption timeframe for maintaining previously cleared areas from 10 years to 20 years (DoE 2015c).

Box 3.4 States' reviews of native vegetation laws and policies

- In **New South Wales**, the Independent Biodiversity Legislation Review Panel found that the current laws in New South Wales are complex, difficult to navigate, and impose unnecessary regulatory burdens (Byron et al. 2014). The review recommended replacing current laws with a new risk-based Biodiversity Conservation Act. In response, the NSW Government has proposed reforms to the legislative framework for native vegetation management, private land conservation, threatened species and other protected native animals and plants (NSW Government 2016).
- **Victoria** amended its native vegetation permitted clearing regulations in 2013 to reduce the burden on landholders and provide them with more information about the biodiversity value of native vegetation on their land. The native vegetation clearing regulations are again under review and the outcomes of the review will be released in late 2016 (VDELWP 2016c). In addition:
 - the *Flora and Fauna Guarantee Act 1988* (Vic), which aims to ensure that all flora and fauna 'can survive, flourish and retain their potential for evolutionary development in the wild', is being reviewed
 - a new Biodiversity Strategy has been released in draft form — its proposed goals are to encourage more Victorians to value nature and to ensure that Victoria's natural environment is healthy (VDELWP 2016b).
- Changes introduced in **Queensland** in 2013, designed to reduce red tape and regulatory burden on landholders, included allowing cattle grazing in national parks; removing the prohibition on large-scale clearing for agricultural, horticultural or pastoral purposes; and changing the onus of proof for vegetation clearing offences (towards a presumption in favour of the innocence of the landholder) (Cripps 2013). These changes led to a significant increase in the rate of land clearing in Queensland — three times as much land was cleared in 2014-15 as in 2009-10. A Bill to reintroduce many of the abolished regulations, including the prohibition on clearing for high-value agriculture and irrigated high-value agriculture, was put before the Queensland Parliament in March 2016. The Bill 'polarised views ... with environmental and conservationist groups supporting the Bill, while landholders and their peak bodies strongly opposed the Bill' (QAEC 2016, p. vii). The Queensland Parliament's Agriculture and Environment Committee was unable to reach a majority decision as to whether the Bill be passed (QAEC 2016). Proposed amendments under the Bill were not agreed to by the Parliament, and 'will not be implemented at this time' (QDNRM 2016).
- The **South Australian** Government is conducting a review of its native vegetation regulations, 'with the aim of reducing the regulatory burden for landholders and to establishing a stronger focus on the value of native vegetation in achieving biodiversity conservation priorities' (sub. 57, p. 15).
- In **Tasmania**, a review of the Permanent Native Forest Estate Policy has been underway since mid-2015. Broad scale clearing is one of the issues being considered by the review. Broad scale clearing (of up to 40 hectares per year per property) was due to be phased out in Tasmania by 1 January 2016, but this has been deferred until 1 July 2017 (Tasmanian Government, sub. DR287; TDSG 2016).

The Environment Protection and Biodiversity Conservation Act

While state and territory governments are the primary regulators of environmental matters, the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) also affects the agricultural sector. It provides a legal framework for protecting nationally and internationally important flora, fauna, ecological communities and heritage places — collectively termed ‘matters of national environmental significance’. These matters are:

- world heritage values (underpinned by the Convention Concerning the Protection of the World Cultural and Natural Heritage)
- national heritage values
- listed threatened species
- listed migratory species
- listed ecological communities (for example, lowland subtropical rainforest or grasslands of the Victorian volcanic plain)
- wetlands of international importance (sometimes called ‘Ramsar’ wetlands after the international treaty under which such wetlands are listed)
- nuclear actions (including uranium mines)
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- water resources impacted by a coal seam gas development or a large coal mining development. (Commonly called the ‘water trigger’, this matter was introduced into the EPBC Act in June 2013.)

Landholders who plan to undertake actions that would have a significant impact on a matter of national environmental significance are required to follow the EPBC Act’s ‘referral, assessment and approval’ process. For farm businesses, this situation typically arises when the business plans to clear native vegetation or undertake development that could affect plants, animals or ecological communities that have been listed as threatened under the EPBC Act.

Certain activities undertaken before the commencement of the EPBC Act in July 2000 and that have been undertaken on a continuing basis since that time are permitted under a ‘continuing use’ exemption. Examples include routine grazing activities, continuing cropping and crop rotation, and maintenance of existing dams, roads and fences (Department of the Environment 2013).

The EPBC Act process comprises the following stages:

- *Referral*. The EPBC Act places the onus for referring a proposed action on the person proposing to take the action (although in certain cases the Minister may deem the referral to have been made). When a proposed action is referred to the Environment Minister, the Minister (or delegate) has 20 business days to decide whether it is likely

to require approval under the EPBC Act. If a significant impact on a matter of national environmental significance is considered by the Minister (or delegate) to be unlikely, further assessment is not required and the proponent can proceed to take the referred action with certainty in respect to Commonwealth laws.

- *Assessment.* If the Minister considers that the proposed action has a high likelihood of having a significant impact on a matter of national environmental significance, then the action is deemed to be a ‘controlled action’. It requires Ministerial approval, and the application proceeds to the assessment stage.
- *Approval.* The Minister decides to either grant approval, to grant approval with conditions, or to deny approval for the action.

The number of agriculture referrals is low. The Department of the Environment said that:

There are fewer referrals from the farming sector than in any other sector. Agriculture and forestry made up just 2% of all referrals received under the EPBC Act from 1 January 2000 to 4 March 2013. (sub. 80, p. 6)

And agricultural projects are rarely required to proceed to assessment. In the period 1999 to 2014, there were 54 agriculture-related projects referred for assessment, of which eight projects were subject to conditions (Australian Government 2014a).

The outcomes of the referral, assessment and approval process under the EPBC Act do not affect any state or local government approvals that may be required, so actions that are permitted under the EPBC Act may be prohibited by state or local governments, and vice versa.

Other environmental regulations

Other environmental regulations affecting farm businesses include pollution control, feral animals, weeds and other pests, and those concerning native animals (box 3.5).

Pollution control legislation affects farm businesses in different ways. For example:

- requirements to contain and reuse effluent, and to prevent it from leaving a property or entering waterways impact on intensive livestock industries such as feedlots, dairy farms and piggeries, as well as processing facilities such as abattoirs (chapter 4)
- noise limits and curfews affect the operation of chicken farms, by limiting the time periods during which chickens can be harvested
- air quality regulations limit the dust that can be emitted by cotton gins and grain silos
- odour and waste regulations affect abattoirs, where there are many potential sources of odour (NSW EPA 2013a). On-farm composting, particularly on a commercial scale, is also a potential odour source (Tasmanian Government, sub. DR287). Odour and waste regulations also affect the feedlot industry, as ‘odour and waste are inevitable by-products of feedlot and intensive finishing systems’ (MLA 2015).

Box 3.5 Other environmental regulations affecting farm businesses

Pollution control regulations

Pollution control regulations seek to deliver the:

- prevention, control and abatement of pollution and environmental harm
- conservation, preservation, protection, enhancement and management of the environment.

Pollution control legislation typically cover air quality, odour, noise, water quality (including effluent discharge) and waste and resource recovery.

Regulation of weeds

A plant is considered to be a weed when it grows where it is not wanted (that means that a plant that is viewed as a weed in one place may not be considered as such in other places). States and territories have a range of laws and regulations relating to weeds. For example in South Australia, if 'a pest is spreading from a property to other areas where it is causing negative impacts, the Minister may "declare" provisions that require a landowner to take action to destroy or control an animal or plant' (South Australian Government, sub. 57, p. 14).

Many biosecurity regulations also aim to limit weed incursions and to control the spread of weeds — these are considered in more detail in chapter 8.

Regulations relating to native and feral animals

State and territory governments typically require people seeking to undertake actions that involve, or may involve, native and/or feral animals to obtain a permit or licence. For example, in some states the regulation provides that snakes can only be relocated by a person with a snake catcher's permit or reptile removal licence. In south eastern Queensland, clearing of certain species of trees must be undertaken under the guidance of a koala spotter (Queensland Government 2015c).

State and territory regulations also govern the way in which landholders are permitted to control native or feral wildlife that is causing property damage. For instance in Tasmania, crop protection permits for the control of fallow deer are only issued outside of hunting season (TDPIPWE 2011). In Queensland, commercial crop growers may obtain a 'damage mitigation permit' that allows them to control some (but not all) species of flying foxes provided the permit holder adheres to the *Code of practice: ecologically sustainable lethal take of flying-foxes for crop protection* (QDEHP 2015).

Many of these issues are considered by agricultural businesses as part of supply chain quality assurance programs, and by state governments and local councils as part of land use planning processes (chapter 2). Farmers can also face requirements for minimum separation distances to ensure that incompatible land uses are located in a way that minimises impacts caused by noise, odour, air emissions and/or waste discharge (especially for intensive agriculture — chapter 2). Additionally, many state governments require intensive industries, including sugar mills, piggeries and poultry farms, to be licenced by the EPA or relevant state government department.

There are also industry-specific guidelines, which provide a common framework for managing the environmental issues that arise in certain intensive agricultural industries.

For example, there are guidelines for the management of effluent on dairy farms in Victoria (VDEPI 2008). In the pork industry, relevant guidelines include ‘the National Environmental Guidelines for Piggeries ... , the National Environmental Guidelines for Outdoor Production ... and the Piggery Manure and Effluent Management and Reuse Guidelines’ (Australian Pork Limited, sub. 37, p. 2).

Operators of intensive agricultural facilities are also required to report information to the National Pollutant Inventory (NPI) if the facility reaches certain prescribed thresholds. The thresholds relate to the quantity of fuel used, and NPI substances used, generated or emitted by, the facility.

Facilities that meet the threshold are then required to estimate their emissions annually and report these to a state or territory environment agency, which checks the data and forwards it to the Australian Government Department of the Environment for inclusion on the NPI. Information in the NPI is freely available and accessible to the public.

Any business that uses agricultural and veterinary (agvet) chemicals is also required to contribute, via a levy, to agvet chemical container recycling programs (ACCC 2014e). In addition in Queensland, regulations designed to protect the Great Barrier Reef place limits on the application of nitrogen, phosphorus and agvet chemicals by certain cane farmers and graziers in the Wet Tropics, Burdekin and Mackay Whitsundays catchments (Queensland Farmers’ Federation. sub. DR217).

3.3 What effect do the regulations have on farm businesses?

This section looks first at the benefits of native vegetation and biodiversity conservation regulations, before looking at the costs that the regulations impose on farm businesses and the scope to remove any unnecessary costs.

What do we know about the benefits of native vegetation and biodiversity conservation regulations?

Assessing the effectiveness of native vegetation and biodiversity conservation regulations (including measuring and valuing the benefits that flow from conserving native vegetation and biodiversity) is difficult, for several reasons.

- First, while the link between native vegetation and the benefits can sometimes be straightforward (for example, providing shade or fodder), the link is often indirect and not easily measurable. The nature of the connection between native vegetation conservation and climate, for example, is very complex and not fully understood.
- Second, even if measurement difficulties could be resolved, many of the benefits of conserving native vegetation and biodiversity do not have a market value. While there

are several non-market methods that can be used to value environmental benefits, these methods have drawbacks.

- The validity of revealed preference methods is widely accepted, but there are many circumstances where they cannot provide the estimates needed for environmental policy analysis.
- Stated preference methods can be used to estimate virtually all types of environmental values, but their validity is more contentious (Baker and Ruting 2014, p. 2).
- The Australian Conservation Foundation considered that ‘appropriate frameworks and measurement are not yet in place to truly value Australia’s natural environment’ (sub. DR252, p. 12).
- Third, it is inherently difficult to measure the additionality of conservation activities (discussed below).

Also, because the natural landscape varies widely between different geographic locations, there is a wide degree of variation in the benefits provided by retaining native vegetation and biodiversity in different locations. These differences, combined with the variations between jurisdictions in the approach and coverage of their regulations (as well as the reviews and changes that are underway in many jurisdictions (box 3.5)), add to the difficulty of obtaining a national picture of the benefits derived from native vegetation and biodiversity conservation regulations.

Despite these challenges, many inquiry participants spoke about the benefits of native vegetation and biodiversity conservation regulations (box 3.6).

In light of the benefits they identified, some participants suggested that native vegetation and biodiversity conservation regulations need to be strengthened. For example, EDOs of Australia said that there is ‘strong evidence that the current legal frameworks are not providing adequate protection for native vegetation and biodiversity’ (sub. DR241, p. 2, see also sub. DR248, p. 3).

Some participants pointed to declines in the annual rate of land clearing, particularly since the adoption of the *Native Vegetation Act 2003* in New South Wales, as evidence of the success of the regulations in that state. But the rate of native vegetation clearance under a particular regulatory regime it is at best only a partial indicator of the effectiveness of that regime. In particular, the rate of clearing does not provide any information on the quality or environmental value of the vegetation being cleared. And it gives no indication of the regime’s effectiveness in achieving other environmental objectives, such as biodiversity conservation or prevention of soil and water degradation. In addition, the rate of land clearing can be affected by many other factors, such as exchange rates, commodity prices and developments in land-clearing technology.

Box 3.6 Participants acknowledged the benefits of native vegetation and biodiversity conservation regulations

Department of the Environment and Energy:

Well designed and implemented environmental regulation creates social benefits and economic value for the community through the maintenance or improvement of environmental standards. Environmental regulation can build community and market confidence and provide a social licence to producers to use natural resources. This can increase productivity and increase access to markets and premium prices. (sub. DR274, p. 1)

WWF Australia:

... a large body of scientific research shows that regulation of native vegetation clearing actually benefits agriculture. (sub. 85, p. 1)

EDOs of Australia:

Regulation of land clearing is necessary, proportionate and critical to the long-term viability of agricultural productivity in Australia. (sub. 60, p. 2)

The Centre for Ecosystem Science said that regulations governing the management of natural resources such as native vegetation, soils and water:

... ensure against wasteful and destructive short-term exploitation of Australia's natural resources that preclude future benefits for other stakeholders and generates costs (mostly as liabilities for taxpayers) for rehabilitation. (sub. DR200, p. 4)

Many quoted WWF Australia's claim that 'an average of 116 000 native mammals have been saved from agricultural clearing each year since the introduction of the [NSW Native Vegetation] Act' (sub. 85, att. 1, p. 14). However, the protection of individual animals is not the same as the preservation of threatened species, and evidence that native vegetation regulations contribute to species preservation is more limited. Indeed, the only conservation activity that has been clearly shown to be associated with stabilisation or recovery of threatened species in Australia is expansion of strictly protected areas such as reserves (Taylor et al. 2011).

But to the extent that native vegetation and biodiversity conservation regulations prevent land clearing, they also avoid costs associated with clearing, which can be considerable. As the Centre for Ecosystem Science said:

... clearing of native vegetation destroys the dependent plants and animals, increases risks to wildlife from introduced predators, impacts surface and groundwater-dependent ecosystems, and fragments habitat so that individuals are unable to move through the landscape. It reduces the resilience of biodiversity to cope with a climate change ... and has a long-term legacy of ongoing adverse impacts on biodiversity ... (sub. DR200, p. 5)

William Blackburn also said that 'the ongoing and long-term cost to the Australian community of excessive land clearing is very high (especially when factoring in [greenhouse gas] emissions)' (sub. DR196, p. 1).

But as noted earlier, farmers retain native vegetation for many reasons. As such, the preservation of areas of native vegetation cannot always be counted as a 'benefit of

regulation’ because though being required by regulation, it often would have been conserved anyway (so the conservation is not ‘additional’). Indeed, the additional conservation attributable to native vegetation and biodiversity conservation regulations is likely to be low, given the benefits that healthy environments and ecosystems provide in terms of agricultural productivity. As the Wilderness Society said:

Agricultural productivity is highly dependent on the maintenance of ecosystem services provided by healthy native vegetation and associated biodiversity. These include healthy riparian zones, maintaining soil stability and biota, reducing erosion and salinity, and assisting pollination and nutrient cycling. Protecting biodiversity thus protects the productivity and value of that agricultural land. (sub. DR207, p. 6)

Many inquiry participants also pointed to the contribution made by native vegetation regulations towards meeting other environmental goals, particularly those related to climate change (box 3.7). Maria Riedl (sub. DR219) noted that restrictions on land clearing in Queensland help to protect the Great Barrier Reef.

Box 3.7 Carbon, climate change and native vegetation

Participants highlighted the interactions between native vegetation regulations and Australia’s goals for carbon emissions reduction and climate change adaptation.

... native vegetation laws significantly contribute to carbon storage and greenhouse mitigation objectives and targets. (EDOs of Australia, sub. DR241, p. 10)

Forests and woodlands mitigate global warming by absorbing and retaining greenhouse gasses. By protecting native vegetation, land clearing laws have made an important contribution to greenhouse gas abatement efforts. They were the primary reason Australia was able to meet its Kyoto Protocol commitments. (National Parks Association of NSW and the Nature Conservation Council of NSW, sub. DR209, p. 6)

Others pointed to the perceived contradiction between recent changes to native vegetation regulations in some states and the Australian Government’s initiatives to reduce carbon emissions.

What has native vegetation clearing regulation achieved? It has allowed Australia to meet its carbon obligations under the Kyoto protocol by sequestering 73 [million] tonnes of carbon. At zero cash cost and acceptable political cost, these regulations were probably the most effective and efficient way to achieve this outcome. (Bruce Gardiner, sub. DR101, p. 2)

It makes little sense to reduce protections to existing native vegetation, only to then have to undertake revegetation ... This represents a double hit to taxpayers: not only has the [Emissions Reduction Fund] investment been entirely wasted by ill-conceived state regulation changes undermining federal efforts, but these emissions will have to be reduced again in order for Australia to meet international obligations. (National Parks Association of NSW and the Nature Conservation Council of NSW, sub. DR209, p. 7)

... the public are currently paying private interests subsidies to avoid polluting activities through the [Emissions Reduction Fund], while weak legislative settings, such as those in Queensland actively encourage the erosion of existing stock of land sector carbon through, what would otherwise be, avoidable and controllable broad scale land clearing. (Australian Conservation Foundation, sub. DR252, p. 6)

A number of participants, including the Wilderness Society (sub. DR207) and the National Parks Association of NSW and the Nature Conservation Council of NSW (sub. DR209), drew attention to CSIRO's finding that despite projected changes to the climate, Australia's total output of food and fibre can increase in coming years, even in scenarios with significant increases in land use for conservation and carbon sequestration. However, projected future improvements in agricultural productivity do not demonstrate whether or not current regulatory settings are optimal — productivity could improve even in the presence of poorly designed or unnecessarily onerous regulations, but that improvement would be smaller than it would have been had the design or implementation of the regulations been better.

Costs of native vegetation and biodiversity conservation regulations

The costs to landholders of native vegetation and biodiversity conservation regulations were highlighted by many participants. GrainGrowers surveyed its members and found that environmental law (especially land clearing and native vegetation laws) was the most consistently raised regulatory issue. Comments from members 'centred on environmental regulations being too restrictive, illogical and overlapping/duplicative' (sub. 73, p. 22).

The Australian Farm Institute, commenting on native vegetation laws in New South Wales, said also that they '... created a cumbersome and tangled web of productivity-sapping regulations, and tasked an ill-equipped bureaucracy with making decisions that even Solomon in all his wisdom would have found impossible' (Keogh 2014).

Regulations restrict what farmers can do

Native vegetation and biodiversity conservation regulations can restrict how farm businesses can operate by:

- limiting the amount of land that can be used for agricultural production
- preventing diversification of farm business operations, or the adoption or full exploitation of new technologies (which could, if adopted, lead to efficiency gains)
- preventing effective management of weeds, vegetation regrowth and woodland thickening.

Participants raised concerns in all three areas.

Farm representatives said that restrictions on land clearing limited farmers' ability to respond to increases in demand for their products. One farmer of tropical fruits in northern Queensland, for example, reported that '... 55% of our land has been conserved [as offsets] so that we can farm 17% of our land (Property Rights Australia, sub. 45, p. 13). And Queensland grazier Larry Acton described land clearing rules as 'impractical regulation ... that is stifling production' (sub. 55, p. 2). In New South Wales, the *Native Vegetation Act 2003* applies to native grasslands, even when those grassland are of low

conservation value. Byron et al. (2014, p. 19) argued that this places ‘particularly inappropriate’ restrictions on the use of native grasslands for pasture.

The Commission also heard that restrictions on clearing isolated trees or small patches of vegetation limit the efficiency of farming operations and opportunities to adopt precision farming (Karen Baines, sub. 13; VFF, sub. DR189). Where this occurs, it reduces the productivity benefits that innovative spatial technologies can provide in terms of reduced soil compaction and reduced water and fertiliser use.

Excessive red tape can impact routine improvements on sugarcane (and other) farms, such as clearing a small area for installing a new irrigation system (for example a centre pivot), with potentially significant financial implications. (ASMC 2014, p. 2)

Similarly, in the Bordertown region of South Australia, ‘scattered trees on development paddocks were an issue of concern when landholders were planning to install large centre pivot irrigation systems ... land clearing restrictions were impeding development plans, potentially affecting returns to investment in centre pivot irrigation’ (Mallawaarachchi and Szakiel 2007, p. 2).

Other barriers to the adoption of new machinery and innovative technologies by farm businesses, including inadequate access to the internet, are discussed in chapter 6.

There was also concern that native vegetation clearing laws impede the ability of producers in regions affected by woody weeds (such as western New South Wales) to control those weeds, limiting their capacity to address this threat to farm productivity (for example, NSW Farmers’ Association 2012). In particular, the order on clearing invasive native species made under clause 38 of the NSW Native Vegetation Regulation limits landholders to clearing no more than 80 per cent of area covered by invasive native species. As noted by Bartel:

Although woody weeds cause land degradation these invasive native species have been protected by land clearance legislation. Permits are required to be obtained and offsets negotiated before they can be removed ... The woody weeds protections are seen to compromise the feasibility of the law in achieving its stated environmental objectives, and are thereby also undermining the legitimacy of the law and of government. (2014, p. 900)

And in the context of weed control, the Aerial Application Association of Australia said:

Often, by trying to comply with the regulatory requirements placed on landholders to manage noxious weeds on their properties, there is the potential for collateral damage on native vegetation co-located with the noxious weeds. Aerial application is often the most efficient means of application of chemicals, but it cannot be undertaken due to native vegetation protection requirements, resulting in significantly lower productivity of significant swathes of agricultural land. (sub. 12, p. 3)

The effect of regulations relating to weed control is discussed further below.

The financial burden on landholders

Where landholders are required to preserve trees or parcels of vegetation, it is not a matter of simply ‘locking up and leaving’ that land — ongoing involvement of the landholder is required (COAG SCEW 2012). The natural ecological succession of native vegetation communities means that active management is required to keep them in preferred states. This can involve significant direct costs for landholders. As the NSW Farmers’ Association said, ‘biodiversity conservation requires active and adaptive management and that in turn, requires human effort and resources’ (2014, p. 15). And the Tasmanian Farmers and Graziers Association said that farmers ‘too often, [they] are expected to undertake conservation measures that carry with them considerable costs but where the benefit is to the wider community’ (sub. DR281, p. 3).

While farmers can benefit from conserving vegetation and biodiversity on their land, they will not necessarily capture all the benefits, or the benefits to them may not outweigh the costs. There is also the cost of reduced incomes (and lower property values) for landholders — in the absence of the native vegetation and biodiversity regulations, the land covered by native vegetation or habitats could have been put to more profitable uses (NFF, sub. 61). A number of inquiry participants claimed that native vegetation and biodiversity conservation regulations curb development. For example, AgForce said that vegetation management laws are seen as:

... onerous, stifling of profitability and not proportionate to risk ... These laws were seen to work to suppress ecologically sustainable development that could support ongoing profitability ... and imposed significant real and opportunity costs. These costs were borne largely by landholders, rather than the urban community which also benefits from such public-good-directed policy making. (sub. 17, p. 5)

West Wimmera Shire Council said the protection of the red-tailed black cockatoo imposes costs on farm businesses in the Wimmera region of Victoria including ‘... damage to machinery, reduction in cropping area and therefore yield and chemical wastage’ (sub. 49, p. 2). The NSW Farmers’ Association said that ‘farmers in New South Wales bear a multi-million dollar opportunity cost each year in the interest of conserving environmental assets for the people of New South Wales’ (sub. 72, p. 9).

Being able to get approval to clear land by purchasing offsets may also not reduce the financial impact on landowners (though it does provide additional opportunities for businesses to earn income by selling offsets to others). Several participants commented on the burden imposed by offset requirements.

Offset requirements are also onerous if the clearing involves endangered or of-concern regional ecosystem or threatened plant species. This has the ability to impede potential cane industry expansion in Northern Australia. (Canegrowers, sub. 22, p. 4)

A cash payout is sometimes given as an option in lieu of offsets but the sums asked for are in the realms of fantasy and could never be paid off by most agricultural businesses. (Property Rights Australia, sub. 45, p. 5)

Not only do landholders incur direct costs in maintaining land that cannot be cleared or in purchasing offsets, and forgo any income that could be generated from land that cannot be cleared, they do so without compensation. As Finlay put it:

The clear problem with the current framework of environmental protection is that it imposes substantial restrictions on land use, but fails to provide any compensation to land owners who purchased their land before these restrictions were put in place and who can no longer realize the true productive value of their property. (2015)

While the Commonwealth is required to provide compensation ‘on just terms’ for property it acquires (s. 51(xxxi) of the Australian Constitution), the compensation guarantee does not extend to the States, and does not cover restrictions to property rights (as opposed to acquisitions of those rights) that are imposed by government policies, regardless of the significance of the restrictions (Finlay 2015).

One of the consequences of loss of productive land is lower property values. While attributing any observed changes in property values to the effects of regulations and to other factors can be difficult, lower farm returns resulting from land clearing regulations would be expected to roughly translate into a fall in property values. According to the Australian Farm Institute, the introduction of native vegetation laws in New South Wales ‘decimated the property values of farmers in many regions’ (Keogh 2014). Where landholders are required to protect native vegetation on their farm, ‘the losses [in land value], or potential increases that cannot now be realised, are common, widespread and often large’ (Sinden 2004, p. 222). Pat Carmody described the effect that the protection of the growling grass frog has had on the value of his land and business (box 3.8).

Box 3.8 Protecting growling grass frog: one winegrower’s experience

Pat Carmody owns and runs Craiglee Vineyard in Sunbury, north-west of Melbourne. In 2013, he discovered that 85 per cent of the vineyard — including 100 metres on either side of a creek that winds through the property — had been included in a growling grass frog conservation area. Communication about the change, according to Mr Carmody, was poor:

... we have never been formally told by the government that our place is in category 1 Growling Grass Frog habitat. If you didn’t find it on the website you didn’t know about it. (trans., p. 160)

And the rationale for including the property in the conservation area was not clear. Mr Carmody said:

We have never seen a frog. There’s other frogs along the creek, there’s a Southern Marsh Frog, there’s other frogs, there is no — we have never heard a Growling Grass Frog. We have never seen a frog in the vineyard ... (trans., pp. 162–3)

Mr Carmody said that being included in the conservation area has substantially reduced the value of his property, ‘basically the place is worthless’ (trans. p. 159). According to the relevant department of the Victorian Government however, it has ‘no effect on landowners’ abilities to continue to use their land within the area as they have done historically’ (Wallace 2015).

In contrast, where remnant native vegetation improves the aesthetic value of a farm, this can lead to an increase in property values (Mallawaarachchi and Szakiel 2007). For example in north-central Victoria, the presence of native woody vegetation was estimated to increase property values, relative to the values of similar properties without any native vegetation, by up to 16 per cent (Polyakov et al. 2014).

The bottom line is that landholders are required to bear the cost of providing many community-wide benefits from better environmental outcomes. While the community may demand better environmental outcomes, because the costs fall on landholders the community is not necessarily aware of the cost of achieving those outcomes. Such an arrangement is likely to encourage the Australian community to continue to demand greater levels of environmental protection simply because they are not paying for (or not paying the full cost of) that protection. Potential strategies for addressing this are discussed in section 3.4.

Perverse incentives and outcomes

The Commission heard that native vegetation and biodiversity conservation regulations lead to some perverse outcomes, including discouraging or prohibiting landholders from adopting practices that benefit the environment. These concerns can be exacerbated when environmental actions are time sensitive (box 3.9).

The National Farmers' Federation (NFF) claimed that the regulations can prevent 'farmers from changing land use, even where there may be a net environmental benefit resulting from the desired practice change' (NFF 2014a, p. 40). The Victorian Farmers Federation (VFF) said that the difficulty with current regulations in Victoria '... is that they focus on a tree-by-tree assessment of a complex ecosystem. The focus is on one piece of a jigsaw puzzle rather than what role that piece has in solving the puzzle' (sub. DR189, p. 13).

Another perverse incentive created by native vegetation and biodiversity conservation regulations is that they impose the greatest costs on landholders who, by choice or chance, have substantial native vegetation remaining on their properties. Past actions that resulted in native vegetation being well managed are not rewarded.

... a landholder who may have degraded native vegetation can be rewarded over the landholder who previously managed vegetation well. (NSW NRC 2014a, p. 2)

... it has been a constant feature of environmental legislation that good environmental stewardship, rather than being rewarded, is often targeted for acquisition at no advantage to the landowner. (Property Rights Australia, sub. DR254, p. 2)

Box 3.9 One farmer's experience when trying to improve environmental outcomes

The owner and operator of a large cotton farming business on the Macintyre River in southern Queensland told the Commission about his experience dealing with regulatory agencies and local councils when trying to improve environmental outcomes on his property. A recent flood event led to frog spawning and an increase in the water bird population on the farmer's property. The farmer sought to prolong this natural event by adding water from his farm to the natural flow. Timing was critical because, in order to benefit the bird population, the water from the farm needed to arrive before the natural flow dried up.

It took the farmer six weeks to negotiate with multiple agencies (at considerable cost) before permission was granted to supply water for this ecological application. The lengthy delays reduced the effectiveness of the water flow. According to the farmer, each agency was focused exclusively on its area of responsibility and they were unable to work together. For example:

- the authority in charge of stock routes initially rejected the proposal due to its potential to cause erosion, while the local council was concerned with flood risk
- the farmer had to build a pipeline under a main road to reduce the risk of erosion as well as increase the capacity of the culvert (to allow water flow) that was already in place
- a temporary weir was built at the head of this pipeline to make it more effective, but had to be removed following a complaint from a local resident.

The farmer reported that he had to convince an environment authority of the merits of the proposal. He hired a zoologist to monitor bird species before and after the flow. The farmer was required to design the activity to fit within the regional irrigation management plan, and to gain permission from other landholders. He was also required to test the water quality before and after the flow.

According to the farmer, the environment agency insisted that the project be labelled as a 'pilot' so that it did not form a precedent committing them to similar projects in future. The farmer, however, would like to do similar projects more efficiently in future.

Although the flow did eventually take place, its biological effectiveness was reduced by the delay. The experience left the farmer with a sense that regulatory agencies exist to inhibit rather than enable innovative projects.

Source: Productivity Commission case study interview (appendix C).

The regulations can thus reduce the incentives for landholders to conserve or re-establish native vegetation (for its own sake or to provide habitat for threatened species), because they fear that changes to that vegetation may be prohibited in the future (NSW Farmers' Association 2014). The VFF said that current policies make farmers 'less likely to undertake regular revegetation as this is not counted in a future "offset"' (sub. DR189, p. 14). In some cases, landholders opt to plant exotics instead of native vegetation, so that they can be certain of retaining the authority to remove, harvest or prune those plants in the future (SFPARC 2010).

Fears of future changes to native vegetation regulations can also encourage pre-emptive clearing, in which landowners clear vegetation as insurance against future policy changes. This was recently reported to be occurring in Queensland (Ludlow and Greber 2016),

ahead of foreshadowed changes to the laws in that state (section 3.2). When moratoriums on clearing were in place in the Douglas-Daly River catchment in the Northern Territory (between 2002 and 2009), reported clearing rates accelerated rather than slowed, with over 80 per cent of clearing conducted without the required permits (Lawes et al. 2015).

Concerns about perverse outcomes can be compounded when regulations do not allow decision makers to take into account relevant local factors. A report published by the OECD highlighted the:

... inflexible application of targets and guidelines across regions [of Australia] with differing characteristics such that perverse environmental outcomes sometimes result. (Pannell and Roberts 2015, p. 18)

Perverse outcomes also arise when native vegetation regulations limit landholders' ability to control invasive native species. This is the case for bracken in South Australia, for example, which can only be cleared in limited circumstances without the consent of the Native Vegetation Council, even though it 'has limited biodiversity value, can reduce the productive capacity of cleared land and, in some seasons, may be toxic to stock' (SANVC 2013, p. 1).

In addition, native vegetation regulations can conflict with other important community goals, such as bushfire prevention. Property Rights Australia said that 'many of the legislated guidelines for fire breaks and fire mitigation are inadequate to protect life and property' (sub. 45, p. 8). Echoing this concern, Karen Baines (sub. 13) and Steve and Joann Chamarette (sub. DR148) said that the 20 metre perimeter of clearing allowed around homes and farm infrastructure is inadequate. Nillumbik PALS expressed concern about the requirement to obtain a permit to remove burgan, 'a highly flammable native tea-tree' that is a 'native weed' (sub. DR159, p. 7), and suggested that by increasing fire danger, these types of restrictions 'endanger property and citizens as well as ... the very bio-diversity they claim to be protecting' (sub. DR159, p. 8). Another participant said 'by preventing effective vegetation fuel management to reduce a major fire risk to at least moderate, and by preventing compliance with fire management guidelines' the current planning and environment laws result 'in increasing the risk of major fires occurring and when they do occur, increasing their devastation' (Name withheld, sub. DR291, p. 2).

Perverse incentives can also arise when the costs borne by farmers as a result of conservation laws are larger than the penalties they would incur for breaching those laws. This was the case for a farmer in Victoria who contravened the EPBC Act by clearing close to 450 trees on his property without obtaining approval to do so. Under a settlement reached with the Department of the Environment, he was required to pay \$70 000 (or around \$150 per tree) (Department of the Environment 2014). However, the Victorian Farmers Federation estimated that each tree can cost farmers up to \$354 per year (in both direct costs and foregone opportunities) (VFF 2016b).

Similarly, if the steps that landholders must follow to obtain approval to undertake a particular action are too burdensome, the landholder may decide to proceed without approval. The NFF noted that:

... many farmers are reluctant to go through the process of changing their existing land practices as the regulatory steps that they must undertake are deemed to be too onerous and time consuming ... in some circumstances, this has regrettably placed pressure on farmers to take land use decisions into their own hands, with instances of poor judgement leading to convictions or poor environmental outcomes. (sub. 61, p. 11)

Rigid administration

Concerns were also raised about the approach taken by the government departments and agencies charged with administering these regulations. While states' native vegetation legislation typically seeks to promote the environmental, social and economic interests of the state, in some states the administration of native vegetation regulations is delegated to regulators who take a lexicographic approach to environmental protection — that is, they are unwilling to approve trade-offs between environmental, social and economic outcomes, even when small amounts of environmental harm result in much larger social or economic benefit.

On this note, the Tasmania Farmers and Graziers Association said that:

There seems to be a mindset within some parts of government that they must set the highest regulatory standards anywhere in the world regardless of the science and the impact on farm businesses. (sub. 16, p. 3)

This approach also reflects a view expressed by some inquiry participants. For example, Peter Taylor said that 'any regulation must protect biodiversity and penalise destruction of biodiversity' (sub. DR157, p. 1). Chris Tallentire considered that 'there should be an overall environmental benefit as a result of any development proposal' (sub. DR142, p. 3).

Concerns about the rigid interpretation of native vegetation regulations were supported by a survey of broadacre and dairy farmers conducted by ABARES in 2011, which found that 42 per cent of farmers considered that native vegetation regulations lacked flexibility and/or clarity (Harris-Adams, Townsend and Lawson 2012).

The lack of clarity surrounding native vegetation regulation is exacerbated when the information upon which decisions are based is not sound. The Commission heard that errors in native vegetation mapping are not uncommon. For example, Andrew Rea said:

Our family purchased land in the Whitsunday Shire of which areas were heavily infested with noxious weeds. We had to engage a consultant at a cost of \$10 000, plus \$10 000 of our time because the PMAV (Property Map of Available Vegetation) was grossly wrong. \$20 000 down the drain for permission just to clear noxious weeds through no fault of our own. (sub. 9, p. 2)

Johnathan Pavetto also raised concerns about the accuracy of vegetation mapping in Queensland:

... if we look at our maps and they're inaccurate and we do something on our farm that should be legal and should be allowed on farm, but it doesn't comply with the mapping, we're the ones to blame and we could face imprisonment. If we want to correct the maps, it's not up to the state government to correct the maps, we have to hire our own consultants to prove to the state government that, in fact, their information's incorrect, which is really quite extraordinary. (trans., p. 652)

And in New South Wales, a recent analysis of the vegetation mapping in the Upper Hunter Valley found that the majority of vegetation types 'are mapped with such a low level of accuracy as to not satisfy the requirements of local planning for development, conservation and offset initiatives' (Hunter 2016, p. 43). Similar concerns were expressed in relation to the vegetation mapping of the south coast of Western Australia, with South Coast NRM reporting that much of it is 'outdated, nonexistent or inadequate' (sub. DR229, p. 4). The VFF (sub. DR189) deplored the absence of mapping of red-tailed black cockatoo habitat in western Victoria.

The Australian Centre for Agriculture and Law said that 'native vegetation control is an area of regulation that often involves cumbersome administration, where attention to reducing the avoidable bureaucracy could result in more efficient laws without undermining the purpose of those laws' (sub. 2, p. 2).

In a similar vein, inquiry participants noted an absence of trust between landholders and regulators (box 3.10).

Many also expressed concerns about the enforcement of native vegetation and biodiversity conservation regulations (box 3.11).

In response to such concerns, the Department of the Environment and Energy said that it 'is committed to conducting compliance and enforcement activities in accordance with the principles of procedural fairness' and 'applies a range of administrative, civil and criminal sanctions to ensure the most appropriate response to breaches of the legislation' (sub. DR274, p. 3).

Box 3.10 **An absence of trust between landholders and regulators**

When it comes to natural resource management, some rural landholders rarely trust government agencies and staff — an underlying distrust of government information and assistance has been reported in many situations (Meadows, Emtage and Herbohn 2014). The National Parks Association of NSW and the Nature Conservation Council of NSW suggested that there is ‘vocal minority of farmers who oppose any form of regulation whatsoever — including regulation on clearing and compliance’ (sub. DR209, p. 9). While such entrenched views would contribute to distrust, there are also other factors at play. In particular, Curtis et al., for example, found evidence that government staff engaged in natural resource management ‘... have different values (i.e. much greener) than the rural landholders they are attempting to engage and this difference in values is likely to lead to distrust unless acknowledged and addressed’ (2014, p. 189).

The lack of trust in local regulators is a recurring theme:

Many do not trust their [Local Land Services] officers enough to ask for advice and preferred to ‘keep under the radar,’ believing that their properties would be watched even more closely if any contact was made. [Local Land Services] staff also commented on the lack of trust and how difficult their job was, given the adversarial and inflexible nature of the Act. (Evidentiary 2014, p. 23)

Many farmers have a very poor relationship with Native Vegetation regulators and this has made it hard [for] the NRM (natural resource management) groups to establish supportive, productive relationships with farmers and land management. (Karen Baines, sub. 13, p. 2)

The NSW Farmers’ Association suggested that it is the native vegetation regulations themselves that reduce farmers’ willingness to seek external advice.

... farmers’ reluctance to engage with advisory services or even in explicit conservation management for fear of locking up land which may be ... better utilised in production have origins in the impositions created by the [Native Vegetation] Act. (sub. 72, p. 11)

Inquiry participants emphasised the need to build the capability of, and trust in, regulators.

The fundamental injustice of [native vegetation laws], in addition to uncertainty about the future direction of native vegetation laws, fosters a distrust of government and any associated conservation or ecological outcomes ... the current context is one of distrust, unwillingness, disconnect and confusion. (NSW Farmers’ Association, sub. 72, pp. 9–10).

Good public policy requires ownership by those that it impacts, failure to achieve that goal results in poor policy outcomes. (Tasmanian Farmers and Graziers Association, sub. 16, p. 3)

Several participants questioned whether or not they could influence the outcomes of processes that affected them. One submission stated that ‘the green decision was already made’ (Ronda and Allen Harmer sub. 15, p. 1). Other participants echoed this concern, and noted that regulators in many jurisdictions are inclined to prohibit every action that could possibly affect biodiversity, regardless of the potential benefits of those actions. The perception that government agencies favour environmental outcomes over agricultural production can be compounded by the dual role of those agencies: in many cases agencies must balance two conflicting roles.

While cooperative approaches are appropriate, regulators must enforce legal obligations where cooperation and collaboration has failed to protect land. (EDOs of Australia, sub. 60, p. 3)

Box 3.11 Different views on enforcement of environmental regulations

Not rigorous enough?

GrainGrowers expressed 'concerns with how environmental regulations are enforced, including problems with some farmers getting away with non-compliance' (sub. 73, p. 22). William Blackburn said that 'while current State regulations may sometimes be inconsistent or not perfectly efficient, by and large they are too weak and too poorly enforced' (sub. DR196, p. 1). Environmental Justice Australia said that in Victoria, 'monitoring, evaluation and enforcement of land clearing has been very poor' (sub. DR221, p. 7), and EDOs of Australia (sub. DR241) highlighted the limited resources that are available for monitoring and enforcement activities.

In many instances smaller lifestyle farms and 'tree changers' close to urban areas are a source of weed infestations and feral animals that reduce productivity on adjacent commercial farms. Such poor land management practices often arise from ignorance (Luck, Race and Black 2011) or through the absence of financial incentives (if landholders are not engaged in agricultural production, they do not reap the productivity benefits of controlling invasive plants and animals). However, there may also be a reluctance on the part of local councils and other government agencies to undertake enforcement actions in such cases.

Or overly rigorous?

In contrast, other participants said that governments take an overly punitive approach to enforcing native vegetation and biodiversity conservation regulations.

Strict enforcement and penalty provisions have created an adversarial climate between landholders and government and eroded landholder goodwill. (NSW Farmers' Association, sub. 72, p. 12)

There have also been ill advised and/or malicious prosecutions of landowners which have had no chance of success but left the defendants broke and broken. (Property Rights Australia, sub. 45, p. 2)

A commonly cited case is that of Peter Swift of Manjimup, Western Australia, who faced a prolonged and expensive legal battle after he was accused by the former Department of Environment and Conservation (Western Australia) of illegally clearing 14 hectares of native vegetation in 2007–09. Mr Swift was not convicted.

AgForce said that in Queensland, '... the rapid reversion from non-coercive policy instruments for vegetation management (information, extension, education), to coercive policy instruments (legislation, compliance, enforcement) has impaired the relationship between State Government and landholders' (sub. 17, p. 13). Also, its members expressed concern that they had:

... applied for and in many cases received permits to clear High Value Agricultural (HVA) land. The Compliance Division in the Federal Department of Environment sent a letter to many of the HVA permit holders enquiring into their recognition of and need for compliance with the EPBC Act. The letter mentioned the severe penalties for breaches of the EPBC Act. (sub. 17, p. 24)

The House of Representatives Standing Committee on the Environment also found:

... [cases] where federal environmental laws were administered in a perhaps more punitive fashion than may have been necessary, particularly when communicating with the farming community when there is a breach of the EPBC Act. (HoRSCE 2014, p. 84)

There were also concerns about the accuracy of the mapping data used to monitor compliance.

Complex, confusing, duplicative and narrowly focused

Many landholders also consider native vegetation and biodiversity conservation laws to be:

- overly complex and process driven (NSW OEH 2015)
- confusing and cumbersome (NFF 2014a, p. 16)
- focused on micro-management of individual plants and properties (NSW Farmers' Association 2014, p. 4).

Burdekin Shire Council (Queensland) said that '... the overall legislative framework is very restrictive and expensive. It is difficult to understand for investors' (sub. 35, p. 2). The Consolidated Pastoral Company considered that there is a need for 'rationalisation of the maze of environmental laws' (sub. 71, p. 4). Gingin Private Property Rights Group suggested that 'because of the complexity of the Environmental Legislation, very few if any from the Ministers down, understand the law' (sub. DR194, p. 3). And, according to Byron et al., in New South Wales, native vegetation laws:

... create a complex system that is difficult for the community to navigate, has imposed unnecessary regulatory burdens, especially in certain regions and sectors across the state, is process driven and not fulfilling current objectives in the most effective and efficient way. (2014, p. 4)

However, the Goulburn Broken CMA warned that 'in aiming to reduce burden, regulatory processes which are highly complex, can become oversimplified and not effective in reaching the objectives for which they were originally intended' (sub. DR198, p. 2).

Farming organisations (including the Pastoralists and Graziers Association of Western Australia (sub. 70) and the Queensland Farmers' Federation (sub. DR217)) said that landholders' awareness of environmental regulations is low. The NFF noted that:

For farmers, awareness of their specific responsibilities under any environmental law is around 30 per cent, with this awareness level focused on state-based regulation. There is confusion that is generated by a lack of harmonisation between State and Commonwealth laws. Despite any good intentions farmers might have to comply with the regulation, awareness and confusion often results in inadvertent non-compliance with the law. (sub. 61, p. 10)

Primary Producers South Australia considered that native vegetation regulation in that state is 'regarded by the majority as expensive and bureaucratic' (sub. 41, p. 2). This perception arises because permit applications must typically include a description of the type and amount of native vegetation to be cleared, an aerial photo or site plan illustrating where the native vegetation exists, which sections are proposed for removal, methods proposed to minimise the amount that needs to be cleared, and actions proposed to offset the clearing that goes ahead (Bricknell 2010). AgForce (sub. 17) provided the example of a 16 000 hectare property north-west of Charters Towers, where the owners spent over \$50 000 (including the costs of obtaining expert advice) to obtain approval to clear less than a tenth of the property.

Many inquiry participants also commented on the duplication that exists in environmental regulations (box 3.12).

Box 3.12 Duplication of environmental regulations

Duplication was a source of considerable concern for many inquiry participants. GrainGrowers said that ‘... there remains problematic overlaps and duplication in the environmental framework (including Federal, state and local government restrictions) that grain farming businesses operate in’ (sub. 73, p. 23). Similarly, the Consolidated Pastoral Company said that it is ‘required to comply with, or take account of, at least 46 separate environmental Acts and regulations across four legal jurisdictions in the management of its properties’ (sub. 71, p. 4). The NSW Farmers’ Association expressed concern that:

... there is no certainty that low risk, potentially self-assessable and ‘code of practice’ based activities (such as those proposed in NSW) do not require referral at the Commonwealth level. This means that a farmer could have his clearing activity ‘certified’ [as authorised under a pre-approved plan] by the Local Land Services and yet still be in breach of the Commonwealth legislation, when undertaking the activity. Not only is it procedurally unfair it isn’t logical to regulate the same species or native habitat twice and differently. (sub. DR161, p. 11)

Similar concerns were raised by the NFF (sub. DR216) and WAFarmers (sub. DR226).

However, the Australian Network of Environmental Defenders Offices cautioned that claims of duplication are not accurate because federal and state laws address different issues.

In some cases, [federal and state laws] are assessing the same projects but they are not necessarily assessing it from the same angle or for the same reasons. State processes do not assess projects from the perspective of World Heritage protection. (HoRSCE 2014, pp. 26–27)

To the extent that the goals of different regulations differs, having separate systems to deliver on those goals may be reasonable. This was highlighted by several participants, including Wimmera CMA (sub. DR147). The Goulburn Broken CMA said that there is not undue overlap between EPBC Act and state native vegetation regulations because ‘both regulatory processes operate at different scales and purposes’ (sub. DR198, p. 3).

However there is scope for governments to work together to implement regulations in ways that minimise duplication (and the perception of duplication).

Overlap and duplication in native vegetation and biodiversity conservation regulations contribute to slow decision making timeframes. While many of the decisions made under the EPBC Act must be made within six months, there is no set timeframe for decisions under many state native vegetation laws. This can compound the effects of the regulations on farm businesses, as ‘seasonal production cycles are broken or missed because of uncertainties arising from complex and unclear legislative requirements’ (NFF 2015c, p. 7). For sheepmeat producers, the ‘regulatory uncertainty and time delay in getting approval for vegetation and water management activities were significant costs to their business’ (Sheepmeat Council of Australia and Cattle Council of Australia, sub. 88, att. 1, p. 28). Similarly, the Limestone Association of Australia said that environmental regulations can delay ‘proposals for new and expanded mines and quarries which service agriculture such as limestone and gypsum’ (sub. 48, p. 2).

Other concerns relating to the EPBC Act

Awareness of the requirements of the EPBC Act

There are issues around the extent to which farm businesses are aware of the requirements imposed by the EPBC Act, which ‘like most important legislation, ... is long and can be difficult for the lay reader’ (Law Council of Australia 2014, p. 5). The House of Representatives Standing Committee on the Environment, for example, said that there have been ‘... cases where members of the farming community were not well informed of their obligations under federal [environmental] regulations’ (HoRSCE 2014, p. 84). The NSW Farmers’ Association agreed that ‘knowledge of the EPBC Act is extremely low amongst farmers’ (sub. DR161, p. 10). The Australian Government Department of the Environment also acknowledged that:

... some farmers may not refer actions that should be referred. Typically this is due to a lack of knowledge about requirements under Commonwealth environmental law. (sub. 80, p. 7)

In addition, according to the NFF, even those landholders who are aware of the EPBC Act can struggle to keep up with ongoing changes.

... as the footprint of environmental laws is extended with new listings — an activity that does not require consent today may require approval if a new listing comes on line. This results in considerable confusion for farmers. (sub. 61, p. 10)

AgForce said that ‘following recent changes to Queensland vegetation management legislation, the [Australian Government] Department [of the Environment] failed to engage with producers and communicate risks of not complying with the EPBC Act, rather sat and speculated over what might unfold on-ground and then commenced compliance investigations when it became apparent that producers were failing to implement the legislation correctly’ (sub. DR246, p. 2).

As discussed in chapter 2, jurisdictions could consider programs to educate prospective land purchasers about the realities of farming practices. This could include providing information about the ways in which environmental regulations (including the EPBC Act but also state and territory native vegetation and biodiversity conservation regulations) can restrict those practices. (Other strategies to improve awareness of environmental regulations are considered below.)

Burden imposed by the EPBC Act referral process

As noted above, the EPBC Act primarily affects farm businesses when they plan to clear native vegetation or undertake development that could affect plants or animals that have been listed as threatened under the EPBC Act. Under the Act, landholders must refer proposed actions (such as land clearing, construction or changes in land use) to the Australian Government Department of the Environment if those actions could affect any matters of national environmental significance.

When deciding whether or not to refer a proposed action, landholders must determine whether the changes they want to make are likely to have a significant impact on any species and ecological communities listed under the EPBC Act (there are hundreds listed), or could otherwise affect a matter of national environmental significance (for example, an increase in the runoff of fertilisers or pesticides could affect the Great Barrier Reef or a listed wetland). As the NFF said:

In essence, the [EPBC] Act requires a farmer to self-assess whether the proposed activity will have a significant impact. (sub. 61, p. 10)

Some guidance is provided by farm organisations (for instance WAFarmers 2014), and the Department of the Environment has created an internet search tool that provides details of matters of national environmental significance for each postcode, catchment or local government area (DoE 2015d). But according to landholders, the available information is often not sufficient for them to fulfil their obligations under the EPBC Act.

At present a catchment level report can be generated which gives a list of species which ‘may be present’. In the Wimmera, this report lists 300 matters of national environment significance which requires the land holder to read over 300 documents and attempt to determine if they have any vegetation listed. (VFF, sub. DR189, p. 17)

This large volume of information is often of little practical assistance. As an example, knowing that the critically endangered Regent Honeyeater’s habitat includes the municipality of Ararat in Victoria does little to assist a landholder in Ararat when the honeyeater’s habitat extends over much of south-eastern Australia, and the land in question may not contain any of the species that honeyeaters use for food or nesting. Farmers therefore typically need to engage specialist advice in order to complete the ‘self-assessment’. The VFF said ‘farmers are required to self-assess whether actions will have a significant impact on listed matters that often only a very select number of specialist scientists would even be able to identify’ (2014b, p. 28).

In addition to their cost, consultants’ reports can easily run to dozens of pages, even when the proposed action is relatively minor (for example, clearing five trees, box 3.13).

Both the NFF (sub. 61) and GrainGrowers (sub. 73) considered that this example illustrates the need for a more streamlined process for seeking formal advice about whether a proposed activity is significant and what will trigger the EPBC Act. In contrast, EDOs of Australia said that the example demonstrates ‘the appropriate application of a risk-based assessment: the risk of impacts on a threatened species were identified, assessed against relevant criteria and determined to be low enough to allow the clearing to proceed’ (sub. DR241, p. 4).

Box 3.13 **Hurdles faced by a proposed blueberry farm in New South Wales**

The National Farmers' Federation provided an example of the actions a farmer must take to be confident that they are acting legally under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act):

... a detailed referral process must be completed to ascertain whether their actions will significantly impact a listed matter. This detailed referral process requires providing independent technical reports and a period of public comment on the proposed activity.

An example of this is of a landholder seeking to clear 1.2 hectares of land near Coffs Harbour NSW for a blueberry farm. The clearing was considered to be clearing of 'regrowth' under State native vegetation laws, and as such no state approval required. However, the proposed clearing area included one EPBC listed threatened plant species and potential habitat for six EPBC threatened animals or birds. The proposed clearing action was going to remove 5 plants in the 1.2ha area, and it was estimated that there was 6270 plants on the total property.

The landholder did the 'right thing' referring the development to Commonwealth to determine whether Federal Environmental approval was required. This referral required the following details:

- 19 pages of application information
- an independent expert report on proposed environmental impacts — which included 22 pages of detailed text, 18 [geographic information system] maps, 19 pages of detailed lists of potential species on site and likelihood of occurrence site
- a period of public comment.

The outcome of the referral was that the action was 'not controlled' and as such Commonwealth approval was not required.

Source: NFF (sub. 61, p. 10).

The burden imposed by the referral process — and the need for consultant's advice — depends on the number of listed species and geographic areas. The Tasmanian Farmers and Graziers Association said:

There is an implicit assumption in the EPBC [Act] that threatened species and/or ecological communities can and should be protected, no matter the cost or the consequences. Recent scientific debate suggests that this assumption requires much more rigorous testing; and it is important to recognise that such aspirations are not always desirable or attainable. (sub. 16, p. 6)

The Tasmanian Farmers and Graziers Association therefore considered that 'there are a number of significant failings' with the EPBC Act (sub. 16, p. 6).

The National Irrigators' Council (sub. 18, p. 4) expressed concern that the listing of the Murray River and the Macquarie Marshes as 'critically endangered' under the EPBC Act occurred without community consultation or a clear rationale. (However, the listing of these areas was subsequently disallowed by the House of Representatives.) It advocated 'amendments to the EPBC Act that guarantee that, prior to any new listings being made, key stakeholders ... are consulted at the commencement of the process' (sub. 18, p. 4).

3.4 Improving environmental regulations

Native vegetation and biodiversity conservation regulations could be improved by:

- building on efforts to reduce regulatory overlap and duplication
- fundamentally changing some jurisdictions' regulations
- improving the administration of the regulations and changing the way that regulators work with landholders and the community
- making more use of market-based approaches to native vegetation and biodiversity conservation.

Costs could be reduced and effectiveness improved if regulatory regimes followed good regulatory practices. This includes considering the community-wide costs and benefits of environmental policies before adopting the policies, as part of regular policy reviews, and when circumstances change (including climatic circumstances, which may make previously attainable goals unattainable).

Reducing regulatory overlap and duplication

Not all overlap and duplication is wasteful — some degree of overlap and redundancy is an important and unavoidable part of reliable systems. But in many cases, complex and overlapping regulations place an undue burden on landholders and can limit the effectiveness of the regulations. As Byron et al. said:

... too much 'red tape' alienates the very people whose cooperation is essential for great biodiversity outcomes. (2014, p. iv)

Where different regulatory requirements are inconsistent, or are perceived to be inconsistent, and the inconsistency cannot be removed, regulators need to provide guidance on how to reconcile the (perceived) inconsistency, and what actions are permitted under all relevant regulations (regardless of which level of government imposes them). AgForce recommended 'that the Queensland Government and Australian Government divisions responsible for vegetation management legislation communicate more effectively and align requirements for information from landholders to enable more streamlined assessment and compliance with respective regulatory frameworks' (sub. 17, p. 25).

Several initiatives are already underway to remove red tape and streamline processes, including:

- consistent assessment processes for the listing of threatened species
- one-stop shops for environmental assessments and approvals.

Consistent assessment processes for the listing of threatened species

In July 2015, the Environment Ministers of the Australian, state and territory governments agreed to progress an intergovernmental memorandum of understanding to implement a common assessment method for listing nationally threatened species, and where agreed, ecological communities (DoE 2015c). Memoranda of understanding have since been signed between the Australian Government and the governments of Western Australia, the Australian Capital Territory, Northern Territory and Tasmania, with other jurisdictions expected to follow (Department of the Environment, sub. 80). Aligning assessment processes is meant to reduce duplication and increase consistency between jurisdictions' threatened species lists.

While the principle of using common methods to assess species for listing is sound, aligning regulatory methods can be complicated, administratively costly and politically difficult, and progress has been slow. The method that is agreed on should achieve a reasonable balance, and should only result in convergence to the highest standard where that standard is scientifically robust and is justified on cost-benefit grounds. The latter point was emphasised by the Tasmanian Farmers and Graziers Association:

Humans will continue to undertake activities that have adverse environmental impacts – and of course they should seek to avoid and mitigate these wherever possible. However, pragmatically, it is also important to accept that some level of residual adverse environmental impact is unavoidable and a part and parcel of our existence as a species ... listings need to be reviewed regularly to ensure that they bear up under contemporary scrutiny and community expectations. (sub. 16, p. 6)

Governments need to focus on the efficiency of governance and decision-making processes relating to threatened species (including appropriate analysis of regulatory impacts, costs and benefits), regardless of the degree of scientific agreement on methods, or the level of data available at a point in time.

One-stop shops for environmental assessments and approvals

Since 2013, some of the duplication in environmental assessment and approval processes has been removed through the creation of 'one-stop shops'. Under the one-stop shop system, the Australian Government and state and territory governments enter into bilateral agreements for the assessment and/or approval of 'an activity [that] is being managed by a state or territory government and is likely to have an impact on a matter of national environmental significance' (Department of the Environment, sub. 80, p. 11). The intended effect is to create a single assessment and approval process for most project proponents.

The Commission has previously found that one-stop shops offer 'significant potential to reduce coordination costs and provide greater certainty and clarity about the regulatory framework' (PC 2013a, p. 154), while recognising that they will not be suited to every circumstance. But despite their general benefits, current one-stop shop arrangements are likely to have little tangible impact for most farm businesses, given the small number of

agricultural projects that proceed to the assessment stage of the EPBC Act (a point noted by Australian Pork Limited (sub. 37) and the Wilderness Society (sub. DR207)).

Several participants (including AgForce, sub. DR246; GrainGrowers, subs. 73 and DR247; NFF, sub. 61) suggested that one-stop shops should be extended to cover on-farm activities or the initial stages of project assessment (such as the referral stage of the EPBC Act). While this proposal could have benefits to farm businesses, those benefits will depend on one-stop shops being fully established and operating effectively. Waiting for this to occur before including other activities in the one-stop shops would therefore be sensible.

Other proposals to improve environmental regulations

The Wilderness Society argued that ‘Australia should have an independent national environmental agency to administer national environment law, coordinate national nature conservation strategies and provide publicly available evidence-based assessment and monitoring of environmental issues to all sectors’ (sub. DR207, p. 12). Environmental Justice Australia also suggested that improvement in agriculture and environmental management ‘likely requires a fundamental rethinking of the relationship of national and State and Territory governments on these issues so that there is greater scope for federal leadership, for example, around legislated standard-setting, and sub-national implementation’ (sub. DR221, p. 11).

The benefits that could arise from revisiting the role of states and territories as primary regulators of environmental matters are not clear. There would be significant challenges in developing a national approach that takes into account the differing interests and circumstances of all jurisdictions, and the costs of doing so are likely to be substantial. There are also a range of other options for improving the effectiveness of native vegetation and biodiversity conservation regulations, and pursuing these options would be worthwhile before considering broader reforms to federal and state responsibilities in this area.

Vegan Australia took a different approach to conservation issues, and suggested that ‘the phasing out of animal agriculture would be of great benefit to the environment’ (sub. DR115, p. 9), as it would promote revegetation and contribute to ‘restoring habitat, increasing biodiversity and reducing species extinctions’ (sub. 25, p. 5). Peter Taylor (sub. DR157) suggested that regulations should be redesigned to mandate the biological health of the soil.

Some principles for environmental regulation

Some of the concerns about native vegetation and biodiversity conservation regulations reflect problems that are inherent in any regulation where the benefits are difficult to quantify and extend far into the future.

However, in the Commission's view, conservation regulations should:

- be risk-based
- involve assessing the impact of proposed activities on the landscape or the region (not just the impact on individual properties)
- consider economic and social factors, as well as environmental impacts.

These principles could work in conjunction with greater use of incentive- and market-based mechanisms (discussed below).

Risk-based regulation

Risk-based approaches to regulation are designed to ensure that applicants' obligations are proportionate to the expected impacts of their proposed actions. In the context of native vegetation and biodiversity conservation regulations, this means setting regulations that are sufficiently flexible to be applied on a case-by-case basis in ways that focus on environmental outcomes.

Some jurisdictions have adopted a risk-based approach to native vegetation clearing regulations. In Victoria, an application for a permit to remove native vegetation is categorised into the low, moderate or high risk pathway, based on the extent and location of proposed clearing and the potential impact on the habitat of Victoria's rare or threatened species (VDEPI 2013a). The risk to biodiversity of a proposal to remove native vegetation is assessed:

... based on whether the removal could significantly impact on habitat for Victoria's rare or threatened species. This is determined by assessing the proportional impact of the proposed removal of native vegetation on rare or threatened species habitat. Proportional impact is a measure of the relative importance of the species' habitat to be removed in relation to the total remaining habitat for that species. (VDEPI 2013a, p. 1)

The South Australian Government noted that its proposed Native Vegetation Regulations 2016 'explicitly include reference to a risk assessment approach to be applied when considering application to clear native vegetation' (sub. DR295, p. 6).

Other jurisdictions are working towards a risk-based approach to native vegetation clearing regulations (DoE 2015c).

- Western Australia is improving its satellite data to 'enable more precisely targeted environmental regulatory activity to areas where maintenance of land condition requires this attention' (WA Government, sub. 54, p. 16).
- The recent review of biodiversity legislation in New South Wales recommended that a risk-based approach be taken to regulation, one 'that emphasises education and voluntary compliance while still giving regulators the tools to take strong enforcement action against those who do the wrong thing' (Byron et al. 2014, p. 8).

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- The Tasmanian Government said that its controls on the removal of wildlife ‘are risk-based and principally based on consideration of the conservation status of the species’ (sub. DR287, p. 6).

Well-designed risk-based approaches have a number of advantages, including that they can:

- improve environmental outcomes, by requiring a more comprehensive assessment of proposals that could have more significant environmental effects
- help to ensure that the costs and obligations faced by landholders are proportionate to the environmental effects of each proposed action — this is particularly important given the wide variation in the type and magnitude of actions covered by native vegetation and biodiversity conservation regulations
- increase the incentives for compliance with the regulations, through the prospect of lighter-touch regulation
- allow all relevant risks to be considered, and for trade-offs between those risks to be made. Risks to native vegetation come not just from land clearing, but also from poor land management (such as failure to control pests and weeds). As such, a system that focuses on limiting land clearing without giving sufficient regard to the ongoing task of environmental management will fail to achieve its conservation objectives. This concern applies to both private- and public-sector land managers (and indeed, participants told the Commission that public sector land managers often fail to adhere to good land management practices)
- help to address perverse incentives (such as incentives to undertake pre-emptive clearing or *not* to plant native species), contributing to better outcomes for both farmers and the environment.

However, the benefits of risk-based approaches will not be achieved in the absence of sound and thoughtful design. As Environmental Justice Australia put it:

Risk-based approaches to environmental regulation can be appropriate and useful but only if well-designed, targeted, principled, enforceable and enforced. (sub. DR221, p. 6)

Achieving this standard requires minimising the potential difficulties associated with risk-based approaches, which include:

- uncertainty — land managers and regulators have incomplete knowledge of a constantly changing environment. ‘Ecosystems are not frozen in time and neither is there complete science about any ecosystem’ (Martin et al. 2007, p. 15)
- bias — on occasion, regulators can place undue weight on risks to regulatory institutions, to the detriment of environmental, economic or social risks (Rothstein et al. 2006)
- failure to acknowledge competing values and interests — ‘clear articulation of values, norms or policy goals is an important factor orientating and ordering risk-based approaches, yet one often obscured and/or contested’ (Lindsay and Riebl 2013, p. 461).

When adopting a risk-based approach, risks need to be assessed in a robust fashion. As the Goulburn Broken CMA pointed out ‘the approach must be developed and implemented according to sound processes and underpinned by rigorous scientific data’ (sub. DR198, p. 2). A risk-based approach must also be implemented by regulators with the skills and capabilities to support landholders in undertaking risk assessments (see below).

Risks also need to be clearly communicated to stakeholders. Unless communicated clearly, the complex risk assessment methodologies can be confusing and appear to contain anomalies (which could in turn lead to failure to protect areas of environmental significance, while imposing additional regulatory hurdles by ‘protecting’ areas of very limited importance). For example, in Victoria, the native vegetation location risk map has been misinterpreted as a map showing the importance of — rather than the risk that clearing would pose to — native vegetation (VDELWP 2016d).

It is also important that risk assessment methods apply equally to all landholders, with the same factors considered regardless of the purpose of the intended action. For example, it is not good practice to apply different rules to land clearing for the mining, petroleum, geothermal and exploration activities than would apply if the same clearing were proposed for agricultural purposes. Similarly, it is difficult to envisage an ongoing rationale for different rules for clearing on pastoral leases and on freehold land, if the form of land tenure is the only difference between otherwise similar tracts of land.

A risk-based approach to native vegetation and biodiversity conservation regulations can also mean that regulations can more easily adapt to changing circumstances. This is important as:

... a fundamental feature of ecosystems and species populations is that they are highly dynamic and change in unpredictable ways both with and without human intervention. Essentially, this means that biodiversity conservation is a ‘moving target’. (Murtough, Aretino and Matysek 2002, pp. 14–15)

Risk-based approaches have been adopted in other related areas of regulation such as biosecurity, where newly modernised legislation provides a more flexible risk-based approach to compliance (chapter 8).

Landscape scale

Landscapes (or bioregions) are an important scale to address threats to biodiversity and to consider the cumulative impacts of development proposals. At the landscape scale, geophysical patterns, the distribution of flora and fauna, and environmental processes that influence the functions of entire ecosystems can be considered in a way that is impossible at a smaller scale. There are approximately 130 bioregions across Australia.

Planning for biodiversity at this scale recognises the significance of these natural processes and gives us the greatest opportunity to conserve biodiversity in sufficient numbers and distribution to maximise its chance of long-term survival. (NSW OEH 2011)

One of the strengths of taking a landscape or bioregional approach is that it involves looking proactively at biodiversity conservation issues in order to establish a framework for future environmental management (Pope and Moore 2013). A landscape approach can also allow for the heterogeneity between regions to be better taken into account in regulatory decisions, which is essential as ‘landscape needs and appropriate management practices vary from region to region’ (Byron et al. 2014, p. 23).

A number of inquiry participants (including Steven and Joan Chamarette, sub. DR148; Johnathan Pavetto, trans., p. 651) supported a landscape approach.

Environment regulations need to be landscape based and focus on activities with significant environmental effects. As an example, an approach to enhance the recovery of threatened species that focuses only on individuals rather than populations is too simplistic as it does not address the key issue of the health of the species at the landscape level (and across tenures). (Australian Forest Products Association, sub. 11, p. 8)

Enabling a process that incorporates a range of supporting evidence can help to ensure that landholder’s obligations are proportionate to the impacts at site, landscape and regional scale and that the decision making is equitable. (Goulburn Broken CMA, sub. DR198, p. 2)

Since 1999, taking a landscape-scale approach to biodiversity conservation has been endorsed in successive Australian biodiversity strategies (DoE 2015c). However, native vegetation and biodiversity conservation regulations sometimes only permit or require assessments of individual proposals, and so involve consideration of environmental outcomes at a smaller, local level. This can mean that cumulative impacts of proposals on the environment, and cumulative impacts of regulations on landholders, are not sufficiently addressed.

Many participants (including the Wilderness Society, sub. DR207) emphasised the importance of considering cumulative impacts on the environment. Chris Nadolny said:

... since clearing is cumulative, keeping account of what is happening at the individual property scale is important for achieving targets at a landscape scale. (sub. DR118, p. 1)

The Centre for Ecosystem Science said that species loss ‘... is occurring at small spatial scales, not landscape scales. Cumulative loss can be considerable due to the small decisions made. It is critical to implement local actions to sometimes effect global sustainability for some species and ecosystems’ (sub. DR200, p. 5). Birds Queensland said:

We believe that biodiversity protection is important at an individual property level as well as a landscape level. For example, what seem to be small and relatively insignificant areas of wetland often support a diversity of wildlife, some of which can be regionally rare. (sub. DR108, pp. 2–3)

Others pointed out that in some cases, properties may be so large that landscape and property scale are very similar.

Landscape scale assessments are the same as property assessments when you consider the size of pastoral leases. (Environmental Farmers Network, sub. DR174, p. 3)

And conversely, ‘large properties in Australia may contain more than one ecological landscape, with quite different issues related to land management, requiring a different process of assessment and approval for development’ (Centre for Ecosystem Science, sub. DR200, p. 11).

The National Parks Association of NSW and the Nature Conservation Council of NSW cautioned that while the proposed management zones for vegetation in New South Wales are inappropriately large, and ‘therefore do not reflect bioregional boundaries and the ecological considerations that are implicit in bioregionalisation’ (sub. DR209, p. 11).

The effective implementation landscape-scale approaches requires data at the landscape or region scale (Western Australian Government, sub. 54). But regardless of data availability and quality, assessment at a landscape scale is desirable because species and ecosystems function at a landscape scale.

Economic and social factors also need to be taken into account

Once the environmental impacts of a proposed action have been assessed (using methods that are commensurate to the level of risk posed to the environment), it is also important to take into account the economic and social benefits and costs of the proposed action. Endorsing Australia’s Native Vegetation Framework, COAG agreed that all governments would consider economic and social factors.

Native vegetation management should adopt an integrated approach that considers both long-term and short-term environmental, economic and social considerations consistent with the principles of ecologically sustainable development. (COAG SCEW 2012, p. xiii)

However, in some jurisdictions the native vegetation and biodiversity conservation regulations do not require, or in some cases even permit, economic and social factors to be considered alongside environmental ones. For example in New South Wales, Byron et al. found that:

While the planning system [for urban and infrastructure development and extractive industries such as mining] considers social, economic and environmental factors to inform decisions, the native vegetation laws are based on a ‘command and control’ system that stifles innovation and forces landholders to absorb the costs of public goods delivered by biodiversity conservation on private land. (2014, p. 18)

Property Rights Australia also said that in Queensland, recent legislative changes have:

... restored the ‘conservation of nature’ as the sole object of the Nature Conservation Act 1992. The additional matters that are to be removed from the object are references to social, cultural and commercial uses; community use and enjoyment; and the involvement of Indigenous people in management. (sub. DR254, p. 2)

Other participants, however, expressed concern about possible trade-offs between economic and social factors and environmental concerns.

What is needed is a decision-making process that gives *more* consideration to environmental factors, not *less*. (Dominique Thiriet, sub. DR136, p. 2)

We do not agree with equal weighting on social, environmental and economic factors. The natural resource base is the primary resource ... the other two logically flow from these values. (Environmental Farmers Network, sub. DR174, p. 3)

Friends of the Earth Australia considered that in attempts to balance economic, social and environmental factors, 'inevitably the environment loses' (sub. DR125, p. 2). Others thought that the phrase 'economic, social and environmental' could imply that economic and social factors would take preference over environmental ones.

The Commission does not agree that environmental considerations should automatically take precedence over economic and social factors. To the extent that policy makers and regulators ignore the economic and social consequences of their decisions, they can forgo potential environmental benefits; that is, economic benefits can be used to purchase greater environmental benefits. By focussing exclusively on environmental harms and benefits, the community could be losing out on potential environmental benefits paid for by improved economic outcomes.

The Australian Sugar Milling Corporation suggested that an assessment of cumulative impacts needs to apply to economic factors as well as to environmental ones, as:

... environmental regulations might be considered to have a relatively minor implication on a farm by farm basis, however have a significant cumulative impact at the market or processing scale, such as a sugar mill. (sub. DR234, p. 3)

In cases where economic and social factors are not fully and routinely considered as part of assessments made under native vegetation and biodiversity conservation regulations, the regulations should be changed so they do. While economic and social factors are considered in some jurisdictions and circumstances, this may not always occur in a consistent manner (as evidenced by the perverse incentives and outcomes described in section 3.3).

In part, failure to fully consider economic and social factors may be because it is difficult to make trade-offs between competing objectives, and because there is little guidance on how decision makers should undertake the complex task of weighing those objectives. In many cases, markets can provide a means of resolving uncertain trade-offs between competing objectives. In other cases, community-based NRM organisations (box 3.14) can provide a forum for making these trade-offs at the regional or local level, particularly once regulatory frameworks enable risks to be considered at a relevant scale.

Box 3.14 Regional natural resource management organisations

There are 56 regional natural resource management (NRM) organisations across Australia, most of which are community based. There is considerable variation in the role and function of these organisations in different states and territories, and the advisory versus management roles of these bodies has varied between states and over time (Pittock, Cork and Maynard 2012). Despite these differences, there are also some commonalities. In broad terms, most aim to 'strengthen the intrinsic motivation of community members to contribute voluntarily to NRM initiatives' (Curtis et al. 2014, p. 190). This translates into goals such as:

- keeping soils, agricultural landscapes and ecosystems healthy
- preserving native vegetation and promoting revegetation
- safeguarding native animals
- managing groundwater and river catchments.

They do this by:

- determining regional NRM priorities and setting those priorities out in a plan or report
- receiving Landcare funding from the Australian Government
- allocating funding (from Landcare and other sources) towards the regional NRM priorities, often through grants to local landholders or community groups. For example, in the six months to 30 June 2014, the 14 regional NRM bodies in Queensland provided funding to 112 Landcare and community groups
- focusing on obtaining community input. For instance, Victoria's catchment management authorities (CMAs) are designed to maximise community involvement in decision-making
- employing a (generally small) number of paid staff, and making use of volunteers (either directly or through funded programs).

Regional bodies are seen as knowing more about the local area, and what is practical and achievable in that area, and thus are viewed by landholders as having greater legitimacy than other government agencies.

Sources: Bartel (2014); Curtis et al. (2014); National Landcare Programme (2014); QDNRM (2014); VDELWP (2015a).

Summing up

Native vegetation and biodiversity conservation regulations should be based on an assessment of environmental risks, consistently consider and balance environmental, economic and social factors, and account for the impacts of proposed activities on the landscape as well as the individual property. A broad range of participants² supported basing conservation regulations on these principles.

² Participants supporting the idea included: the Australian Sugar Milling Council (sub. DR234); Canegrowers (sub. DR169); the Department of the Environment and Energy (sub. DR274); Livestock SA (sub. DR303); the Queensland Farmers' Federation (sub. DR217); Queensland Regional NRM Groups

To achieve this, governments will need to make changes to laws, regulations and policies in many cases (though the nature and scope of the changes needed will vary between jurisdictions). And in accordance with good policy-making practices, a thorough regulation impact assessment should be undertaken before making regulatory changes.

Considering long-term, as well as short-term effects, is a key component of good policy making and is essential for promoting dynamic efficiency.

RECOMMENDATION 3.1

The Australian, state and territory governments, in consultation with natural resource management organisations, should ensure that native vegetation and biodiversity conservation regulations:

- are risk based (so that landholders' obligations are proportionate to the impacts of their proposed actions)
- rely on assessments at the landscape scale, not just at the individual property scale
- consistently consider environmental, economic and social factors.

Making better use of market-based approaches

Markets provide a way to value environmental factors (so that they can be considered alongside economic and social factors) and they increase transparency about the cost-benefit trade-offs involved in providing environmental services.

Market mechanisms for protecting native vegetation and biodiversity can take many forms including private conservation efforts, markets for environmental offsets and paying landholders for conservation and environmental services. They have both advantages and disadvantages. Importantly, market mechanisms are a complement to, rather than a complete substitute for, regulation — a point emphasised by a number of participants (including the Department of the Environment and Energy (sub. DR274), Peter Flanagan (sub. DR107) and Bruce Gardiner (sub. DR101)).

What are the advantages of market-based approaches?

Market-based approaches to native vegetation and biodiversity conservation have several advantages.

Collective (sub. DR130); SouthCoast NRM (sub. DR229); the Tasmanian Government (sub. DR287); Tully Cane Growers (sub. DR170); and Vegan Australia (sub. DR115).

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- They give landholders incentives to retain and manage native vegetation. As the Department of Environment put it, ‘farmers taking extra responsibility for environmental management deserve recognition of the costs involved, as well as their time and expertise in delivering sound frontline land care’ (sub. 80, p. 13). Paying those who know the land best gives them greater scope to deliver environmental outcomes in innovative and cost-effective ways.
 - They enhance community welfare, because the conservation activity only occurs if the benefits to those paying for the conservation activity exceed the costs.
 - To the extent that market-based approaches involve payments to landholders for public-good conservation, they facilitate increased scrutiny of costs and benefits of policy intervention. A requirement to fund conservation from within the budget would act as a discipline on governments’ demands for conservation on private land. Without such a requirement, demands for conservation on private land can quickly grow. As James Beale put it, ‘the majority believe more trees are wanted’ and that those trees can be provided ‘without apparent expense to the populace’ (sub. DR275, p. 4), so there is no natural restriction on demands for conservation on private land.
 - Well-designed market-based policies can be better than environmental standards at promoting dynamic efficiency, as they provide businesses with more flexibility in the way they adapt to changes in environmental policies (Albrizio et al. 2014).
 - Market-based approaches can account for differences in the cost of conservation in different regions, or be targeted to better meet a particular conservation objective. Because environmental values, project feasibility and project costs are not evenly distributed across the landscape, there are potential gains from targeting opportunities to preserve native vegetation where benefit–cost ratios are highest (Davidson et al. 2006). Careful targeting of environmental investments can also increase their environmental value (Pannell and Roberts 2015). In particular, using auctions can lower the cost of achieving the environmental objectives sought by the community. Through the auction process, landholders reveal information that would otherwise be costly for the government to obtain. The process for assessing bids can (and should) be designed to help decision makers to take into account any interdependence of the environmental benefits of different bids at the landscape scale.

The benefits of market approaches were acknowledged by many inquiry participants.³ For example:

³ Participants who acknowledged the benefits of market approaches included: the Australian Lot Feeders’ Association (sub. DR294); the Australian Sugar Milling Council (sub. DR234); Canegrowers (sub. DR169); the Department of the Environment and Energy (sub. DR274); Goulburn Broken CMA (sub. DR198); the Institute of Public Affairs (sub. DR164); NFF (sub. DR216); Queensland Farmers’ Federation (sub. DR217); Queensland Regional NRM Groups Collective (sub. DR130); South Coast NRM (sub. DR229); Tasmanian Government (sub. DR287); Tully Cane Growers (sub. DR170); and the Wilderness Society (sub. DR207).

Market-based solutions to environmental objectives are critical because they will bring the cost of regulation back on to the balance sheets of, in this case, state governments. (Institute of Public Affairs, sub. DR164, p. 7)

We believe it is critical that environmental regulators have some ‘skin in the game’ rather than requiring land holders to provide environmental outcomes for the wider community at the expense of their productivity and viability. (VFF, sub. DR189, p. 15)

... the Government should be discouraging ‘productive’ use of vast areas of inland Australia. Best use is probably biodiversity conservation and carbon sinks. Government could be paying existing land managers to ‘farm’ the land for these two purposes. (Environmental Farmers Network, sub. DR174, p. 3)

The NFF (sub. DR216) and WAFarmers (sub. DR226) pointed out that the adoption of digital technologies and the increasing use of spatial information by farmers will increase potential options for designing market structures.

Governments in Australia have also endorsed market-based approaches.

Although putting a price on the value of biodiversity and ecosystem services is difficult, well-designed markets are one of the most effective policy instruments for attributing economic value to biodiversity and can be very effective in encouraging investment in biodiversity conservation. (Natural Resource Management Ministerial Council 2010, p. 41)

The Department of the Environment and Energy said that ‘paying for voluntary action is particularly appropriate where the community is seeking environmental benefits that go beyond reasonable community expectations of landholders’ (sub. DR274, p. 2).

New South Wales, Victoria (box 3.15), South Australia and Tasmania have trialled or operated market-based native vegetation conservation programs at various times (though there is limited publicly available information about the outcomes of many of these programs). International experiences suggest that the use of auction mechanisms can improve program efficiency, but that they ‘still require further refinement to maximize environmental benefits and minimize transaction costs associated with such complex programs’ (DUC 2009, p. 7).

Offsets (box 3.3) can also lead to the creation of markets. For instance, the South Australian Government said that offset arrangements that came into effect in that state in December 2015:

... allow for the trading in environmental benefits. This provides new opportunities for clearance proponents to offset their clearance activities and allows for the establishment of a market in environmental benefits. This will be supported by a Register that will be publically available. This will provide a means for landholders to generate an income from managing their native vegetation. (South Australian Government, sub. DR295, p. 6)

The Commission has previously recommended that the role of market-based offset approaches be examined as part of an independent and public national review of environmental offset policies and practices (PC 2013a).

Box 3.15 Tender-based ecomarkets in Victoria

The BushTender program was trialled in Victoria from 2001 (alongside a similar program called EcoTender). Both programs were designed to improve native vegetation management or secure revegetation on private land, with the aim of achieving improved environmental outcomes at both the local and catchment scale.

Both programs operated using a tender approach. Landholders submitted bids to improve the quality or extent of native vegetation on their land. The benefit offered by each tender was assessed according to a range of environmental outcomes, including terrestrial biodiversity, reduced saline land and riverine health (water quality and quantity). Carbon sequestration was also considered as part of the assessment of revegetation tenders.

Successful tenderers were paid to enter into an agreement with the Victorian Government to manage their land differently for a period of time (typically five to ten years). BushTender agreements covered over 35 000 hectares. Changes undertaken by landholders included:

- fencing to address grazing impact by domestic stock
- adopting grazing practices to maximise habitat quality outcomes
- weed and pest animal control above current responsibilities
- retaining standing/fallen timber
- supplementary planting of existing patches of vegetation.

Sources: VDEPI (2014a); VDSE (2011).

Market-based approaches can be used to increase the involvement of the private and not-for-profit sectors in biodiversity conservation. There are already a range of privately managed conservation reserves — for example, Arid Recovery runs a 123 km² fenced reserve in South Australia (Arid Recovery 2015) and Bush Heritage Australia owns and operates private reserves in every state. The National Parks Association of NSW and the Nature Conservation Council of NSW suggested that ‘previous allocations of funding to support private land conservation have dwindled’ (sub. DR209, p. 9). The continued creation and maintenance of conservation reserves is important, given the demonstrated effectiveness of reserves for threatened species protection in Australia (Taylor et al. 2011).

And, as discussed in box 3.7, markets are also being used as a way to achieve reductions in carbon emissions, and carbon markets can have clear advantages for farm businesses.

New markets and policy settings that enable carbon farming would allow many rural landowners to diversify their incomes, particularly from less productive land, even while they benefit from the projected higher prices for agricultural commodities. (CSIRO 2015a, p. 11)

Some challenges using market-based approaches

While market-based approaches to native vegetation and biodiversity conservation have clear advantages, they also have limitations and involve many challenges.

First, given the degree of scientific uncertainty with many aspects of native vegetation and biodiversity conservation, market creation can be difficult. This can manifest in several ways.

- There can be a trade-off between market liquidity and scientific certainty. For example, because of the uncertain impact of offsetting land clearing in one area against land rehabilitation in another distant area, it is desirable to limit a native vegetation offset scheme to a particular landscape or bioregion. But limiting a scheme in this way reduces the number of potential buyers and sellers, which affects the functioning of the market.
- The high probability of new scientific discoveries means that property rights traded in the market may need to be changed in the future. This means that markets for ecosystem services, like a range of other markets, are subject to considerable risk of policy change. This risk can diminish the value of the property right and hence the likelihood that market will operate effectively (Murrough, Aretino and Matysek 2002). Also, where there is a high degree of scientific uncertainty and property rights are locked in through a market-based system, there is a risk that a constituency of asset owners could resist policy change even if it might be in the community interest.

Second, landholder heterogeneity means that a given market-based approach could be effective for only a subset of landholders. For example, Race and Curtis noted that:

... landholders with a farming background and lengthy experience as land managers may be seeking support with the cost of materials, rather than seeking land management expertise or additional labor. On the other hand, landholders who are nonfarmers with limited experience as land managers, and with high levels of off-farm income, may prefer one-to-one extension support rather than cash or materials. (2013, p. 1052)

Third, transaction costs can be substantial, which can limit participation in environmental markets (Harris-Adams, Townsend and Lawson 2012). This complexity was highlighted by Environmental Justice Australia:

... market based mechanisms for the funding ('purchase') of environmental management on private (including agricultural) land can require complex and sophisticated regulatory tools, whether operating under contract or statute or both. (sub. DR221, p. 6)

There is also the risk that policies that provide payments for conservation services reduce farmers' intrinsic interest in undertaking conservation programs (Farmer-Bowers and Lane 2009) and lead to short-term changes in behaviour that do not persist after programs cease. This risk was highlighted by participants:

The current approach is to punish land users if they do bad things, while the new approach is to reward them if they do good things. The trend will be to do bad things if there is money in it and only do good things if they get paid. (Peter Flanagan, sub. DR107, p. 4)

[Market-based] approaches require strong governance, including transparency and accountability in the system; and testing in a market to ensure that the instrument does provide an incentive for an efficient cost. (Goulburn Broken CMA, sub. DR198, p. 3)

Taken together, these challenges mean that market-based approaches will not be a suitable solution in every situation. Market mechanisms may be useful when the market and policy setting align (e.g. when there is profit in protection), but this can be the exception, not the rule.

Market-based approaches also need to interact successfully with policy approaches to carbon emissions. Land clearing contributes significantly to carbon emissions, and so native vegetation conservation can be considered as a form of carbon abatement. For example, some of the activities funded by the Emissions Reduction Fund include vegetation sequestration projects (Australian Government 2015a). As the Australian Forest Products Association said:

... agriculture and forestry, has the potential to make a major contribution to meeting Australia's carbon emission reduction targets. The first and second Emission Reduction Fund (ERF) auctions were dominated by land use projects, such as avoided vegetation clearing of agricultural land and new tree planting in degraded landscapes. (sub. 11, p. 4)

Native vegetation offsets also have their own challenges (box 3.16).

Box 3.16 Challenges with offsets

One of the key challenges for offset markets is that proposed losses of native vegetation are largely immediate and certain, but predicted gains from restoration efforts take time to achieve and are uncertain, as the science of habitat restoration is still developing and there are substantial limitations in the scientific knowledge of our ability to restore ecosystems.

Other common challenges with offsets include:

- *identifying net loss* — regulators must make judgments about how environmental impacts and gains are measured, and the duration of impacts and gains — the time lag between offsets implementation and outcome makes it difficult to monitor and verify the actual net loss
- *fungibility* — ecosystems are not perfectly replaceable and regulators must decide how much dissimilarity between the primary and offsetting environments can be tolerated
- *additionality* — uncertainty about future activities makes it difficult to determine if the offset activity would have been undertaken anyway
- *accounting for risk* — information constraints regarding future events increase the risk of impermanence and reduce the certainty of environmental outcomes.

Source: PC (2013a).

The Peri Urban Group of Rural Councils pointed out that:

... native re-vegetation projects planted to offset native vegetation clearing are only achieving a 40% survival rate rather than the expected 80%. This is due to the impacts of invasive pests including deer and kangaroos whose numbers have exploded due to cost cutting in culling programs on crown land and red tape involved in culling on private land. (sub. DR220, p. 3)

Other participants who expressed concern about the effectiveness of offsets included William Blackburn (sub. DR196) and Friends of the Earth Australia (sub. DR125). And the National Parks Association of NSW and the Nature Conservation Council of NSW (sub. DR209) suggested that:

... a best-practice offset regime must include ‘red flags’ (species or ecosystems that cannot be cleared); must avoid the use of supplementary measures, must ensure like for like offsets, must have legal protection and must follow the hierarchy avoid, limit, offset. (sub. DR209, p. 11)

The bottom line is that while there are challenges involved in the design and implementation of market-based approaches to native vegetation and biodiversity conservation, they also have some clear advantages. They provide a way of ensuring that the community bears the costs of providing the public good native vegetation and biodiversity conservation services that it has sought. Purchasing these services from landholders is also more equitable than some of the current regulatory approaches, and by encouraging and rewarding the efforts of landholders, would be more efficient and effective in achieving environmental outcomes that the community desires.

RECOMMENDATION 3.2

The Australian, state and territory governments should continue to develop market-based approaches to native vegetation and biodiversity conservation. Governments could achieve desired environmental outcomes by buying environmental services (such as native vegetation retention and management) from private landholders.

Administrative improvements

Even where efforts to reduce regulatory overlap and duplication are successful, there is also scope to improve governments’ interactions and relationships with landholders and with each other (both within and between governments). This includes improving information flows and building trust, especially with those affected by native vegetation and biodiversity conservation regulations. It also includes ensuring that environmental extension services and the organisations that administer environmental regulations are sufficiently resourced to effectively perform their functions. These directions were supported by a broad range of inquiry participants.⁴

⁴ Participants supporting administrative improvements included: the Australian Sugar Milling Council (sub. DR234); Canegrowers (sub. DR169); Chris Nadolny (sub. DR118); NFF (sub. DR216); NSW Farmers’ Association (sub. DR161); Queensland Farmers’ Federation (sub. DR217); Queensland Regional NRM Groups Collective (sub. DR130); South Coast NRM (sub. DR229); the Tasmanian Government (sub. DR287); Tully Cane Growers (sub. DR170); and the Wilderness Society (sub. DR207).

Improving information flows

Good regulation is clear, simple, and practical for users (chapter 1). However, as many landholders have argued, native vegetation and biodiversity conservation regulations are so complex that understanding them is neither simple nor practical.

There is clear role for farming organisations to provide information and assistance about native vegetation and biodiversity conservation regulations to their members (in the same way they do for workplace health and safety, employment and other complex laws). As discussed earlier, many organisations already provide detailed information to their members (for example, QFF 2015a; WAFarmers 2014). Farming organisations also provide a channel of communication from their members to governments.

Governments have made some efforts to produce user-friendly information and tools, such as websites, fact sheets and plain English guides to native vegetation and biodiversity conservation legislation. For example, the Department of Environment and Energy produced information sheets on a range of threatened ecological communities (such as the Eucalypt Woodlands of the Western Australian Wheatbelt (DoEE 2016)), which may assist landholders to identify, assess and manage those communities. (Though, if governments rely solely on these forms of communication they deprive themselves of the knowledge that can be gained from more participatory approaches.)

Despite the efforts of industry and governments, farm businesses' awareness and understanding of the requirements of native vegetation and biodiversity conservation regulations is incomplete at best. Providing information to citizens affected by regulation is a core part of the regulatory task. Unless those affected by a regulation are aware of the actions they must or must not take as a result of that regulation, the objective of the regulation is unlikely to be achieved.

First, governments need to ensure that they provide, or continue to provide, clear guidance on their native vegetation and biodiversity conservation regulations (including to their own staff). Participants viewed maps as being an essential part of this guidance. For example the VFF said that:

... it is critical that the regulatory regime be able to be mapped in a single location and allow for integrated decision making across all levels of government. (sub. DR189, p. 15)

The NFF said that there should be 'a focus on ensuring that when a landholder needs to make a decision they have ready access to the information they need, collated in a format that covers the relevant regulation across different jurisdictions and is specific in nature' (sub. DR216, p. 22).

As interactive internet-based technologies become more common in all aspects of people's lives (notwithstanding concerns about internet access in rural areas — see chapter 6), there will be growing expectations for similar technology and convenience to assist in complying with complex regulations such as these. Technology has been used to good effect in related areas. For example, the Grains Research and Development Corporation

has developed an app called *Weed ID: The Ute Guide*, which contains photos and information to assist growers identify the most common weeds found in paddocks throughout Australia (GRDC nd). Similar products could be developed for native vegetation and biodiversity conservation regulations.

Targeted engagement programs may be needed for particular audiences, such as small-acreage landowners (Meadows, Emtage and Herbohn 2014).

Second, each government needs to acknowledge that its regulations interact with those imposed by other levels of government, and provide basic assistance to landholders about other governments' requirements. As the Pastoralists and Graziers Association of Western Australia put it:

If efficiency and effectiveness of regulation is ever to be achieved, government departments need to talk to each other. (sub. 70, p. 3)

Australian Pork Limited said that 'in addition to reviewing how they engage with landholders, all levels of government must also ensure they are engaging and collaborating with each other, so environmental regulation delivers outcomes to manage the identified risks' (sub. DR282, p. 3). From a landholder's perspective, it is unhelpful to be told that a certain action (say, clearing dead trees) is permitted under state regulations, without also being told that Australian Government approval may also be required to clear those trees (because in certain areas dead trees provide important habitat for species that are listed as threatened under the EPBC Act). Simply mentioning the existence of regulations imposed by other levels of government and providing a link to other governments' websites (and to other tools, such as apps, once they have been developed) would be a considerable improvement.

Building capability and trust

Building and maintaining trust is essential not only in maintaining a balanced and robust system of native vegetation and biodiversity conservation regulation, but also for reform. However, inquiry participants noted an absence of trust between landholders and regulators (box 3.10).

Concerns about trust were compounded by participants' concerns about the poor management practices displayed by some government land managers (particularly in relation to weed control). Another contributing factor is the steady decline in the delivery of natural resource management and extension services by government agencies over the past decade (Meadows, Emtage and Herbohn 2014).

To be effective, efforts to build and maintain trust must take into account the capabilities of landholders and environmental regulators, and the relationship between them. As the Commission previously emphasised, ‘policies that fail to engage the cooperation of landholders will themselves ultimately fail’ (PC 2004a, p. 238). And as the VFF put it:

Successful on ground outcomes require good will and support of land managers and an understanding by regulators that a successful control understands that production methods that sustain farm income are critical to environmental management. (sub. DR189, p. 14)

Similarly, landholders want a trusted and long-term relationship with governments’ environmental and natural resource management staff, and the absence of such a relationship may undermine the effectiveness of markets for environmental services (Race and Curtis 2013).

A relationship of trust and cooperation between landholders (both individually and collectively) and regulators can only be achieved when regulators have sufficient understanding of farm business practices, and are capable of supporting farm businesses to make sound decisions about the effect of environmental regulations on their operations. As South Coast NRM said:

Natural Resource Management and Landcare is just as much about managing people as it is managing the natural environment. Farmers have the largest effect on environmental resource condition and their voluntary participation is essential in getting positive environmental outcomes. (sub. DR229, pp. 2–3)

Slow Food Australia said that ‘landowner’s expertise should be harnessed and trust built through better education and more transparent information provision’ (sub. DR278, p. 3).

Sophisticated approaches will be needed to account for heterogeneity of landholders and their behaviour, which may not always be exemplary.

... some landholders have extensive knowledge and expertise in land care and management. However, many others do not and will breach regulations designed to protect biodiversity, sometimes deliberately. (Birds Queensland, sub. DR108, p. 3)

Indeed, if landholders choose not to adhere to the regulations, this could increase the risks to native biodiversity that the regulatory system is designed to protect (Mallawaarachchi and Szakiel 2007).

In the Commission’s view, the likelihood that there will be occasional examples of deliberate bad behaviour should not be the basis for system design, and should not be used by regulators as an excuse not to trust all landholders.

Investment in targeted extension services to build trust and cooperation between landholders and regulators could reduce the cost of producing environmental benefits on agricultural land (Harris-Adams, Townsend and Lawson 2012). This will be particularly important given reductions in state and territory government funding for extension services. In this context, the Commission has previously noted that where rural activities

have adverse environmental impacts that cannot be readily attributed to individual producers, it could be in the community's interests to contribute to the cost of farm-level extension services aimed at facilitating practice change (PC 2011e).

Building trust and enhancing cooperation between landholders and regulators will require change to the regulatory approach in some jurisdictions, but if risks are communicated effectively and the basis of decisions is clear, risk-based decision making can enhance stakeholder trust in environmental regulation (Gouldson, Morton and Pollard 2009).

Building trust will also require landholders' concerns about the inappropriate enforcement of environmental policies to be addressed (box 3.11). That is, regulators need to ensure that their enforcement practices are timely, accurate, reliable and designed to minimise burdens on business and the community (PC 2015d). An example of the types of improvements that are possible was provided by the cotton farmer from Goondiwindi who participated in the Commission's case studies (appendix C). He has been able to work with regulators to swap land with low conservation but high production value, for land with high conservation and low production value. This exchange led to increases in both conservation and productivity.

More resourcing may be required

A further challenge for environmental protection capability is that there are limited resources for native vegetation and biodiversity conservation, given the large numbers of species and vast areas that are considered to merit protection.

While evidence is limited, there are indications that additional resourcing may be required. For example, an OECD report found that:

... overall, the scale of environmental challenges facing Australian agriculture is much larger than can be addressed with existing budgets. (Pannell and Roberts 2015, p. 24)

And the need to increased expenditure on extension services, particularly those focused on native vegetation and biodiversity conservation, was highlighted by inquiry participants (box 3.17), as well as by ABARES.

Managing native vegetation for production and conservation benefits can be challenging and requires specific skills, tools and knowledge ... While farmers have multiple sources of information, localised or regionally specific information to support native vegetation management can be lacking. This can mean farmers are unsure of what species are on their land, their production value and the management actions needed for them. (Harris-Adams, Townsend and Lawson 2012, p. 19)

More resourcing is also likely to be required in order to address concerns about inaccuracies in vegetation mapping (section 3.3).

Box 3.17 Adequacy of resourcing was questioned

Inquiry participants expressed concern about the level of resources provided by governments for the implementation of native vegetation and biodiversity conservation regulations, as well as to support the regional natural resource management (NRM) organisations (box 3.15) and community-based programs that underpin landholder engagement in environmental protection.

... improved regulation and administration of environmental matters in relation to agriculture requires both significantly increased resourcing and channels of broad-based participation across governmental, nongovernmental and private actors. (Environmental Justice Australia, sub. DR221, p. 11)

The value of Landcare and Natural Resource Management offices cannot be understated ... we strongly urge the government to increase funding to those organisations in recognition of their role in educating farmers and implementing cost-effective measures to improve farm productivity and minimise environmental impacts. (EDOs of Australia, sub. DR241, p. 8)

Livestock SA expressed concern that increased funding for NRM boards in South Australia is being used for water planning and management costs rather than 'on-the-ground NRM projects', and that 'this is not assisting in encouraging a good relationship between primary producers and South Australia's regional NRM Boards' (sub. DR303, p. 3).

Several participants suggested that increased resources could be devoted to the creation of new extension roles. For example, Annette Prehn said:

Further funding is sought from the government to permanently resource the employment of additional Threatened Species and Wildlife Extension Officer's across Australia to provide farmers and landowners with on ground support on ecological sustainable practices on private lands containing high nature conservation values. (sub. DR173, p. 1)

AgInstitute Australia considered that there would be community-wide benefits in government funding for '... the deployment of professionally trained agricultural extension officers who have a combined knowledge of farming systems, natural resource management and adult education' (sub. DR182, p. 19).

Instead of government funding, Chris Tallentire (sub. DR142) suggested that conservation activities be supported by a Bushland Conservation Fund, which could be funded by a levy on units of agricultural production. He said 'if there are perceived costs associated with maintaining healthy bushland these should be borne by the recipients of the many positive effects of bushland', and that 'those who receive the greatest financial gain from the management and conservation of bushland in the landscape are adjacent landholders using land for agricultural purposes' (sub. DR142, p. 4).

And to the extent that local governments lack the resources, capacity or skills to effectively fulfil their role in administering environmental regulations, increased expenditure may be a necessary feature of strategies to address those deficits. The Commission has previously noted that:

State governments increasingly rely on [local governments] for the on-ground implementation of many of their environmental objectives and yet [local government] skills and resources to do this are limited. Greater clarity on the availability of state government funding for [local government] implementation of environmental objectives and ongoing environmental projects may reduce cost shifting. (PC 2012b, p. 395)

Concerns about local government resourcing were mirrored in concerns about other environmental regulators in some states. For example in New South Wales, both the Natural Resources Commission and the Independent Pricing and Regulatory Tribunal have recommended decreasing the Local Land Services minimum rateable area size from 10 hectares to 2 hectares to increase the rate base (and thus the resources available to Local Land Services) (NSW NRC 2016). Such a change would help to address concerns about environmental regulator capacity in that state.

In addition, and as noted above, making use of market-based approaches to native vegetation and biodiversity conservation will facilitate increased scrutiny of costs and benefits of policy intervention. This could help to increase the rigour with which conservation proposals are assessed, and free up resources for other conservation objectives. Alternatively, a clearer statement of the costs and benefits of native vegetation and biodiversity conservation regulations could strengthen the case for devoting additional resources to this area.

At the national level, a review of the National Landcare Programme is underway. It is due to report by mid-2017. The review will provide an opportunity to assess the effectiveness, efficiency and appropriateness of the programme and its delivery (Australian Government 2016), and could therefore identify priorities for additional conservation resources.

RECOMMENDATION 3.3

The Australian, state and territory governments should review the way they engage with landholders on environmental regulations, and make necessary changes so that landholders are assisted in understanding the environmental regulations that affect them, and the actions required under those regulations. This would be facilitated by doing more to:

- recognise and recruit the efforts and expertise of landholders and community-based natural resource management organisations
- build the capability of, and landholders' trust in, the organisations that administer environmental regulations (including local governments).

3.5 Other environmental regulations

Pollution control regulations and reporting

Pollution control regulations can impact on the efficiency and productivity of certain agricultural industries, particularly intensive animal industries. The Australian Chicken Meat Federation, for example, said that chicken businesses are required to provide

site-specific odour modelling ‘requiring the use of consultants to develop technically complex atmospheric models around site data’ (sub. 40, p. 2).

Engaging environmental consultants to obtain the necessary approvals for pollution control regulations can be costly for farm businesses. A sandalwood producer in Western Australia reported that building a new waste water pond cost around \$14 000, while consultants’ fees for the project were over \$20 000 (Government of Western Australia 2009, p. 128).

Cotton Australia expressed concern about the effect of air quality regulations on cotton processing, saying that:

... environmental regulations appear to lack the flexibility required for local conditions. One such example involves the rules around dust emissions coming from cotton gins ... The problem is that the licensing requirements cannot take into account the average dust emission from all the cyclones [in the cotton gin]. So, if one cyclone has a high reading, and all others are below the maximum the gin is not compliant. This does not make sense, as the total dust load out of the gin is below the license requirements, and the very nature of the ginning process means some cyclones will have a higher dust load than others. (sub. 23, pp. 10–11).

It also noted that ‘allowed dust limits, which may be entirely reasonable in a coastal city environment, can be lower than the ambient dust levels in areas where cotton gins are located’ (sub. 23, p. 11). This highlights the way in which pollution control regulations are not always well adapted to the agricultural environment.

On this topic, the VFF said that it:

...is aware of a recent example where a Local Council issued a litter abatement notice ... due to a complaint about mud on a local road in winter. The farm was an operating dairy and there had been significant rain over the preceding four weeks. A litter abatement notice is discretionary and should consider whether the litter was an ‘unavoidable consequence of a lawful activity’. At the same time there was extensive mud on an urban road near the Council offices. This demonstrates that merely referencing considerations does not of itself provide information or knowledge to a regulator to be able to make a common sense decision. (sub. DR189, p. 5)

Pollution control regulations can vary depending on the intensity of agricultural production, with more stringent regulations applying to businesses that exceed certain thresholds (chapter 2). The Australian Chicken Meat Federation suggested that pollution control regulations are rarely designed with agricultural industries in mind. They ‘lump animal agriculture in with other non-agricultural, industrial pursuits, with little regard for the inherent differences between these industries, particularly that agricultural industries are dealing with biological processes’ (sub. 40, p. 5).

Australian Pork Limited suggested that all jurisdictions should revise their legislative arrangements relating to environmental management ‘to have an overarching outcomes-based framework and to formally incorporate national industry guidelines’ (sub. 37, p. 2).

There are also a range of pollution control reporting requirements. The Western Australian Government noted that environmental monitoring, reporting and auditing schemes can be ‘cost-intensive’ (sub. 54, p. 16). The Australian Food and Grocery Council (sub. 28) expressed concern about duplication in environmental and pollution control reporting requirements. And several participants raised concerns about the public accessibility of farmers’ location and contact details, given the public nature of the NPI. For example, the Australian Chicken Growers’ Council said that:

... [NPI] reporting entities have their farms identified on Google earth with their address and contact details unless they have nominated their state organisation to represent them which removes their contact details but not the farms location on Google earth. This exposes the farm to the possibility of bio-terrorism and unwarranted attention from groups opposed to intensive farming. (sub. 51, p. 5)

The Commission has previously noted that ‘the geographic basis of reporting need not necessarily be at the facility level’ and that some aggregation of individual facilities’ data ‘may well be desirable where there are real concerns about the harassment of businesses’ (PC 2007, p. 63). That said, aggregation of data risks reducing the value of the information available to the public and the incentive for businesses to reduce their emissions. Any trade-offs in information availability should only be made after a full assessment of the costs and benefits. Other concerns relating to harassment of businesses (such as illegal trespass) are discussed in chapter 8.

The effect of weed control regulations

Inquiry participants did not raise concerns about the burden imposed by weed control regulations. In fact, one participant said ‘regulations preventing the spread of weeds are a cost-effective approach to managing the damage caused by invasive plant species’ (EDOs of Australia, sub. 60, p. 3). This support is in line with participants’ recognising the benefits they obtain from Australia’s biosecurity system (chapter 8). The Australian Centre for Agriculture and Law said:

Regulatory control of agricultural invasive species may impose a cost or constraint on some landholders, but it reduces economic losses and costs to other landholders as well as producing public good benefits. (sub. 2, p. 1)

However, the Aerial Application Association of Australia highlighted the tension between weed control and native vegetation conservation requirements:

Resolution of this tension could be achieved by a clear statement on labels or in control-of- use legislation that gives primacy to the noxious weeds objective over damage to co-located native vegetation. (sub. 12, p. 3)

Others pointed out that the burden of weed control can be exacerbated when government managers of neighbouring land do not effectively manage weeds.⁵ A survey of farmers in central and western New South Wales also found that:

A significant number of farmers felt let down by government and considered its actions were often hypocritical. To many farmers, the standard of management of public land failed to meet that required of private land owners. In many instances this public land was seen as infiltrated by noxious weeds and animals and had insufficient annual hazard reduction burning undertaken, thereby putting public and private land under threat. (Finlay 2014, p. 254)

The view that governments are failing to meet their responsibilities in relation to control of invasive species on public land has been expressed at numerous junctures over many years (for example, in Cocklin, Dibden and Mautner 2003; NSW NRC 2014b; PC 2004a). In response to such concerns, the Sheepmeat Council of Australia and the Cattle Council of Australia said that ‘incentives and sanctions should extend to public land managers’ (sub. 88, att. 1, p. 27).

The effect of regulations relating to native and feral animals

Farm businesses control many feral, and some native, animals because doing so is necessary for the ongoing viability and success of the business. John Cooke (sub. 30) emphasised that the cost of controlling rabbits and other feral animals can be substantial. The Department of the Environment gave the example of feral pigs, which:

... cause substantial production losses to sugar cane and bananas in north Queensland, costing hundreds of thousands of dollars to the respective industries. It is estimated that the economic cost of feral pigs in Australia is \$106.5 million per year. Feral pigs also pose a major threat to biodiversity [through] predation, habitat degradation, competition and disease transmission ... (sub. 80, p. 2)

As discussed in section 3.2, a range of state and territory regulations govern the way landholders are permitted to control native or feral wildlife that is causing property damage. When regulations restrict agricultural producers’ ability to control feral animals, this can have substantial effects on their business. For example in Tasmania:

The population of fallow deer, originally introduced to Tasmania for hunting, has expanded to an estimated 25,000 and is predicted to increase by up to 40% in the next decade. The impacts of the species on agricultural land, in wilderness areas and on other native species warrant strategic management. However, the species is currently protected under the *Nature Conservation Act 2002* (Tas) and can only be taken in limited numbers under a permit. The current permitting system does not allow land managers to respond efficiently to the problems posed by deer. (EDOs of Australia, sub. 60, pp. 13–4)

⁵ Including Larry Acton (sub. 55); Karen Baines (sub. 13) and Frances O’Callaghan, (trans., p. 641).

In response, the Tasmanian Government noted that:

The issue of deer management in Tasmania is sensitive with a range of strongly held views in the community. In Tasmania deer are managed strategically, taking into account their impacts on agriculture and also their ability to be managed sustainably for hunting. Many landowners also receive an income from hunters who pay for access to private land to hunt deer. (sub. DR287, pp. 7–8).

Similar issues are emerging in New South Wales, where a review of pest animal management found that ‘deer are currently managed under outdated, restrictive arrangements as a game and livestock animal, yet they are recognised as the most important emerging pest animal threat’ (NSW NRC 2016, p. 72).

Participants also stressed the importance of ensuring that regulators continue to allow them to control native animals. Voice of Horticulture said that it:

... recognises that regulation is required to ensure survival of species and habitats but compromises need to be made to ensure the ongoing viability of fruit and vegetable growers. Perhaps regulation needs to be re-written to recognise and offset harsh socio-economic impacts on growers ... In Queensland there is a Code of Practice for the control of flying foxes which underpins access to Damage Mitigation Permits (DMP) and it is vital that continued access to DMPs remains until a non-lethal alternative is available. (sub. 42, p. 8)

The NSW Small Business Commissioner raised an issue relating to the harvesting of kangaroos and other macropods:

... multiple licences are required and that hunting and processing must be conducted in the same state jurisdiction. This poses particular issues for businesses operating over state borders and where the closest processing facilities are located over the border. (sub. 4, p. 3)

Property Rights Australia (sub. 45) also raised macropod quotas as an issue. In Tasmania, the record-keeping requirements for permitted wallaby culls are so onerous — requiring farmers to keep up to 600 separate records per year — that ‘it is highly unlikely that the annual figures provided by farmers to the regulator accurately reflect the actual count of wildlife culled over the previous year’ (DPIPWE Tasmania, sub. 62, att. 1, p. 19).

Another issue raised by participants was access to state and national parks for commercial honey bee operators (box 3.18).

Box 3.18 **Regulating beehives on public land**

An issue of particular concern to the honey bee industry was obtaining sufficient access to state and national parks in the face of increasing demand. An apiarist from New South Wales said:

Most beekeepers are not prepared to expand their hive numbers to cater for this increased demand by almond pollination. Primarily because there is a lack of resource to support these extra hives. The lack of resource is due to current state legislation that prohibits beehives being in National Parks and some other crown lands. Beehives are allowed in some very limited areas in some National Parks (a long and complex story). Farmers are clearing eucalypt and mallee trees to supposedly make their farms more efficient which is reducing the available resource to beekeepers. Most eucalypt trees are found on public lands. (Stephen Targett, sub. 5, p. 3)

Submissions to the Agricultural Competitiveness White Paper also raised this issue:

About 80 per cent of the honey produced by the Australian beekeeping industry is derived from native plants flowering on public and freehold land. Problems of access to some public land tenures and the long-term sustainability of forests/woodlands are ongoing challenges for the industry. This issue ... is arguably the most significant faced by commercial beekeepers. (Wheen Bee Foundation 2014, p. 11)

Thinking about how best to address these concerns, it is important to understand that national parks are 'not national at all but managed according to a wide range of legislative measures, objectives, priorities and management systems' (NPAC 2012, p. 5). As such, there could be scope for jurisdictions to adopt management practices and approaches used successfully in other jurisdictions. But as the Australian Conservation Foundation (sub. DR252) pointed out, incentives affecting land clearing on private land and the benefits that national parks provide to surrounding farmland are also important factors that merit consideration when assessing the appropriateness of regulatory structures for beehives on public land.

Reducing the burden of other environmental protection regulations

Many environmental regulations set standards that apply across all sectors of economic activity. In some cases, this can mean that the particular effects of a regulation on farm businesses are not fully recognised before the regulation is adopted. The Australian Sugar Milling Council claimed that this 'very narrow perspective' and 'lack of rigorous assessment can lead to perverse outcomes and the negative economic and social impacts can be disproportionate to the improved environmental outcome that is being sought (sub. 68, pp. 2–3).

Many of the burdens imposed by environmental protection regulations are designed to limit air, noise, odour and water pollution have arisen because those regulations do sufficiently take account of the different circumstances faced by businesses in particular industries or locations. Rigid application of standards (especially standards that are necessary and efficient in more densely populated areas, but that are neither of those things on an isolated farm) can impose a significant and unnecessary burden on farm businesses, without contributing to better outcomes for the environment.

To avoid this, regulations should be designed with enough flexibility so that they only apply where environmental values cannot be preserved and protected in other ways, and

where the benefits of protection outweigh the costs. The Australian Sugar Milling Council highlighted how good regulatory processes can assist in this regard. In 2009:

... extensive regulations impacting commercial sugarcane farming and cattle grazing were introduced by the Government of the day without any form of regulatory impact assessment. It resulted in ‘best guess’ regulations that did not consider the vastly different growing conditions of the different sugar industry regions in Queensland. (sub. 68, p. 3)

The regulatory impact analysis process is an important mechanism for ensuring that this occurs.

In relation to weed and feral animal control regulations, the Commission considers that much of the avoidable burden of those regulations arises when they are poorly enforced or when public land managers (local councils, state governments and other government agencies such as water companies) lack the capacity to properly control weeds across all of their land holdings. There is some evidence to suggest that government capacity is the main cause of this issue.

The capacity of public authorities to meet their weed management obligations varies considerably. Most retain a limited weed management capacity ‘in house’ and rely on the procurement of vegetation management services from contractors, who may not have the required skills for effective weed management. (NSW NRC 2014b, p. 93)

The earlier discussion on regulator capacity in relation to native vegetation and biodiversity conservation regulations is also relevant for weed and feral animal control regulations.

4 On-farm regulation of water

Key points

- Approximately two-thirds of Australia's total water consumption is used in agriculture.
- Australia has a complex regulatory system for water that involves all levels of government, industry and the community. This inquiry focused on regulations that affect the access, use and disposal of water by farm businesses.
- From the perspective of farm businesses, an important focus of water regulation has been creating markets that allow them to trade water to its highest value uses.
- Farmers report that water trading has increased the productivity of their businesses by providing them with the flexibility to buy and sell water in response to changing market and seasonal conditions.
- Better use could be made of technology to allow real-time trading of water rights.
- Improving the regulation of groundwater and floodplain harvesting has the potential to enhance the security of water entitlements in some areas.
- Transaction fees and the way they are administered can be a significant barrier to water trading.
- There is no evidence of systemic misconduct or market failure that would justify the administrative and transaction costs of governments regulating the water broking industry.
- Lengthy delays in the design and implementation of water-related regulations cause uncertainty that can undermine the confidence of farm businesses to innovate and invest. More consultation and community participation is needed to reduce uncertainty and integrate local knowledge into the design and implementation of regulation.
- There are significant opportunities to streamline the water-related reporting obligations of farm businesses. A worthwhile first step is to continue adopting the reforms recommended by the Interagency Working Group on Commonwealth Water Information Provision.
- The Productivity Commission has taken over some of the responsibilities of the National Water Commission, and will revisit many of the issues raised in this chapter in its future water-related inquiries.

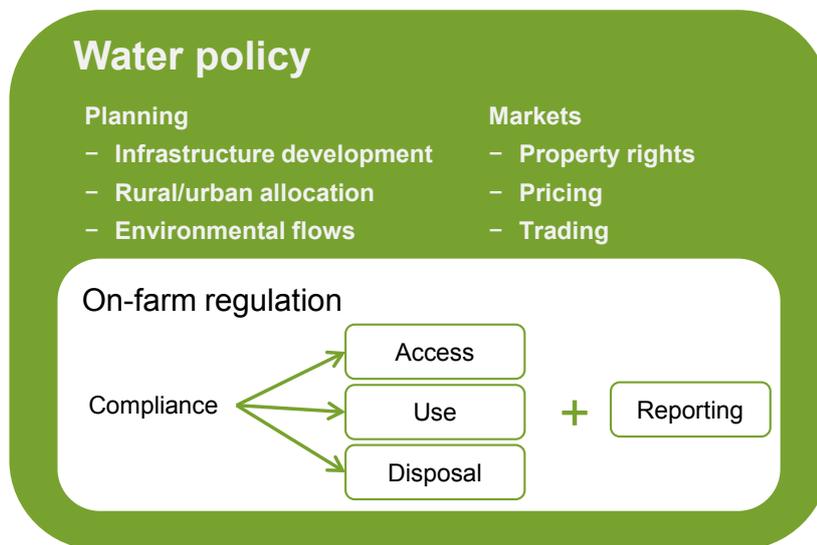
4.1 Water and agriculture

Water is an essential input for farm businesses. Water from streams, aquifers and overland flows is used to irrigate crops, to provide livestock with drinking water, and to manage waste in intensive livestock and processing industries. Access to water is fundamental to improving the competitiveness and productivity of irrigated farm businesses.

This chapter looks at water use in the agricultural sector and the reasons why governments regulate water (section 4.1). It then looks in more detail at water use regulations that affect access (section 4.2), use (section 4.3) and disposal of water (section 4.4) by farm businesses. It also addresses the on-farm reporting requirements of water regulation (section 4.5).

The chapter does not look at the multiple and complex regulatory frameworks associated with water planning or the establishment of water markets (figure 4.1). The Productivity Commission will look into water policy reform in more depth as part of the water-related functions it acquired following the abolition of the National Water Commission (NWC) (box 4.1).

Figure 4.1 Components of water policy
On-farm regulation is the focus of this inquiry



Water sources and regulation

The water used on Australian farms comes from waterways, aquifers and from overland flows during times of flood. Regulations generally specify:

- the amount of water that can be taken from these sources
- the methods and infrastructure that can be used to access water, and the conditions under which it can be accessed
- what water can be used for (in some cases).

Water and effluent returned to the environment from farms is also subject to a range of environmental and health regulations (chapter 3).

Box 4.1 Productivity Commission water functions

The Productivity Commission has recently taken over the review functions of the National Water Commission (NWC).

The *Water Act 2007* (Cwlth) requires the Minister administering the *Productivity Commission Act 1998* (Cwlth) (the Treasurer) to refer two inquiries to the Commission — one on the National Water Initiative (NWI), the other on the Murray–Darling *Basin Plan 2012* (Cwlth) (the Basin Plan) and associated water resource plans.

Inquiry into the National Water Initiative

The Treasurer must refer an inquiry to the Commission into progress towards achieving the objectives and outcomes of the NWI. The objectives of the NWI include the establishment of ‘a nationally compatible, market, regulatory and planning based system of managing surface and groundwater resources for rural and urban use that optimises economic, social and environmental outcomes’ (COAG 2004, p. 3).

This inquiry will replace the NWC’s former triennial assessment of progress toward achieving the NWI objectives. The first inquiry report must be submitted by 31 December 2017, with subsequent reports every 3 years.

Inquiry into the Murray–Darling Basin Plan and water resource plans

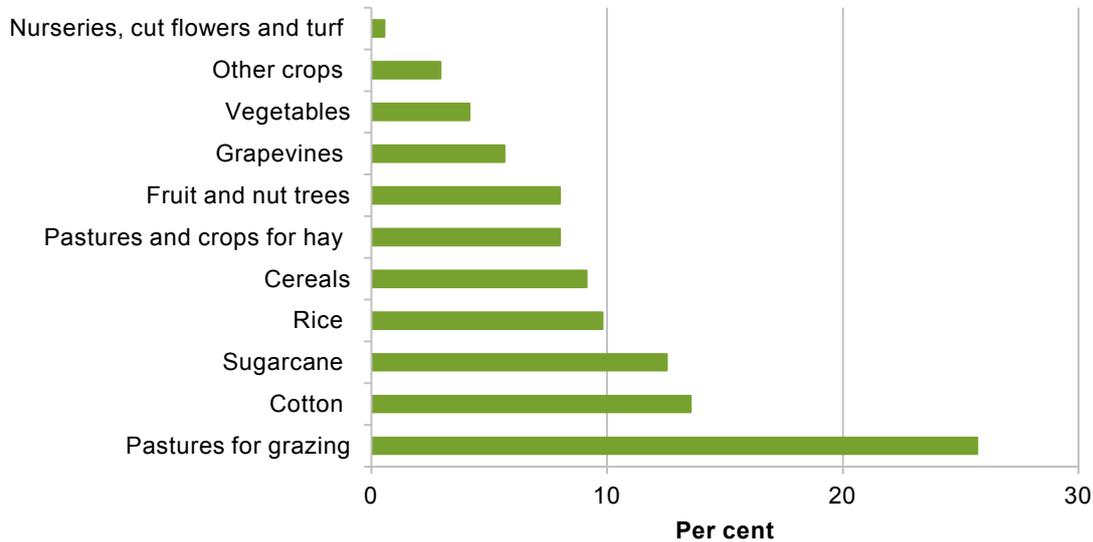
The Treasurer must refer to the Commission an inquiry into the effectiveness of implementation of the Basin Plan and associated water resource plans. This inquiry replaces the NWC’s five-yearly audit of the Basin Plan. The first report must be submitted by 31 December 2018, with subsequent reports every 5 years.

Some facts about agriculture and water use

About two-thirds of Australia’s total measured water consumption is used in agriculture. In 2014-15, approximately 110 000 farms used 9.8 million megalitres of water for agricultural production (ABS 2016l) (compared to total consumption estimated in 2013-14 to be 18.6 million megalitres (ABS 2015g). Farms in New South Wales used the most water (3.4 million megalitres), followed by Queensland and Victoria (2.5 million megalitres). Approximately 78 per cent of the water used in agriculture in 2014-15 was used for growing cotton, pastures (mostly dairy), sugarcane, rice and other cereals (figure 4.2). However, these pastures and crops only accounted for 50 per cent of the gross value of irrigated production, indicating that other uses of water, especially horticulture, generate much higher returns per litre (figure 4.3).

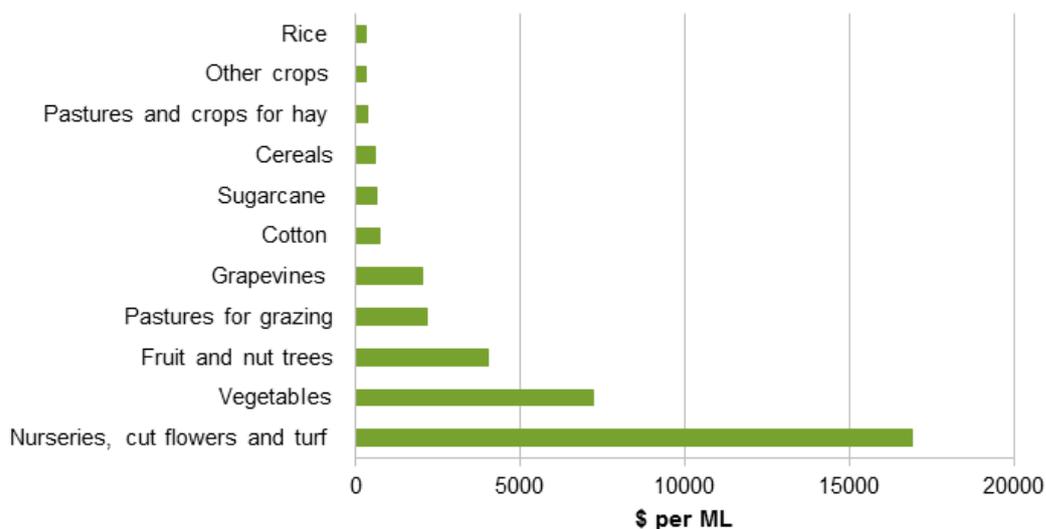
Water used on farms comes from a number of sources, and these sources vary by region (figure 4.4).

Figure 4.2 Share of water use by commodity
2014-15



Data source: ABS (2015h).

Figure 4.3 Value of water use by commodity^a
2014-15



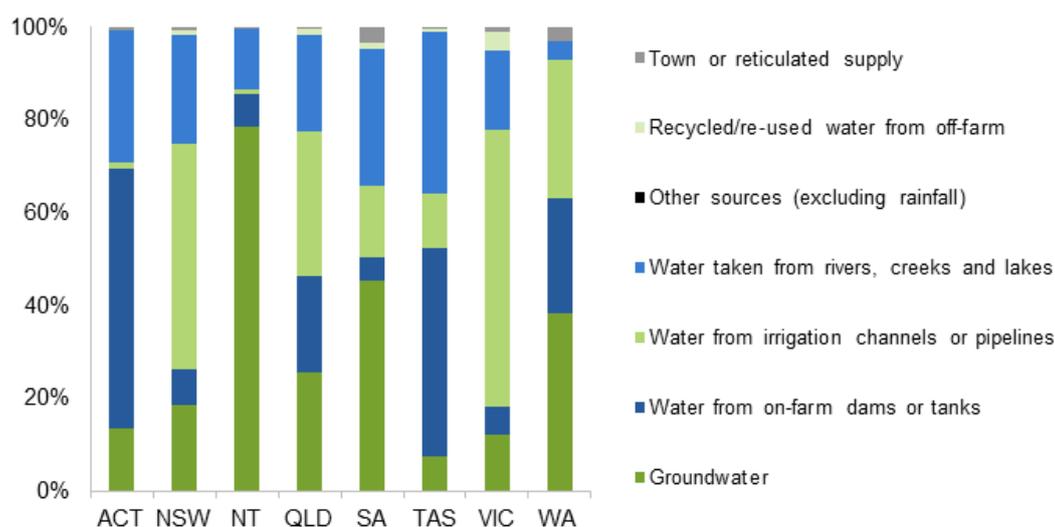
^a The value of water use is the Gross Value of Irrigated Agricultural Production (GVIAP) for each commodity divided by the volume of water used. GVIAP attributes the gross value of production from irrigated land to irrigated production, so may overstate GVIAP for farming systems growing multiple commodities on the same land each year.

Data sources: ABS (2015c, 2015h).

In 2014-15, 2.1 million megalitres of groundwater was used by over 47 000 farm businesses and made up 22 per cent of total agricultural water use across Australia (ABS 2015h). Groundwater is derived from rainfall and surface water that infiltrates soils and is stored below the earth's surface in porous sand or gravel layers. About 60 per cent of Australia's agricultural groundwater in 2014-15 was used in New South Wales and Queensland, with 17 per cent used in the Namoi and Murrumbidgee catchments (mainly for cotton production), and 15 per cent in the Burdekin catchment (used mainly for sugarcane production).

Groundwater is especially important in drier regions of Australia, and provided 38, 45 and 78 per cent of agricultural water used in Western Australia, South Australia and the Northern Territory respectively in 2014-15 (figure 4.4).

Figure 4.4 Sources of water used on farm
2014-15



Data source: ABS (2016l).

Groundwater use tends to be higher in dry years, as farmers substitute groundwater for surface water (PC 2010c). The use of groundwater in Australia has consistently exceeded 2 million megalitres per year in recent years (ABS 2015h, 2016l). CSIRO (2008) found that existing extraction rates were likely to be unsustainable in some catchments (seven of the twenty high-use groundwater areas in the Murray–Darling Basin). The pressure on groundwater resources was emphasised by NT Farmers:

... water in the NT is mainly groundwater, with very minimal above ground water storage. As such it is critical for planning and allocation of extraction licenses be done in a manner that is fair to existing irrigators, well assessed in terms of new applications and taking a balanced view over competing needs. (sub. 8, p. 2)

Australia's climate is highly variable resulting in uncertain water allocations that add to the risks of agricultural production. Climate change is also predicted to affect the distribution of rainfall and reduce the availability of water (CSIRO 2008).

The Western Australian Government, commenting on the availability of water in that state, said that:

Water rather than land availability could be considered the biggest constraint to agricultural development in Western Australia. The ability to deliver water to existing and new agricultural enterprises is critical to further development. (sub. DR285, p. 5)

Why governments are involved

In the absence of regulation, water can become a 'common property' resource for which inefficiencies arise if individuals have unrestricted access at little or no cost. This feature of water means that markets do not always function effectively, and that water use in the private interests of some users can have significant adverse consequences for other users and the environment. Governments intervene to improve the allocation of this scarce and valuable resource, and to improve the sustainability of its use.

Governments intervene in water management in various ways, including by:

- defining property rights — efficient water markets require clear and enforceable property rights to water
- overcoming information asymmetries — a lack of information about prices and how to exchange water rights can result in inefficient levels of trade
- resolving externalities — the use of water for one purpose can have adverse impacts on other users and the environment.

Governments use regulations to develop water markets by establishing property rights over water, and creating trading mechanisms. Water markets create an incentive for farm businesses to allocate water to its highest value uses, and to use it efficiently. Governments also invest in water infrastructure (such as dams, weirs and pipelines), regulate water prices and ensure that the environmental goals of water management are met.

Current arrangements

The national component of Australia's water policy is set out in the *Water Act 2007* (Cwlth) (the Water Act) (Commonwealth of Australia 2014). The broad objectives of the Act are to promote the management of water resources to optimise economic, social and environmental outcomes, and to return over-allocated water resources to environmentally sustainable levels of use. One of the earliest and most important policy strategies for achieving these objectives has been moving from an administrative to a market-based allocation of water (Connell 2007). Australia has a multi-tier regulatory system for water

that involves all levels of government, industry and the community (box 4.2). The complexity of the institutional arrangements for managing water in Australia reflects the diversity of water resources across Australia, and the evolution of locally appropriate management approaches across states and territories.

Box 4.2 Water management in Australia's federation

There are four levels of water management in Australia — national, state and territory, regional and local.

The management of land and water resources is a state and territory responsibility, with each having a number of authorities and utilities involved in water management. Water resources vary significantly across Australia, and each state and territory adopts a different approach to their management. This means that regulation can vary markedly between jurisdictions.

The Australian Government provides national leadership and coordination of water issues that cross state boundaries, including management of the Murray–Darling Basin via the Murray-Darling Basin Authority, and data via the Bureau of Meteorology. Australian Government agencies involved in water policy include: the Department of Agriculture and Water Resources; the Department of the Environment and Energy; the Australian Competition and Consumer Commission; and (since the abolition of the National Water Commission) the Productivity Commission.

Australia has a well-established network of statutory and non-statutory regional natural resource management groups that support the integrated management of 56 river catchments across the country. These groups provide an important link between governments and communities, enabling community resources and government funding to leverage one another, and the integration of local and scientific expertise to tackle challenging environmental problems (Curtis et al. 2014).

Local governments are involved in aspects of water management such as drainage, water use in public spaces, and water conservation. In Victoria, for example, the management of water is a shared responsibility between the Victorian Government, rural water supply authorities, catchment management authorities, local governments and land owners (VDEDJTR 2015b).

A sector under review

There have been numerous reviews of Australia's water sector over the past few decades,⁶ and several reviews are ongoing. Few areas of government policy have experienced such significant change over such an extended period of time.

Recent reviews of water arrangements include:

- a 2011 inquiry by the House of Representatives Standing Committee on Regional Australia into the impact of the Murray–Darling *Basin Plan 2012* (Cwlth) (the Basin Plan) in regional Australia (HoRSCRA 2011)

⁶ See Connell (2007) for a history of water policy in Australia.

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- a 2014 review of the Water Act undertaken by an independent panel seeking opportunities to reduce the regulatory burden generated by the Act
 - numerous assessments conducted by the NWC (NWC 2014c)
 - a review by a Senate Select Committee on refreshing the Basin Plan (SSCMDBP 2016).

Some recent reforms at the state level include:

- changes to water governance in Victoria to provide a more uniform operational framework for all state-owned water businesses (VDEPI 2014b)
- an improved dam approval process in Tasmania and a new policy on managing water resources during extreme dry conditions (DPIPWE, sub. 62)
- forthcoming changes in Queensland made by the *Water Reform and Other Legislation Amendment Act 2014* (Qld)
- new and updated water plans in many regions.

The Commission has undertaken a number of research reports including: *Rural Water Use and the Environment: The role of market mechanisms* (2006b); and *Market Mechanisms for recovering water in the Murray–Darling Basin* (2010c). More targeted reviews include Commission reports on: *Water Rights Arrangements in Australia and Overseas* (2003); and *Australia’s Urban Water Sector* (2011a). The Australian Competition and Consumer Commission (ACCC) also recently undertook a *Review of the Water Charge Rules* (ACCC 2015f).

Uncertainty created by changes in water policy

A number of participants to this inquiry commented that the degree and pace of change in water regulation has created uncertainty. For example, the NSW Farmers’ Association said that:

We understand and appreciate the need for government action in regulating this highly valuable and scarce resource, and the move from administrative water policy to market based allocation of water. However, ... the constant change in pricing and charging rules coupled with a high number of both state based and Commonwealth agencies has amounted to a reduction in certainty for farm businesses and a lack of transparency of, and accessibility to, information about the market and regulatory context. (sub. DR161, p. 12)

The National Farmers’ Federation (NFF) also said:

Water reform in Australia, particularly in the Murray Darling Basin has been a continual process since Competition Policy Reform in the early 1990s. The burden of continued water reform is to drive uncertainty in the business environment for farmers, and uncertainty in the local communities that suffer from the flow on effects of reduced production from irrigated agriculture. (sub. DR216, p. 24)

Complexity with a multi-tiered system

The changes to water regulation have also added complexity. The New South Wales Irrigators' Council, for example, commented on the increase in the number of agencies involved in water.

... the involvement of Federal agencies, departments and statutory authorities has exponentially increased since the passing of the Water Act in 2007 and the Basin Plan in 2012. NSWIC considers this additional layer of regulation to be of significant concern and suggests further effort should be made to decrease the regulatory overlap and duplication that has resulted from this Federal intervention. (sub. DR239, p. 5)

The Tasmanian Farmers and Graziers Association, commenting on arrangements in Tasmania, also said:

We currently have Hydro, Tasmanian Irrigation, TasWater and the Water Management Branch within the Department of Primary Industries, Parks, Water and Environment (DPIPWE). All have varying degrees of management in relation to our water resources. The TFGA believes the current model is not sustainable and is inefficient and counterproductive to the sector. (sub. DR281, p. 5)

This complexity can add to the cumulative burden of regulation on farmers.

4.2 Farm access to water

Regulation of surface water

From the perspective of farm businesses, an important focus of water regulation is the development of water markets. Water markets are created by regulations that establish property rights and set conditions on trade. Beyond this, regulation of surface water includes rules governing the charges that irrigation infrastructure operators can levy water users for capturing, storing and delivering water. Conditions on water trading are regulated by the ACCC and state counterpart agencies.

Water trading is most developed in the southern Murray–Darling Basin, and the Basin Plan trading rules came into effect on 1 July 2014 (MDBA sub. DR127, p. 2). Commenting on the Basin Plan water trading rules, the Murray-Darling Basin Authority (MDBA) said:

... [the] water trading rules, through structural and governance changes, enhance the transparency of trade processes, improve information accessibility and ultimately seeks to build the confidence of all current and potential water market participants. This in turn provides greater opportunities for water trade underpinned by informed market participants. (sub. DR127, p. 2)

The Basin Plan also sets long-term average sustainable diversion limits (SDLs) that reflect an environmentally sustainable level of water use (or 'take'). The SDLs act like a 'cap' on water use and the amount of water that can be used for consumptive purposes in the Basin.

Research commissioned by the MDBA has determined that the Basin-wide long term average SDL for surface water is 10 873 gigalitres per year, which is 2750 gigalitres⁷ per year below the 2009 baseline level (MDBA 2016b). While significant progress has been made, the MDBA reported in early 2016 that nearly 800 gigalitres are still to be redirected from existing uses to meet this goal (MDBA 2016a).

Water markets are also being developed in other regions of Australia, including parts of Western Australia, as the volume of water entitlements in these catchments approach allocation limits (WADW 2010). However, in many parts of Western Australia, water continues to be allocated via ‘a licensing system rather than the market based methods used in other jurisdictions’ (WA Government, sub. DR285, p. 5).

In Tasmania in 2014-15, 10 400 megalitres of water entitlements were traded, with permanent transfers traded at an average price of \$1480 per megalitre (Tasmanian Irrigation 2015). The Commission also heard that informal trade takes place between farmers operating within the same catchments (Macquarie Franklin, trans., p. 749).

In some regions of Australia, including Tasmania and parts of northern Australia, water resources are not yet considered to be fully allocated. The motivation for regulation in these regions is the need to develop these resources sustainably, and establish market mechanisms that will enable ongoing reallocation of water to its highest value uses. For example:

- in Tasmania, 10 small catchment irrigation schemes have been developed over the past decade, and a further five schemes are under development (Tasmanian Irrigation 2015)
- the Australian Government has established the National Water Infrastructure Development Fund to develop water resources mainly in northern Australia, particularly in the Fitzroy and Mitchell catchments (DAWR 2015s).

Without water trading, farm businesses may not be able to expand their operations or take advantage of innovations. For example, the West Australian Pork Producers Association said that:

A situation exists where landowners have licences for large volumes of water that they are not using, have never used and have no commercial business plan to use. This prevents producers with a genuine need and a sound business, from within the same area, expanding due to limited water availability. (sub. 24, p. 9)

⁷ A gigalitre is approximately equivalent to the volume of water in 400 Olympic size pools.

Issues in regulating surface water

Trade within irrigation areas

The benefits to farm businesses of being able to buy and sell water are partly offset by the costs associated with complying with the regulations needed to establish and operate water markets.

Farmers interviewed by the Commission said that being able to trade water has significantly boosted the productivity of their businesses by providing the flexibility to buy and sell water in response to changing market and seasonal conditions. Some said that the process of trading water is gradually becoming faster and more efficient (box 4.3), but also suggested that there was scope to make better use of technology. The NSW Farmers' Association, for example, said:

Advances in telemetry, automation and cloud data base technology have removed any technical barriers to the implementation of an integrated national digital platform for regulation, allocation and trade in the Murray Darling Basin ... The time has come for Australia to commission a top tier commercial ICT firm to analyse the Basin's total water information needs and build a solution that is fit for purpose. (sub. DR161, pp. 12–13)

Box 4.3 A cotton farmer's perspective on water trading

The manager of a large cotton farming business west of Goondiwindi in southern Queensland was generally optimistic about the future of the cotton industry in Australia, and the contribution that water policy reforms have made to its sustainability. The manager told the Commission that 'water allocations have gone down over time, but this has increased the long-term sustainability of our industry'. Water trading has allowed him to expand the business, and to introduce a flexible management approach that has meant he can adapt to increasingly uncertain allocations of water.

However, the manager also noted that 'we can trade everything else almost instantly, but we can't yet do intra-flow trades'. He said that the duration of flood events in the area can be as brief as four to six hours, whereas completing a water trade takes three to five days.

While the manager was generally pleased with the commercial advantages that water trading has brought, he was also of the view that these advances can go further. He anticipated that technology-based refinements will eventually enable water trades to take place much more rapidly, adding further to the flexibility and productivity of his farm business. An issue he would like resolved with water trading is the multiple approvals required to trade water — currently he needs approval from the local water utility as well as the state government to buy water.

Source: Productivity Commission case study interview (appendix C).

Since the Commission's report on *Rural Water Use and the Environment* (PC 2006b), water markets have made a significant contribution to increasing rural water-use efficiency (NWC 2014a). These productivity gains are partly attributable to markets facilitating the transfer of water entitlements to larger and more efficient farms (Dr John Cooke, sub. 29). A study by the NWC, for example, showed that between 2001 and 2006, the value of

agricultural production in the southern Murray–Darling Basin increased by nearly 2 per cent despite a 14 per cent reduction in water use over the corresponding period (NWC 2010). Modelling for the study estimated that water trading in the southern Murray–Darling Basin increased Australia’s gross domestic product by more than \$220 million in 2008-09.

The NWC concluded that surface water trading in the Murray–Darling Basin is providing irrigators with increased flexibility.

The removal of many unnecessary barriers to trade, the facilitation of interstate trade and the implementation of better service standards have streamlined water trading, which has become a vital tool for giving irrigators the flexibility to respond to variable water availability and market factors. (NWC 2014b, p. 6)

The challenging task of implementing the National Water Initiative (NWI) across Australia’s diverse water resources has been slow, which inevitably delays improvements in on-farm productivity that are likely to flow from further regulatory reform. A recent independent review of the Water Act, for example, found that some of the reforms established under the Act and the Basin Plan were in transition, and were yet to be fully implemented (Commonwealth of Australia 2014). The Basin Plan was designed to be implemented over seven years (MDBA 2015a).

The MDBA pointed out that:

Implementing a plan of this scale and national significance takes time. The planned time for transition and implementation of the Basin Plan in full is necessary to deliver the objectives defined by the Water Act 2007 (Cwlth). (sub. DR127, p. 4)

An important ongoing issue for some farm businesses is an ongoing insecurity over water rights, and the constraints this places on the development of water trading outside of the Murray–Darling Basin. The independent review called for rapid and consistent national implementation of reforms to:

... ensure water access entitlements established through transparent processes were respected and could not be arbitrarily eroded to any significant extent without compensation. (Commonwealth of Australia 2014, p. 38)

The Queensland Farmers’ Federation also argued that:

The development of effective water markets is a critical factor to connect opportunities for Queensland’s agricultural sector. Queensland’s water trading markets are nascent, focused in localized areas where supply is either supplemented by infrastructure or available from unregulated river flows. (sub. DR217, p. 6)

Water trading has become more efficient as online systems for trading have improved. The NWC found that there has been an improvement in the functionality of the ‘registers’ used to process water trading transactions.

Victoria, New South Wales, Queensland and South Australia have online registers that have improved the efficiency of transactions and access to market information — with the Victorian

Water Register currently the benchmark in this area. In other jurisdictions limited market information can be accessed online but it does not allow interrogation or processing of trades. There is still work to be done to improve public access to jurisdictional registers and to facilitate data searches within these registers. (NWC 2014c, p. 40)

One cotton farmer told the Commission that after a lengthy period of development, the online system for trading water in New South Wales is beginning to work efficiently, and water is generally transferred promptly once it is purchased (appendix C).

Other participants raised concerns about the design and implementation of water trading regulations. These included the slow development of water property rights outside the Murray–Darling Basin, restrictive conditions placed on accessing water, and unnecessary restrictions on trade. According to the Pastoralists and Graziers Association of Western Australia:

Licensing regimes in Western Australia do not follow the provisions of the National Water Initiative as no perpetual licenses have been issued in this state. This water allocation is a property right and the fact that there is no continuity of access affects the owner's ability to forward plan or borrow funds for expansion. (sub. 70, p. 6)

While the NWI does specify that water entitlements will be perpetual, it also allows governments to issue non-perpetual entitlements where water resources are poorly understood or less developed. The Australian Property Institute told the Commission that water has not yet been accorded the same property rights as land in all Australian jurisdictions, resulting in only 'modest compensation' if 'the right to water is extinguished by the state' (trans., p. 148). This has implications for the value placed on water by banks, and the lending capacity of farm businesses.

The Voice of Horticulture argued that current rules around the timing of water trading impose a burden on horticultural businesses.

In Batlow water trading is difficult for apple growers at the top of the catchment as there are rules including flow rates that must be achieved before water can be harvested. However, this timing does not coincide with the times water is required on the orchard. Consequently on-farm water storage is required before a grower can buy more allocation. (sub. 42, p. 14)

Trade restrictions were also a concern for Australian Dairy Farmers:

... while water entitlements are freely traded, other water products such as delivery shares, are tied to specific shared irrigation districts and are not freely tradeable in practice. This represents a competitive disadvantage imposed on one group of farmers through an additional cost burden. (sub. 63, p. 5)

This suggests that centralised rules designed to facilitate water trading can be perceived by water users as being incompatible with local management practices. In some regions, infrastructure limitations can mean that delivery shares cannot be readily transferred to users in distant locations. In other regions, trade of delivery shares is possible, and arbitrary barriers to such trade would impose an undesirable cost burden on water users.

The continuing implementation of reforms under the NWI that integrate the benefits of centralised rules and local knowledge has the potential to improve the ability of farmers to manage risks and boost farm output, competitiveness and productivity.

Trade between irrigation areas

Some farm businesses and water utilities that the Commission spoke to in this inquiry suggested that while water can be traded efficiently within irrigation districts, water trading between districts remains problematic. This is in part due to catchment hydrology and the ‘transmission’ losses of water that occur when water is transferred long distances along natural water courses. However, it is also partly due to administrative practices and regulations that aim to keep water within particular regions.

The states place a range of administrative restrictions on water trade between regions (BoM 2015). While participants in this inquiry did not raise concerns about these restrictions, trade can be restricted when thresholds of water flow or other conditions are met (NSW Office of Water 2014). And recently, some concerns were raised about the design and operation of these regulations. For example, the Ricegrowers’ Association of Australia criticised the operation of NSW Government regulations governing inter-valley trade between the Murray and Murrumbidgee rivers, and claimed that it led to ‘a pretty haphazard race to secure trades before the door closed, and the process lacked fairness’ (RGAA 2015, p. 1).

The trade of water between irrigation areas is regulated through termination fees and other charges. These are partially justified on economic efficiency grounds (PC 2010c). When water entitlements are sold to another district, the fixed costs of water infrastructure (less saving from any infrastructure that can be decommissioned) are spread across fewer remaining entitlements. The exit of water users from a scheme can cause the so-called ‘Swiss cheese effect’, where the remaining users are geographically dispersed with potentially ‘stranded’ irrigation assets along channels and pipelines that become too costly to maintain (PC 2010c). To offset these costs, irrigation infrastructure operators can place conditions and charge ‘termination’ fees when users cease using irrigation assets.

In the past, irrigation infrastructure operators have also imposed ‘exit’ fees on irrigators. An exit fee is charged when a water entitlement is sold out of an irrigation area, irrespective of whether the user plans to continue to irrigate (for example, by purchasing annual water allocations in lieu of its sold entitlements). Consequently, the National Water Initiative specifies that exit fees should not become a barrier to trade.

The ACCC said:

... where rights to hold or take water have been ‘unbundled’ from rights to delivery of water, exit fees are not an appropriate type of fee for recovery of ongoing costs of the delivery infrastructure ... In this context, a fee with the purpose to recover the ongoing costs of providing water service infrastructure and mitigate risks of ‘stranded assets’ should be levied

on rights of access to infrastructure (i.e. water delivery rights) rather than on water access rights.

Levying such fees when water access rights are traded (i.e. ‘exit fees’) works against the policy intent of unbundling and the facilitation of efficient and effective water markets. (sub. DR121, p. 3)

The ACCC has also said that:

The imposition of a termination fee on an irrigator that is terminating their right of access ensures a contribution from exiting irrigators for the ongoing fixed costs of operating the infrastructure. This provides a degree of revenue certainty for infrastructure operators. Revenue from termination fees can be used to limit future increases in charges for those customers who maintain their connection or to fund network rationalisation to lower ongoing costs. (ACCC 2015f, p. 31)

Termination fees may be justified on efficiency grounds when, for example, there is an implied agreement between the operator and the irrigator that the capital costs of past infrastructure investments will be recovered through annual access fees (PC 2010c). As the New South Wales Irrigators’ Council said: ‘these fees are a vital and reasonable requirement on those selling out of an irrigation network to help offset the financial impacts of exits on the forward revenue requirements of irrigation infrastructure operators required to sustain its network operations’ (sub. DR239, p. 6).

However, excessive termination fees can be distortionary and act as a barrier to water trade. Excessive termination fees increase the price paid for water entitlements in importing regions and reduce the price paid for entitlements in exporting regions, reducing the quantity of water traded and foregoing the economic benefits of reallocating water to its highest value uses. There is also a risk of locking water into low productivity businesses and regions.

The Commission has previously questioned whether termination fees should be removed or replaced with long term supply contracts tailored to each new investment (PC 2010c).

The ACCC regulates termination fees along with other water charge rules under the Water Act to balance the benefits of permanent trades in water entitlements between districts with the external costs imposed by these trades on remaining irrigators. The Basin Plan requires that infrastructure operators must not unreasonably restrict the trade of water delivery rights, and outlines limited circumstances in which doing so may be reasonable. Some jurisdictions, including Victoria, have removed volumetric limits on trade out of irrigation areas (VDELWP 2016a).

In 2014, an independent review of the Water Act revealed widespread concern about inconsistent approaches to setting water charges across the Murray–Darling Basin (Commonwealth of Australia 2014). Termination fees are one of three types of water charges. Governments also levy ‘planning and management’ charges to recover the costs associated with planning and managing the development of water infrastructure. Irrigation

infrastructure operators levy ‘infrastructure charges’ to cover the cost of infrastructure for harvesting, storing and delivering water.

The Commission has also previously suggested that trade between irrigation districts could be facilitated by reducing unwarranted differences in the specification of water entitlements (PC 2006b). More recently, the ACCC said:

States and territories should consider further ‘unbundling’ their water access rights into their component parts, with separate and clearly defined rights to storage, carryover and delivery. Where appropriate, these separate rights should be clearly defined and made tradeable, to enable a more efficient utilisation of water service infrastructure. (2014b, p. 56)

Water charges should vary between irrigation districts. Seeking to impose uniform charges on users in districts with different infrastructure costs could create equity issues between districts and reduce economic efficiency:

... the use of a Basin-wide charge would be contrary to the user-pays and price transparency objectives of the [Water] Act and to the National Water Initiative pricing principles, and would result in cross-subsidisation and inefficient use of the infrastructure services and water. (Commonwealth of Australia 2014, p. 60)

Based on a survey of 270 irrigated farm businesses, Ashton reported that:

Across the Murray–Darling Basin, an estimated 46 per cent of irrigators indicated the level of fixed charges was very important to their decision to undertake a permanent water trade, with a further 20 per cent indicating it was somewhat important ... The highest responses for the importance of fixed charges in making permanent water trades were for the Goulburn–Broken and Murray region. (2015, p. 3)

Irrigation businesses, especially in New South Wales, raised concerns about the regulatory burden imposed by the different sets of water charge rules. According to the NSWIC, the three sets of water charges impose an unnecessary regulatory burden on irrigators and ongoing changes to the framework add to this burden.

... the three sets of water charge rules mean a significant additional regulatory burden for irrigators and irrigation infrastructure operators (either indirectly, through the determination of bulk water charges in NSW, or directly, through additional reporting and compliance requirements) ... The constant change in the regulatory framework governing the determination of bulk water charges in NSW is not only disruptive but also costly for irrigators, government agencies, bulk water suppliers and stakeholder representative bodies. (sub. 3, pp. 5–6)

The National Irrigators’ Council added that:

Significant costs are imposed on irrigation businesses complying with water charge rules, particularly the Water Charge (Infrastructure) Rules. (sub. 18, p. 6)

The NFF stated that:

Unlike state agencies and private water infrastructure operators, there is still little transparency or independent review of the MDBA’s cost structure in this regard. (sub. 61, p. 16)

Submissions to the 2014 review of the Water Act also raised concerns about water charge rules. For example, Southern Riverina Irrigators (2014) were concerned about the complexity of water charging and the different water charging regimes across the Murray-Darling Basin.

Concern over potential inequities in water charges led the Australian Government to commission an ACCC inquiry into water charge rules. The ACCC's (2015f) draft advice was to retain, but streamline, the application of all three types of water charges by applying them consistently regardless of the size or ownership of the water-using business, or the purposes for which water is used. Other amendments were designed to improve the transparency of pricing, and strengthen regulations to prevent discriminatory pricing.

Submissions to the ACCC were generally supportive of the current rules (ACCC 2015f). The ACCC heard during its public forums that some irrigators were facing difficulties paying termination fees, particularly as a result of Commonwealth purchases of water to meet environmental targets. Farmers interviewed for this inquiry also noted that the regulatory burden of termination fees is adding to the natural barrier to inter-regional trade posed by transmission losses (appendix C).

Termination fees and other water charges levied by infrastructure operators are likely to be considered further by the Commission as part of its water-related responsibilities. The Victorian Farmers' Federation (VFF) said it 'encourages the Commission to consider termination fees in its other water related responsibilities' (sub. DR189, p. 21).

Calls to regulate water brokers

Water brokers investigate trading options for their clients, and facilitate the buying and selling of temporary allocations and permanent entitlements (ACCC 2010). They also provide advisory services regarding water products and the functioning of water markets. Water brokers assist farm businesses by bringing together buyers and sellers, reducing search costs, improving information flows and helping with regulatory approvals.

The NFF explained the role that water brokers play in providing irrigation farm businesses with up-to-date market information.

The absence of a consolidated source of market information results in considerable inefficiency in the water market. Ultimately, most irrigation farmers largely rely on the advice of their water brokers rather than conduct their own analysis of the many different trading platforms operated by private companies, irrigation organisations or the often dated market information available on government websites. (sub. 61, p. 16)

The NWC also commented on the positive contribution that brokers are making to the efficient functioning of water markets.

... private water brokers are filling a gap in market information, providing a combination of publicly available data, and disclosing limited price and market information. This is having a

significant positive impact on the availability of information in the marketplace as at least 60 per cent of trades occur through private water brokers. (NWC 2014c, p. 24)

The potential for misconduct by water brokers to undermine confidence in water markets has led to calls to regulate the industry (ACCC 2010). Past calls for regulation appear to have been motivated by concerns that ‘misconduct by intermediaries could impose financial losses on consumers and damage market confidence’ (Allen Consulting Group 2007, p. 9).

Concerns about the conduct of water brokers tend to be directed at ‘possible future misconduct — and the potential negative consequences that this entails for the individuals involved and for water markets more generally’ (ACCC 2010, p. 1). The ACCC noted that concerns relating to misleading or deceptive conduct, theft, fraud and insolvency are addressed through the fair trading provisions of the *Competition and Consumer Act 2010* (Cwlth)), the *Corporations Act 2001* (Cwlth) and criminal law.

In its submission to this inquiry, the NFF said there were ongoing concerns in the agricultural sector about the potential for water brokers to exercise market power over farm businesses.

Regulatory reform to improve the transparency and availability of water market information would go some way to redress the information imbalance between water market participants. (NFF sub. 61, p. 16)

Similarly, the VFF commented that:

The information gap between water resource managers, brokers and water users can impede efficient trade of water resources and create the potential for some market participants to capitalise on this information gap. (sub. DR189, p. 21)

And Agforce said that:

AgForce supports the Commission as part of its water responsibilities, to examine the need for regulation of water brokers to support growing confidence in water markets, particularly where these are developing. (sub. DR246, p. 3)

The South Australian Government and the Department of Agriculture and Water Resources (DAWR) indicated that a voluntary accreditation scheme was an appropriate option. The South Australian Government said it:

... believes that a voluntary intermediary accreditation scheme would be the appropriate action rather than an industry-specific regulation. (sub. 57, p. 19)

And DAWR said that the Australia Government considers that ‘industry-led self-regulation of water market intermediaries directed at protecting the integrity of the water markets has merit’ and that they ‘will encourage water market industry representative bodies to establish such arrangements’ (sub. DR183, p. 2).

A draft regulatory impact statement prepared by the Department of Sustainability, Environment, Water, Population and Communities for the Council of Australian Governments (COAG) found that introducing a licensing scheme was likely to have a significant negative impact on the water broking industry.

It is likely that the cost of establishing and maintaining a licensing scheme ... exceed[s] the benefits associated with addressing stakeholder concerns and reducing risk of misconduct. If full cost recovery is pursued, the cost is likely to be prohibitive for the majority of intermediaries to continue operating. (DSEWPac 2013, p. 36)

In 2014, the independent review of the Water Act recommended ‘that the Australian Government work with industry to ensure that an appropriate and effective scheme of industry self-regulation is developed’ (Commonwealth of Australia 2014, p. 54).

The New South Wales Irrigators’ Council told the Commission that it was:

... not convinced that despite recent accusations from some quarters within the irrigation sector that Government needs to regulate the water market to prevent price speculation and market manipulation there is still no evidence yet provided to prove such allegations. NSWIC maintains its view that there must be clear evidence of market manipulation to justify heavier regulation of the Australian water market. (sub. DR239, p. 6)

The Commission will examine the regulation of water brokers as part of its water-related responsibilities. That said, there does not appear to be evidence of systemic misconduct or market failure in the water broking industry.

The New South Wales Irrigators’ Council argued that:

Should another review of Australian water markets or water brokers be conducted, it should be targeted and have a clear objective. To continue with wholesale reviews of Australian water markets is a regulatory burden in its own right and results in obvious duplication between agencies — leading to a waste of resources. (sub. DR239, p. 6)

Environmental flows

Surface water used on farms often has other important ecological functions in natural ecosystems. An important focus of regulation that is not easily resolved by water markets is how much water should be allocated to the environment relative to commercial uses (PC 2010c). As the Centre for Ecosystem Science said:

Regulation is critical for water management, both on farm to protect floodplain ecosystems and ecosystem services and also downstream in a catchment context. Flexibility in government regulations needs to reflect this complexity while also allowing for the use of water for positive environmental purposes. (sub. DR200, p. 14)

Maria Riedl told the Commission that:

... the entire purpose of the [Basin] Plan ... was to REBALANCE the unequal weight of water going to agricultural uses to the detriment of the entire MDB system ... the entire system was

degraded, with loss of wetlands, loss of species, loss of habitat, loss of flows out the mouth taking with it all the salt and chemicals and refuse we still put into the systems. (sub. DR219, p. 10)

Some farm businesses and irrigators expressed concerns to this inquiry about the potential for reduced access to water, and higher water prices to agricultural industries resulting from the ‘diversion’ of water for environmental purposes (Ronda and Allen Harmer, sub. 15). Australian Dairy Farmers, for example, said that:

Government intervention to reduce the amount of water available through the Murray–Darling Basin Plan is putting upward pressure on water prices. More than 1160 [gigalitres] has already been transferred from the pool allocated for irrigation across to the environment under the Basin Plan, through buybacks and on-farm upgrades. The pool may shrink even further, if the Basin governments push ahead with a commitment to recover another 450 [gigalitres] in addition to the Basin Plan’s 2750 [gigalitres] target. (sub. 63, p. 4)

Similarly, the VFF told the Commission that:

The implementation of the Basin Plan has reduced the amount of water available for productive use, restricted the ability of governments or infrastructure operators to reduce trade out of districts and created a strong distrust of government in many irrigation communities. (sub. DR189, p. 20)

While the recovery of water for environmental purposes does place absolute limits on the amount of water available for the expansion of agricultural industries, this does not affect water entitlements already granted to individual water users. The MDBA told the Commission that:

Due to the excludability of water entitlements, water users are not affected by market activity and continue to receive water under their water entitlements. (sub. DR127, p. 2)

The Department of the Environment said that the use of Commonwealth environmental water regulated under the Basin Plan has helped to ease constraints on the availability of water for agriculture. Delivering water early in the year can increase the free space in dams to capture inflows, reduce water losses and reduce competition for channel capacity during periods of peak agricultural demands (sub. 80).

The Commission has previously looked at the most effective and efficient options for governments to recover water for environmental purposes in the Murray–Darling Basin (PC 2010c), and found that understanding the socioeconomic trade-offs between consumptive and environmental uses is essential for setting targets for water recovery (based on ‘sustainable diversion limits’). The Commission also found that purchasing water from willing sellers within existing markets is generally the most cost-effective way of meeting targets for water recovery. It found that termination fees levied on environmental water purchases offset the risk of stranding irrigation assets that could otherwise result from geographically dispersed purchases of water entitlements.

The implications of recovering water for the environment through the Murray–Darling Basin Plan and local water resource plans will be examined by the Commission as part of

its water-related responsibilities. However, the Commission notes that while the allocation of water to the environment meets important community goals, it can be a potential source of uncertainty for agricultural industries.

Frontiers of water regulation

As regulation of surface water matures, the attention of regulators has been shifting to regulating groundwater and the interception of overland flows. Regulation of these important water sources varies across the country, and ongoing improvements to regulation has the potential to improve the overall security of all water entitlements. In non-regulated areas, and areas where regulation is under development, the Commission heard that lengthy delays in the design and implementation of these regulations are creating uncertainty and undermining the confidence of farm businesses to innovate and invest (appendix C).

From the perspective of farm businesses, the regulation of groundwater and overland flows are important because of the hydrological connections between these alternative sources of water. Physical interconnection means that unmeasured or uncontrolled use of groundwater and overland flows can reduce the security of all water entitlements, including those held for surface water. Uncertain water entitlements risk undermining confidence in water markets, and foregoing the productivity benefits of future trade that would allocate water to its highest value uses.

EDOs of Australia provided the following example:

In Queensland, the *Water Reform and Other Legislation Amendment Act 2014* introduced an exemption allowing mining and coal resource projects to take unlimited groundwater needed to access their resource without obtaining a licence ... Without the water licence framework to act as a check and balance prior to associated water being taken by the mine, the government cannot adequately manage a State's water resources. (sub. 60, p. 9)

Groundwater

The management of groundwater resources is covered by regulation spanning all levels of government. At a national level, groundwater is regulated under the Basin Plan. Water sharing arrangements are governed by state and territory legislation. For example, the Victorian Government manages the allocation of surface water and groundwater in accordance with the *Water Act 1989* (Vic). A water entitlement and planning framework is in place to define how water is shared, held, used and traded. To use groundwater, farmers in Victoria generally need a bore construction licence and a groundwater usage licence (VDELWP 2015b).

Local governments and regional organisations (such as community-based natural resource management (NRM) groups and catchment management authorities) also play a role in groundwater management through, for example: planning mechanisms; building controls;

infrastructure and drainage management; environmental rehabilitation; and community education.

While all jurisdictions have for some time had legislation that enables groundwater trading, the development of markets was initially slow (GHD, Hamstead Consulting and O’Keefe 2011). By 2013-14, however, trade in entitlements of groundwater was about 315 gigalitres across Australia (or 13 per cent of the total volume of water entitlements traded in that year) (Morey, Grinlinton, and Hughes, 2015). In some jurisdictions, property rights for groundwater have yet to be separated from property rights for land, which restricts trade (GHD, Hamstead Consulting and O’Keefe 2011).

The MDBA told the Commission that:

Groundwater markets currently operate in New South Wales, parts of Victoria and South Australia. The MDBA, in collaboration with Basin States, are currently working on finalising the Basin Plan groundwater trade guidelines which are expected to be released in late 2016. (sub. DR127, p. 3)

Trade in groundwater is limited to regions where this resource is available, and within these regions by the uncertainties that surround the level of storage, connectivity with surface water and potential impacts on other users, including the environment (PC 2006b). For example, the Basin Plan specifies that state Water Resource Plans will prohibit the trading of groundwater unless it can be demonstrated that there is sufficient hydrological connectivity between the two locations, and that water access rights in the two locations are sufficiently similar (MDBA 2014). Proponents are also required to demonstrate that measures are in place to address third-party impacts that result from trade. These conditions are costly for individual farm businesses to comply with, and likely to preclude trade in most instances (PC 2006b), unless facilitated by state Water Resource Plans.

Precise scientific measurement of groundwater and hydrological connectivity is not necessary to achieve productivity benefits from trade. The Commission’s report on *Rural Water Use and the Environment* noted that while comprehensive solutions may be some time off, conservative separate groundwater and surface water caps could be adopted in the short term. Also, simple ‘rules of thumb’ (such as capping extraction from all groundwater sources within some distance of connected rivers) can be combined with new information into policy settings over time (PC 2006b, p. 36).

Considerable progress has been made in understanding catchment hydrology (NWC 2012), and in the development of robust ‘rules of thumb’ (SKM and NCGRT 2012). This has supported the development of substantial markets for groundwater. The Commission is likely to reconsider the regulation of groundwater as part of its water-related responsibilities.

Overland flows

Estimates suggest that in 2014-15, 59 000 farms used 1160 gigalitres of water from farm dams, or roughly 12 per cent of total agricultural water use (ABS 2016l). Nearly 80 per cent of this water use was in three states: Queensland (44 per cent), New South Wales (23 per cent) and Victoria (12 per cent). The development of irrigation schemes in Tasmania is reflected in that state's disproportionate 10 per cent share of the national total.

Estimates of the interception and use of water on farms are likely to be conservative, because this source of water is often not measured or reported. Water is intercepted by countless small dams capturing small amounts of water for stock and domestic use, as well as much larger dams used for irrigating crops and pastures. For example, cotton farms on Australia's ephemeral inland river systems rely on capturing, storing and irrigating with water that flows across the landscape in times of flood. As one cotton farmer told the Commission, 'we never used to admit that we did this, but now that they're talking about giving us a licence for it we had to start telling them'. (appendix C)

As is the case with groundwater, the regulation of overland flows is important for protecting the integrity of water entitlements (PC 2006b). Regulating the interception of overland flows involves a balance between the rights of farm businesses to water that falls as rainfall or flows across their land in times of flood, and the availability of water to users and ecosystems further downstream (PC 2010c). Water intercepted on farms may be reduced in quality before it is returned to groundwater or streams, imposing additional costs on downstream users and the environment. For these reasons, all states and territories regulate the interception, storage and use of water on farms.

EDOs of Australia stated that:

Given the significance to farming communities of maintaining water supplies and water quality, EDOA recommends that all allocation and dam construction decisions be required to demonstrate that adequate environmental flows will be retained, and that these decisions be open to challenge by interested third parties. (sub. 60, p. 9)

EDOs of Australia also pointed out that exemptions for small off-stream dams including recent changes to legislation in Tasmania are 'an example of regulatory amendments that have improved efficiency while maintaining (potentially, improving) environmental outcomes in respect of small farm dams' (sub. 60, p. 9).

Under the Basin Plan, the Water Resource Plans prepared by each state and territory are required to set out how interception activities — including run off dams, commercial plantations, mining activities and floodplain harvesting — will be managed and monitored (MDBA 2015b).

Interception of overland flows is also regulated by water-related legislation in each state and territory. In New South Wales, section 54 of the *Water Management Act 2000* (NSW) specifies the maximum dam capacity that can be used to harvest water on farms, and the percentage of runoff that can be intercepted. The maximum allowable dam capacity varies

by region with the amount and seasonal distribution of rainfall. The percentage of runoff that can be intercepted ranges from 10 per cent in the central and eastern regions of the state, to 100 per cent in the west (NSW DPIW nd).

In Victoria, farm businesses need a licence to take and use water for dams built for irrigation or commercial purposes, but not for dams used for domestic use or watering livestock (VDSE 2007). A construction licence is also required, which ensures that dams meet acceptable engineering standards. Licences for farm dams across Australia often place conditions on the operation of dams such as allowing water to flow at certain times of year (WADW 2014).

Effectively regulating large numbers of small farm dams remains a significant challenge for state and territory governments.

The Voice of Horticulture stated that:

Governments [also] need to speed up approval processes to enable growers to build new on-farm dam storage and to purchase more water allocation to replenish their dams. This is a particular problem in NSW. (sub. 42, p. 14)

The regulation of water captured from overland flows is an issue on the large inland river systems in the northern part of the Murray–Darling Basin. The regulation of ‘floodplain harvesting’ (New South Wales) or ‘overland flows’ (Queensland) controls the construction and management of channels and dams used to divert floodwaters flowing across the landscape. This infrastructure is typically much larger, and captures much greater volumes of water, than small farm dams used for domestic and livestock purposes. It consequently also has greater implications for downstream users and the environment.

In Queensland, the ‘taking’ of water from overland flows is administered by the Department of Natural Resources and Mines under the *Water Act 2000* (Qld). Rules in the *Water Regulation 2002* and the *Sustainable Planning Act 2009* (Qld) control the construction of new infrastructure to capture overland flows (Queensland Government 2015a). Farmers in Queensland who participated in the Commission’s case study interviews (appendix C) did not feel any undue uncertainty regarding existing infrastructure under these regulations, but commented that it was taking years for new infrastructure to be approved.

In New South Wales, the Department of Primary Industries is in the process of implementing a ‘floodplain harvesting policy’ that was published in 2013. The purpose of the policy is ‘to manage floodplain water extractions more effectively in order to protect the environment and the reliability of water supply for downstream water users, ensure compliance with the requirements of the *Water Management Act 2000* and meet the objectives of the National Water Initiative’ (NSW DPI 2013a, p. 2)

A farmer in New South Wales that was interviewed by the Commission welcomed the potential improvement in the security of water entitlements that regulating overland flows was likely to bring (appendix C). However, lengthy delays in the design and

implementation of these regulations are causing uncertainty and undermining their confidence to invest (box 4.4).

Box 4.4 A farmer's perspective on the uncertainty of changing water regulations

A cotton farm near Moree has nearly 250 hectares of dams, and a network of irrigation channels and fields for capturing, storing and using water to irrigate cotton and other crops. The irrigation infrastructure is an investment to optimise capacity for uncertain summer rainfall. It was originally designed for an era of higher and more secure water allocations.

The farmer has been closely involved in local water policy for 40 years. His concerns are the constant changes to water regulation, reductions in water allocations and the uncertainty these create for investment, and the ongoing viability of the farm.

The farmer recognised that the introduction of water trading has been positive for the cotton industry — it has increased productivity by giving farmers the flexibility to buy and sell water in response to changing market and seasonal conditions. According to the farmer, after a lengthy period of development, online systems for water trading are beginning to work efficiently, and water that is purchased is generally transferred promptly.

However, changes to water policy have dramatically increased the exposure of his farm to seasonal climate risk. The most reliable source of water is groundwater, the allocation of which has been reduced by 42 per cent since the introduction of national water reforms. This has meant that the area of irrigated cotton that can be reliably grown each year has fallen from 300 to 180 hectares, and in turn has reduced the most reliable source of income for this farm business.

According to the farmer, an ongoing concern is uncertainty over water allocations from floodplain harvesting. He is looking forward to the certainty that licensing this water will bring, but is concerned that the design of these regulations continues after a 10 year process. He said that:

The farmer is the only constant. Over the last 10 years we've had five water Ministers and three name changes to the Department, and each one led to changes and delays.

Also, the ongoing uncertainty associated with water allocations is affecting his capacity to borrow and invest. The farmer told the Commission that when he says to the bank 'it's ok, we're going to get a licence for harvesting overland flows', the answer is 'when?'. The farmer said that he hasn't been able to answer this question for a long time. The farmer claims that the ongoing uncertainty is affecting land values — the value of non-irrigated farmland in the district has increased from \$100 to \$800 per hectare over the past 15 years, while the value of irrigated farmland has remained largely unchanged, representing a significant reduction in real terms.

Source: Productivity Commission case study interview (appendix C).

In other industries, the pace of regulatory change is adding to the burden felt by farm businesses. The NSWIC said that it:

... stresses that the timeframe imposed on irrigators and irrigation infrastructure operators to respond to these significant changes in water resource planning and management is inappropriate and must be reviewed with the focus of providing greater flexibility and time throughout the review process. (sub. 3, p. 4)

The Commission is likely to continue to assess the regulation of farm dams and floodplain harvesting as part of its water-related responsibilities. In past studies, the Commission found that the uncontrolled proliferation of farm dams and floodplain infrastructure could significantly reduce stream flow and the security of water entitlements (PC 2006b). The benefits of regulating overland flows are clear, and governments need to consider the uncertainty and productivity costs introduced by delays in implementation.

Summing up

Complexity and change in water regulation contributes to the cumulative burden felt by farm businesses, and this in turn reduces the incentives for farmers to innovate and invest (appendix C).

Water trading within regions is beginning to work well (particularly where connectivity is high and transmission losses are kept to acceptable levels). It is providing farm businesses with a greater degree of agility to adapt decision making to changing market and seasonal conditions. Technology has helped to create effective trading mechanisms, and further developments are likely to make water trading easier and faster.

The potential to build on the productivity of water trading in Australian agriculture depends on:

- improving current systems for trading surface water using technology to reduce transaction costs, and allowing real-time trading where this is cost-effective
- increasing the use of water trading mechanisms in regions outside of the Murray-Darling Basin
- improving property rights for groundwater and water intercepted as overland flows to expand trade.

It has proven challenging to extend water trading between regions, and to include groundwater and floodplain harvesting. This process is taking time, but the result is likely to be worthwhile. As the Queensland Regional NRM Groups Collective told the Commission:

Whilst it's long and tedious, I think the outcome is going to be ideal in that there will be agreement across a whole lot of key players, and that plan then will set the foundation for the future, and hopefully then minimise the need for regulation. (trans., p. 613)

Australia's river catchments have very different physical characteristics across different regions. This physical diversity is matched or exceeded by the diverse characteristics of the farm businesses, ecological systems, urban communities and other industries using water. Byron (2010) argued that it is essential to consider this diversity when talking about 'delays' in water reforms under the NWI. Regional diversity may require slower processes that allow for more local ownership of agreed courses of action, within flexible principles that seek consistency rather than uniformity at a national scale.

The NFF agreed that ‘in relation to water policy and management, decisions should be made by the least centralised level of government possible’, noting that catchments are diverse in terms of hydrology, infrastructure and historical development, as well as the evolution of regulation (sub. DR216, p. 23).

The MDBA also said that it was ‘committed to locally appropriate and flexible regulatory settings’ (sub. DR127, p. 3).

FINDING 4.1

Complexity and ongoing changes in water regulation contribute to the cumulative burden of regulation on farm businesses. However, the diversity of Australia’s river catchments makes streamlining and harmonising regulation difficult. More flexible governance arrangements may be needed to develop locally relevant regulatory settings for accessing water.

4.3 Farm use of water

Most of the water used by Australian farm businesses is used to irrigate pastures and crops (figure 4.2). Unlike regulations governing *access* to water, Australia has few regulations that direct what farm businesses can *use* water for once they have the right to access it. Typically, farm businesses are left to make decisions about how best to use water to meet their own productivity and profitability goals.

The NFF told the Commission that:

Regulation of farm use of water is not a significant issue for the agriculture sector. Consistent with the statutory water access and use rights that are established in state water management laws, farm businesses should be left to make decisions about how best to use water to meet their own productivity and profitability goals. (sub. DR216, p. 5)

A recurring issue has been the degree to which non-agricultural users should be eligible to trade water in rural water markets. Restricting potential water users (such as urban water users, and mining and power generation industries) from accessing water markets prevents the price of water from revealing the true value of alternative uses, and the overall benefits of water use to the community (PC 2006b).

Some water used on farms is not regulated. Most state legislation governing access to water excludes water used for domestic purposes and drinking water for livestock, although these uses account for a very small fraction of overall water consumption. (This exemption does not apply to intensive livestock farming such as piggeries and feedlots.) However, as noted above, state and territory governments generally regulate the construction of dams and other infrastructure used to provide water for livestock and

domestic use. The NFF notes that ‘these regulatory processes place limited burden on the farm sector and are not viewed by the NFF as an issue’ (sub. DR216, p. 25).

While direct regulation of water use does not appear to be an issue, it is likely that the regulation of water access and disposal could influence which agricultural activities are profitable to irrigate. Regulations influencing the volume, seasonal availability and cost of water are likely to influence the profitability of irrigating crops and pastures that have dissimilar water requirements. Whether or not this influence is efficient depends on whether a confluence of regulatory impacts (such as termination fees and other transaction costs) prevent water from being traded to its highest value uses.

4.4 Farm disposal of water

Water used on farms can be recycled for reuse or returned to the environment via surface or groundwater. From the perspective of regional water planning, accounting for return flows is important for managing the security of water entitlements throughout each catchment (PC 2006b). Existing entitlements and seasonal allocations in many areas are based on the expectation that, when water is applied on farm, some proportion of the water returns to the hydrological system through seepage or runoff. As such, changes in return flows (resulting from landuse changes) need to be accounted for in entitlement specifications and/or resource management policies (PC 2010c).

Water returning to streams contributes to the health of downstream communities and ecosystems. To avoid and manage adverse downstream impacts, all Australian states and territories have an independent statutory authority (known as environmental protection agencies or equivalent government department) that regulates water pollution, including the disposal of water from farms. These regulations typically set minimum quality standards for water leaving farms.

Water quality and effluent discharge are regulated by diverse environmental legislation (chapter 3). Regulations can require farm businesses to contain and reuse effluent and prevent it from leaving a property or entering waterways. Most state governments require intensive industries such as sugar mills, piggeries and poultry farms to be licensed to ensure compliance with pollution control regulations. In some areas of Australia, including the Murray–Darling Basin, the contribution of water leaving irrigated farms to in-stream salinity is subject to regional water management plans (NSW OEH 2013).

There are also a range of industry-specific guidelines that address, for example, manure and effluent management in intensive livestock systems (examples for the pork industry are provided in chapter 3). The Consolidated Pastoral Company noted that the National Beef Cattle Feedlot Environmental Code of Practice specifies outcomes that include ‘preventing or minimising adverse impacts’ to surface or ground water (sub. 71, p. 79).

The benefits to farm businesses of regulations that control the disposal of effluent and water include improvements in the quality of water that they can access from waterways and aquifers, and the environmental amenity of healthy rivers systems and wetlands. Soil, nutrients and chemicals lost in water disposed from farms represent foregone opportunities to reduce input costs and increase productivity. Improved effluent management can also improve food safety, contributing to human health and providing innovative industries with a marketing advantage.

Complying with water regulations that improve water quality can also help agricultural industries to sustain their ‘social licence to operate’ within the broader Australian community. As Canegrowers said:

Sugarcane’s proximity to the Great Barrier Reef continues to pressure growers and industry on their social licence to operate. Canegrowers continues to participate in the Federal Reef programs including Reef Programme through Reef Plan and Reef Trust through Reef 2050 Long Term Sustainability Plan relating to water quality improvement and the resilience of the Great Barrier Reef. (sub. 22, p. 4)

Farm businesses can also benefit from improved water quality resulting from regulation placed on other uses, such as mining. The Department of the Environment said that:

The water trigger was incorporated into the EPBC Act in June 2013, partly in response to community concerns at a time when coal seam gas development was relatively new ... The water trigger seeks to provide confidence about the impacts of these developments on water resources and water quality, including management responses to secure good water outcomes. (sub. 80, p. 8)

While regulation of water disposal can benefit farm businesses (and the community more broadly), there are also costs of complying with these regulations, including the costs of installing effluent capture and processing technologies. The costs of compliance also include any foregone productivity benefits from reducing the intensity of farming to meet environmental standards.

According to Canegrowers (sub. 22), the balanced use of herbicides and mechanical cultivation in sugarcane production can improve productivity and water quality, while reducing the risk of damage to the Great Barrier Reef. However, a failure to harmonise these regulations can have adverse productivity and environmental consequences.

In a number of submissions to this inquiry, regulation of water disposal was cited as part of a broader set of environmental regulations that farmers are required to comply with. Australian Dairy Farmers, for example, said that it ‘wants planning and environmental legislative frameworks that foster a consistent and inclusive regulatory environment for a diverse dairy industry’ (sub. 63, p. 3). Many dairy farms are expanding and investing in new and more effective effluent management systems, and consistent regulation reduces the cost of new investments. The dairy industry is developing innovative ways to reuse effluent (Australian Dairy Farmers, sub. 63) that adds to productivity while reducing pollution and waste.

An issue addressed in chapter 2 is whether local governments have the skills and resources necessary to administer this type of regulation. Environmental regulation is perceived by some farm businesses as complex and at times inconsistent. For example, according to the West Australian Pork Producers Association:

... inconsistencies arise that encourage participants to question the fairness of the system. For example deep litter based sheds compared to effluent based sheds do not need a licence yet the moment pigs are put into sheds they suddenly need a licence. (sub. 24, p. 4)

Drainage design and water quality monitoring are also part of the regulatory requirements for applications to develop new intensive livestock businesses in peri-urban areas. In these areas, conditions imposed to protect other residents are said to be increasing the compliance burden for some farm businesses (Cordina Farms, sub. 65).

Farm businesses can benefit from the regulation of water disposal through secure water entitlements, increased productivity and improved water quality. Realising these benefits requires regulatory regimes that take a holistic approach to controlling diverse influences on the quantity and quality of water returned from farm businesses to the environment.

4.5 Water reporting

A number of inquiry participants told the Commission that water-related reporting requirements of the Water Act and the Basin Plan impose an unnecessary and increasing regulatory burden. Duplication and increased frequency of reporting were of particular concern. For example, the NFF said that:

With the Australian Government's implementation of the *Water Act 2007*, there are now several Australian government agencies and authorities collecting water data ... In many cases, the different entities require slightly different water information, or the information in different formats. State agencies also collect water data. All these different data requirements increase the cost of doing business for the irrigation companies, costs which are then passed on to farmers through water charges. (sub. 61, p. 16)

As noted by the NFF (sub. DR216), this reporting burden is usually an indirect cost for farm businesses, and it is usually infrastructure operators who report water use to a range of Australian, state and territory government agencies (table 4.1). These include the government departments and water authorities in each jurisdiction, the Bureau of Meteorology, the ACCC, the Australian Bureau of Statistics (ABS), the Department of the Environment and DAWR.

The MDBA receives data from the agencies responsible for implementing the Basin Plan in participating states and territory.

The MDBA does not collect any water use data or information from farm or agricultural businesses. All water use data the MDBA collects is provided by the relevant Basin State water agency under section 71 of the Water Act 2007 (Cwlth). (MDBA, sub DR127, p. 4)

Table 4.1 Selected water reporting requirements of an irrigation infrastructure operator in New South Wales 2014

<i>Information</i>	<i>Collection agency</i>	<i>Frequency</i>
Water supply and use	ABS	On request
	ACCC	Annual
	Bureau of Meteorology	Annual
	NSW Office of Water	Monthly
	State Water	Monthly
Water trade/market data	Bureau of Meteorology	Annual
	NWC	Annual
Performance data	NWC	Annual
	Bureau of Meteorology	Annual
	ACCC	Annual
	NSW Office of Water	Annual
Financial statements	ASIC	Annual
Water quality	NSW EPA	Weekly, Annual
Network characteristics	ACCC	Annual
Network Service Plan, Network Consultation Paper	ACCC	Five-yearly

Source: Murray Irrigation (2014).

In addition to reporting water use to infrastructure operators, a sample of farm businesses across Australia (more than 34 000 in 2014-15) report water use to the ABS's annual Rural Environment and Agricultural Commodities Survey (ABS 2016a). This information informs the ABS's calculation of the gross value of irrigated agricultural production (ABS 2015c). In 2010, the ABS also began collecting data on the ownership of water rights via the Agricultural Land and Water Ownership Survey, with 11 000 farms surveyed in 2013 (ABS 2014b).

According to Murray Irrigation, reporting imposes a significant regulatory burden on their infrastructure operating business.

A core concern for Irrigation Infrastructure Operators (IIOs) is the increased reporting requirements and the added complexity in the water market created by the multiple layers of State and Federal legislation and regulation. IIOs are licenced to operate under State legislation and therefore have significant reporting requirements at a State level, regulated in NSW under the *Water Management Act 2000*. Many of these reports supply the same information, albeit in a different format, to those supplied to federal agencies under the *Water Act*. (2014, p. 2)

The National Irrigators' Council (sub. 18) argued that this unnecessary regulatory burden required some irrigation infrastructure operators to employ additional staff to meet their reporting obligations. The irrigation farmers interviewed by the Commission also said that they expend considerable effort in reporting water use (and that this was often exacerbated by unreliable internet services).

In some cases, different types of data must be provided in different formats to the same agency. In other cases, the same data must be provided to different agencies. According to Retailer and Supplier Roundtable Ltd:

The lack of a standardised format or system means that information provided to a local entity under one format cannot be shared with a federal or state entity, resulting in the farmer needing to provide similar data to the other agencies in a separate step. (2014, p. 18)

The Australian Food and Grocery Council (sub. 28) was also concerned about an increase in compliance costs resulting from water-related reporting obligations. It indicated that multiple water usage and water quality parameters must be reported to government agencies under the:

- Environment and Resource Efficiency Plan, Water Management Action Plan and Annual Waste Returns in Victoria
- ongoing Water Efficiency Management Plans in Queensland and Western Australia
- Water Savings Action Plans — New South Wales
- Water Discharge Reports required by state EPAs
- reports to water retailers such as Sydney Water and Yarra Water.

The overlapping nature of water reporting requirements was also noted in various submissions to the 2014 review of the Water Act (such as NFF (2014c), NSWIC (2014) and Waterfind (2014)). For example, Australian Dairy Industry Council Inc and Dairy Australia stated that:

... similar water information is collected, aggregated and distributed by the Bureau of Meteorology, the MDBA, State water departments, state water corporations, the ACCC, the National Water Commission, ABARES and the [Commonwealth Environmental Water Holder]. (2014a, p. 8)

The Commission notes that steps have already been taken to understand the burden of reporting, and to streamline reporting requirements to reduce this burden. As a result of the 2014 review of the Water Act, an Interagency Working Group⁸ reviewed water information reporting burdens under the Water Act, as well as water-related reporting to other Australian government agencies. Its objective was to reduce the regulatory burden associated with providing water information to the Australian Government (IWG 2016).

The IWG made a number of recommendations and proposals to reduce information reporting requirements while achieving the objectives of the Water Act. These included:

- amending the water regulations to reduce information requests on rural water entities from 37 to 10 subcategories of information
- obtaining water use data from state agencies

⁸ The Interagency Working Group was comprised of representatives from the ABS, ABARES, ACCC, Bureau of Meteorology, the Department of the Environment, MDBA and the Treasury (IWG 2016).

-
- consolidating information requirements (IWG 2016).

The IWG estimated that implementation of its recommendations could reduce the reporting-related regulatory burden on agricultural businesses by over 20 per cent (IWG 2016).

The IWG investigated a single portal for the supply of water information to the Australian Government, but found that ‘it is not effective to have a single government agency collect all the required information because of the very different roles of the agencies and hence different skills, capacities and analysis of the information’ (IWG 2016, p. 4).

There has been considerable progress made towards reducing the administrative burden on participants in water markets, especially in the Murray-Darling Basin. The MDBA told the Commission that:

The MDBA is committed to consistently decreasing the aggregate regulatory burden felt by individuals and will continue to coordinate with other regulatory agencies. (sub. DR127, p. 3)

The Commission’s view is that value of reporting for policy development and implementation need to be carefully weighed against the costs imposed on farm businesses. An important first step is to implement the reforms suggested by the IWG, noting that the Australian Government accepted all 23 of its recommendations in December 2015 (DAWR sub. DR183, p. 1). DAWR noted that:

A number of the Review’s recommendations were implemented by the Water Amendment (Review Implementation and Other Measures) Act 2016, passed by Parliament in May 2016 ... substantial progress has [also] been made on reviews of water information reporting to the Commonwealth (led by the Bureau of Meteorology (BoM)) and the Australian Competition and Consumer Commission (ACCC) water charge rules. (sub. DR183, p. 1)

Amendments have also been made to the Water Regulations 2008 (Cwlth) to reduce the categories of information reported by infrastructure operators, and the frequency of reporting to the Bureau of Meteorology (DAWR, sub. DR183, p. 1).

The Commission agrees with comments made by both the Ag Institute of Australia and Australian Dairy Farmers.

All information requested should be justified with explicit and clear explanation as to why it is required and how it will be used. (Ag Institute of Australia, sub. DR182, p. 21)

... simply determining where reporting duplications are occurring is not sufficient. It is crucial to also investigate whether the information collected is valuable and necessary for the outcomes being sought from the data. (Australian Dairy Farmers, sub. DR218, p. 3)

RECOMMENDATION 4.1

The Australian Government should implement the findings of the Interagency Working Group on Commonwealth Water Information Provision to reduce duplicative and unnecessary water management information requirements imposed on farm businesses.

5 Regulation of farm animal welfare

Key points

- Animals (sheep, cattle, pigs and poultry) are an essential part of the agriculture sector. Their outputs, such as milk, wool, meat and eggs, are basic elements of the food and fibre chain. While most Australians accept the rearing of animals for commercial purposes, many also place a value on their health and wellbeing (welfare).
- Good animal management practices are an essential part of livestock operations. Producers have an incentive to improve animal welfare where it increases the productivity and profitability of their business, including when consumers demand higher welfare products. But animal welfare, productivity and profitability do not always go hand-in-hand.
- The challenge for policy makers is to determine the level of regulation that weighs up the cost of improved animal welfare against its value to the community.
- National standards and guidelines are being developed with the aim of improving animal welfare (standards are intended to reflect contemporary scientific knowledge and community expectations). However, progress to date has been very slow and the standard setting process does not adequately value the benefits of animal welfare to the community.
- To give consumers and the Australian community confidence that acceptable welfare standards for farm animals are in place, the current approach to developing national standards and guidelines needs to be improved by:
 - clarifying the objective of the standard setting process
 - relying more on rigorous science and evidence of community values for animal welfare
 - more independent and robust application of regulatory impact assessment processes.
- The Commission proposes that an independent statutory agency (the Australian Commission for Animal Welfare (ACAW)) be established to develop the national standards and guidelines. The ACAW would also disseminate information on best-practice farm animal husbandry, including through further development of the standards and guidelines.
- State and territory governments should be more transparent about the monitoring and enforcement activities they undertake — this would help to improve community confidence that animal welfare standards are being achieved.
 - Monitoring arrangements could also be improved by recognising industry quality assurance schemes (that meet mandatory welfare standards and involve independent auditing) as a means of demonstrating regulatory compliance.
- There is general support from industry and welfare groups for the regulation of live exports.
 - The exporter supply chain assurance system (ESCAS) has led to some improvement in welfare for Australian livestock in some overseas export supply chains.
 - The regulatory burden of the system for exporters could be reduced through greater cooperation and sharing of audits and costs between exporters. An industry-led quality assurance program could, depending on its design, be used over time to demonstrate live export welfare assurance.
 - The ACAW should regularly review the performance of the ESCAS.

Animals (cattle, sheep, pigs and poultry) are a fundamental part of the livestock industry and their outputs such as milk, meat, and eggs are basic elements of the food supply chain. Other outputs, such as wool and hides, are also important components of leather and fabric production. The gross value of livestock production during 2014-15 was about \$27 billion (about half of the total value of agricultural production) (ABS 2016k).

Australians generally accept that it is appropriate to rear animals for commercial purposes (as revealed by their consumption of animals as food or in other products). They also place a value on the welfare of farm animals and expect, and benefit from knowing, that farm animals are being treated humanely (both from an animal wellbeing and animal health perspective). That said, there are some Australians who do not consider it appropriate to use animals for commercial purposes (Animal Welfare Brief Submissions 2). For example, Vegan Australia (sub. 25) advocates for animals to be able to live free from human use.

Animal welfare issues have received increased attention in Australia in recent years, particularly following exposure of malpractice in the livestock sector through electronic media. The temporary suspension of live exports to Indonesia in 2011 is a prominent example. The suspension was in response to community concern following ABC's *Four Corners* airing of footage of mistreatment of animals in Indonesian abattoirs. Intensive farming and housing systems, such as stalls for pigs and cages for hens, have also been the subject of animal welfare campaigns. Exposure of incidents of mistreatment has raised community awareness and influenced consumers' attitudes.

A number of concerns about farm animal welfare regulation were raised in this inquiry, including that:

- animal welfare regulations are not meeting community expectations about the humane treatment of farm animals
- there is a risk that unnecessary regulations will be imposed on farmers based on emotive reactions rather than evidence (such as what represents an improvement in the welfare of farm animals and how this is valued by the community)
- the current arrangements are a patchwork of different standards
- there are conflicts of interest under the current governance arrangements.

Concerns were also raised about practices used on animals, including surgical procedures without use of anaesthetic (such as dehorning of calves and tail docking and teeth clipping of pigs), forced and continual pregnancy of pigs, separation of mothers and infants and disposal of unwanted farm animals, primarily male chicks and 'bobby' calves (Animal Law Institute, sub. DR213; Christine Bennett, sub. DR140; Jan Kendall, sub. DR106; Vegan Australia, sub. DR115).

This chapter looks at the concept of animal welfare (section 5.1), the role for government (section 5.2) and farm animal welfare regulations in Australia (section 5.3). The objectives of the regulation and the current process for developing and enforcing farm animal welfare standards within Australia are examined in section 5.4, and options for improving the

regulations are discussed in section 5.5. The arrangements for regulating the welfare of Australian live exports in overseas supply chains are also examined (section 5.6).

5.1 The concept of animal welfare

The concept of animal welfare is elusive and has a number of dimensions, including psychological as well as physical aspects, people's subjective evaluations, and historical and cultural influences (PC 1998). Essentially, though, animal welfare is about animal health and wellbeing. The World Organisation for Animal Health (box 5.1) defines animal welfare to mean:

... how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear, and distress. Good animal welfare requires disease prevention and appropriate veterinary treatment, shelter, management and nutrition, humane handling and humane slaughter or killing. Animal welfare refers to the state of the animal; the treatment that an animal receives is covered by other terms such as animal care, animal husbandry, and humane treatment. (OIE 2016c, p. 1)

Box 5.1 Internationally agreed concepts of animal welfare

The World Organisation for Animal Health (OIE) is an intergovernmental organisation responsible for improving animal health worldwide. In 2002, the OIE's mandate was broadened to include animal welfare standards and to take the lead internationally in this field. It is recognised as a reference organisation by the World Trade Organization. In 2016 it had 180 member countries, including Australia.

OIE's guiding principles for animal welfare note that there is a critical relationship between animal health and animal welfare and refer to the internationally recognised 'Five Freedoms of Animal Welfare' (published in 1965) to describe the right to welfare of animals under human control. According to this concept, an animal's primary welfare needs can be met by providing freedom: from hunger; from discomfort; from pain, injury or disease; to express normal behaviour; and from fear and distress.

Section 7 of the Terrestrial Animal Health Code sets out recommended standards for the improvement of animal welfare. Specific welfare standards are included for the transport and slaughter of animals, and for beef, broiler chicken, and dairy cattle production systems.

Sources: OIE (2016a, 2016c).

The Australian Animal Welfare Strategy (AAWS) (discussed later) states that Australia accepts the international definition of animal welfare developed by the OIE. It also states that animal welfare reflects the ethical imperative and social expectation that the use of animals for human benefit should minimise suffering of the animals involved. Welfare is related to health and wellbeing, but extends beyond survival to consider the quality of an animal's life. And while concern for animal welfare is widespread throughout the

community, the underlying set of ethical values used to interpret and act on this concern varies between individuals and groups, particularly as ethical concerns are not always matched with consumption decisions. This raises significant challenges for policy makers.

5.2 A role for government in farm animal welfare?

Good animal management practices are an essential part of commercial livestock operations. Many welfare improvements increase the productivity and profitability of livestock production. For example:

- a stockperson training program (ProHand) developed by the Animal Welfare Science Centre⁹, has been shown to increase milk yields in cows, and increase litter sizes and growth rates in pigs (AAWS 2016)
- low stress handling and slaughter practices (that maintain glycogen (sugar) levels) can help improve the quality of meat (UN FAO 2001).

As Australian Pork Limited (sub. 37, p. 6) said ‘the single most important factor in addressing the welfare of animals is the husbandry skills of the stock-people’. Other welfare attributes that improve livestock productivity and are essential for good livestock production processes include good housing, nutrition and protection from diseases.

From a production perspective, the value of a farm animal is determined by what it contributes to the economic output of the production process. This varies between extensive (grazing) and intensive (housed or closed-stock) systems that use ruminant and non-ruminant animals. As such, the way an animal is treated (in terms of food, shelter, disease management and so on) is influenced by what is required to achieve the highest level of productivity (the cost of which the producer will seek to recover in the sale of the product). Above all, high mortality rates (a simple but useful measure of animal welfare) are typically at odds with productivity.

As noted by the (then) Australian Government Department of Agriculture¹⁰, there is also a link between animal welfare and industry profitability, where improvements in animal welfare can contribute to improved competitiveness and community acceptance of livestock animal welfare arrangements. This can lead to better domestic and export market access, higher prices and enhanced long-term sustainability (DoA 2015e). Producers also have an incentive to improve animal welfare to meet changing consumer demands for higher welfare products.

⁹ The Animal Welfare Science Centre comprises four collaborative partners — the Victorian Department of Economic Development, Jobs, Transport and Resources; the University of Melbourne (Faculty of Veterinary and Agricultural Sciences); the South Australian Research and Development Institute; and the University of Adelaide (School of Animal and Veterinary Sciences).

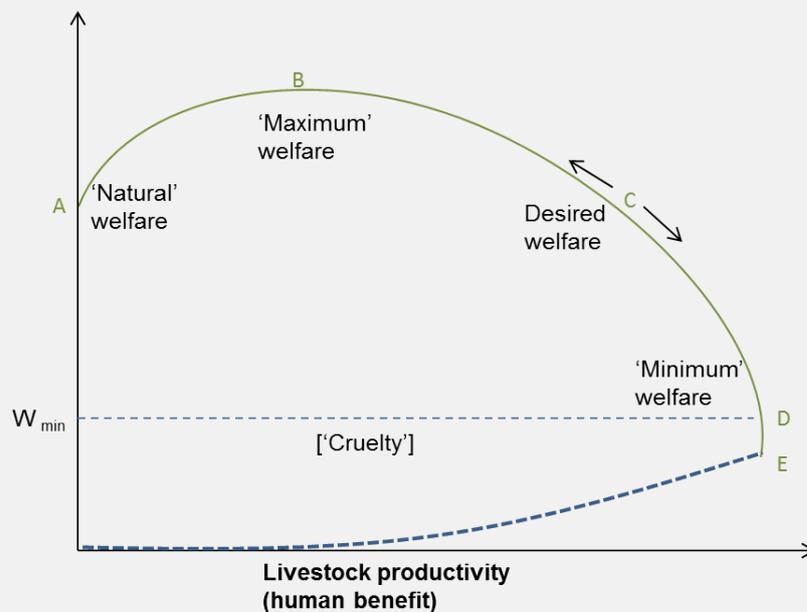
¹⁰ Now the Department of Agriculture and Water Resources.

And in practice, some producers will take factors other than profit into account, including attitudes to risk, concern for animals and the environment, maintaining a certain way of life, and farm succession (FAWC 2011). Maintaining cash flows and land values will also be important for some farmers, particularly those in pastoral zones.

But animal welfare and production and profitability do not always go hand-in-hand (box 5.2).

Box 5.2 Conceptual relationship between productivity and welfare

A generalised relationship between the productivity of livestock and livestock welfare can be conceptualised using production economics. At low levels of output, there is complementarity between increased livestock production from better practices (such as nutrition, housing, and disease control) and livestock welfare outcomes. Ultimately, however, a point *may* be reached where further productivity increases come at the cost of animal welfare as livestock 'intensity' increases and production techniques seek to maximise the biological potential of livestock.



Points along the 'welfare-productivity frontier' (green line) are associated with different preferences for animal welfare outcomes. Livestock producers will occupy different positions on the frontier depending on their enterprise (dairying, organic, grass-based, etc.) and the intensity of their production system. That said, general consensus about what constitutes animal cruelty will determine a minimum level of animal welfare that society expects and which may set the threshold for government regulation. McInerney (2004) argues that beyond this point it is a matter of choice as to how animals are farmed, and how the balance between the economic value attached to their output and the value attached to their welfare should be resolved.

While this 'welfare-productivity frontier' provides a useful theoretical depiction of the relationship between livestock productivity and welfare, a potential limitation is that it is too generalised to represent both intensive and extensive production systems. Also, it is not necessarily the case that increases in intensity are always associated with lower welfare outcomes.

Source: McInerney (2004).

Some welfare measures can involve costs for farmers with little or no offsetting gains to the business. Examples include:

- where welfare measures reduce the intensity of livestock production, for example, by lowering stocking densities in poultry systems used for egg production
- the use of pain relief for invasive procedures such as mulesing or castration, that impose costs with limited offsetting productivity improvements.

Producers may still have an incentive to adopt such measures if the final product can be sold at a higher price — examples are free range eggs and pork — although prices for these products may not relate to other (non-housing related) welfare attributes, such as use of surgical procedures without anaesthetic. Producers also have an incentive to adopt higher animal welfare in response to changes in community values to avoid the risk of new regulations, which could be more costly than industry-initiated welfare measures.

Public benefits of farm animal welfare

In principle, the community attaches a value to farm animal welfare that is distinct from the value that animal welfare contributes to the productivity and profitability of the farm business. This value may not be reflected in the production process where farmers are seeking to maximise profitability. Farm animal welfare is important both to consumers of animal products as well as others in the community (those who are not consumers of animal products and are not directly involved in the production of animal products) who feel concern or discomfort about the mistreatment of animals. Viewed in this way, farm animal production can impose negative externalities on society which points to a role for government, but only if the costs of government intervention are outweighed by the benefits to the community.

Evidence shows that consumers assign a positive value to increased animal welfare, although how much they are willing to pay for products that have higher animal welfare standards varies. For example:

- in a meta-analysis of the literature, consumers across several countries were found to be consistently willing to pay price premiums for better housing conditions for caged hens (Lagerkvist and Hess 2011)
- consumers in Western Australia were found to be willing to pay a premium for ‘welfare friendly’ broiler products (Patterson, Mugeru and Burton 2015). Consumers in this study were most concerned about stocking density, hot metal blade beak trimming and poor litter quality.

By contrast, Glass et al. (2005) found that in Northern Ireland, a significant proportion of the public at that time were unwilling to pay for improvements in the welfare of pigs.

The evidence also shows that:

- demographics (age, income and gender) matter for willingness to pay for improved animal welfare (Lagerkvist and Hess 2011; Naald and Cameron 2011; Taylor and Signal 2009)
- respondents' self-rated knowledge of modern animal-based food production is positively related to willingness to pay (Taylor and Signal 2009). Coleman (2009) also suggests that surveyed attitudes on animal welfare would become progressively better predictors of consumer behaviour the more attitudes are based on direct experience (in that case, experience and knowledge of the pork industry and its husbandry practices).

But people's views are not always consistent with their willingness to pay for higher welfare products (box 5.3). Nonetheless, most members of the community expect that farm animals will be treated humanely and in a manner that achieves a minimum level of welfare. This minimum level of welfare can be thought of as a public good as all (or many) members of society derive a benefit from it.¹¹ The government has a role in ensuring this minimum level of welfare is achieved, where it would not otherwise be achieved as a result of the commercial incentives and actions of producers. This suggests that the role of government should be confined to addressing instances where farm animal welfare and profitability are not complementary. At the opposite end of the scale is a level of welfare that a minority of society would consider desirable, but which can be considered a private good and therefore there is a very limited role for government (McInerney 2004).

The challenge for policy makers is to determine the level of farm animal welfare that provides the highest net benefits to the community as a whole. That is, the level that balances the value of farm animal welfare against the cost of achieving a certain level of welfare. This balance is not easily struck simply because some people value animal welfare highly while others derive relatively little benefit from improved welfare.

Ethical considerations are important in determining the acceptability of welfare standards, but it is critical that views about animal welfare are based on credible science. People may perceive a practice to be cruel because they do not understand the actual welfare outcomes for an animal. For instance, people may believe 'free range' eggs to always be superior to cage egg production, but neglect the risks posed by predation, feather pecking and cannibalism in some free range systems (UK DEFRA 2005). And most people accept that there can be tradeoffs between standards and the costs and practicality of achieving them. For that reason, it is important that factual (scientific and economic) considerations are

¹¹ For example, the benefit someone receives from knowing that a hen has improved welfare from that person's consumption of cage-free eggs does not prevent another person from also benefiting from the increased welfare the hen receives (that is, animal welfare is non-rival). Also, other people cannot be excluded from benefiting from the animal welfare embodied in the consumption of cage-free eggs (that is, animal welfare is non-excludable). These public good features of animal welfare mean that consumers may not purchase products that entail higher levels of animal welfare, even though they place a positive value on this (Lusk and Norwood 2011).

separated from judgements about what is appropriate (ethics) and that an effective governance framework is in place for this to occur.

Box 5.3 Willingness to pay for higher animal welfare products

Taylor and Signal (2009) refer to a number of Australian and international studies that found that consumers' attitudes to animal welfare are not always matched by their purchasing behaviours, or the experiences of farmers using alternative (higher welfare) production systems. Several studies have put forward explanations for this disparity.

- Harvey and Hubbard (2013) suggest that people may be more willing to pay a premium for higher welfare products if they could be sure that their contributions would make a difference to animal welfare or if they could be sure other people were willing to support animal welfare. These consequences are aspects of the 'free rider' problem, as well as information asymmetries between producers and consumers.
- Blokhuis et. al (2003) considered the limited availability and insufficiency of information about 'animal welfare friendly' products to be a greater barrier than the price of those products. Similarly, interpretations of welfare scores and the level of trust in animal welfare certification processes can affect the extent of changes to consumer behaviour (Kehlbacher, Bennett and Balcombe 2012; Nocella, Hubbard and Scarpa 2010). High transaction costs associated with uncovering information to inform decisions may pose a barrier to changes in purchasing behaviour.

Other reasons put forward by Vegan Australia include 'tradition, convenience, widespread promotion by the animal industries, lack of information about the treatment of farmed animals and lack of knowledge about non-animal alternatives' (sub. DR115, p. 10). Consumer choice can also be affected by product attributes other than animal welfare, such as taste, healthiness and food safety (Naald and Cameron 2011).

5.3 Australia's animal welfare system

All levels of government in Australia are responsible for animal welfare, but primary responsibility rests with state governments. The Australian Government is responsible for animal welfare issues relating to international trade (including live animal exports) and international agreements (discussed in section 5.6). Local governments are responsible for some areas of animal control (such as cattle at large). Some local councils also make local laws for livestock welfare at saleyards, particularly where the council is the freehold owner or manager of the relevant public land (Harding and Rivers 2015).

Codes of practice govern Australia's farm animal welfare system

Since the 1980s, the welfare of farm animals in Australia has been governed by a series of Model Codes of Practice. The codes set standards for different categories of farm animals (including cattle, poultry, pigs, and sheep), land transport, processing, and saleyard codes. The codes were developed through a cooperative process involving state and territory governments

in an attempt to achieve national consistency. They were endorsed through the (then) COAG Primary Industries Ministerial Council¹² and were adopted to varying degrees by state and territory governments — largely as voluntary standards, although some have adopted the codes as mandatory or developed their own enforceable codes based on the model codes. For example, in South Australia most of the model codes are mandatory. Victoria’s welfare standards and guidelines for pigs (which are based on the model code) are mandatory, and in New South Wales, its animal welfare code of practice for commercial pig production is enforceable under regulation, which includes welfare requirements for poultry.

In 2005, the Australian, state and territory governments agreed to convert the model codes of practice into Australian Animal Welfare Standards and Guidelines for the welfare of livestock. This process was meant to convert the standards into mandatory requirements in state and territory law, and for the guidelines to be used as recommendations for good practice. The development of national standards and guidelines was a key feature of the AAWS (box 5.4).

Box 5.4 The Australian Animal Welfare Strategy

The Australian Animal Welfare Strategy (AAWS) was endorsed in 2004 by the then Primary Industries Ministerial Council (PIMC). The aim of the AAWS is to assist in the creation of a more consistent and effective animal welfare system. Six working groups were established, with representation from government, industry and sector specialist organisations. The working groups covered: animals in research and training; native and introduced wildlife; animals used for work, recreation, entertainment or display; aquatic animals; livestock and production; and pets and companion animals.

A key component of the AAWS is to create nationally consistent farm animal welfare policies by replacing 22 voluntary national Model Codes of Practice for the Welfare of Animals — that states and territories use to inform their animal welfare legislation and codes of practice — with nationally agreed Australian Animal Welfare Standards and Guidelines. The standards are mandatory, whereas the guidelines are voluntary. The intention is that, once endorsed by Agriculture Ministers, the standards and guidelines be implemented into legislation in each state and territory (Australian Animal Welfare Standards and Guidelines 2016).

The AAWS was coordinated by the (then) Department of Agriculture, Forestry and Fisheries on behalf of PIMC. PIMC was assisted by an Animal Welfare Committee (AWC) (which coordinated government partners) and the Australian Animal Welfare Advisory Committee (which made recommendations on expenditure of AAWS funds and assisted the AWC in setting the direction of the strategy) (DoA 2015c; Thornber, Kelly and Crook 2012).

Model codes of practice for farm animals are different to the legislative arrangements that are in place for the welfare of companion animals.¹³ Commercially farmed animals are

¹² The Primary Industries Ministerial Council became the Standing Council on Primary Industries, which was replaced with the Agriculture Ministers’ Forum (AGMIN) that met for the first time in May 2014 (DoA 2014b; Joyce 2014b).

¹³ For example, the model code of practice for domestic poultry (section 13.2) and the national standards and guidelines for sheep (section 7) do not require the use of anaesthesia when de-beaking layer hens or mulesing of sheep under 6–12 months old, whereas state animal welfare legislation prohibits the infliction

exempted from the overarching anti-cruelty and duty of care standards included in animal welfare legislation. Most states' primary legislation allows for the adoption of codes of practice by regulation, with compliance with the code being a defence to prosecution for cruelty or breach of duty of care under the primary legislation.¹⁴ A number of participants questioned the basis for applying different welfare standards depending on the use of the animal (Animals Australia, sub. 53; Animals Tasmania, sub. DR146; Vegan Australia, sub. DR115).

The agency responsible for enforcing animal welfare arrangements for commercial farm animals is usually the government department responsible for administering animal welfare legislation for farmed animals, typically primary industries or agriculture departments. Arrangements are generally in place between the relevant department and the RSPCA that outline respective monitoring and enforcement roles, with the RSPCA typically (but not always) dealing with companion animals, and the department dealing with farm animals.

5.4 How are farm animal welfare standards set?

The objective of the farm animal welfare standards and guidelines

In 2005, the usefulness and relevance of the model codes of practice (which the national standards and guidelines are designed to replace) were questioned. The former Primary Industries Standing Committee asked the (then) Department of Agriculture to consider arrangements for reviewing and developing the codes as a basis for Australia's future livestock welfare regulation, and the arrangements were reviewed.

The 2005 review found that the codes did 'little to provide consistency', provided 'poor support to regulators', resulted in 'considerable additional work producing codes suitable to some States and generally satisfy few expectations' (Geoff Neumann and Associates 2005, p. 10).

The review also found that the codes:

- had not routinely considered contemporary animal welfare science as a basis for a standard
- had not routinely involved preparation of an economic impact assessment

of pain on animals without reasonable steps taken to alleviate pain. For example, see the *Prevention of Cruelty to Animals Act 1979* (NSW) s. 5(3)(b).

¹⁴ For example, in Queensland, the *Animal Care and Protection Act 2001* (Qld) (s. 40) provides that it is a defence to a charge of cruelty or breach of duty of care if there has been compliance with a relevant code of practice. This means that if a farmer was charged with a cruelty or breach of duty of care offence, and wished to rely on the code as a defence, he or she would need to demonstrate compliance with the code. A similar approach is followed in Victoria, South Australia, the Northern Territory, the Australian Capital Territory and Western Australia (McEwen 2011; WA DAF 2015; White 2007).

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- did not provide the degree of national consistency in animal welfare policy and practice appropriate to Australia's position as a significant producer and exporter of livestock
 - had a questionable impact on the welfare of animals.

The subsequent Business Plan for the development of the standards and guidelines outlines a vision and an objective for the standards and guidelines.

Vision

The vision is to establish national livestock welfare standards that reflect contemporary scientific knowledge, competent animal husbandry and mainstream community expectations, and that these are maintained and enforced in a consistent, cost-effective manner.

Objective

As a cornerstone of the Australian Animal Welfare Strategy, the national livestock welfare standards, with complementary guidelines, provide welfare outcomes that meet community and international expectations and reflect Australia's position as a leader in modern, sustainable and scientifically-based welfare practice. (AAWS 2009, p. 2)

A slightly different formulation of this objective is referred to in documents supporting the development of specific standards and guidelines. For example, the regulation impact statement (RIS) for the standards and guidelines for cattle states that the policy objective is 'to minimise risks to cattle welfare and unnecessary regulatory burden in a way that is practical for implementation and industry compliance' (Tim Harding and Associates and Rivers Economic Consulting 2014a, p. iv). It also states that in terms of achieving this objective, the main criterion for evaluation is net benefit for the community.

The RIS states that the main problem underlying the development of the national standards is welfare risks for cattle due to deficiencies in the model code of practice and, to a lesser extent, uncertainty for industry due to lack of clear and verifiable standards and excess regulatory burden arising from lack of national consistency. Excess regulatory burden was not identified or quantified in the RIS, although some regulatory differences between jurisdictions were identified, for example, the requirements to provide pain relief for castration and other surgical procedures.

Different views on the objective of national standards will slow down their progress. This was identified as an issue in a 2013 review of the process:

This objective includes a requirement for the Standards and Guidelines to meet community expectations. There is, however, currently a relatively low understanding, or agreement, on what these expectations are. This is a gap in the current analysis and development of the Standards, which has contributed greatly to the problems of conflicts within the process. Without a strong statement of objective, each party involved in the process has their own benchmark of what the Standards should be seeking to achieve ... (PwC 2013, p. ii)

The different views are reflected in polarised positions and concerns from animal welfare and industry groups. Animal welfare groups expressed concern that the standards have not

gone far enough to improve welfare outcomes and are not meeting community expectations. Industry groups raised concerns about risks of excessive regulation (box 5.5).

Box 5.5 Participants' views on farm animal welfare standards

RSPCA Australia, commenting on whether existing animal welfare regulations meet community expectations said:

State and territory regulations authorise systems of production and husbandry practices that fall well below community expectations ... the primary concerns of the community relate to intensive confinement systems such as the use of battery cages for laying hens and individual stalls for sows, routine surgical procedures without pain relief, and food and water deprivation during transportation and at saleyards. (sub. 31, p. 1)

RSPCA Australia (sub. 31) also claimed that the national standards and guidelines have not 'raised the bar' on animal welfare from those already in the model codes of practice. Similarly, Animals Australia (sub. 53) did not consider that animal welfare regulations were meeting community expectations about the humane treatment of farm animals. And Vegan Australia (sub. 25) suggested that if community expectations were met, many existing practices (such as procedures without anaesthetic) would not occur.

The Law Society of South Australia (sub. 44) pointed to a similar list of community concerns as raised by RSPCA Australia (sub. 31) and suggested that existing animal welfare regulations required improvement to meet community expectations. The NSW Young Lawyers Animal Law Committee (sub. DR284) said that Australia's animal welfare standards are lower than many other countries, pointing to World Animal Protection's Animal Protection Index, which grades Australia as an overall 'C' in both animal protection standards, and for protecting animals used in farming. In contrast, New Zealand received an 'A' on both measures.

A number of agriculture industry groups and state government departments acknowledged the growing community concerns about the welfare of farm animals (Australian Pork, sub. 37; South Australian Government, sub. 57). The Western Australian Government, however, noted that 'any cost impositions from unnecessary regulation, based on emotion as opposed to that necessary to ensure the humane treatment of animals, will have a disproportionately larger impact on the export focused West Australian industry' (sub. 54, p. 31).

The Consolidated Pastoral Company (sub. 71) also said that rules governing animal welfare practices have been at risk of being politicised, resulting in excessive coverage. And the NSW Farmers' Association (sub. 72) argued that no case has been made for additional regulation above and beyond state Prevention of Cruelty to Animals Acts. It suggested that the appropriate course of action is to allow changes in production practices to be guided by economic drivers in the consumer sphere. By contrast, NSW Young Lawyers Animal Law Committee said that 'market forces are an imperfect means of achieving acceptable standards in production methods, particularly in circumstances where there is no requirement for producers to disclose how products were produced ...' (sub. DR284, p. 6).

Progress developing national standards and guidelines has been slow

Three sets of national standards and guidelines have been endorsed — for sheep and cattle (both in 2016) and livestock land transport (in 2013). Livestock saleyards and depots standards and guidelines are developed and pending endorsement from Agriculture

Ministers, and the poultry code and the livestock at slaughtering establishments code are currently in the process of conversion. Another 10 model codes are yet to be converted.¹⁵

The standards for land transport of livestock have been implemented in state and territory law in most states and territories. The sheep and cattle standards and guidelines are yet to be implemented and the NSW Government has said it will not make the standards mandatory, but will reference them as voluntary guidelines under its prevention of cruelty to animals legislation (NSW Government 2015a).

The Tasmanian Department of Primary Industries, Parks, Water and the Environment (sub. 62) also said that its state's Animal Welfare Advisory Committee (which makes recommendations to the responsible Minister on the adoption of standards) has previously refused to endorse a national standard where it considers the standard to be too low. An example is where the Tasmanian Government gave effect to most of the standards contained within the Model Code of Practice for the Welfare of Animals — Pigs (third edition), but did not apply standard 4.1.5 of the code and prohibited the confinement of sows in stalls except in some circumstances. The RIS for the prohibition determined that there would be some initial adjustment costs (including capital costs and retraining costs) for the pork industry, but that over a ten year period there would be a small annual net benefit to the industry (Tasmanian Government 2013). The higher standards are claimed to address community concerns and to provide a point of differentiation for Tasmanian pork products (TDPIPWE, sub. 62).

Despite difficulties developing the national standards and guidelines, participants to this inquiry and in other forums, including the Agriculture Competitiveness White Paper process, expressed support (to varying degrees) for a national approach to regulating farm animal welfare (Australian Chicken Growers Council, sub. 51; Australian Chicken Meat Federation, sub. 40; Law Society of South Australia, sub. 44; VFF 2014).

The costs and benefits of a national approach to livestock welfare

A national approach could help increase confidence in the community that livestock production in Australia is based on consistent welfare standards. As the Australian Farm Institute (AFI) said:

Having inconsistent approaches and enforcement practices at state level makes it very difficult to adequately and effectively inform and educate consumers, and also has a direct impact on the competitiveness of national farm businesses. (Potard 2015, p. 76)

¹⁵ The Model Code of Practice for the Welfare of Animals — Pigs was being updated at the time the decision was made to convert the codes into standards and guidelines. This document retained the name and format of a code but contained standards that states and territories agreed to regulate (Thornber, Kelly and Crook 2012).

Difference in regulation can mean that consumers cannot compare the welfare attributes of like products. As RSPCA Australia said:

A prominent example of this may be found in the case of free-range eggs. There is no consistent legal standard for what free-range means in the context of egg production and consumer confidence in the market has suffered as a result. (sub. 31, p. 4)

(Consumer detriment from confusing or lack of understanding of welfare claims on food labels is discussed in chapter 10.)

A lack of clear and verifiable standards also creates uncertainty for producers. A recent example of this is inconsistent interpretation of stocking densities for free range layer hens in the poultry code. Some producers have interpreted the maximum stocking density to be 1500 hens per hectare while others have interpreted the section on range rotation to mean there is no maximum stocking density (chapter 10).

Some participants suggested that differences across jurisdictions have reduced competition. Different approaches to free range hen stocking densities was raised as an example in this context (Australian Veterinary Association, sub. 26; Law Society of South Australia, sub. 44). The Western Australian Government (sub. 54) and the Law Society of South Australia (sub. 44) considered that greater consistency would protect the image of the Australian livestock industry as well as the welfare of livestock.

Regulatory differences can impose costs on businesses that operate in more than one state, particularly in the eastern states where not only are livestock transported across state boundaries, but also some farming businesses cross state boundaries. The Australian Chicken Meat Federation (sub. 40) said that companies operating in more than one state need to be checking their internal standards for compliance with regulations on a state-by-state basis, rather than against one common set of standards and compliance procedures.

A nationally consistent approach can reduce costs from regulatory differences that result in additional transaction costs with no offsetting benefits. But there are challenges developing a national approach that takes into account the interests and circumstances of all jurisdictions. There may be tradeoffs that favour states tailoring regulations to their own circumstances and community preferences. As the Tasmanian Department of Primary Industries, Parks, Water and the Environment said:

Tasmania adopts nationally agreed standards where possible but reserves the right to apply higher standards. National standards need to cover the whole of Australia and one of the challenges in developing them is that practices that are reasonable and acceptable in one part of the country may not be in another part. For example, due to the practical difficulty of inspecting animals in the extensive grazing areas of northern Australia, it is reasonable to apply a lower standard than in Tasmania where graziers face fewer challenges in inspecting stock. (sub. 62, p. 6)

National standard setting processes that align regulatory arrangements to the ‘lowest (or highest) common denominator’ are unlikely to be in the best interests of the community.

While more (or less) stringent standards in some states may affect the competitiveness of some providers (by potentially raising their production costs relative to their interstate competitors), these costs must be balanced against the benefits to the community from improved animal welfare outcomes, particularly where the higher standards have been shown to better reflect community values.

On balance, the Commission's view is that a national approach, with flexibility to address local circumstances, is desirable. There would also be merit in prioritising the development of standards to areas (such as categories of farm animals, and production processes or practices) where there is the most community concern about livestock welfare, and where risk of adverse livestock welfare outcomes are greatest.

The Commission is concerned that progress in furthering standards and guidelines has been too slow. Slow progress could reflect that some parties want to preserve the status quo and see merit in delay, rather than directly addressing and arguing the various animal welfare standards. It could also be a result of conflicts within the process, as evidenced by statements made regarding the development of the sheep and cattle standards, which took eight years to complete. Commenting on the time taken to develop the standards, WAFarmers claimed that:

It is pertinent to note that this process could have been achieved some time ago if after eight years of consultation and after final standards and guidelines were released for further public consultation, the RSPCA hadn't immediately come out in the press claiming the standards were insufficient even though the RSPCA representatives had sat at the negotiation table for eight years and had agreed to the standards and guidelines being released for further public consultation. (sub. DR226, p. 9)

In contrast, RSPCA WA claims that RSPCA representatives consistently expressed dissatisfaction with certain aspects of the draft standards on multiple occasions during the process and that:

The delays were caused by the cattle and sheep industries deciding to withhold funding of the process until certain conditions were addressed to their satisfaction. This was communicated to the stakeholder reference group by the CEO of Animal Health Australia in October 2010, well before RSPCA Australia made public comment about the deficiencies in the draft standards. (sub. DR306, p. 1)

It is in the interest of the community for the development of the standards and guidelines to be expedited.

Concern that efforts to develop a national approach have stalled

As part of its 2014-15 Budget initiatives, the Australian Government ceased funding the AAWS and disbanded the Australian Animal Welfare Advisory Committee (AAWAC) (Treasury 2014a). Australian Animal Welfare Standards and Guidelines are now being developed under the auspices of the Agriculture Ministers' Forum (AGMIN), the

Agriculture Senior Officials Committee, and its advisory body on animal welfare issues, the Animal Welfare Task Group (AWTG).

A number of participants expressed concern about the AAWS process being abandoned. The Australian Veterinary Association said that:

Since the AAWS was discontinued, the lack of an inclusive framework risks the development of greater polarisation within the community, and loss of community confidence. In recent years, we have seen the major supermarkets dictate welfare standards to industry in response to community pressure. These standards are developed in an ad-hoc manner, [and] are not generally science-based. This is a risk to our livestock industries whose best defence is to demonstrate compliance with recognised, science based, balanced and enforceable animal welfare standards. (sub. 26, p. 3)

And Australian Pork Limited said that:

With the Federal Government withdrawing its national leadership position on animal welfare standards and guidelines following the 2013 Federal Election, there is significant mistrust and dissatisfaction with the current process ... While this process mimics the prior process, it is apparent there is significantly less transparency about the process including who is involved and how work programs are determined and directed. (sub. DR282, p. 3)

Adding to this, it said that there is ongoing mistrust of minimum standards and guidelines for animal welfare, particularly with industry involved and partly funding the process.

There were calls for the Australian Government to reengage and take on a coordinating role in harmonising animal welfare standards (AAAL 2014; Australian Chicken Growers Council, sub. DR149; ALFA 2014; ASWGA 2015; AVA 2014; NFF 2014; VFF 2014; Voiceless 2014; Western Australian Government, sub. DR285). For example, the Victorian Farmers' Federation said it:

... urges the Federal Government [to] put the issue of national animal welfare standards and guidelines back on the AGMIN agenda. But we must have a consistent national approach to the issue. (2014a, p. 23)

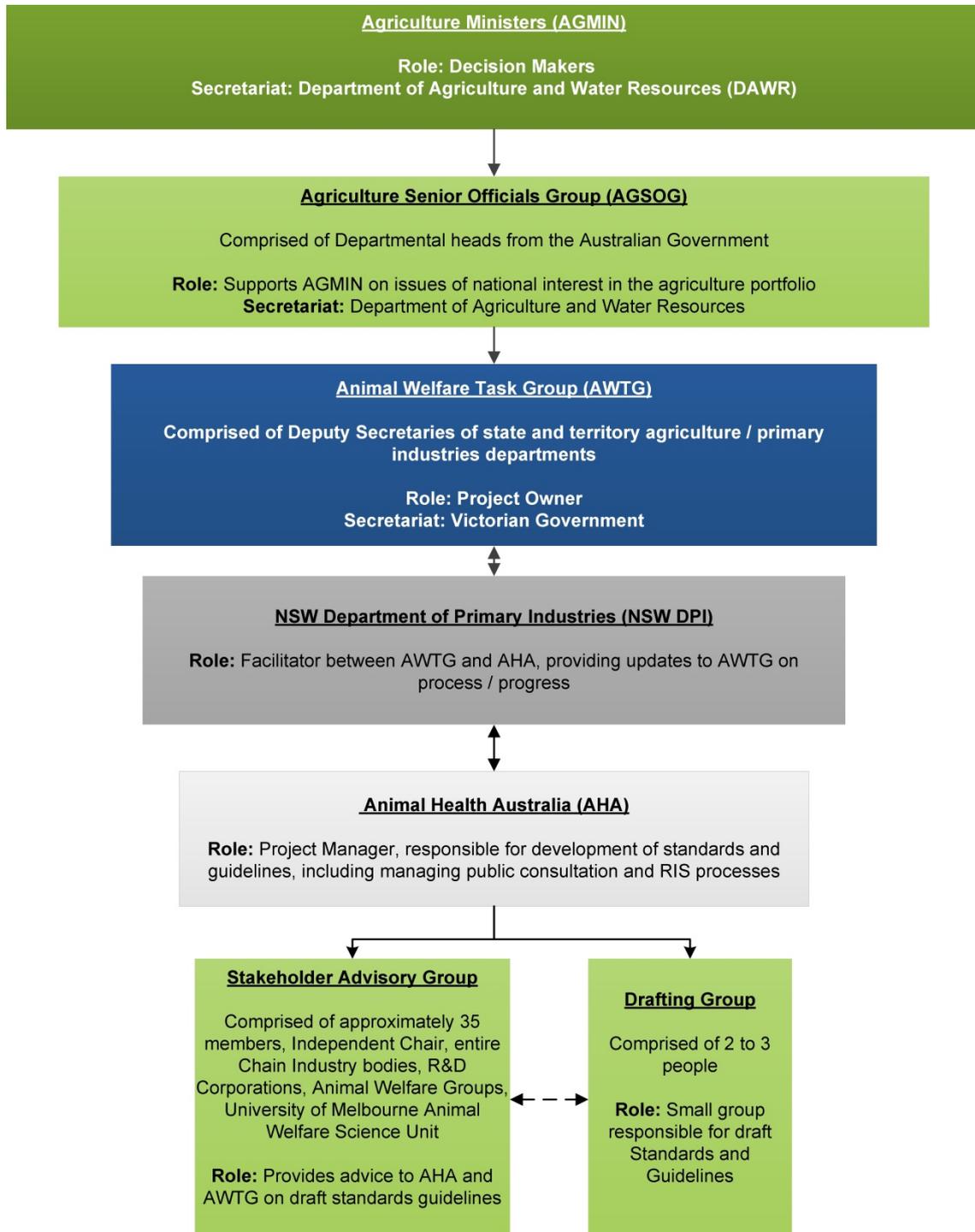
And the Community and Public Sector Union (sub. DR204) said that its members have proposed the re-engagement of the Department of Agriculture and Water Resources (DAWR) in the AAWS.

Robust institutional arrangements?

The process for developing the national standards and guidelines is managed by Animal Health Australia (AHA) (a not-for-profit company that facilitates partnerships between governments and major livestock industries to protect animal health and the sustainability of Australia's livestock industry). AHA provides secretariat support for a stakeholder advisory group (comprising an independent chair, Australian and state government representatives, various industry members, and animal welfare representatives) and a

smaller drafting group (which has the task of developing the standards and guidelines for review by the stakeholder advisory group) (figure 5.1).

Figure 5.1 **Institutional arrangements for developing poultry standards**



Funding for the development of standards and guidelines is split equally (on a one third each basis) between the Australian Government, state and territory governments, and relevant industry groups.

There have been some reforms to the standards development process

The current standards setting process is different to the previous process (for transport, sheep and cattle), in part, because of the disbanding of the AAWAC and the Animal Welfare Committee. The AWTG is meant to play the role of the Animal Welfare Committee, and state and territory governments facilitate the standard setting process (previously undertaken by the Australian Government) between AHA and the AWTG. For poultry and livestock at slaughtering establishments, the NSW Department of Primary Industries has taken on this role.

Other differences between the current and previous framework reflect recommendations made in the 2013 review of the standards and guidelines development process (box 5.6). The review identified issues with the lack of agreement on the objective of the national standards and guidelines (discussed above), inadequate use of RIS processes (including lack of scientific literature and research on community values to support claims), and the roles (particularly conflict resolution) of the groups involved in the process.

The Commission was advised that as a result of the review's findings, the drafting group now comprises a small number of people (two to three) with expertise in drafting standards. Previously, the drafting group consisted of about nine people and included representatives from industry, science and government. The stakeholder advisory group (previously referred to as the standards reference group) has also changed. It includes only one active member from each relevant representative body (rather than multiple representatives from the same body), although the total size of the group is still large.

The stakeholder advisory group is now chaired by an external consultant, and matters of contention will be referred to the AWTG to avoid long delays. Previously, AHA attempted to resolve contentious matters. The 2013 review recommended that the reference group be confirmed as a body for representative advice, not decision making, and that it should be clear to all parties that the ultimate decision maker for the standards is the Standing Council on Primary Industries (now AGMIN).

These reforms to the process are currently being tested in the poultry standards and guidelines process. However, a different process is being used to convert the livestock at slaughtering establishments code into national standards and guidelines. In this case, the NSW Department of Primary Industries is the project manager (AHA is not involved in the process). The Commission was advised that the reason for the different approach for slaughter establishments is because the standards were largely written by a task group appointed by the then Animal Welfare Committee in 2012 based on existing industry guidelines (developed by the Australian Meat Industry Council). A national RIS process is not being undertaken as the standards are not expected to impose significant additional

regulatory burden on abattoirs (NSW Department of Primary Industries, pers. comm., 24 October 2016). A similar approach was used to convert the *animals at saleyards* code (the resulting standards are pending endorsement from Agriculture Ministers) although in this case a national RIS was undertaken.

Box 5.6 Review identifies opportunities to improve the process

A 2013 review (commissioned by the then Primary Industries Standing Committee's Animal Welfare Committee) of the process for developing animal welfare standards and guidelines identified a number of opportunities to improve the process.

- *The objective of the animal welfare standards and guidelines.* The review noted that there is little understanding of, or agreement on, what community expectations are, which has contributed to conflicts in the process, particularly between industry and animal welfare groups. The review recommended the use of focused research and surveys to improve understanding of community expectations and values, with the outcomes of the research balanced with industry input and scientific knowledge on animal welfare matters.
- *The structure of the standards and guidelines.* Some stakeholders to the review suggested that including both standards and guidelines in the same document created confusion about the role of the guidelines and their enforceability. On balance, the review recommended that guidelines be retained in the document and that industry take a higher level of responsibility for promoting the guidelines as representative of good industry practice.
- *Process structure and roles.* The review found that the structure of the process involved the appropriate elements but greater clarity and demarcation of the role of each party was needed. The review recommended that the roles of project manager, standards development and drafting, representative advice and comment, and decision making, be clearly articulated. The reference group should be confirmed as a body for representative advice, not decision making. Standards development and drafting should be conducted by an individual or group (not a representative body) with expertise in standards development and be provided with legal support for drafting so that the standards are 'regulation ready'.
- *Conflict resolution.* Conflict between parties was identified as a major impediment to agreeing on standards. Animal Health Australia (as project manager) has endeavoured to mediate between parties but there was a strong view that this was not their role. The review recommended that meetings be facilitated by an independent person, and that the regulation impact statement process be more clearly used to consider a range of options and reflect on evidence.
- *Evidence-based decision making.* The review noted that there were significant gaps in knowledge of current practices and costs of alternatives, which makes it difficult to understand the extent of the 'problem'. It recommended that small research tasks be conducted (with emphasis on engagement of research independent of other interested parties) to support the RIS, and that future RIS development be properly resourced.

Source: PricewaterhouseCoopers (2013).

Concerns about the independence and transparency of the process persist

Despite changes to the process, concerns continue to be raised about its independence and transparency, including with respect to the development of the poultry standards. Animals Australia (sub. DR268) said that the process for converting the poultry code into standards and guidelines is mimicking the failure of the sheep and cattle standards (as reflected by the ‘refusal of cattle, dairy and sheep industries to accept a requirement to use available and practical pain relief for painful and invasive surgical practices (mulesing, dehorning, disbudding of calves, some cattle spaying techniques’ (p. 5)). Voiceless (sub. DR166) said that its requests to be involved in the development of the standards and guidelines was rejected by the AWTG without reason, and that, of the 35 stakeholders involved in the initial draft consultation process, only two represented animal welfare or protection groups.

Background information for the poultry standards process states that the RIS will incorporate public consultation feedback and changes made by the majority of the stakeholder advisory group (AAWSG 2016). This means that any majority decision will be strongly influenced by the composition of the group, the majority of which represent the poultry industry.

Another example of where the process appears to have failed to consider the interests of the broader community relates to unstunned slaughter. In June 2016, members of the stakeholder advisory group were told that non-stun (religious) slaughter would not be considered in the review of the code for livestock at slaughtering establishments (Animals Australia, sub. DR68). According to Animals Australia (a member of the stakeholder advisory group), the Animal Welfare Task Group deemed that the issue of religious slaughter would not be part of the standards and guidelines development process and that the current exemption (that allows non-stun (religious) slaughter at approved abattoirs) would remain — it is effectively ‘off the table’ for discussion. At the time of writing, there was no publicly available information on the conversion process or what issues were being considered for standards of slaughter at abattoirs. As noted above, the standards for livestock at slaughtering establishments are being managed by NSW DPI and a national RIS is not being undertaken.

The Commission sees no legitimate reason for unstunned (religious) slaughter to be excluded from the standards and guidelines development process. Also, the rationale for the exemption is questionable. The animal welfare risks associated with unstunned slaughter (as expressed by Christine Bennett, sub. DR140 and in Australian Government commissioned scientific reviews (Adams and Sheridan 2008)) demonstrate that it is a matter that should be on the table for public discussion.

RSPCA Australia (sub. 31) was also concerned that failure to properly take into account community expectations is continuing under the current process, and said that it was not aware of any plans for such research to be undertaken in future standards development processes.

Similarly, the Australian Veterinary Association (sub. DR167) pointed to concerns that community groups are underrepresented in standard setting and suggested that additional expertise from veterinarians and animal welfare scientists may lead to the development of more defensible animal welfare standards.

The Commission understands that the main way that community values will be taken into account in the development of standards is through public consultation for the RIS (where a RIS occurs). The Commission is not aware of any plans to undertake targeted surveys or additional research to assess the benefits of animal welfare to the community.

Concerns about impartiality, transparency and accountability in the standards development process are also raised in the animal law literature. Ellis (2010) raised concerns about significant input from bodies whose interests she described as ‘essentially antagonistic’ to those of animals. Mundt (2015) (a legal representative for Animals Australia) suggested that the involvement of industry in the development of standards (through their role as members of AHA) allows them to exert disproportionate influence.

Disproportionate industry influence in the standard setting process was also raised as a concern by Animals Australia, which argued that this was an area in urgent need for reform:

... particularly to remove the bias and inherent conflicts of interest that pervade animal welfare standard-setting and enforcement regimes which are dominated by industry capture and government agriculture department oversight. (sub. 53, p. 1)

It pointed to the newly endorsed sheep standards and guidelines as evidence of this — specifically, the failure of the process to endorse pain relief for lambs undergoing mulesing¹⁶ as an enforceable standard (box 5.7). The RIS assessment of pain relief for mulesing was that the net incremental welfare benefits did not justify the additional compliance costs for farmers. This was based on the views of the standards reference group (now the stakeholder advisory group). A similar approach was used to balance compliance costs against welfare benefits for other welfare measures in the sheep standards, as well as in the cattle standards.

Compliance costs to industry are a critical consideration in any benefit–cost assessment. However, these costs are only one element of a rigorous benefit–cost assessment. Also relevant is the distribution of compliance costs, including the degree to which they can be passed on through the supply chain, including to consumers (to determine who bears the burden of the costs). For example, the RIS for Tasmania’s restrictions on the use of sow stalls stated that the sensitivity of demand to changes in the price of pork in Australia was high (according to research from the Rural Industries Research and Development

¹⁶ Mulesing is the removal of wrinkled skin from the breech and/or tail of a sheep using mulesing shears. Mulesing is used to reduce urine and faecal soiling or dag formation in the breech and tail wool to minimise susceptibility to flystrike (Tim Harding and Associates and Rivers Economic Consulting 2014b).

Corporation), which meant that pork producers would have limited capacity to pass costs on to consumers without losing market share (Tasmanian Government 2013). Costs to industry (reflected in lower demand from higher prices) need to be weighed against the intangible benefits to the community from improved animal welfare outcomes.

Box 5.7 Case study: the costs and benefits of changes to sheep mulesing standards

The Regulation Impact Statement (RIS) for the Australian animal welfare standards and guidelines for sheep states that the most controversial issues raised when consulting on the RIS were:

- mulesing and other surgical procedures (such as castration and tail docking) without pain relief
- availability of water and provision of shelter
- methods of slaughtering sheep.

In 2004, the wool industry agreed that mulesing would be phased out by the end of 2010, and although this is still the longer term goal, there is no longer a fixed date. The Australian Wool Innovation and the Australian Government have invested in researching alternative methods of breech flystrike prevention, which include breeding of resistant sheep, anti-fly strike clips, intradermal injections and blow fly control.

The RIS states that ‘mulesing is a very painful procedure and involves a greater degree of tissue trauma than other surgical husbandry procedures such as castration or tail-docking’ (p. 40). It refers to a 2007 study that found that lambs mulesed with no drug application exhibited large increases in the stress-responsive hormone cortisol, reduced lying and increased standing with a hunched back compared with unmulesed lambs. It further stated that available scientific research suggests that it is possible to achieve pain relief (including by using a spray application of Tri-Solfen) in conjunction with mulesing.

Under the base case of the RIS, 4.86 million lambs per year were estimated to be mulesed without pain relief. The cost of using pain relief for these lambs was estimated to be \$33 million over ten years (or \$0.45/sheep). The benefits of increased animal welfare outcomes were attributed to the lambs but were unquantified. The RIS did not discuss the value to the community from the increased level of sheep welfare. The RIS concluded that the net incremental welfare benefits for 4.86 million lambs per annum did not justify the additional compliance costs for farmers. This assessment was based on the views of the standards reference group meeting from December 2015. The reference group comprises representatives of 11 national livestock industry organisations (including those representing the livestock transport industry, and production, saleyard, feedlot and processing sectors for sheep), two animal welfare organisations, representatives from the eight state and territory governments, the Australian Government, and the Australian Veterinarian Association.

The preferred sheep standards in the RIS were endorsed by the Agriculture Ministers’ Forum in January 2016. On 23 March 2016, the NSW Parliament passed a motion urging the state’s wool producers to provide pain relief when mulesing sheep and to breed sheep that are less susceptible to fly strike. The motion called for the 20 per cent of wool producers who do not use pain relief or breed more fly-strike resistant sheep to do so.

Sources: Animal Health Australia (2014b); Parliament of New South Wales (2016).

Commenting on the sheep and cattle standards, the Animal Law Institute said that they represent:

A retrograde step, as they make provisions such as being able to ‘reasonably’ strike, punch or kick an animal, or throw or drop sheep from 1.5 metres or less. These ‘welfare’ requirements may suit the agricultural industry, but we doubt these requirements represent practices acceptable to the public, let alone welfare scientists without vested interests in the agricultural industry. (sub. DR213, p. 3)

And RSPCA Australia, commenting on how the standards are implemented, said that:

Even when a set of standards have been finalised by stakeholder reference committees and endorsed for implementation by state and territory agriculture ministers, political lobbying by industry groups can nevertheless result in last minute changes ... This is a reflection of the fact that state agriculture departments and ministers are especially susceptible to influence from state farming organisations and this raises broader questions regarding the governance arrangements for the development of animal welfare policy and standards. (sub. 31, p. 5)

Assessing community attitudes and values for farm animal welfare

The extent of improvements in animal welfare from changes in standards and the benefits derived by the community are not easy to quantify. An element of judgment is required. Judgments should be informed by a transparent process that identifies community values and demonstrates how these values are balanced against costs to industry. This is a complex task which requires independent analysis and robust techniques for testing community values.

A number of participants suggested that further research was required to understand community and consumer perceptions. For example, the National Farmers’ Federation (sub. DR216) said that the Australian Government should undertake research into consumer perceptions and expectations of animal welfare to determine how animal welfare outcomes could be improved and communicated. AHA (sub. DR250) proposed that longitudinal research on community attitudes and values be undertaken to better understand trends and genuine concerns about the humane treatment of animals. It said that this research should be combined with community communication and education campaigns to improve understanding of animal welfare in general and farming practice.

There are a number of methods that can be used to assess community attitudes to animal welfare, including public consultation and surveys (box 5.8). In Europe, the Eurobarometer is used to gauge public opinion on a range of issues. A special 2016 Eurobarometer on attitudes to animal welfare found that of those surveyed (approximately 1000 people in each country), 94 per cent thought it was important to protect the welfare of farmed animals and 82 per cent believed that the welfare of farmed animals should be better protected (European Commission 2016).

One of the challenges of determining community values for the welfare of farm animals is that views on animal welfare can be polarised and community attitudes can change over

time, sometimes rapidly in response to revelations of incidents of mistreatment. As the AFI said:

The challenge associated with this policy area lies in the development of structures that have the capacity to deliver balanced outcomes over time, rather [than] responding to short-term or political developments in a piece-meal and haphazard manner. (Potard 2015, p. vi)

Box 5.8 What do we know about community attitudes to farm animal welfare?

A survey of Australians' relationships with animals found that '52 per cent of respondents thought that factory-farming methods of producing meat, eggs, and milk (which are becoming dominant trends) were cruel' (Franklin 2007, p. 19). The data comes from a survey of 2000 representative Australians.

A 2012 study commissioned by the Victorian Government found that 23 per cent of Victorians surveyed valued animal welfare highly, but had a relatively low level of trust that farmers would address these issues without coercion (Parbery and Wilkinson 2012). Another Australian survey found that:

- 61 per cent of surveyed respondents thought that animals deserve some protection from harm and exploitation but that it is appropriate to use them for the benefit of humans
- 30 per cent thought that animals deserve the same rights as people to be free from harm and exploitation
- 4 per cent thought that animals do not need much protection (EMC 2012).

The public consultation document supporting the welfare standards and guidelines for sheep stated that 51 per cent of surveyed respondents did not agree that the standards would help to protect the welfare of sheep, although the agreement ratings for individual standards were high. A similar result was found for the consultations for the cattle standards (Animal Health Australia 2014).

Research also shows that Australian consumers' preferences for some products, such as free-range eggs, are primarily driven by animal welfare concerns, but can also be influenced by other factors such as taste, health and price. Over the past decade, there has been an increase in the proportion of retail free-range eggs sold, from 15 per cent to 39 per cent (chapter 10).

Changes in standards in other developed nations and in Australia may also be indicative of changes in community expectations for animal welfare. For example, the ACT has passed legislation to prohibit sow stall, farrowing crate and battery cage production practices. And Tasmania has restricted use of sow stalls to 10 days within a reproductive cycle (TDPIPWE, sub. 62).

Perceptions of animal welfare can also be based on a lack of information about farming practices, or misunderstanding of practices. Many people believe that animals should be allowed to lead natural lives by displaying their normal behaviour in a reasonably natural environment. But as pointed out by research from the Animal Welfare Science Centre, natural environments often contain hardships, such as climatic extremes, food shortages and predators. Also, it is unclear what constitutes the natural environment for a domestic hen given its long history of selective breeding. Scientific knowledge of design features of

animal housing from the perspective of animal welfare is also often poor (Hemsworth, Coleman and Skuse 2014).

Some research shows that Australians have widely different views. An example is research on what stocking density provides an acceptable level of welfare for free-range layer hens. Research from CHOICE suggests that a very small proportion (two per cent) of free-range egg buyers consider 10 000 hens per hectare to be acceptable. In contrast, research commissioned by the NSW Farmers' Association suggests that 10 000 hens per hectare meets or exceeds consumers' expectations. The way in which research is undertaken, including the way questions are posed, can significantly influence survey results (chapter 10 discusses some of the issues associated with the above surveys).

A 2009 study on tools to assess community attitudes and consumer responses to animal welfare in the pork industry (funded by the Department of Agriculture and Australian Pork Limited) found that attitudes do not predict meat purchasing behaviour to any major extent. Rather, they predict other community behaviours (such as donating money to a welfare organisation, signing petitions, or speaking to friends or family about a welfare issue) that may affect government policy makers. The study noted that attitudes are more reliable predictors of behaviour if based on knowledge and experience of farming practices. It recommended that surveys include questions on these matters. It also recommended that, because generic attitudes provide an indicator of trends in community values (and because decision makers respond to these), general attitudes to welfare be monitored (including through a large-scale survey conducted every few years) (Coleman 2009).

It is imperative that the community has confidence that research used to inform policymaking is unbiased, credible and is conducted by qualified, independent researchers using robust research methods. It is also essential that a broad spectrum of consumers and members of the community are able to participate in the process.

Ultimately, judgment about whether the benefits (value) to the community of changes in animal welfare outweigh the costs is a matter for government. Some groups consider that government is not adequately fulfilling this role, mainly because advice to inform decision making is provided by representatives from departments of primary industries, whose principal objective is promoting the productivity of the agricultural sector.

Concerns about a conflict of interest in farm animal welfare regulation making

A number of participants expressed concern about a conflict of interest in the arrangements for animal welfare regulation in Australia (Humane Society International, sub. DR253; Law Society of South Australia, sub. DR181; PETA Australia, sub. DR109). The NSW Young Lawyers Animal Law Committee said:

At both the federal and state and territory level, the regulation and governance of animal protection has been delegated to government departments that possess a real or perceived conflict of interest as they are also responsible for ensuring the profitability of the agricultural

industry. This raises concerns that animal welfare laws are not being appropriately enforced. (sub. DR284, p. 7)

And Animals Australia said that:

... there is a serious misalignment between the regulations and the expectations of the community in this regard. The root of this ‘misalignment’ lies in the inherent and untenable conflict of interest that exists within both the Commonwealth and state/territory Departments responsible for agriculture — whereby the department charged with maximising the interests of producers is in most cases the same department charged with looking after the animal welfare portfolio. (sub. 53, p. 1)

The independence of the project manager (AHA) for the standards and guidelines development process was also questioned. The 2013 review considered the role of AHA to be a strength of the process. In submissions, some industry groups and state governments also supported AHA continuing to manage the standards development process (Australian Chicken Growers Council, sub. DR149; Tasmanian Government, sub. DR245; Victorian Farmers’ Federation, sub. DR189; WA Government, sub. DR285).

However, the 2013 review also noted concerns from animal welfare groups and some government representatives that AHA as an organisation is more closely aligned with industry positions, and therefore may not be sufficiently independent in the process.

Goodfellow, Tensen and Bradshaw (of RSPCA Australia) subsequently observed that the nature of the review’s conclusion is indicative of the ‘flawed approach taken to consulting with stakeholders during the standards development process itself’ (2014, p. 45). (The review consulted 31 representatives of 20 livestock industry groups and four representatives from animal welfare organisations.) They further stated that ‘in basing its conclusion on the views of the “majority of stakeholders”, the concerns of animal welfare stakeholders are simply overshadowed by those of the livestock industries’ (Goodfellow, Tensen and Bradshaw 2014, p. 45).

Concerns about conflicts of interest are also expressed in the animal law literature. McEwen (2011, p. 3) (from the Barristers Animal Welfare Panel), for example, contends that federal and state departments of agriculture (as part of their involvement in the standard and guideline setting process) are ‘standard bearers’ of producer interests and that their conflict of interest in regulating animal welfare is patent.

There is the *potential* for a conflict of interest to arise where policy and regulatory objectives conflict. Animal welfare is likely to be of secondary importance when the primary objective of the agency responsible for livestock welfare is to promote a productive and profitable agricultural sector.

Goodfellow (2016) looked at the perceived conflict of interest of state and federal departments of agriculture in administering animal welfare law and argued that measureable economic goals associated with productive and profitable primary industries are prioritised over the more elusive, less determinate public interest animal welfare test.

Overrepresentation of industry interests in the standards setting process, industry influence over development of animal welfare science, and inadequate compliance and enforcement were considered to be symptoms of this conflict.

In contrast, a 2015 review of the administration of the *Animal Welfare Act 2002* (WA) was strongly of the view that the Minister for Agriculture and Food, assisted by the Department of Agriculture and Food, should remain responsible for administering and enforcing the Act (Easton et al. 2015). To address any actual or perceived conflict of interest, the review recommended that the department (and the RSPCA, which also has enforcement functions) ensure that inspection functions be separated from operational areas within the organisations.

Representing the interests of the industry that a government department is tasked with addressing is not of itself a concern, it is consistent with its objective. However, issues can arise when that department is also responsible for implementing a regulation that has broader community interests that may conflict with those of the industry.

Risks from combining commercial and regulatory functions in the one entity have become apparent in the greyhound racing industry. Recent reviews into the greyhound racing industries in New South Wales, Victoria and Queensland found that the combination of commercial and regulatory functions in the one body has the potential to severely compromise the integrity of the sport. The NSW Special Commission of Inquiry, chaired by the Honourable Michael McHugh AC QC, found that in New South Wales, the commercial imperatives of the industry were given precedence by Greyhound Racing NSW and that this issue could not be sufficiently overcome by improved governance within an entity that exercises both functions. The inquiry report recommended the creation of a new statutory body, the NSW Greyhound Racing Integrity Commission, which would have the role (amongst other things) of maintaining, protecting and enhancing animal welfare standards in greyhound racing (McHugh AC QC 2016).

The NSW Government banned greyhound racing due to a number of concerns, including the animal welfare concerns identified in the report. However, it subsequently reversed the ban and announced that the industry would be given one more opportunity to conform to higher standards of animal welfare. Stricter new regulations have been announced. A panel will determine the new regulatory regime, including the establishment of an independent regulator with stronger powers to ensure transparency and accountability as well as substantially increased resources for animal welfare enforcement and prosecution. Subject to the panel's recommendations, legislation to reverse the ban and introduce the new regulatory regime is expected to be introduced in early 2017 (Baird 2016).

Concerns about the scientific evidence used to inform standards

Some participants claimed that there was biased selection of the science presented during the process of standard setting, both from animal welfare groups and industry groups (Animals Australia, sub. 53; Australian Pork Limited, sub. DR282).

Others questioned the validity of scientific studies funded by industry (Animal Law Institute, sub. DR213; Edgar’s Mission sub. DR145). Animals Australia (sub. 53) referred to a research paper from the University of Queensland which questioned the conclusions drawn from a scientific assessment of the welfare effects of time-off feed for bobby calves during transport (box 5.9). Other examples were provided by the Australian Veterinary Association.

[T]he current standard for tail docking in sheep permits short tail docking, whereas the science indicates that short-tail docking leads to negative outcomes such as vulval cancer, rectal prolapse, and increased fly strike risk. Similarly standards which require pain control during procedures such as castration, tail docking and mulesing are currently set at 6 months of age in sheep, however science shows these practices are very painful at the much younger ages when these procedures are typically performed. These are lost opportunities to improve animal welfare standards over and above current practice. (sub. DR167, p. 3)

Box 5.9 Time-off feed for bobby calves

A paper assessing the evidence base used to inform farm animal welfare standards identified instances where research conclusions appear to be unfounded based on the evidence. One of the examples is a critique of research undertaken on the welfare effects of time-off feed for bobby calves (bobby calves are surplus dairy calves, usually male, that are slaughtered within a few days of birth). The research concluded that 30 hours for time-off feed is defensible as an outer ‘legal’ limit. Phillips and Petherick (2015) claimed that this observation was made on the basis that most of the measures were within reference ranges, even though plasma glucose concentrations for some calves were reduced to below the lower limit of the reference range at 30 hours. Also, no direct measures of stress (e.g. cortisol) were considered in the research (Phillips and Petherick 2015).

Animals Australia (sub. 53) claimed that the research was based on a sample of 60 calves from a single well-run farm, where the operators were aware of the study and the need to provide adequate colostrum, good shelter and accommodation and feed prior to the study. Similarly, Jan Kendall (sub. DR106, attachment 1) suggested that the science used to inform the standard was misleading as it was conditional on the assumption of good practice in other areas of calf management, which cannot be assumed to occur.

Industries involved in the bobby calf supply chain have subsequently agreed to implement a national industry standard for time-off feed of 30 hours for calves aged between 5 and 30 days being transported without mothers.

It suggested that the assessment of animal welfare benefits in regulatory impact assessments could be improved if performed by people with animal welfare science expertise, as they are better able to assist in the interpretation of the literature. To illustrate this point, it noted that science based on a single measure, such as blood cortisol levels, can sometimes be equivocal when trying to assess animal welfare, and viewed in isolation, papers based on these sorts of findings can be misleading. Animal welfare behavioural indicators can be more important but are sometimes overlooked.

In this vein, the Animal Welfare Science Centre notes that scientists' views differ on how animal welfare should be measured or judged, with three prominent concepts of animal welfare in the literature. The welfare of animals is judged on the basis of:

- how well the animal is performing from a biological functioning perspective
- affective states, such as suffering, pain and other feelings or emotions
- the expression of normal or 'natural' behaviours.

The differences in concepts of animal welfare within science lead to differences in the methodology used by scientists to assess animal welfare under different husbandry or housing practices (Barnett and Hemsworth 2009). A research program to further understanding the relationships between these concepts and methodologies is being conducted by the Animal Welfare Science Centre (2016).

Large gaps in the scientific literature on animal welfare were acknowledged in the 2013 review, although specific examples were not identified. The review stated that stakeholders differed strongly on whether the appropriate science was being used in the development of the standards and that often — but not exclusively — conflict arose where there was a lack of science based literature to support claims. The review report suggested that resources needed to be invested in further research.

Similarly, AHA (sub. DR250) suggested that the standard setting process would be improved by establishing an independent animal welfare scientific advisory body (funded by the Australian Government) to provide advice on animal welfare science and values, to feed into the standards and guidelines process.

Australian Pork Limited (sub. DR282) also agreed that a more independent process was needed for reviewing the science presented and determining what science is relevant to the standards process.

And Professors Paul Hemsworth and Grahame Coleman from the Animal Welfare Science Centre (sub. 87) recommended that an independent, expert and well-respected advisory committee be established to provide factual advice to the community and major stakeholders on science, philosophy and practices around food and fibre production (including animal welfare, environmental and food safety issues). This step was considered necessary for achieving a well-informed community and to facilitate rational discussions around food and fibre.

5.5 Improving the effectiveness of farm animal welfare regulation

There is significant scope for greater rigour in the process of developing national farm animal welfare standards and guidelines. And importantly, for science and (soundly elicited) community values to play a more prominent role. Without reform, there is a risk

that the agricultural sector and the Australian community will continue to face a patchwork of different regulatory arrangements across jurisdictions that do not rigorously take into account economic and social considerations.

There are three areas where farm animal welfare regulation could be improved.

- The objective of the national standards and guidelines needs to be clearer.
- Standards and guidelines should be evidence-based, drawing on independent and credible evidence on animal welfare science and research on community values for animal welfare. This evidence should also be used in RIS processes.
- There needs to be more independence in the standards development process so that outcomes are not overly influenced by the views of any one group, either industry or animal welfare groups. Judgments made to balance conflicting considerations should be transparent and apply rigorous scientific principles. Surveys of community values for animal welfare should be statistically robust and transparent.

The Commission considered three options:

1. setting up an independent animal welfare science and community ethics advisory body to provide advice on animal welfare science and community values for animal welfare. (This option does not involve any other changes to the institutional arrangements described above for developing the standards and guidelines, which would remain at the state and territory level.)
2. creating an independent animal welfare body at the Australian government level — the body would be responsible for the development of national standards and guidelines, including the management of all inputs to the process
3. Australian Government responsibility for livestock welfare regulation.

These options are not mutually exclusive. The merits and feasibility of each option are discussed below.

Option 1: An independent national animal welfare science and community ethics advisory body

Scientific evidence and community values are critical to decisions about animal welfare and need to be embedded in the process for developing standards and guidelines. But as outlined above, there are large gaps in the scientific evidence base used to inform standards, both in relation to animal welfare science and community values.

An independent animal welfare science and community ethics advisory body would help to build a better evidence base on the effects of various animal management practices and on what community values are in the area of animal welfare. The advisory body could:

- review the existing scientific research on farm animal welfare (and undertake or commission additional research where knowledge gaps are identified)

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- communicate scientifically-based information in an accessible form to the community about best-practice livestock farm animal husbandry practices and contemporary animal welfare science — well informed members of the community are better able to express a view on the value they place on animal welfare
 - review the literature on community views, and manage public consultation processes (including, for example, regular public attitudes surveys) aimed at determining community values for livestock welfare. Challenges in this area include ensuring people's views about welfare take into account their willingness to pay for it, and that their views are based on accurate information on the actual, rather than perceived, welfare impacts of farming practices
 - provide advice to the standards and guidelines project manager (as part of the project manager's role in managing the RIS assessment) and resolve conflicts to determine which scientific literature is most applicable to the relevant standard
 - coordinate research and data collection across jurisdictions.

Because there is some uncertainty about the science of animal welfare, policy makers need credible information about the extent of scientific uncertainty. And, because there are trade-offs with achieving different animal welfare outcomes, it is important to know how the community values different outcomes. Building this knowledge base would be the role of the community ethics component of the body.

While public consultation is essential for a rigorous RIS process, consultation solely through submissions is unlikely to be sufficient to balance the sharp differences in views of stakeholders who are likely to engage in the RIS process. More rigorous and participatory consultation and evidence gathering approaches are needed to understand what is generally acceptable to the community. This could include targeted public forums and community attitudes and consumer surveys.

The science and community ethics body should be made up of a number of experts, including in the fields of animal welfare science, consumer behaviour and social science research. It would need to be sufficiently resourced so that it could commission research for identified gaps in the scientific and social science literature. Expertise in public consultation, including survey design, would also be required.

The Farm Animal Welfare Committee in the United Kingdom is an example of a body that was established to provide independent advice (including scientific advice) and recommendations to government on the welfare of farmed animals and advice on legislative (or other) changes that might be considered to improve standards of animal welfare (FAWC 2016). In Australia, state and territory governments also have animal welfare advisory committees to provide advice on animal welfare matters. The governance structures of the committees vary by jurisdiction and include statutory bodies as well as non-statutory committees and offices.

An advisory body, however, would not address concerns about a conflict of interest in project management and decision-making for standards and guidelines. Nor would it necessarily guarantee that this evidence is appropriately balanced against economic considerations — that is, the effects on industry from different welfare options. These trade-offs are usually considered within a RIS assessment — a RIS aims to identify the option that provides the highest net benefits to the community as a whole, balancing economic and social considerations. The value of independent and credible animal welfare science and research on community ethics will be undermined if the RIS process is not performed rigorously and if final decisions are not made transparently and in the interests of the community as a whole.

Option 2: An independent body that develops national standards and guidelines

The independent animal welfare advisory body could also develop the farm animal welfare standards and guidelines. It would need to be clear that its objective is to balance the benefits of animal welfare outcomes against the costs of achieving those outcomes, with the ultimate aim of providing net benefits to the community as a whole.

The proposal to establish an independent animal welfare body at the Australian government level is not a new idea.

- In July 2013, the Australian Government announced that it planned to establish an independent office of animal welfare and an inspector general for animal welfare. However, in October 2013, following a change of government, the Minister for Agriculture announced that the government would not proceed with the establishment of the independent office or inspector general.
- In June 2015, the Australian Greens introduced a Bill to establish an independent office of animal welfare. The Bill (and subsequent proposed amendments) proposed that an independent statutory body, supported by an advisory committee, be established. The proposed advisory committee was to have responsibility (among other things) for commissioning independent animal welfare science to support the development of national standards and guidelines. The Senate Rural and Regional Affairs and Transport Legislation Committee recommended that the bill not be passed (SRRATLC 2015a).

An independent animal welfare body could take a number of forms. It could be established as a statutory body (similar to the approach that is used in New Zealand to develop animal welfare codes (box 5.10). Alternatively, the body could be established as an office within a department, as is the case with the Office of the Gene Technology Regulator, which resides within the Department of Health (chapter 6).

Box 5.10 **New Zealand National Animal Welfare Advisory Committee**

The National Animal Welfare Advisory Committee is an independent statutory committee established under New Zealand's *Animal Welfare Act 1999* to provide independent advice on animal welfare to the Minister for Primary Industries, including on the welfare of animals in New Zealand, research needs, codes of welfare, and legislative proposals. Codes of welfare form part of the Act, and set minimum standards of care and management of animals as well as recommend best practice above the minimum standards. Evidence of failure to meet minimum standards in a code may be used to support prosecution under the Animal Welfare Act. There are livestock welfare codes for: dairy cattle, layer hens, meat chickens, pigs, sheep and cattle, commercial slaughter of animals, and transport of animals.

The structure of the Animal Welfare Advisory Committee

The committee is made up of a chairperson, the chairperson of the National Animal Ethics Advisory Committee, and up to nine other members. Members are chosen for their expertise, knowledge and experience based on criteria set out in the Act. Current members have backgrounds in: veterinary science and epidemiology; accountancy; the RNZSPCA; corporate governance; agricultural economics; farming; and animal science.

Operation of the committee and guidelines on its operation

In 2015, the committee focused on eight priority areas, including to: advise the Minister on options for addressing farrowing crates in the code and/or regulations; recommend a code of welfare amendment for dairy cattle to the Minister; develop a position on shelter and/or recommend regulations to maintain animal welfare in pastorally farmed livestock.

The Committee publishes guidelines on how it operates. This includes a guideline on how society's ethical values, technical viewpoints and public opinions are taken into account. The guideline states that there are three relevant dimensions in this regard.

- To consider ethical values taking into account the evolution of attitudes towards animals.
- Technical views on the physical, health and behavioural needs of animals and how they may be met, which evolve over time partly in response to scientific knowledge and technology.
- Society's ethical values versus public opinion. The guideline makes a distinction between ethical values and current public opinion, and states that public opinion may or may not be a good measure of a change in society's ethical values. Ethical values relate to the general thought in New Zealand society on what is or is not considered to be acceptable ways of caring for and managing animals.

The Committee states that it will reach its own decision on a draft code and will not formulate codes by following international trends, industry demands or public opinion. Its 'obligation is to work to improve animal welfare by rigorous evaluation of relevant science, practical experience and good practice first, with economics, international trends and public ethical concerns modulating that information. Economic considerations may constrain the speed of implementation of a change the Committee desires, but cannot prevent it' (NAWAC 2011, p. 1).

Source: New Zealand Ministry for Primary Industries (2016).

The benefits of establishing an independent body are that it would:

- provide greater independence in the standard development process, which would help ensure that standards provide a net benefit to the community

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- address concerns about potential conflicts of interest, particularly if the body was at arm's length from DAWR
 - enable trade-offs between competing interests and objectives to be made more independently
 - enable farm animal welfare regulation to be proactive, rather than reactive to incidents of mistreatment.

There was strong support in submissions for establishing an independent body to develop farm animal welfare standards (box 5.11). The Commission also received over 1200 brief submissions from individuals who advocated for the establishment of an independent body for animal welfare. However, some industry groups and state governments opposed the idea of an independent body, although they acknowledged the lack of evidence on community values for farm animal welfare and the need for scientific principles and evidence-based policy to guide the development of standards. There was a concern that an independent body would lead to an increase in the regulatory burden on farm businesses.

An independent body would not result in a duplication of current regulatory processes or necessarily result in an increase in regulation. The independent body would *replace* (and improve upon) the national structure (described earlier in this chapter) that is already in place for developing standards and guidelines. Importantly, it would be an advisory body, not a regulatory body.

The main costs with establishing an independent body are the administrative costs of operation. However, a well-designed independent body need not be more expensive than the current arrangements, and could deliver cost savings over time by providing greater clarity on farm animal welfare issues and by reducing the likelihood that regulations will be hastily implemented in response to intense public reaction to revelations of mistreatment.

Currently there is government funding for a number of farm animal welfare advisory and regulatory activities and some of this may not be required if an independent body is established. The current standards and guidelines development process is funded on a one-third-each basis by the Australian Government, state and territory governments, and relevant industry groups. There are also animal welfare advisory bodies in most states and territories. And government funding is provided for farm animal welfare research (for example, through rural research and development corporations). To minimise costs, the body could operate under a shared corporate services arrangement with another body or government department.

If the body only has responsibility for developing standards and guidelines, it will not be able to address inconsistency in the implementation (and enforcement) of the standards by state and territory governments. This issue could be partially addressed by giving the body responsibility for reviewing progress in implementing (and enforcing) standards and identifying opportunities for further harmonisation.

Box 5.11 Participant views on an independent animal welfare body

Many participants supported the establishment of an independent body. For example:

It is our strong view therefore that in the absence of national leadership, an Independent Office of Animal Welfare is needed to monitor, investigate and be able to make recommendations to government regarding matters impacting on animal welfare across all areas of animal use (not only farmed animals). (Animals Australia, sub. 53, p. 10)

[Animal Law Institute] strongly agrees with the Commission's recommendation that the Australian Government should establish an independent body with responsibility for animal welfare matters ... [Animal Law Institute] is supportive of the view that the proposed independent body be involved with establishing standards that operate in conjunction with the State and Territory anti-cruelty legislation. However, ALI does not think that the independent body should be involved in enforcement ... (Animal Law Institute, sub. DR213, p. 3)

The Society supports Draft Recommendation 5.1 which outlines that the Australian Government should take responsibility for ensuring that scientific principles guide the development of farm animal welfare standards. To achieve this, an independent body tasked with developing national standards and guidelines should be established. (The Law Society of South Australia, sub. DR181, p. 2)

The CPSU supports the creation of an independent Commonwealth entity tasked with developing national standards and guidelines for farm animal welfare ... The body should include representation of regulatory bodies and other industry stakeholders, be independent from industry, and be fully financed by government. (Community and Public Sector Union, sub. DR204, p. 1)

Many individuals and other animal welfare and rights groups and other organisations also supported an independent body (see Animal Welfare Brief Submissions 1 and 2; Animal Justice Party, sub. DR112; Animal Liberation, sub. DR143; Animal Welfare League of Queensland, sub. DR238; Edgar's Mission, sub. DR145; Environmental Farmers Network, sub. DR174; Humane Society International, sub. DR253; Lawyers for Animals, sub. DR153; NSW Young Lawyers Animal Law Committee, sub. DR284; Peri Urban Group of Rural Councils, sub. DR220; People for the Ethical Treatment of Animals Australia, sub. DR109; RSPCA Australia, sub. DR223; Voiceless, sub. DR166; Vegan Australia, sub. DR115; Vets Against Live Exports, sub. DR199).

A number of industry groups and state governments opposed the idea of an independent body (Animal Health Australia, sub. DR250; Australian Livestock Exporters' Council, sub. DR305; Livestock SA, sub. DR303; National Farmers' Federation, sub. DR216; Sheepmeat Council of Australia, sub. DR245; Tasmanian Government, sub. DR287; Western Australian Government, sub. DR285; Wool Producers Australia, sub. DR237).

CCA appreciates that there is a leadership void that currently exists at the Federal Government level. However, the proposed establishment of an Independent Office will not satisfactorily alleviate this void, as the new bureau would have a high probability of imposing additional bureaucratic processes and related costs. These extra impositions would not produce effective outcomes and would appear contrary to the Commission's Terms of Reference for this Inquiry, by increasing the burden of unnecessary costs on producers. (Cattle Council of Australia, sub. DR290, p. 3)

ADF does not support the assertion that community expectations about animal welfare are not being met ... There is no market failure justifying the establishment of a new statutory body with new functions. The proposal for establishing a new independent body/agency is counter to the Australian Government's policy of reducing red tape and is not supported by ADF. (Australian Dairy Farmers, sub. DR218, p. 3)

The Commission's recommendations in this section of the report represent a significant shift from current Commonwealth-State responsibilities and it is not clear they have a feasible constitutional basis to actually advance this matter, or could be implemented in a way that is materially different from the status quo. (Department of Agriculture and Water Resources, sub. DR183, p. 4)

Also, if the body sat outside DAWR (such as in the Attorney General’s portfolio, as suggested by some participants, including Animals Australia, sub. DR268; Animal Law Institute, sub. DR213; Lawyers for Animals, sub. DR153), some livestock welfare expertise and synergies with the agriculture portfolio’s other areas of responsibility, such as biosecurity and advances in livestock industry practices, could be lost.

In the Commission’s view, an independent body is the best option for delivering balanced farm animal welfare standards and outcomes over time, both for the benefit of the Australian community but also for the agriculture sector. It would enable regulation to be more proactive — rather than reactive to reports of incidents of mistreatment — which will help ensure the long-term sustainability of the agriculture sector.

Ensuring the body has a clear statement of objectives will help ensure that standards and guidelines are set with the ultimate objective of providing net benefits to the community as a whole. The body could prioritise issues and focus on the development of standards and guidelines in the areas where market forces and industry incentives are insufficient to achieve a level of welfare that is generally acceptable to the community.

The body would also include animal science and community ethics advisory committees with clear and effective processes in place for assessing (to the extent possible) community values for different livestock welfare outcomes. The body would use this information to balance economic and social considerations and provide information to the community and industry on best-practice animal husbandry practices.

Option 3: Australian Government responsibility for farm animal welfare

The key difference between the Australian Government assuming responsibility for farm animal welfare and the options outlined above is that the Australian Government would design and implement the regulations and enforce the national arrangements.

Under this option, producers would only have to comply with one set of arrangements. Consumers and the community more broadly would also benefit knowing that agricultural products in Australia are produced with the same level of, and compliance with, welfare standards. However, the Australian government being responsible for monitoring and enforcement activities is likely to be less efficient than state and territory monitoring and enforcement. This is because states and territories can shift monitoring and enforcement resources between various related functions (such as animal health, biosecurity and wild animal control) as circumstances change. State and territory governments also have a better understanding of the issues affecting their jurisdiction and agricultural sectors.

That said, a nationally consistent enforcement approach would not necessarily require Australian Government officers. States and territories (and local government where relevant) could retain farm animal welfare monitoring and enforcement functions based on a national approach. This would be similar to food regulation in Australia, where Food Standards Australia New Zealand (a statutory body) is responsible for the standards and an

intergovernmental agreement between the Commonwealth and states and territories establishes that states and territories adopt and enforce these standards (chapter 10).

A number of participants supported this option. For example, the Law Society of South Australia said:

... only the Commonwealth Government has the resources needed to fund national animal welfare standards and this, coupled with a national statutory authority to enforce such standards (save those subject to State jurisdiction such as companion animals owned by individuals) would be the best and most effective way of proceeding to appropriately regulate the area.

A similar case was made for the protections of the environment with the creation of the *Environment Protection and Biodiversity Conservation Act 1999*. It is arguable that the power to make laws that govern animal welfare at the Federal level can be derived from, *inter alia*, the trade and commerce power or the Corporations power. (sub. 44, p. 11)

The Australian Chicken Meat Federation also said:

The ACMF believes that, not only is the current state-based approach inefficient, but that there needs to be strong national leadership in this particular area. For this reason, we strongly favour the concept of regulatory responsibility for domestic production animal welfare reverting to the Commonwealth Government, rather than being regulated at a jurisdictional level. (sub. 40, p. 6)

The Australian Chicken Meat Federation further stated that, in the absence of Australian government responsibility for regulation of livestock welfare, it supported strong national leadership, and nationally consistent legislation with respect to animal welfare. The Australian Chicken Growers' Council (sub. 51) expressed a similar view.

The South Australian Government also commented that:

The current regulatory system would benefit from greater leadership by the Australian Government in steering animal welfare policy and legislation beyond livestock export and quarantine. (sub. 57, p. 6)

And the AFI (2015) favoured the establishment of national farm animal welfare legislation (which would also establish a national enforcement system), supported by a farm animal welfare advisory council to provide advice and recommendations to government (including in relation to national livestock standards) (box 5.12).

While this option could provide benefits in terms of national consistency and more timely development and implementation of welfare standards, it raises issues about the division of roles and responsibilities between the Australian and state and territory governments. As a result, there may be constraints on the Australian Government's ability to act unilaterally in this area, meaning that agreement between the Australian and state and territory governments would be required.

Box 5.12 Australian Farm Institute's proposal for national legislation

The Australian Farm Institute described the current farm animal welfare policy system in Australia as:

... out-dated, unwieldy, and unable to address urgent emerging challenges effectively. ... standards are being established in different ways in different production sectors, and they also differ among states, and it seems that decisions which impact on farm animal welfare are being made by people without appropriate education and background. (Potard 2015, p. 74)

It proposed national legislation to replace the existing fragmented state legislation. The proposed 'National Farm Animal Welfare Act' would focus on farm animal welfare and would:

- outline the guiding principles for farm animal welfare consistent with international standards
- set up a process for writing and updating the standards and guidelines (to be applied consistently across states and across different farm sectors)
- establish an advisory council and relevant committees and implement an enforcement system based on national standards and guidelines.

The Australian Farm Institute proposed that the independent farm animal advisory council would have the role of scrutinising and formally recommending farm animal welfare standards and guidelines to the government for adoption, and overseeing the revision of them as new information becomes available. The importance of having a council independent of the (then) Department of Agriculture was noted, due to the complexity of some of the issues associated with farm animal welfare.

The Institute proposed two advisory committees to support the council — a scientific advisory committee (to prepare a review of the latest scientific information related to the welfare of the animal(s) affected by the standard being reviewed) and an ethics advisory committee.

Source: Potard (2015).

Summing up

On balance, the Commission considers that the best option is to establish an independent body (option 2) — the Australian Commission for Animal Welfare (ACAW) — with responsibility for developing national standards and guidelines. The ACAW should be responsible for managing the RIS for the standards, using good-practice regulatory impact assessment processes (PC 2012c), informed by independent and sound science on animal welfare and community values. Industry and animal welfare organisations would provide input through the RIS and other public consultation processes. The standards and guidelines developed by the independent body would be implemented by state and territory governments (with little or no variation unless required to meet clearly defined local circumstances). Compliance functions would remain with state and territory governments, although there is scope to improve these arrangements (discussed in the following section).

The ACAW should also be responsible for independently assessing the effectiveness of the implementation (including enforcement) of the standards by state and territory governments (section 5.5), and the live export regulatory system (section 5.6).

Functions and governance of the ACAW

The Commission proposes that the ACAW be a stand-alone statutory organisation, with its functions and membership requirements specified in a separate Act of Parliament. This will help ensure the actual and perceived independence of the ACAW and would also provide relative stability given the difficulties in abolishing independent organisations.

The ACAW should be set up to develop farm animal welfare standards that provide the highest net benefits to the community, and to disseminate information to the community and industry on farm animal welfare. It should do this by rigorously and transparently balancing independent scientific evidence on animal welfare, community values and costs to industry.

The functions of the ACAW should include:

- determining if new standards for farm animal welfare are required, and if so, to develop and publish the standards, for implementation by state and territory governments
- publicly assessing the efficiency and effectiveness of the implementation and enforcement of farm animal welfare standards by state and territory governments
- conducting and publishing regular reviews of the effectiveness of the live export regulatory system and making recommendations to improve the system to the Australian Government Minister for Agriculture
- identifying areas where animal welfare research is required, and commissioning research where necessary
- promoting public understanding of farm animal welfare issues and disseminating information on best-practice animal husbandry practices.

The ACAW should be made-up of no more than five members, including a Chair, appointed for terms of five years with the option of reappointment. Members would be appointed by the Australian Government following consultation with state and territory governments. It is essential that members of the ACAW be appointed on the basis of skills and experience, not as current representatives of a particular agriculture sector, organisation or group. This would help assure the community that members have no conflicts of interests and avoid politicisation of the body. Collectively, the members of the ACAW should have skills and experience in the areas of:

- animal welfare science and veterinary science
- agricultural science and commercial livestock production
- public policy, law and economics
- ethical standards and conduct with respect to farm animals.

The ACAW would be responsible for establishing the advisory committees on animal welfare science and community ethics, with each committee consisting of at least two members of the body. It should also be required to adopt good-practice consultation

processes, including public submissions and surveys, and could convene targeted and time-limited stakeholder advisory groups to elicit input from specific industry and consumer groups.

The ACAW should be funded by Commonwealth and state and territory governments, *not* from industry or animal groups. This would help to ensure that the body is not unduly influenced by the positions of particular stakeholders.

The Australian Government should take responsibility for establishing the ACAW, and in doing so should consult with state and territory governments. Intergovernmental cooperation could occur through the Agriculture Ministers forum and/or could be outlined in an intergovernmental agreement. The Commission notes that there are various instances where the Australian and state and territory governments have worked cooperatively to establish national processes and national regulatory bodies in other areas, such as for the regulation of food safety, agricultural and veterinary chemicals, and consumer protection. A similar approach could be taken for farm animal welfare.

RECOMMENDATION 5.1

To facilitate greater rigour in the process for developing national farm animal welfare standards, the Australian Government should take responsibility for ensuring that scientific principles guide the development of farm animal welfare standards. To do this, a stand-alone statutory organisation — the Australian Commission for Animal Welfare (ACAW) — should be established. The functions of ACAW should include:

- determining if new standards for farm animal welfare are required, and if so, to develop the standards using good-practice public consultation and regulatory impact assessment processes
- publicly assessing the efficiency and effectiveness of the implementation and enforcement of farm animal welfare standards by state and territory governments
- publicly assessing the efficiency and effectiveness of the livestock export regulatory system and making recommendations to improve the system to the Australian Government Minister for Agriculture.

ACAW should comprise no more than five members (including a Chair) appointed by the Australian Government following consultation with state and territory governments. Members should be appointed on the basis of skills and experience, not as representatives of a particular industry, organisation or group.

It should also include animal science and community ethics advisory committees to provide independent, evidence-based advice on animal welfare science and community values.

An outcomes-based approach for national standards?

A more outcomes-based approach to the development of national standards and guidelines could play a greater role in farm animal welfare regulation than prescriptive standards. An outcomes-based approach could focus on ways of measuring livestock welfare, and could be used for measuring compliance. Grandin (2014), for example, identified a number of numerical scores that could be used to determine whether handling and stunning practices during the slaughter process were improving or deteriorating. The scores included the percentage of animals that are rendered insensible with one captive bolt or gunshot, vocalise and/or fall during handling, and are moved with electric prods.

The OIE Terrestrial Animal Health Code (article 7.3.8) encourages the use of performance standards. For example, it states that for the loading of animals, ‘performance standards should be established in which numerical scoring is used to evaluate the use of such instruments [goads and other aids], and to measure the percentage of animals moved with an electric instrument and the percentage of animals slipping or falling as a result of their usage’.

Outcomes-based regulation gives livestock producers flexibility in terms of the production process and practices they use (such as housing systems and livestock handling aids) to achieve welfare objectives. However, this approach is less appropriate where outcomes are not easily observed and measured, or where there is only one way of achieving a regulatory objective. In these cases, a combination of input-based and output-based measures may be preferable, as noted by the Australian Veterinary Association.

The best animal welfare outcomes are achieved through a combination of input-based and output-based measures. Welfare inputs such as space requirements provide measurable criteria for objective assessment of the conditions under which animals are being farmed, consistency from one operation to another and certainty to farmers as to what conditions they must provide. Output based measures such as health, productivity, and behavioural indices help to inform us how animals are coping with their environment. Inputs are sometimes easier to monitor from a compliance perspective so a combination of the two is preferred. (sub. DR167, p. 4)

Governments may also choose to prohibit certain practices where these are considered unacceptable to the general community. Some farm businesses may also sometimes prefer prescriptive arrangements because they provide greater certainty about their regulatory obligations.

The role of public funding to improve farm animal welfare

Under the options outlined above, relevant governments could retain responsibility for providing any public funding to support the transition to different welfare standards (where these are assessed as providing net benefits to the community). Public funding could be provided in a number of ways, including through support for scientific research on animal welfare (such as through research grants, and funding through Rural Research and Development Corporations (chapter 6)). Producers could also be supported to meet one-off

costs associated with a transition to a new production practice. For example, in 2013, the Tasmanian Government provided \$500 000 to assist producers in converting their infrastructure and to transition away from the use of sow stalls during gestation (Tasmanian Government 2013). However, subsidies can disadvantage producers who have already invested to achieve higher animal welfare outcomes. They can also discourage further voluntary development of production methods that achieve higher welfare outcomes, and which can be marketed to obtain a higher price.¹⁷

Monitoring and enforcement of livestock welfare regulation

Effective regulation includes incentives for regulated entities to comply with regulation. No matter how well designed, regulations will not achieve their objective if those that are regulated do not comply or if the standards are not able to be effectively enforced. The effectiveness of monitoring and enforcement arrangements is influenced by whether non-compliance is able to be detected and addressed, which is in turn influenced by the resources and skill sets available to regulators.

Transparent and effective monitoring and enforcement functions are needed to assure the community that regulatory objectives are being achieved. But aiming for 100 per cent compliance is unrealistic as there are costs associated with monitoring and enforcement.

Publicly available information on the compliance activities of state and territory government agencies responsible for farm animal welfare is limited. This makes it difficult to assess the extent of compliance with welfare standards. State and territory governments generally share responsibility for livestock welfare inspection activities with the RSPCA, although the RSPCA's responsibility is limited with respect to livestock in some instances (box 5.13). State and territory food safety authorities are also responsible for animal welfare regulations at meat processing facilities (such as abattoirs). And as noted above, local governments are also responsible for some areas of farm animal welfare, such as cattle at large and in saleyards owned and run by local councils. And local government officers and the police can be appointed as inspectors under state animal welfare legislation.

Concerns were raised about the level of monitoring and enforcement of farm animal welfare standards. Vegan Australia (sub. 25) said that state and territory enforcement agencies fail to enforce animal welfare regulations and even where regulation is enforced, it is very rare for a perpetrator to be punished appropriately.

¹⁷ Harvey and Hubbard (2013) proposed the novel idea of a consumption subsidy for products that involve higher animal welfare outcomes. However, it is hard to envisage how such a subsidy would be calibrated and implemented in practice.

Box 5.13 **Responsibility for enforcement of farm animal welfare regulation**

Responsibility for enforcement and inspection activities in relation to livestock welfare is generally shared between state and territory government agencies and the RSPCA. For example:

- in Queensland and Victoria, the RSPCA's role relates to companion animals and non-commercial farm animal welfare issues (Agriculture Victoria 2016b; Queensland Government 2013a)
- in Western Australia, the Department of Agriculture and Forestry and the RSPCA are both responsible for enforcement of farm animal welfare regulations. The RSPCA is responsible for enforcement for both companion and farm animals, including 'level three' (serious) commercial livestock matters. Funding to the RSPCA from the WA Government is for enforcement of companion animal welfare issues only — this funding does not relate to inspections for animal cruelty cases relating to farm animals (RSPCA Western Australia 2015)
- in New South Wales, the Department of Primary Industries is responsible for administering the *Prevention of Cruelty to Animals Act 1979* (NSW), but officers of the department do not have powers of enforcement (NSW DPI 2016a). The enforcement agencies are the RSPCA, the Animal Welfare League of NSW and the NSW Police
- in South Australia, the Department of Environment, Water and Natural Resources is primarily responsible for administering the *Animal Welfare Act 1985* (SA). Enforcement is conducted by authorised RSPCA inspectors and, to a lesser extent, the SA Police (South Australian Government, sub. DR295)
- in Tasmania, inspections are conducted by the Department of Primary Industries, Parks, Water and Environment. RSPCA animal welfare officers are also authorised to inspect premises where animals are kept for commercial purposes. Unannounced routine inspections occur for intensive pig farms and poultry farms (TDPIPWE 2016a).

Animals Australia (sub. 53) suggested that in the main, the system of enforcement is reliant on complaints. But as observed by the Law Society of South Australia (sub. 44), complaints are likely to be limited for intensive farming facilities as animals and operations are usually in closed buildings or in remote areas. This makes it difficult for members of the public to observe animal farming practices. It also stated that:

A series of requests by Animals Australia to state government animal welfare enforcement officers to request details of any 'routine' or systematic compliance initiatives recently found it varied significantly between the states — in NSW and Victoria for example there were no current routine compliance monitoring systems related to animal welfare in place (other than for abattoirs), and only in Tasmania was 'unannounced' inspections the norm. (sub. 53, p. 12)

Animals Australia further stated that 'discretion to prosecute chiefly resides with departments of agriculture/primary industry, which take into account factors relevant to their role as facilitators of agribusiness' (sub. 53, p. 14).

Similarly, RSPCA Australia (sub. 31 and DR223) considered that animal welfare regulations are not appropriately enforced. It suggested that the most significant problem

with enforcement is lack of funding, which it said was not reflective of the degree of public interest involved in animal welfare. Also, funding from the states to the RSPCAs (through annual grants) typically accounts for a small percentage of the various RSPCAs' actual enforcement expenditure.

The Law Society of South Australia (sub. 44) expressed a similar view. As did the NSW Young Lawyers Animal Law Committee:

... the RSCPA is not sufficiently resourced by the government to detect contraventions of, and enforce, animal welfare laws. As a result, the detection of contraventions of animal welfare law has, in large part, been left to individuals and animal welfare groups. Had it not been for the work of these parties, illegal activities resulting in the abuse of animals would likely remain undetected. The Committee considers that circumstances where individuals and charities are required to take on the role of investigating and detecting contraventions indicate that there is a significant deficiency in the enforcement of the law. (sub. DR284, p. 7)

RSPCA Australia (sub. DR223) also suggested that greater resources needed to be dedicated to establishing formal routine inspections programs where government officers inspect livestock and other animal facilities according to key animal welfare performance indicators.

A challenge for animal welfare enforcement is that there are limited resources available. The large number of reported animal welfare incidents relating to companion animals limit the available resources for compliance activities in farming, particularly as some farming occurs in vast geographical rural areas. That said, sufficient resources should be devoted to ensuring compliance that is proportionate with regulatory objectives.

Commenting on the enforcement of livestock regulation, the Australian Veterinary Association said:

A section of the public has lost its confidence in the power of government and non-government agencies to adequately enforce existing legal protections for animals. Some animal welfare advocates have felt compelled to take matters into their own hands. This situation is undesirable for a number of reasons, not the least of which is the potential for serious breaches in biosecurity protocols and risks to the animals themselves from uncontrolled and unauthorised contact with animal welfare advocates. (2015, p. 3)

The 2015 review of the administration of the *Animal Welfare Act 2002* (WA) in Western Australia found that the Department of Agriculture and Food was 'under-resourced to deliver a level of service to meet community and industry expectations' (Easton et al. 2015, p. 3). The review found that livestock welfare investigations took priority over inspections, and that investigations were reactive not proactive due to resource constraints. The review recommended that funding to the department be increased and that a process be put in place for annual reporting of animal welfare activity by inspectors. The WA Government supported the recommendations (Baston 2015).

Effective enforcement requires clearly defined and well understood criteria for breaches of farm animal welfare regulations and standards. The AFI (2015) claims that most states'

current enforcement frameworks are inherited from the past, when the regulators' main objective was to police cruel behaviour by individuals towards animals. The AFI also considered that the current enforcement system (through prevention of cruelty legislation) does not specialise in farm animal welfare issues, as reflected in most of the jurisprudence.

Under current state and territory animal cruelty legislation, it is not a legal requirement to comply with all codes of practice (unless the code is mandatory), although compliance with a code provides a defence to a person charged under relevant animal cruelty legislation. The AFI (2015) suggested that most courts do not have a clear process to assess issues of compliance with farm animal welfare standards and how this differs from cruelty. Similarly, Ellis (2010) considered that the exemption of commercial livestock from state animal welfare Acts means that there is an absence of Australian legal authority regarding words such as 'unnecessary' in relation to animal cruelty provisions as they apply to livestock. McEwen (2011) raised similar concerns.

Industry quality assurance systems as a complement to regulation

Industry quality assurance schemes can complement farm animal welfare regulation, for example, where the scheme puts in place requirements that are higher than the minimum standards prescribed by law. Where a quality assurance scheme has a clear and transparent compliance framework and independent trained auditors, it could be used as a complement to state and territory monitoring arrangements. Where the quality assurance system is developed by a national industry group, it could also help to provide consistency where there are different regulatory requirements at the state and territory level.

An example is the Australian Pork Industry Quality Assurance program for pig producers. This program was approved as part of a co-regulatory arrangement in Victoria under the *Livestock Management Act 2010* (Vic). The Australian Livestock Processing Industry Animal Welfare Certification System is another example of an industry quality assurance program. This system uses independent audits to demonstrate compliance with animal welfare standards established by the Australian Meat Industry Council.

Co-regulation offers potential advantages over traditional regulation, including greater flexibility and adaptability, lower compliance and administrative costs, ability to address industry-specific and consumer issues directly, and quicker and lower-cost complaints handling. And, as noted by AHA (sub. DR250), co-regulatory models can also empower industry enterprises to jointly manage regulatory and commercial requirements and allow jurisdictions to redirect resources to areas of greater need.

However, co-regulation also has limitations. Adequate protection must be in place to ensure that the arrangement is not captured by the industry for its own, rather than the community, benefit (Hepburn 2006). The potential for co-regulation to involve conflicts of interests was raised as a concern by a number of submitters (Humane Society, sub. DR253; RSPCA Australia, sub. DR223; World Animal Protection, sub. DR137). Animals Australia said that a co-regulatory model for animal welfare 'would require adequate accountability

and oversight safeguards to ensure legitimacy, including mandatory reporting by auditors of serious welfare issues'. And that 'there are already legitimate community and welfare group concerns ... that industry [quality assurance] schemes are "in-house" and regularly put the needs of industry above the welfare needs of individual animals' (sub. 53, p. 14).

State and territory governments need to be sure that any industry quality assurance scheme aligns (at a minimum) with the relevant farm animal welfare standards established in law. External (independent) monitoring and auditing (potentially including unannounced inspections by government regulators/inspectors) would be required to ensure that the scheme is achieving its objectives.

Other industry-led initiatives could also help to improve confidence in the community that animal welfare standards are being maintained. For example, some abattoirs in Australia have installed closed circuit cameras to monitor animal welfare and worker safety. Monitoring of video footage by third-party auditors may further increase community confidence. And broadcasting video footage (for example, Ecoeggs' 'ChookCam') provides information to consumers and the community about the production practices used by producers. Slow Food Australia suggested that 'if production methods were more open to inspection by the public and if product information was more honest and straightforward, the market would secure adjustments in animal welfare standards' (sub DR278, p. 3).

Third parties along the livestock supply chain could also play a role in helping to ensure compliance with welfare standards. An example could be a requirement that stock agents or managers of livestock saleyards report any breaches of welfare standards to the relevant regulatory agency (which could be a local government as, in some cases, saleyards are owned and operated by councils, which make local laws applicable to livestock welfare at saleyards) (Harding and Rivers 2015). The use of drones could also reduce the costs associated with monitoring animal welfare outcomes on large farms (chapter 6).

Greater transparency of monitoring and enforcement activities

The Commission is of the view that more transparent and effective monitoring and enforcement arrangements will help increase confidence within the community that farm animal welfare standards are being met. Annual reporting by relevant regulators of the compliance activities they undertake, including routine unannounced inspections, would improve transparency.

Targeting monitoring and enforcement activities to areas of highest risk for farm animal welfare, and to areas where there is significant community concern, could improve the overall effectiveness of monitoring and enforcement arrangements, and help prioritise use of limited resources. Improvements could also be made by recognising industry quality assurance schemes that (at a minimum) comply with mandatory farm animal welfare standards and involve transparent compliance arrangements using independent auditing.

To manage perceived (and potential) conflicts of interest, there should be independence between farm animal policy functions and regulatory enforcement functions — both within relevant departments of agriculture and primary industries as well as the RSPCA.

Assessment and reporting on monitoring and enforcement activities by the independent body (as discussed in the preceding section) would also help to increase transparency for the community, and help to identify issues in the implementation of farm animal welfare standards. This role could also be given to existing state animal welfare advisory committees.

RECOMMENDATION 5.2

State and territory governments should review, by the end of 2017, the way in which their farm animal welfare regulations are monitored and enforced, and make necessary changes so that:

- there is separation between agriculture policy matters and farm animal welfare monitoring and enforcement functions
- a transparent process is in place for publicly reporting on monitoring and enforcement activities
- adequate resourcing is available to support an effective discharge of monitoring and enforcement activities.

State and territory governments should also consider recognising industry quality assurance schemes as a means of demonstrating compliance with farm animal welfare standards, provided that the scheme complies (at a minimum) with standards in law, and involves independent and transparent auditing arrangements.

5.6 Live export regulation

Australia has a two-part system for regulating animal welfare for live exports.

- The Australian Standards for the Export of Livestock regulate the welfare of animals being prepared for live exports in Australia and during the voyage to the importing country. These standards were introduced following the 2003 Cormo Express incident, which involved the rejection of a boatload of Australian sheep by Saudi Arabia, resulting in the vessel and sheep remaining in limbo for almost three months.
- The Exporter Supply Chain Assurance System (ESCAS) regulates animal welfare for live exports originating in Australia from arrival in the importing country to slaughter.

The ESCAS is based on four principles:

- animal handling and slaughter in the importing country consistent with OIE animal welfare recommendations

-
- control through the supply chain by the exporter with all livestock remaining in the supply chain
 - traceability through the supply chain to, and including, slaughter
 - independent auditing and reporting of the supply chain in the importing country.

The ESCAS was implemented in 2011 following public response to a news report by ABC's *Four Corners* program on the mistreatment of Australian animals in some Indonesian abattoirs (Four Corners, 30 May 2011). The (then) Minister for Agriculture, Fisheries and Forestry suspended trade to Indonesia of cattle for slaughter. During the suspension, new safeguards for animal welfare — the ESCAS — were designed. Trade to Indonesia resumed in August 2011, under the new ESCAS framework, and the ESCAS has since been expanded to all destination markets for Australian live exports (although Australia has not exported live animals to Saudi Arabia since August 2012 due to Saudi Arabia's concern that the implementation of the ESCAS would impinge upon its sovereignty).

The ESCAS aims to 'ensure that Australian livestock exported for feeder and slaughter purposes are handled in accordance with international animal welfare standards and to provide a mechanism to deal with animal welfare issues when they occur — preventing the need for trade suspensions' (Commonwealth of Australia 2015a, p. 2).

There is support for regulation of Australian live exports

There was general support from participants for the regulation of Australian livestock export supply chains, although there were various suggestions for improvement to the system. Industry and animal welfare and animal rights organisations' views on the trade also differ considerably.

The NSW Farmers' Association expressed support for the ESCAS:

We recognise that the community response to revelations in the live export industry created a widespread reaction from the public and that regulatory intervention to respond to this level of public reaction was not inappropriate. (sub. 72, p. 26)

And the Australian Livestock Export Corporation (LiveCorp) observed that:

... there has been widespread transformation across Australia's markets and the involvement of industry and exporters in supply chains. The introduction of ESCAS immediately expanded the responsibilities and expectations of livestock exporters into their overseas markets and set minimum standards which needed to be achieved. The scope and nature of this legal obligation is unique in any international export context. (sub. DR300, p. 16)

Similarly, the Australian Livestock Exporters' Council (sub. 78) said that ESCAS has achieved its aim of regulating the export of livestock along the supply chain to provide a greater level of assurance of animal welfare. However, both the Australian Livestock

Exporters' Council and LiveCorp suggested that the benefits of the system are achieved with significant costs and adjustment for the industry (discussed further below).

Participants did not want to see a return to the system prior to the introduction of the ESCAS in 2011, although some proposed that live exports be banned or phased out and replaced with a processed meat trade (Animals Australia, sub. 53; Humane Society International, sub. DR253; Lyndell Whyte, sub. DR180; Margaret A Clinch, sub. DR150; Vets Against Live Export, sub. DR199; Vegan Australia, sub. 25). The Commission also received a large number of brief submissions from individuals who proposed that live exports be banned (Animal Welfare Brief Submissions 2). And there have been renewed calls for a ban on live exports following reports of inappropriate handling and slaughter of cattle at ESCAS facilities in Vietnam in June 2016.

A ban on live exports could lead to several outcomes, with different implications for animal welfare. It is conceivable that Australian exports of refrigerated meat could replace live exports over time. An economic analysis of live cattle exports by ACIL Tasman suggested that in Indonesia the majority of growth in demand will come from a rising, affluent, urban middle class (this is consistent with the consumption pattern in most developing countries). Rising middle classes have preferences for higher quality meat products sold in convenient ways in modern retail outlets (ACIL Tasman 2012).

Australia is continuing to develop a significant trade in meat products, but a lack of refrigeration and cold chain facilities, as well as cultural preferences for freshly slaughtered meat, could preclude Australia from servicing all of its export markets with processed meat products (DAWR 2015p), at least in the short to medium term. (This situation is likely to change over time as GDP and incomes grow and infrastructure and refrigeration improves). Accordingly, there is a risk that a ban on live exports from Australia would, in the short to medium term, induce increased livestock exports from countries with lower welfare regulations. So, perversely, a ban on live exports could actually result in poorer animal welfare outcomes.

At the same time, if not designed and implemented well, any regulatory arrangement that seeks to improve the welfare of Australian animals in export markets could unnecessarily increase the costs of Australian live exports. If these costs cannot be absorbed by exporters or passed through in final prices, there is a risk that buyers could substitute to exports from countries with lower animal welfare regulations.

An important policy question is whether regulatory arrangements can effectively manage the welfare of Australian live exports without imposing costs that lead to a substitution to exports from other countries.

That said, if regulation is unable to effectively address the welfare risks for live exports (both during the voyage and in export supply chains), then the Australian Government could still decide to prohibit the trade on ethical grounds if this aligns with the expectations of the Australian community.

Is the ESCAS meeting its objectives?

The ESCAS was introduced to meet the dual objectives of:

- providing assurances to the Australian community that the welfare of animals exported from Australia is maintained through to the point of slaughter in the importing country
- facilitating the livestock export trade so that exporters can increase market share overseas.

Commenting on the objectives of the ESCAS, LiveCorp said:

... a significant gap in the current ESCAS regulation is the lack of a clear objective and guidance or principles for decision making/discretions and an overt recognition within the live export laws of the regulator's need to balance legitimate social and economic goals, and how this should be achieved. (sub. 75, p. 23)

LiveCorp also said that without a legislated objective there is a perception that the regulator has primarily drawn its purpose from the discretion allocated to the Secretary under the Export Control (Animals) Order 2004 — which sets out the ESCAS and is made under regulations to the *Export Control Act 1982* (Cwth). However, such an approach provides regulatory flexibility and enables rules to be more easily adapted to changing circumstances. Regulatory guidance can be provided to help provide certainty to livestock exporters about how any regulatory discretion may be used. Indeed, guidance in the form of export advisory notices and guidelines has been developed that outlines the regulatory requirements and compliance strategy underpinning the ESCAS (discussed further below).

Some evidence of improved welfare outcomes for live exports

In a 2015 Australian government review of the ESCAS, exporters and importing countries were reported as saying that the ESCAS had led to greater efficiency in processing animals at slaughter, as well as improved animal welfare outcomes. For example, a Philippines importer was reported as noting that the ESCAS had improved staff knowledge and contributed to the establishment of procedures for feedlot and meat processing facilities (Commonwealth of Australia 2015a).

The livestock export industry has also made substantial investments in infrastructure and training and systems to meet ESCAS requirements.

To support this expanded responsibility and obligation, the industry substantively invested and committed to training, systems, infrastructure and technologies to meet these animal welfare, control and traceability requirements. For example, this included extensive training in handling and slaughter (over 10 000 people), the development and introduction of Standard Operating Procedures to meet minimum standards (such as for confirmation of death or lack of consciousness), the installation of new and improved infrastructure such as restraint boxes, crushes, races, stunning devices etc; and technologies and systems for control and traceability (including NLIS tag readers and CCTV). (LiveCorp, sub. DR300, p. 16)

Animals Australia acknowledged that welfare for Australian live exports has improved following the introduction of the ESCAS (sub. 53, attachment). While retaining its policy position that live exports should be replaced by carcass-only trade, Animals Australia suggested that some Australian exporters are now more proactive in securing improved treatment of exported animals. It referred to Indonesia and the broad implementation of stunning as an important example of this. Between July 2011 to September 2013, it is estimated that about 90 per cent of cattle exported to Indonesia were processed in facilities that used pre-slaughter stunning (Commonwealth of Australia 2015a). Pre-slaughter stunning was rarely used prior to 2011.

Despite these developments, some participants point to the number of ESCAS breaches (discussed below), as evidence of a failed regulatory system and an industry that has lost its social license to operate (Humane Society, sub. DR253; Lyndell Whyte, sub. DR180; RSPCA Australia, sub. DR223; Voiceless, sub. DR166). There are also calls for the ESCAS to be strengthened, including through:

- stronger penalties for non-compliance and strengthening of the audit system
- mandatory pre-slaughter stunning and extension of the system to include animals used for breeding purposes.

An independent review of Australia's livestock export trade in 2011 (the Farmer review), found that there would be practical difficulties extending the ESCAS to breeders, and that it would be difficult, costly and intrusive for industry or regulators to maintain a 'line of sight' over the many years that breeders may live. The review also noted that international animal welfare standards allow for slaughter with or without stunning and that there was sensitivity (in some countries) about suggestions that Australia might seek to mandate its own standards overseas. However, it was generally accepted that Australia was seeking to ensure, via commercial arrangements, the welfare of Australian animals in accordance with the OIE standards (Farmer 2011).

Live exporters also raised concerns about the costs of the system and called for reforms to reduce the level of oversight by the regulator, including through reliance on industry quality assurance schemes and codes of conduct (Australian Livestock Exporters' Council, sub. 78; Consolidated Pastoral Company, sub. 71; LiveCorp, sub. 75).

Industry concerns about the costs of the ESCAS

Exporters are required to provide a substantial amount of paperwork to DAWR for the ESCAS, including application documents, contracts or control arrangement documents, and traceability procedures and audit reports (Commonwealth of Australia 2015a).

The Pastoralists and Graziers Association of Western Australia (sub. 70) said that livestock exporters are often confronted with requests for differing levels of detail that vary from official to official and consignment to consignment. As a result, exporters are unable to establish standard operating procedures for the ESCAS.

Analysis conducted for LiveCorp by Ernst & Young estimated the costs associated with the ESCAS to be \$22.3 million per annum, which is made up of: administrative costs (69 per cent); substantive compliance costs (27 per cent) and ESCAS charges (4 per cent) — 84 per cent of the substantive compliance costs are estimated to be fixed costs (LiveCorp, sub. 75, attachment 1). However, the report did not address the extent to which these costs represented unnecessary regulatory costs, or whether any costs could be mitigated or avoided (for example, through cost sharing between exporters).

These costs are also substantially higher than previous estimates from DAWR and Meat and Livestock Australia and LiveCorp.

- In 2015, DAWR estimated that the ESCAS had cost about \$18 million per year since 2011 — with \$12 million of these costs incurred by the live export industry and \$6 million by the Australian Government, some of which is cost-recovered from exporters. An additional \$5 million in government support was provided over 2011–13 for private investment in supply chain improvements, including infrastructure upgrades and personnel training (Commonwealth of Australia 2015a).
- A study conducted in 2013-14 by Meat and Livestock Australia and LiveCorp, estimated the economic costs from the ESCAS (per head of livestock) to be between \$0.77 (for sheep) and \$13 (for goats as well as for sheep that are transported by air) (MLA 2014). Based on these estimates and the number of livestock exported in 2013-14, the cost of complying with the ESCAS would be about \$13.2 million per year (LiveCorp, sub. 75, attachment 1).

In an addendum to its report, Ernst & Young suggested several explanations for the differences in the estimates:

- different methodologies (including whether costs were estimated or self-reported)
- the use of different population bases (whether costs were measured per animal or per exporter)
- the fact that some costs of complying with the ESCAS had not been fully realised by the time the earlier studies were undertaken (LiveCorp, sub. 75, attachment 2).

Reforms to reduce the cost and complexity of the ESCAS

The cost and complexity of the ESCAS was acknowledged in the 2015 ESCAS review. The review also raised questions about whether the same animal welfare outcomes could be achieved through a simpler, clearer and ultimately more cost-effective system.

Options to improve the system were identified in the review and some reforms have been introduced, including:

- new auditing arrangements that apply a risk-based (low, medium, or high) approach to determining the frequency of audits for facilities in ESCAS supply chains. Facilities

with a high risk or a history of poor performance will be subject to an increased number of audits while audits for facilities with good performance may be reduced

- allowing the sharing of audits for the same facility or supply chain
- allowing a standing ESCAS approval process so that exporters do not have to submit an ESCAS application for every consignment (notice of intent to export) (Commonwealth of Australia 2015; DAWR, sub. 50; Joyce 2015).

RSPCA Australia (sub. 31) stated that it was consulted on the reforms and that in each case it expressed concerns about the potential for regulatory oversight of the trade to be reduced. RSPCA Australia stated that any benefits in terms of improving efficiencies in regulatory processes must not come at the expense of reductions in animal welfare and that:

Net community benefits in this regard must be conceptualised broadly to include satisfying community concerns for animal welfare. (sub. 31, p. 4)

Managing compliance with ESCAS requirements

Australia has no legal basis or authority to conduct compliance activities in export supply chains or slaughter facilities located in export destination countries. Rather, it relies on notifications of breaches from auditors, exporters and third parties. The inability of DAWR to directly observe activities in foreign supply chains and to assess compliance with the ESCAS is one of the biggest challenges for the regulation of live exports.

Since its inception in August 2011 until the end of October 2016, there have been 116 reported incidents of non-compliance with the ESCAS, involving about 49 000 animals (out of a total of 13.9 million). The number of reported incidents has increased over time — from 5 in 2012 to 43 in 2015 (28 incidents have so far been reported in 2016). Less than half (51) of the reported breaches have come from animal rights groups, the media or third parties, while the remaining 65 have come from exporters themselves, industry reports and audit reports (in one instance) (DAWR, pers. comm., 1 November 2016).

The level of self-reporting by exporters has increased over time, although Animals Australia (sub. 53, attachment) claimed that self-reporting is due to the threat of exposure by animal welfare organisations and that without this threat the level of self-reporting would be much lower. It also claimed that without Animals Australia performing the role of unofficial ‘watchdog’, breaches of the ESCAS in export markets would have gone undetected, but this role is not sustainable for a charity (Animals Australia, sub. 53, attachment).

The main reason for non-compliance is the movement of animals outside of an approved supply chain. According to DAWR, most instances of non-compliance are due to a loss of control of the supply chain (and hence the animals within the supply chain) without establishing any adverse animal welfare outcomes (Commonwealth of Australia 2015a). The 2015 review of the ESCAS stated that non-compliance with ESCAS was higher for

sheep exports, as sheep are not individually identified and are commonly sold for home slaughter in the Middle East — the main market for Australian sheep. Of the 59 reported incidents up to that point — November 2014 — 22 were identified as resulting in adverse or unknown welfare outcomes, involving up to several thousand animals in one instance.

Regulatory action taken as result of complaints that were upheld include changes to export licence conditions, and additional conditions to an ESCAS approval, including increased auditing in, and reporting from, some markets, and restrictions or suspensions of facilities. No suspensions or cancellations of licenses and no criminal sanctions, such as fines or imprisonment, have been imposed on Australian exporters as a result of non-compliance with the ESCAS.

Additional control and traceability standards and auditing requirements have been applied in some export markets. For example, since October 2015, Australian exporters supplying cattle and buffalo to Vietnam have been required to verify effective implementation of the livestock industry's 'six point plan' to address supply chain leakage in Vietnam. The plan includes criteria for management, monitoring, recording and auditing of control and traceability within ESCAS supply chains and facilities, such as use of working real time CCTV at key control points with remote monitoring and recording, and unrestricted access by the exporter and their representative to all facilities within their supply chain (DAWR 2015h).

However, additional requirements do not guarantee that the relevant welfare standards will be met. DAWR is currently investigating allegations of breaches of the ESCAS in supply chains and facilities in Vietnam (where additional requirements are in place). During this investigation the department has suspended 32 facilities and 3 importers (with one facility reinstated as of 31 October 2016). The department also suspended two of the nine exporters from supplying to Vietnam; both these exporters have subsequently been permitted to resume supply to Vietnam under additional conditions (DAWR, pers. comm., 1 November 2016).

Commenting on the administration of the ESCAS in Vietnam, RSPCA Australia said:

The rapid approval of supply chains in Vietnam provides evidence of lax auditing and the rubber stamping of supply chains by the Department of Agriculture and Water Resources. In 2012, just 3353 cattle were shipped to Vietnam; in 2015, that number had jumped to 311,523. The Australian Government now approves nine exporters to send 20-30,000 cattle per month to over 200 facilities. There are now more Australian Government-approved abattoirs in Vietnam than there are abattoirs operating in Australia. Many of these facilities are small, rudimentary operations with the capacity to slaughter only a handful of animals per day ...

Such rapid expansion in such high risk conditions could only be made possible via a process of rubber stamping supply chains, and this has played out in the country's compliance record. Exporters have more recorded breaches of ESCAS in Vietnam than in any other country, including evidence of Australian cattle being bludgeoned to death with sledgehammers. Such evidence was presented to the Australian Government in June 2013, May 2015, and most recently, in June 2016. (sub. DR223, p. 4)

There have been other instances of breaches of the ESCAS in supply chains and facilities that have been audited and approved under the ESCAS, including in Israel and Gaza.

Animals Australia (sub. 53, attachment) called for greater penalties for non-compliance. The 2015 review also suggested that the ESCAS be supported by a system of financial or other sanctions (such as enforceable undertakings), rather than relying on the administrative and criminal (strict liability) sanctions currently available.

A broader range of monitoring, investigation and performance powers to deal with non-compliance (including infringement notices, enforceable undertakings and civil penalties) are currently being considered as part of stage two of the Australian Government's review of agricultural export legislation. Stage two reforms are expected to take place during 2016 and 2017 so that implementation can occur before April 2020 (when the delegated legislation will cease). These reforms are likely to provide a more effective suite of tools to manage instances of non-compliance with the ESCAS. DAWR stated that expanding the range of sanctions will provide effective enforcement tools that can be applied proportionately to a breach or an act of non-compliance (DAWR 2015j).

The independence and competence of auditors

Enforcement of the ESCAS relies on a system of independent audits (box 5.14) and reports from exporters or third parties. The independence and competence of the auditors employed under the ESCAS was questioned by Animals Australia:

The auditors are selected, paid for, and retained by exporters, and their audit reports are provided to the exporters prior to being submitted to DA. This puts them in the category of second-party audits (at best), and certainly cannot provide the independence of a third-party audit. (sub. 53, attachment, p. 3)

RSPCA Australia also raised concerns about the veracity of audits conducted under the ESCAS stating that 'auditors are appointed by the exporters themselves and their audit reports have been found wanting on many occasions' (sub. DR223, p. 4).

There has been an increase in the number of exporters addressing and resolving non-compliance before the audit is submitted to the department. The Australian Government stated that this outcome is in line with the principles of the ESCAS — to detect, manage and prevent non-compliance — and for this reason, there are few audit reports with non-compliance that have not had corrective action taken. But as acknowledged in the 2015 ESCAS review, audits provide an assessment at a single point in time so it is possible that non-compliance occurs outside an auditor's visit (Commonwealth of Australia 2015a).

Box 5.14 **Auditing under the ESCAS**

There are two main types of auditing requirements under the ESCAS.

- The independent initial audit report is required as part of an exporter's application for an ESCAS approval for a new supply chain and new facilities for existing supply chains.
- The independent performance audit report is provided by the exporter on the performance of the supply chain.

Audits report on an exporter's control of the supply chain, the traceability system, and whether World Organisation for Animal Health recommendations for animal welfare can be (in the case of an initial audit) or have been (for performance audits) met. The frequency of performance audits (annual, half yearly or quarterly) is determined using a risk-based auditing schedule based on the type of facility, its inherent risks and the actions and compliance history of exporters. Exporters may share audit reports to minimise costs, provided each exporter submits an audit report that references their name. Audit reports must be provided to the Department of Agriculture and Water Resources within one month of completion.

Independent auditors must possess the necessary accreditation, qualifications and skills to be accepted as an ESCAS auditor by the Department of Agriculture and Water Resources. The auditing company must have independence, no conflict of interest and possess an appropriate level of competence (through qualifications and expertise) accredited (to an international standard) by an appropriate authority, such as a member of the international body for accreditation of Conformity Assessment Bodies — the International Accreditation Forum. An example of an authority that provides accreditation is the Joint Accreditation System — Australia and New Zealand. The Department requires evidence that the auditing company meets these requirements prior to accepting an independent audit report.

Source: Department of Agriculture and Water Resources (2015d).

To be approved as an auditor for the ESCAS, the auditor must have independence, no conflict of interest, and possess an appropriate level of competence (accredited by an appropriate authority). The regulator should satisfy itself that such criteria have been met, and continue to be met, especially where concerns are raised by third-parties about auditor competence or independence.

DAWR could require, as part of its audit policy, that auditors are regularly rotated, or replaced where it is found that auditors are not performing to the standards required by their accreditation.¹⁸ Depending on the frequency of audits and the risk status of the relevant facility, auditors could be rotated on an annual or biannual basis. The benefits of rotating auditors, in terms of promoting independence, would need to be weighed against the potential costs from loss of auditor knowledge, experience and quality.

DAWR could also select (and potentially appoint) which third-party auditors or audit companies can be used under the ESCAS, with exporters paying full cost recovery fees for

¹⁸ For example, Division 5 Part 2M of the *Corporations Act 2001 (Cwlth)* states that an individual auditor or authorised audit company must not play a significant role in the audit of a particular listed company or listed registered scheme for more than five successive financial years. Auditors for companies are appointed by the Board and paid by the company.

audits (as proposed by Animals Australia (sub. 53, attachment)). DAWR could select auditors that have demonstrated training and experience in animal behaviour and animal welfare and auditing of livestock production and processing facilities — expertise in animal welfare is not currently a requirement to be selected as an auditor under the ESCAS. However, direct appointment of auditors by the Department could raise issues if importing countries view this as auditing by the Australian Government.

Options to improve the effectiveness and efficiency of the ESCAS

Both LiveCorp (sub. 75) and the Australian Livestock Exporters' Council (ALEC, sub. 78) proposed reforms to reduce the regulatory burden of the ESCAS (box 5.15). The main concerns underpinning the proposed reforms related to what ALEC defined as:

- lack of clear objective setting for the role, expectations and scope of the operation of the regulator
- failure to define and limit the scope of discretionary powers, allowing for significant regulatory creep
- expectation of infallible performance by exporters
- strict liability and secondary liability for exporter non-compliance
- de facto sanctions applied to exporters where evidence is circumstantial or unproven.

Box 5.15 Reforms to the ESCAS proposed by live exporters

Reforms to the ESCAS proposed by LiveCorp and the Australian Livestock Exporters Council (ALEC) can be broadly grouped into the following categories:

- set clear objectives and principles in governing legislation that articulates the critical balance between social and economic objectives of the trade
- entrench the concept of 'reasonableness' rather than the current requirement of absolute compliance
- provide guidance on the use of discretionary powers and ensure that the government's risk appetite for the trade in livestock is set out in transparent and defined legislation
- refocus the Department of Agriculture and Water Resources on substantive matters rather than micro-management
- expeditiously introduce a regulatory pathway to recognise suitably structured welfare conformance and certification programs and/or equivalence in other regulatory jurisdictions
- establish the level of intervention in a recognised program at a systems level
- reform the current approach to non-compliance assessment and enforcement, including the substantive ties to license approvals, particularly for operational matters.

In addition, ALEC suggested that the substantial public good elements of the ESCAS requires more active recognition and support from government and that government investment in the Livestock Global Assurance System provides an opportunity for this to occur.

Sources: ALEC (sub. 78); LiveCorp (sub. 75).

Both suggested that many of the above issues could be addressed through primary legislation that clearly articulates the objective of the ESCAS, and outlines the role and powers of the regulator.

It is unclear if this approach would provide greater net benefits than other options that could be implemented in the shorter term to reduce the regulatory burden of the ESCAS, particularly given that sanctions for non-compliance have been limited to date. Also, regulatory guidance is already available through export advisory notices and guidelines. For example, DAWR has prepared a number of export advisory notices and guidelines for livestock exporters that outline ESCAS requirements. This includes notices on: risk-based auditing arrangements; standards, requirements, checklists and templates for audits; control and traceability standards; and the ESCAS compliance and investigations strategy, including the regulatory options that may be used (and when) to address non-compliance.

The Commission considers that the greatest scope to reduce the regulatory burden of the ESCAS is through greater cooperation between exporters, including in the auditing process, and recognition of equivalent regulatory standards in importing countries.

Recognising industry assurance schemes and equivalent regulatory regimes

ALEC (sub. 78) raised concerns about ‘micro management’ by DAWR, and suggested that there are duplicative auditing processes and ineffective use of independent auditing.

There is currently scope for duplication of audits between exporters to be reduced through sharing of audit reports. While some exporters have used this option, more extensive use may be limited by commercial factors associated with sharing audit reports.

Another way to reduce duplication of audits is to rely on industry quality assurance programs that involve animal welfare assurance and independent auditing. The Sheepmeat Council of Australia and the Cattle Council of Australia (sub. 88, attachment), for example, suggested that the ESCAS requires simplification with transition to a co-regulatory model.

The Livestock Global Assurance Program (LGAP) is being developed by the live export industry (with funding from Meat and Livestock Australia) with the intention that it could be used by Australian exporters as a means of demonstrating regulatory compliance with the ESCAS. The LGAP is intended to be independent of government but recognised as an alternative pathway for live export welfare assurance. The main differences between the LGAP and the ESCAS for exporters are claimed to include:

- greater ability for the LGAP to remove audit duplication than under the ESCAS
- better risk management at the facility level (rather than supply chain level) by allowing facility performance to be monitored on an individual and ongoing basis through standardised mechanisms

-
- responsibility for the day-to-day welfare and management of livestock shared more equitably by the facilities which handle the livestock
 - internal audits used as a standardised risk mitigation tool to better manage what occurs during the time between external audits (or the inter-audit gap)
 - focus on continual improvement, while non-conformities carry consequences (Meat and Livestock Australia 2015).

ALEC (sub. 78) said that the challenge for the Australian Government (if LGAP is implemented by industry) is negotiating the appropriate intersection between the program's independence and the Government's regulatory oversight of the trade.

The Commission understands that the LGAP could be accepted as a co-operative auditing arrangement under existing ESCAS arrangements, if DAWR is satisfied that the LGAP's auditing arrangements satisfy the relevant ESCAS auditing criteria. Recognising equivalent importing countries' livestock welfare regulations could also provide scope to reduce the burden of the ESCAS for Australian exporters operating in those countries. The ESCAS is likely to impose an unnecessary regulatory burden on exporters that are operating in markets that have equivalently high standards of animal welfare. For example, it is unclear whether the additional ESCAS regulations have resulted in any discernible improvements in animal welfare in Japan (Commonwealth of Australia 2015a). That said, the current regulatory burden may not be material for exporters operating in Japan as the move to a risk-based auditing approach has meant that auditing is now only required once per year for facilities and supply chains in Japan.

Exempting countries from the ESCAS would require DAWR to be satisfied that the regulations in other countries are at least equivalent to those of the ESCAS, both in principle and in practice. Difficulties arise where importing countries have regulatory arrangements in place but, in practice, the requirements are not generally enforced.

Overall, the Commission considers that the ESCAS has helped to improve welfare outcomes of Australian live exports in some export markets. The system is complex and there are regulatory costs imposed on exporters, but there is scope for the burden on the industry to be reduced through greater exporter co-operation and sharing of audits. The LGAP could be a means of achieving greater co-operation and reducing costs for exporters.

The LGAP also has the capacity to address some of the auditing issues outlined above. The LGAP program owner (proposed to be a not-for profit membership organisation) would review, appoint, contract and pay qualified certification bodies and auditors directly. There would be no direct relationship between the entity being audited and the certification body or auditor. Internal and unscheduled audits are also part of the LGAP. Auditors will also be required to have a minimum amount of experience and training in the areas of auditing, animal behaviour, health, husbandry and welfare.

Whether the LGAP could be used by exporters to demonstrate compliance with the requirements of the ESCAS depends on whether it can be shown to assure the welfare of Australian live exports in line with the Australian community's values.

The LGAP is still in development and concerns about its likely effectiveness have been raised.

- RSPCA Australia (sub. DR223) acknowledged that some aspects of the LGAP (such as the appointments and skills of auditors) are improvements over the ESCAS. However, it noted that it would be opposed to any 'watering down' of the Australian Government's oversight of the trade, and stressed the need for Government to maintain a strong and direct role.
- Animals Australia (sub. DR268) does not support the LGAP because in its view, it does not provide any improvements for animals over the current ESCAS standards (for example, in relation to use of stunning prior to slaughter), and offers no greater independence in auditing and compliance.
- World Animal Protection (sub. DR137) said reliance on an industry assurance program to meet ESCAS requirements is not warranted as community confidence in the industry's compliance with ESCAS is already extremely low.

How the program will publicly report non-compliance, and how the Government will impose penalties when information is provided to the LGAP program owner (rather than the Government) are key issues to work through before the LGAP can be used to demonstrate regulatory compliance. Also, the LGAP is a voluntary industry initiative and may not be adopted by all exporters. Focusing government resources on its development should not come at the expense of continual review and refinement of the ESCAS — the Commission notes that the Australian Government has announced \$8.3 million of funding for the implementation of the LGAP (Liberal Party of Australia 2016).

It is critical that the community has confidence in the system used to regulate live exports. Incidents of mistreatment of animals in facilities that are within the purview of the ESCAS and that are overseen by the Australian livestock industry reduce community confidence in the trade and the regulator's effectiveness.

The Australian Commission for Animal Welfare (recommendation 5.1) should play a role in live export regulation. At a minimum, this role should involve reviewing the performance of the ESCAS, including the performance, independence and effectiveness of the auditing arrangements, and making recommendations for reform. Mandatory rotation of auditors (as discussed above), and specific requirements for auditors to have experience and training in animal health, husbandry and welfare, could improve the effectiveness of the auditing arrangements. These options should be considered in the first independent performance review of the ESCAS.

It should also review other aspects of the regulatory system for live exports, including the Australian Standards for the Export of Livestock. Although not a focus of analysis of this

inquiry, the Commission notes concerns raised about these standards, including with respect to the accreditation and independence of veterinarians on board live export vessels (AVA, trans. pp. 395–396).

Regular, independent reviews will help to address any perceived or actual conflict of interest in livestock export regulatory arrangements, and ultimately help to further improve the welfare of Australian live exports. It is important that the live export regulatory system is independently reviewed irrespective of whether the Australian Government establishes an independent organisation for farm animal welfare. If the Australian Commission for Animal Welfare is not established in time to review livestock export regulations by 2017 then the Australian Government should appoint an independent expert or committee to undertake the first review.

RECOMMENDATION 5.3

The Australian Government should appoint an independent expert or committee to publicly inquire and report, by the end of 2017, on the efficiency and effectiveness of the livestock export regulatory system.

The review should include an assessment and make recommendations for reform on:

- industry-developed initiatives, such as quality assurance programs, as a means of compliance with livestock export regulations
- recognition of equivalence of regulatory arrangements in livestock export markets
- the effectiveness of the auditing arrangements used to demonstrate compliance with livestock export regulatory requirements, including mandatory rotation of auditors and requirements for auditors to have expertise in animal welfare and animal husbandry.

If the Australian Commission for Animal Welfare (recommendation 5.1) is established in time, it should undertake the first review. It should also undertake subsequent regular reviews of the livestock export regulatory system.

6 Regulation of technologies

Key points

- New agricultural technologies can improve the productivity, competitiveness and safety of farm businesses, as well as the quality of agricultural products. Any unnecessary barriers to the development, access and use of technologies should be removed.
- The Australian Government regulates genetically modified (GM) organisms and products to protect human health and safety and the environment. The regulatory frameworks and processes of the Office of the Gene Technology Regulator (OGTR) and Food Standards Australia New Zealand (FSANZ) adhere to international standards and are sufficiently rigorous to protect the health and safety of the Australian community and the environment.
- Scientific evidence indicates that GM organisms and foods approved by the OGTR and FSANZ are as safe as their non-GM counterparts.
- States and territories can regulate GM organisms to address market access and trade concerns, and some jurisdictions have imposed partial or complete moratoria on the cultivation of GM crops.
- The coexistence of GM and non-GM crops is possible, and has been demonstrated in Australia and internationally. This brings into question the rationale for banning GM crops. The ability for GM and non-GM crops to coexist means that if there are any market access and trade advantages (such as price premiums) for non-GM crops, these can still be achieved when GM crops are in the market. Moratoria on GM crops should be removed.
- There are some concerns within the community about GM technology. Many of these relate to the health and safety of GM food, and are likely to be based on a misunderstanding or lack of knowledge of the risks and benefits of GM technology and regulation to protect health and safety. However, there are other concerns that are broader and relate to social and ethical issues.
- Effective communication and public engagement by government agencies may help to address community concerns about GM technology where these are based on a lack of information or understanding. Government agencies responsible for food policy and regulation should coordinate communication strategies designed to increase public knowledge about the benefits and risks of, and the regulatory framework for, GM technology.
- Regulations must be flexible and responsive to facilitate the adoption of new technologies that enable Australia to remain competitive. The OGTR is currently conducting a technical review of its regulations to clarify if new breeding techniques fall under the definition of a GM organism.

The technologies used by farm businesses have evolved over thousands of years, and will continue to do so. From the early days of simple mechanical farm equipment powered by humans, horses and other domesticated animals, agricultural technology transitioned to tractors powered by the internal combustion engine and then to the vast range of complex

farm machinery, electronic devices, software applications and genetic engineering techniques used today. Technology has also changed the way farmers operate their machines — remote computer monitoring systems, global positioning systems and self-driving tractors mean that farm machines can be used with less human involvement (box 6.1). Many of these new technologies require access to the internet.

Technology plays an important role in improving productivity, competitiveness and safety in the agricultural sector, as well as the quality of agricultural products. For example:

- biotechnology has allowed plants that are resistant to certain pests to be created, decreasing the need for pesticides
- early testing suggests that the use of drones is likely to reduce the financial costs and safety risks involved in monitoring and gathering cattle on large farms (CSIRO 2015d).

In relation to the regulation of agricultural technologies, the Commission heard concerns about genetic modification (GM) technology, new plant breeding techniques and drones. Participants also raised concerns about the lack of access to telecommunications infrastructure in regional Australia.

6.1 Why are governments involved?

Governments regulate agricultural technologies because of their potential risk to human health and safety and the environment. For example:

- the risks associated with new technologies can be unknown, either because of a lack of industry experience, or because of inadequate scientific information
- consumers can be unaware that certain technologies are used, or unable to verify that they are used safely, because they do not observe the production process. And when they can observe the production process, they may not know what constitutes safe use (however, technological advancements may also be able to help overcome information asymmetries by providing better and more timely information)
- the use of certain technologies can have (positive or negative) spillovers that affect neighbouring farms or other properties.

Governments can intervene in various ways, including by developing and administering legislation to ban or control the use of technologies, developing policies and codes of practice, and funding research activities. Research activities are sometimes co-funded through industry levies (box 6.2).

Box 6.1 **Examples of agricultural technologies**

Precision agriculture

Precision agriculture involves observing variations across the landscape of a farm, and varying farming practices accordingly (CSIRO 2016a). This requires collecting data across large areas of land about soil types, crop or animal performance and other environmental variables. The advent of technologies, such as global positioning systems and drones, has enabled the collection of such data, and has increased farmers' productivity by, for example, allowing them to apply fertilizer and water only where it is needed (The University of Sydney 2016; Thomasson 2015). This also reduces costs and the environmental impact of agricultural activity.

Automation in the dairy sector

Technologies currently used in the Australian dairy industry include automatic gate timers, walkover weigh scale systems and automatic feeding and milking systems (Dairy Australia 2016). Automatic milking systems reduce the amount of labour required for milk harvesting and provide greater flexibility around milking times and milking frequency.

Each cow is fitted with a unique electronic identification tag that allows the cow to be 'recognised' electronically at gates and in the milking unit. A robotic arm cleans the teats, attaches the milking cups and sprays the teats of each cow. Each quarter is milked individually and cups are removed based on the milk flow from each teat, thereby minimising overmilking. (Dairy Australia 2014, p. 1)

Useful data on milk quality, milk output, feed intake and cow traffic are collected in the process.

Use of mapping technology to improve the efficiency of livestock transport

The CSIRO (2015c) is developing modelling tools that can be used to improve the efficiency of transporting livestock from Northern Australia to abattoirs on the east coast. (Moving northern Australian cattle from farm to market can involve distances of up to 2500 kilometres, with land transport costs making up to 35 per cent of the market price of livestock). Decision support tools help identify the least cost route by incorporating data from 50 000 properties, 88 000 origin-to-destination combinations, and over 1.5 million recorded vehicle movements, and integrating factors such as truck configuration, livestock weight and regulatory constraints. According to the CSIRO (2015c), these tools have the potential to help reduce transport costs incurred by northern beef producers by over \$10 million annually.

Other technologies in development

The CSIRO is also developing:

- thermal remote sensing technology on unmanned aerial vehicles (drones) to determine the location of livestock in large rangelands — this may prove to be a reliable and cost-effective system for identifying animals in extensive landscapes (2015d)
- biosensors that mimic the smell receptors of animals to detect and measure odours and chemicals in different substances — this technology could be used to detect insect contamination in grain and detect other pests, weeds or diseases in commodities (2015b).

Box 6.2 **The use of levies in the agricultural sector**

Levies (imposed on domestic products) and charges (imposed on imported and exported products) are used by some primary industries to support research and development (R&D), marketing and promotion, residue testing, and plant and animal health programs. These levies and charges are generally initiated by an industry body that has identified the need for funding to respond to a specific problem or opportunity.

Levies are sometimes used to fund rural Research and Development Corporations (RDCs). RDCs allow Australian Government and primary producers to co-invest in R&D — the Australian Government matches industry funding up to 0.5 per cent of the gross value of production in a particular industry. There are currently 15 RDCs, five of which are Commonwealth statutory bodies. The remainder are industry-owned.

The Commission reviewed the RDC model in 2011 and found that the main rationale for government intervention in rural R&D was to address ‘spillover’ effects which would otherwise discourage producers from investing in socially valuable research. The Commission noted that while government intervention may be justified to address spillover-related market failures, it need not take the form of public funding support. For example, governments could intervene by protecting intellectual property or compelling all industry participants to contribute to the cost of R&D through levies. However, the Commission concluded that, in many circumstances, other mechanisms were unlikely to fully correct for under-investment by the private sector, and therefore public support was warranted.

The Commission also recommended reducing the cap on government matching contributions from 0.5 per cent to 0.25 per cent of an industry’s gross value of production. The Australian Government did not adopt the recommendation.

Sources: DAFF (2009); DAWR (2015o, 2015v); PC (2011e).

6.2 Regulating genetically modified organisms and products

Genetic modification involves using biotechnology to change the genes of plant and animal organisms. In Australia, the only genetically modified (GM) crops that have been approved for commercial release to date are certain varieties of canola and cotton that have been altered to be resistant to particular pests and/or herbicides (DAWR 2015e). Field trials are currently underway for GM banana, barley, perennial ryegrass, safflower, sugarcane, wheat and white clover (ABCA 2015).

In addition, some GM products can be used:

- as ingredients in foods — including GM varieties of soybean, corn, potato, sugar beet, wheat and rice (FSANZ 2016c, 2016d)
- for the production of stockfeed — including GM cottonseed meal, imported GM soybean and GM canola meal (Ansell and McGinn 2009; FSANZ 2016d).

There are benefits for both the agricultural sector and consumers from GM technology. For example, GM technology can be used to create crops and other plants that are more resistant to weeds and pests and increase crop yields. The use of biotechnology (including genetic modification) and best practice pest management has allowed Australian cotton growers to reduce pesticide use by more than 90 per cent over the last 10 years (NFF, sub. 61).

GM technology can also improve the nutritional value, shelf life and other quality characteristics of food. For example, high oleic acid soybean oil, made from GM soybeans, offers improved nutritional properties compared to conventional soybean oil (FAO 2016b).

However, there may also be risks associated with GM technology. Risks to human health could include the allergenicity of new genetically modified organisms (GMOs) and the possibility of gene transfer (for example, if antibiotic resistance genes used as gene markers were to be transferred to cells of the human body) (WHO 2016). Risks to the environment could include the persistence of the modified gene after crops have been harvested and the susceptibility of non-target organisms, such as insects that are not pests (WHO 2016).

Regulation is put in place to manage these risks — in Australia, approved GM foods must be assessed to be at least as safe as their conventional counterparts, and licences for dealings with GMOs are only issued where risks to human health, safety and the environment can be managed. GM technology in Australia is regulated at the Commonwealth level by:

- the Office of the Gene Technology Regulator (OGTR) for GMOs such as seeds and crops
- Food Standards Australia New Zealand (FSANZ) for GM food
- the Australian Pesticides and Veterinary Medicines Authority (APVMA) for agvet chemicals containing GM material
- the Therapeutic Goods Administration, the National Industrial Chemicals Notification and Assessment Scheme and the Department of Agriculture and Water Resources for other GM products.

In addition, states and territories can impose bans or ‘moratoria’ on the cultivation of GM crops for market access and trade reasons, but not for safety reasons. These moratoria were the main technology-related regulatory issue raised by participants to this inquiry.

This section discusses the regulatory arrangements for GM technology, and assesses the need for state-based moratoria. Concerns regarding the mandatory labelling of GM foods are discussed in chapter 10.

The OGTR assesses GMOs for health, safety and environmental risks

The Gene Technology Regulator is an independent statutory office holder responsible for administering the *Gene Technology Act 2000* (Cwlth) and its associated regulations. The objective of the Gene Technology Act is to:

... protect the health and safety of people, and to protect the environment, by identifying risks posed by or as a result of gene technology, and by managing those risks through regulating certain dealings with GMOs.

The OGTR applies protective measures at all stages of the regulation of gene technology. Dealings with GMOs are prohibited unless authorised under the Act, and before a dealing with a GMO is authorised, the OGTR prepares risk assessments and risk management plans that rely on credible evidence and consideration of uncertainty (OGTR 2013) (box 6.3). As the OGTR said:

The effect of the gene technology regulatory scheme is to create a science-based system to assess and regulate the safe development, trialling and commercial release of GM plants and animals that can be used in agriculture (and other sectors). The scheme touches all stages of the research and development pipeline from proof of concept through to commercial release. The assessment of applications and decisions about licence conditions are based on current available science and a published, well respected Risk Analysis Framework which ensures consistent decision making. (sub. 76, p. 3)

Box 6.3 The OGTR's risk assessments

In assessing the risks posed by a GMO and identifying risk management controls, the OGTR implements a risk analysis framework based on the *Australian/New Zealand Standard ISO 31000:2009 Risk Management — Principles and guidelines*. Risk assessments provide a structured, reasoned approach to consider the potential harm from certain activities with GMOs, and include consideration of the following key questions.

- What could go wrong? Consideration is given to a range of circumstances where a GMO could harm people or the environment.
- How serious could the harm be? An assessment is made about the seriousness of potential harm using risk scenarios.
- How likely is the harm to occur? An assessment is made about the likelihood of potential harm using risk scenarios.
- What is the level of concern? The risk is assessed as negligible, low, moderate or high depending on the seriousness of the harm and the likelihood of it occurring.

Sources: OGTR (sub. 76, 2013).

Licences for dealings with GMOs can be accompanied by specific conditions to manage risk. In accordance with subsection 56(1) of the Gene Technology Act, the Gene Technology Regulator must not issue a licence for a dealing with a GMO unless satisfied that the risks to human health, safety and the environment can be managed. The Gene Technology Regulator also has powers to suspend, vary or cancel a licence.

The OGTR said that:

In each of the cases for the commercial growing of GMOs, the regulator has found that the weight of evidence that there is shows that these GMOs are as safe as their conventional counterparts. (trans., p. 380)

FSANZ assesses genetically modified foods for health and safety risks

FSANZ regulates GM foods under Standard 1.5.2 of the Food Standards Code. Under this standard, GM foods require mandatory pre-market approval, including a food safety assessment, before being released into the food supply chain. FSANZ's foremost objective is the protection of public health and safety, and it undertakes GM food safety assessments in accordance with internationally established scientific principles and guidelines developed through organisations such as the World Health Organization and the OECD (FSANZ 2016e) (box 6.4).

Box 6.4 Food safety assessments for GM foods

Safety assessments undertaken by Food Standards Australia New Zealand are characterised by:

- a case-by-case consideration of GM foods. This allows each food to be assessed according to its particular characteristics, including the type of genetic modification
- consideration of both the intended and unintended effects of genetic modification. For example, the intended effect of genetic modification of an organism may be a new trait such as insect protection, but unintended effects such as changed nutritional characteristics may also arise. Both of these effects are evaluated
- comparisons with conventional foods with an acceptable standard of safety. This enables the identification of similarities and differences between the GM food and an appropriate comparator, and allows identified differences to be characterised to determine any potential safety or nutritional issues.

Source: FSANZ (2016e).

FSANZ (2016e) states that 'gene technology has not been shown to introduce any new or altered hazards into the food supply' — a view that is comprehensively shared by international regulators and organisations. For example:

- the US Food and Drug Administration stated that:
... credible evidence has demonstrated that foods from the [genetically engineered] plant varieties marketed to date are as safe as comparable, non-GE foods. (2015a)
- the World Health Organization recently reported that:
GM foods currently available on the international market have passed safety assessments and are not likely to present risks for human health. In addition, no effects on human health have been shown as a result of the consumption of such foods by the general population in the countries where they have been approved. (2016)

-
- the OECD also said that:

Worldwide, many people are eating GM foods (especially in North America and China) with no adverse effects on human health having been reported in the peer-reviewed scientific literature. (2000, p. 8)

FSANZ also actively monitors the scientific literature and other information about GM foods to determine if it needs to revise its safety assessments (FSANZ 2015e).

How effective is the regulation of the health and safety of GMOs?

There have been two independent reviews of the Gene Technology Act since its commencement in 2000.

- The first review in 2005-06 found that the object of the Act — to protect human health and safety and the environment — was being achieved, and that the regulatory framework was appropriate and applied effectively (Timbs, Adams and Rogers 2006).
- The second review in 2011 found that the national scheme for the regulation of gene technology was effective and efficient (Allen Consulting Group 2011).

Both reviews recommended minor and technical changes to improve the operation of the Act, and some amendments — such as the discontinuation of quarterly reporting to the Minister for Health on activities under the Act — were made as a result.

FSANZ has also commissioned external reviews of its regulatory processes (box 6.5). Both reviews found that FSANZ's risk assessment processes were scientifically rigorous.

Box 6.5 External reviews of FSANZ's risk assessment processes

In 2008, an international expert from Canada, Dr. William Yan, conducted a peer review of FSANZ's GM food safety assessment procedures. Dr. Yan found that FSANZ's safety assessments were based on concepts and principles developed and recognised internationally, and that:

The GM food safety assessment process employed by FSANZ is scientifically rigorous ... and is one of the most, if not the most transparent in the world. (Yan 2009, p. 1)

Dr. Yan also made several recommendations, including that FSANZ maintain scientific expertise to enable it to address future challenges. In response, FSANZ outlined proposed actions that addressed all recommendations.

In 2012, an expert in toxicology, public health and epidemiology from the World Health Organization, Dr Angelika Tritscher, conducted an external peer review on FSANZ's risk assessment practices and procedures. Dr. Tritscher confirmed that the methods and approach used by FSANZ for the safety assessment of GM food were consistent with international guidelines, and concluded that:

As judged by a previous external assessment, FSANZ's risk assessment science for GM food is considered to be strong. (Tritscher 2012, p. 30)

Industry participants generally expressed support for the science-based approaches of the OGTR and FSANZ (AusBiotech, sub. 20; Australian Dairy Farmers, sub. 63; CropLife Australia, sub. 14; NSW Farmers' Association, sub. 72; WAFarmers, sub. DR226). For example, the Producers Forum said that:

Australia's Office of the Gene Technology Regulator (OGTR) is recognised as one of the best in the world and along with Food Standards Australia New Zealand (FSANZ) provides us with solid assurances that GM crops and foods are no less safe than their non-GM counterparts. (sub. DR277, p. 2)

Similarly, CropLife Australia submitted that it:

... firmly believes that both the OGTR and FSANZ are robust world-class regulators; and are recognised globally for their expertise in gene technology regulation. This is evidenced by the amount of requests they receive to engage in regulatory capacity building, both in the Asian region and globally. (sub. DR156, p. 2)

However, some participants raised concerns about the OGTR's and FSANZ's approach to risk assessment, as well as the health and safety of GM foods more generally (box 6.6). The main concerns were that:

- the use of the weedkiller glyphosate on GM crops is harmful to human health (Chris Coughran, sub. DR93; Madge Australia, sub. DR224; Michelle McLaren, sub. DR256; Susan Moore, sub. DR168)
- GM foods could contain new allergens (Gene Ethics, sub. DR243, personal responses and views on gene technology)
- a precautionary approach or the precautionary principle is not being applied in the regulation of GMOs (Australian Food Sovereignty Alliance, sub. DR211; Chris Coughran, sub. DR93; Gene Ethics, sub. DR243)
- regulator risk analyses rely on data provided by applicants rather than their own scientific assessments and data (Gene Ethics, sub. DR243; Network of Concerned Farmers, sub. DR128; Miguel Pez, sub. DR177)
- FSANZ does not require animal testing for GM food (Nathan Laurent, sub. DR133; Madge Australia, sub. DR224)
- there is duplication between the processes and requirements of the OGTR and the APVMA (CropLife Australia, sub. 14; Veterinary Manufacturers and Distributors Association, sub. 79)
- the concept of 'substantial equivalence' is scientifically invalid (Gene Ethics, sub. DR243; Madge Australia, sub. DR224; Michelle McLaren, sub. DR256).

Many of these concerns appeared to be based on a misunderstanding or lack of knowledge of the relevant regulatory processes for GM technology in Australia. Insofar as this is the case, more effective communication on the risk and benefits of GM technology could increase understanding and acceptance of GM technology (discussed below).

Box 6.6 Selected concerns regarding gene technology**The use of glyphosate on GM crops is harmful to human health**

While many participants expressed general concerns about the health and safety of GM foods (for example, Michael Burns, sub. DR280; personal responses and views on gene technology; Miguel Pez, sub. DR177; Estelle Ross, sub. DR100), some were concerned specifically with the use of glyphosate.

Glyphosate is the weedkiller that some GM crops have been modified to be resistant against. In 2015, the International Agency for Research on Cancer, an agency affiliated with the World Health Organization (WHO), released a monograph classifying glyphosate as '*probably carcinogenic to humans*' (2015, p. 78). However, in May 2016, a joint Food and Agriculture Organisation (FAO) and WHO meeting on pesticide residues assessed the weight of evidence regarding glyphosate, and concluded that it 'is unlikely to pose a carcinogenic risk to humans from exposure through the diet' (FAO and WHO 2016, p. 2).

Many regulatory agencies have also concluded that glyphosate is unlikely to pose a carcinogenic hazard or risk to humans (EFSA 2015; Health Canada 2015; Temple 2016; US EPA 2016). In Australia, the APVMA's assessment is that glyphosate does not pose a cancer risk to humans, and is safe to use as per the label instructions (APVMA 2015c).

GM foods could contain new allergens

Genetic modification typically results in the expression of one or more new proteins in the organism, and these new proteins may be allergens. For this reason, one of the main components of FSANZ's food safety assessment for GM foods is a consideration of the potential allergenicity of the food (FSANZ 2016d). Each food is assessed on a case-by-case basis, and so far no approved GM foods in Australia have been found to have allergenic effects (FSANZ 2016e; Victorian Government 2013).

A precautionary approach or the precautionary principle is not being applied

The gene technology regulatory scheme is by nature precautionary. Precautionary measures are applied at every stage of the regulation of GMOs, including the need for risk assessments before a licence is granted, and controlled licences that place restrictions on the growing of new GMOs (this enables sufficient knowledge and experience to be gathered while minimising risks) (OGTR, sub. DR265). Uncertainty should not be used as a reason for restricting technologies which have been shown to provide benefits to the community and where potential risks can be managed.

Also, there is a difference between applying precautionary measures and invoking the precautionary principle. The precautionary principle (as per the 1992 United Nations Environmental Program Rio Declaration) is included in the Gene Technology Act, and applies when there are threats of serious or irreversible environmental damage. To date, no such situation has been identified in the applications assessed by the OGTR (sub. DR265).

(Continued next page)

Box 6.6 (continued)

Regulator risk analyses rely on data provided by applicants

In addition to critically evaluating the data provided by licence applicants (typically biotechnology companies), the OGTR gathers evidence from published literature, and consults with members of the Gene Technology Advisory Committee and other agencies. The Gene Technology Regulator also has the power to commission independent scientific research where a gap in the literature is identified (OGTR, sub. DR256).

Further, when an applicant seeks approval for a new GM food, the data they provide to FSANZ must be generated according to quality assurance guidelines based on internationally accepted protocols, such as procedures consistent with Good Laboratory Practice (FSANZ 2016e). The data must also stand up to external scrutiny, such as independent audits. FSANZ complements data provided by applicants with information from the scientific literature, other applications, government agencies and the public. FSANZ highlighted that paper reviews are a standard scientific method of evaluation used by regulators around the world for a variety of products, including food, drugs and agricultural and veterinary chemicals (FSANZ 2016e).

FSANZ does not require animal testing for GM food

In 2007, FSANZ convened an expert panel to consider whether animal testing for GM foods was required. The panel recommended that FSANZ continue its case-by-case assessment based on the best available science (FSANZ 2007b). FSANZ does not require animal toxicity testing because it considers that:

In the majority of circumstances, animal toxicity studies with whole foods are not likely to contribute any further useful information to the safety assessment ... (2007a, p. 17)

While animal toxicity testing can be useful in identifying potential adverse effects of chemical substances, whole foods are a complex mixture of chemical substances. This means that it could be difficult to attribute adverse effects observed in toxicity testing to a particular food characteristic, including GM status (FSANZ 2007a). That said, where animal toxicity studies already exist, applicants are expected to provide these to FSANZ as part of their application.

There is duplication between the OGTR and the APVMA

In some instances, GMOs or products could fall under the remit of both the OGTR and the APVMA. Examples include veterinary GM vaccines and GM plants that have been altered to encode pesticides. The Veterinary Manufacturers and Distributors Association (sub. 79) said that in one case, a vaccine used in intensively farmed animals was required to comply with both OGTR and APVMA requirements, resulting in a cost of more than \$2 million.

Under their respective legislation, the APVMA and OGTR must consult with each other on applications involving a GMO (in the case of the APVMA) or before granting a licence for a dealing with a GMO (in the case of the OGTR). The OGTR (sub. DR265) said that wherever possible, both agencies coordinate decision making.

The APVMA (sub. DR228) also said that it works closely with the OGTR to align common requirements and ensure that there are no repeated assessments. It also said that it would continue to seek advice from the OGTR as part of agvet chemical registration activities, regardless of whether there were separate requirements under the two frameworks.

(Continued next page)

Box 6.6 (continued)

The concept of ‘substantial equivalence’ is scientifically invalid

When determining the safety of GM foods, FSANZ assesses if the food is ‘substantially equivalent’ to its non-GM counterpart. This concept is contained within the Codex Alimentarius — a set of harmonised international food standards developed by the WHO and FAO — and is used by many overseas regulators including the US Food and Drug Administration, the Canadian Food Inspection Agency and the European Food Safety Authority. In 2007, a joint FAO and WHO Expert Consultation on Safety Aspects of Genetically Modified Foods of Plant Origin re-evaluated the usefulness of the concept of substantial equivalence and concluded that there were presently no alternative strategies that would provide a better assurance of safety of GM foods (FSANZ 2007a).

However, other concerns were raised about issues broader than GM technology as a production technique. For example, some participants associated GM technology with concerns about modern agricultural production and distribution systems. Madge Australia said that ‘agroecology, not industrial GM farming, will feed the world’ (sub. 92, p. 10), and advocated for:

... a rapid and significant shift from conventional, monoculture-based and high external-input-dependent industrial production towards mosaics of sustainable, regenerative production systems that also considerably improve the productivity of small-scale farmers. (sub. 92, p. 11)

Some called for a shift towards organic systems or for support for organic farmers (Michelle McLaren, sub. DR256; Richard Nankin & Rosemary Cousin, sub. DR248; personal views and responses on gene technology).

While some consumers may prefer organic produce, this form of production typically requires more resources — in particular, land — and therefore may not be able to meet the food supply needs of the population. Most of the world’s land that is suitable for farming is already used for this purpose, and therefore increases in production (to meet growing global demand for food) must come from higher yields (The Economist 2016). Yields from organic farming systems have been found to be lower than those from conventional production systems (Seufert, Ramankutty and Foley 2012).

Some participants also expressed distrust in the institutions involved in the regulation, production and distribution of agricultural produce. For example, Chris Coughran said that:

While GMO crops may not be inherently unsafe, from a strictly scientific point of view, the context of their deployment (i.e. the market, solely dedicated to the expansion of private profits) must be considered a critical factor in the likely emergence of adverse effects on human health and the Australian environment. (sub. DR93, p. 1)

Negeen Nichols also said that:

... consumers of GMO food are little more than guinea pigs in a global experiment designed to benefit state and corporate stakeholders. (sub. DR94, p. 2)

This sentiment was commonly expressed by those opposed to GMOs in the personal views and responses on gene technology received by the Commission.

Many were concerned that corporations involved in developing GMOs were engaging in unconscionable, anti-competitive or fraudulent behaviour — for example, by ‘controlling’ the supply of seeds, suppressing information about harmful health effects, or manipulating the media.¹⁹

Madge Australia (sub. 92, sub. DR224) also said that there are conflicts of interest within international organisations and food safety regulators which result in assessments and decisions that are not in the interest of human health and safety and the environment.

In contrast to concerns stemming from a misunderstanding or a lack of knowledge, these types of concerns are likely to be more difficult to address through improved public communication and engagement (discussed below).

The Commission considers that the regulatory frameworks and processes of the OGTR and FSANZ are sufficiently rigorous to protect the health and safety of the Australian community and the environment. These arrangements must keep pace with advances in GM technology to continue to achieve their objectives. The Commission notes that a third statutory review of the Gene Technology Act is due to commence in 2016 or 2017 (OGTR, sub. DR265).

Regulation to address market access and trade concerns

Under the inter-governmental Gene Technology Agreement 2001, state and territory governments have agreed to maintain legislation that corresponds with the Commonwealth Gene Technology Act (OGTR 2014). However, the agreement does not preclude states and territories from introducing their own legislation to address market access and trade concerns associated with producing and marketing GMs, and most have done so. For example, in 2003, after GM canola was approved for commercial release by the OGTR, all states and territories except for Queensland and the Northern Territory enacted moratoria on its cultivation. The moratoria on GM canola in New South Wales and Victoria were

¹⁹ Participants who were concerned that corporations involved in developing GMOs were engaging in unconscionable, anti-competitive or fraudulent behaviour included: Michael Burns (sub. DR280); Gene Ethics (sub. 90); Madge Australia (sub. 92); Richard Nankin & Rosemary Cousin (sub. DR248); Network of Concerned Farmers (sub. DR128); personal views and responses on gene technology; Miguel Pez (sub. DR177); Estelle Ross (sub. DR100); and Slow Food Hobart (sub. DR123).

subsequently lifted in 2008 following recommendations by independent reviews. Western Australia also repealed its moratoria legislation in October 2016.

Partial or complete moratoria on the cultivation of GM crops (including crops other than canola and cotton) remain in New South Wales, South Australia, Tasmania and the ACT (figure 6.1), and some inquiry participants said that these have a negative impact on their productivity and competitiveness. For example, the Australian Dairy Farmers said that:

... state-based legislation is unwarranted and represents a serious impediment to the adoption of new technological advances evolving in the dairy sector. (sub. 63, p. 4)

The National Farmers' Federation (NFF) also said that:

With much of the science community expelling the fears surrounding GM crops, this moratorium acts solely to restrict the ability of farmers to choose their production means and methods, and in doing so limits innovation and growth in the sector. (sub. 61, p. 15)

The rationale given for the moratoria is that they enable states to create a brand name that confers benefits on producers. The South Australian Government stated that it:

... has retained its prohibition on the cultivation of GM food crops including canola to ensure that South Australia can retain its position in the global marketplace and retain one of the attributes that underpin the State's economic priority Premium Food and Wine Produced in our Clean Environment and Exported to the World. (sub. 57, p. 18)

Similarly, the Tasmanian Department of Primary Industries, Parks, Water and Environment said that its moratorium 'is intended to position the State in the global marketplace as a producer of food that is genuinely GMO-free' (2013, p. 3).

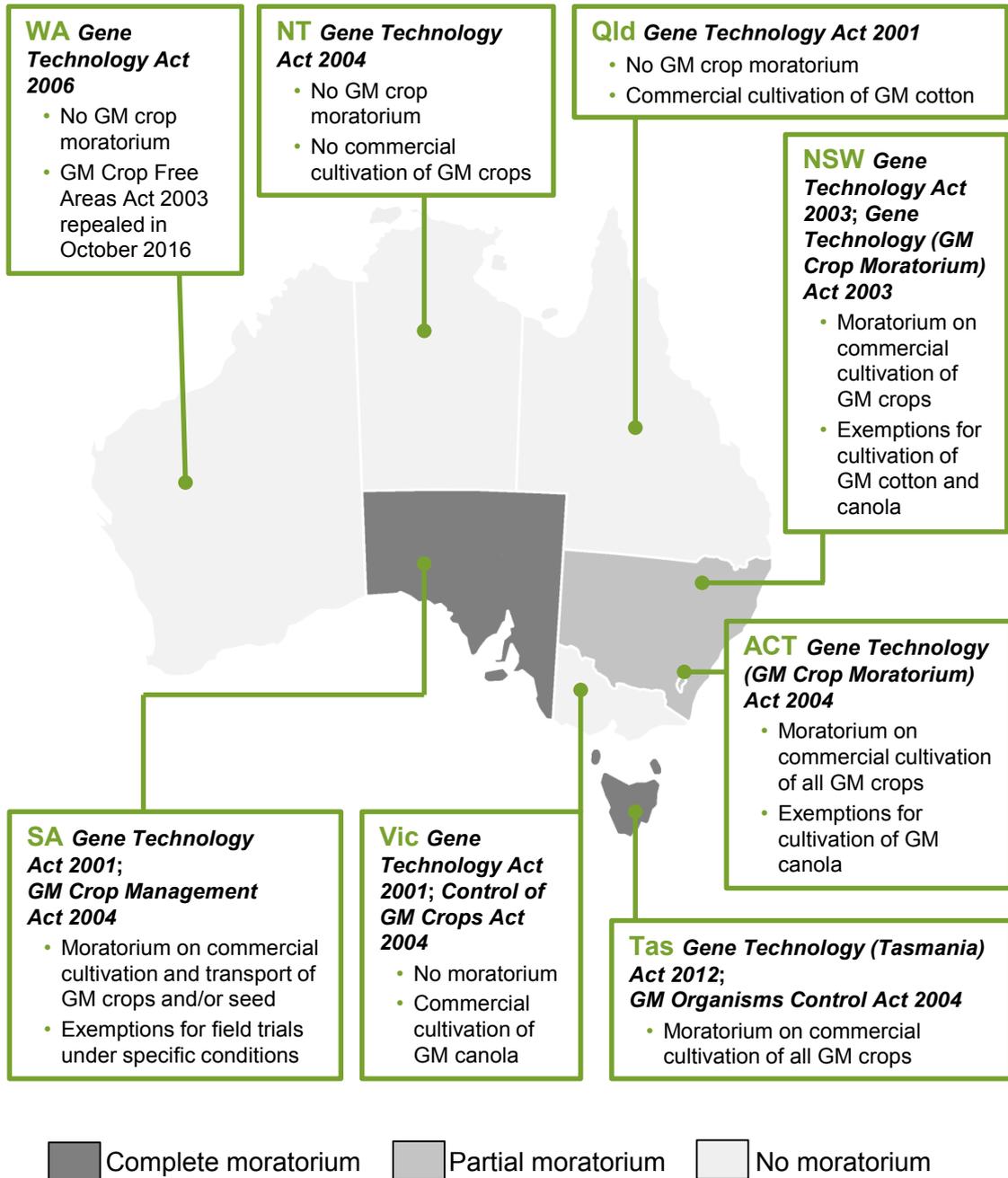
There is mixed evidence about the benefits of such branding (box 6.7). However, the question of whether moratoria on GM crops are warranted depends, in the first instance, on the ability of GM and non-GM production systems to coexist, rather than the benefits of producing non-GM products. If GM and non-GM systems can coexist, producers of non-GM products would realise benefits regardless of whether GM products were in the market.

Price premiums depend on the ability of producers to differentiate their products and to market these premium attributes. There is no clear case for governments to support non-GM producers' marketing activities at the expense of those who wish to grow GM crops, and this is especially so given that, in many cases, consumer preferences (and hence demand) for non-GM foods are based on a misunderstanding about the health and safety of GM food. Like mandatory requirements to label GM food, moratoria could reinforce misplaced community concerns about the potential risks associated with consuming GM foods (chapter 10).

In the absence of moratoria, non-GM producers could still command price premiums by creating brands that are associated with premium attributes (among other things).

Producers are free to market their products in any way they wish, as long as their claims are not misleading (chapter 10).

Figure 6.1 State and territory legislation and moratoria for GMOs



Source: Adapted from GrainGrowers (2016).

Box 6.7 **Mixed evidence of the marketing benefits of GM moratoria**

Some states and territories argued that maintaining a GM-free status is an essential component of their marketing and branding that allows them to obtain market access or a price premium in domestic and international markets. For example, during the second reading debate for the Genetically Modified Organisms Control Amendment Bill 2014 (Tas), David Llewellyn said that:

Some years ago I was told by Mr Armstrong from Harvest Moon that he could export some of his products into Japan in plain boxes but he could get a 10 per cent increase in the same products if the boxes listed Tasmania as a source for those products. It goes to show that we need to harness the opportunities that are available in this state to market our products. In doing that we need to live up to the reputation that we have gained of being clean, quality and green in our marketing process. (2014)

Locke (2016a) reported that GM canola consistently sells for a lower price than non-GM canola, with the 2015-16 harvest in Western Australia marked down by up to \$50 per tonne. WAFarmers also reported that the 'premium for non-GM grain has varied from \$10 to approximately \$65 [per tonne]' (sub. DR226, p. 14). In addition, there is some evidence that some non-GM grains attract a higher price than their GM counterparts in certain niche high-income markets, where mandatory labelling for GM exists (Foster 2010).

However, evidence also suggests that in many instances, non-GM products do not command a price premium at the bulk trade level. Reviews undertaken in both New South Wales and Victorian found that there was no evidence to indicate a market or price advantage for Australian canola marketed as non-GM (Armstrong, Adams and Reeves 2007; VDPI 2007). And Primary Producers SA submitted that:

... the argument that the ban is gaining SA producers premiums is not supported by any real evidence, and grain prices suggest otherwise. (sub. 41, p. 4)

The review of the moratorium in Tasmania also found that:

Tasmania's markets for food and beverage products are on the whole ambivalent about the State's GMO-status. Within the two Asian markets considered, there is not a high level of recognition or understanding by consumers about GM foods. The underlying perception of GM foods in these markets is that they are not good for human health, but consumers are not prepared to pay a price premium for GMO-free. (TDPIPWE 2013, p. 5)

Moreover, price premiums do not necessarily mean higher profits. Participants to the 2007 review of the *Genetically Modified Crops Management Act 2004* (SA) pointed out that:

... the financial benefits that are reported to exist with non-GM canola do not take into account the better gross margins that can be obtained with GM canola production. (2007, p. 5)

Can GM and non-GM production systems coexist?

The presence of both GM and non-GM crops in the same area of land introduces the possibility that unwanted GM material could be found in non-GM produce, or vice versa. This could occur in the field (box 6.8), during transport (GM Cropwatch, sub. DR113) or when produce is being processed at receival sites (box 6.9). Cross-contamination that results in the loss of marketing advantages is a market failure known as a negative externality.

Box 6.8 **The case of *Marsh v Baxter***

In *Marsh v Baxter*, organic farmers Stephen and Susan Marsh (the Marshes) lost their organic certification because genetically modified canola grown in the neighbouring farm owned by Michael Baxter was blown by the wind onto the Marshes' property. The Marshes brought proceedings in the Supreme Court of Western Australia, alleging private nuisance and common law negligence, seeking a permanent injunction and damages for economic losses of \$85 000.

However, the case was dismissed. The reasons given were that:

- a private nuisance had not been established, as there had been no unreasonable interference by Mr Baxter in the Marshes' use and enjoyment of their property
- a duty of care for purely financial losses is without precedent, defeating the action in common law negligence.

The court also noted that Mr Baxter had used a well-accepted method for growing and harvesting genetically modified canola, and that the decision by the organic certifier (the National Association for Sustainable Agriculture Australia) to revoke the Marshes' organic certification ran contrary to guidelines and rules under which it operated.

The plaintiffs unsuccessfully appealed the decision in the WA Court of Appeal. An application for leave to appeal to the High Court of Australia was also dismissed.

Sources: Marsh v Baxter [2014] WASC 187; Marsh v Baxter [2015] WASCA 169.

Box 6.9 **Cross-contamination during processing**

In a member's statement to the WA Legislative Council, the Hon. Darren West MLC recounted his experience of canola cross-contamination at a Cooperative Bulk Handling receival site in Avon, Western Australia. He was told that his canola would have to be processed as GM canola due to contamination.

I [was] told, "Sorry to do this to you, but ... one of the samplers has accidentally thrown a bucket of GM canola on top of your load of non-GM canola." I now had this contaminated load of canola. I was very unhappy about that and I asked the manager of the Avon receival site whether we could remove the GM canola from the top of my load of non-GM canola, because it was very easy to see; it was a very different colour. He informed me, "Don't worry, you will still be paid the price for non-GM canola", which has a \$58 premium over GM canola, "but you will have to tip that load of GM canola into the GM stack, because we have zero tolerance for contamination by GM canola in our canola stacks." (West 2015, p. 9268)

He estimated that the total cost of the reclassification of his canola was \$1334.

Source: West (2015).

The ability of state and territory governments to impose moratoria should be based solely on a demonstrated market failure regarding the coexistence of GM and non-GM production systems. That is, states and territories should only impose moratoria on the cultivation of GM crops if negative spillovers cannot be effectively managed, and if these spillovers outweigh the benefits of GM technology.

Evidence suggests that GM and non-GM systems can coexist.

- Many participants²⁰ pointed to the ability of industry to manage the segregation of GM and non-GM products along the supply chain. For example, CropLife Australia said that:

GM and non-GM canola has been grown side-by-side successfully and productively without creating marketing issues. With 7 years under our belt of growing GM canola, there has not been one incident across more than 5.6 million tonnes of canola seed delivered domestically, or more than 15 million tonnes delivered internationally, where an end user ... has not received what they had ordered in terms of the GM status. (sub. 14, p. 11)

Reviews of GM moratoria in New South Wales, Victoria and South Australia have also found that industry is able to manage segregation throughout the supply chain (Armstrong, Adams and Reeves 2007; SA Genetically Modified Crop Advisory Committee 2007; VDPI 2007).

- Organic foods are produced in areas where GM crops are permitted. For example, organic honey is produced in Victoria, despite there being no moratorium (VicHoney 2016). A 2007 review by the Victorian Department of Primary Industries also noted that US production of organic corn and soybean has increased since the introduction of GM varieties, and in Canada (where GM foods have been available since 1994), the organic sector increased by 60 per cent between 2002 and 2007 (VDPI 2007).

Consumer law and common law also define some of the responsibilities of various parties in managing the coexistence of GM and non-GM products.

- Consumer law prohibits producers from making false or misleading representations — products marketed to consumers as ‘GM’ or ‘non-GM’ must be genuinely so.
- Producers and those along the supply chain could be legally liable for losses that result from the adventitious presence of their products — causes of action could include common law trespass, negligence and nuisance (VDPI 2007). Although both actions of nuisance and negligence in *Marsh v Baxter* were dismissed (box 6.7), the Commission notes that each case is decided on its facts. Courts in Australia have previously found that, under certain circumstances, a duty of care exists for pure economic losses.²¹

These arrangements are likely to be most effective when growers, handlers and other parties with responsibilities for managing products can be easily identified. They may be less effective when this is not the case, such as when GM material spills onto roadsides during transportation. However, the need to ensure that products are contained during transportation is not confined to GM products.

²⁰ Participants who pointed to the ability of industry to manage segregation of GM and non-GM products included: the Australian Dairy Farmers (sub. DR218); CropLife Australia (sub. 14); Grain Producers Australia (sub. DR201); Pastoralists and Graziers Association of Western Australia (sub. 70); and the WA Government (sub. 54).

²¹ See, for example, *Perre v Apand Pty Ltd* (1999) 198 CLR 180.

Contractual arrangements, industry codes of practice or guidelines could also be used to facilitate coexistence. For example, producers who enter into contracts to supply particular products (whether GM or non-GM) are bound by the terms of those contracts and must ensure the integrity of their products. In addition, growers who wish to grow GM crops could be required to sign licence and stewardship agreements with technology developers that, among other things, require them to adhere to conditions relating to product integrity (both within the GM crop as well as for adjacent crops). An audit in Western Australia found that growers who grew Monsanto's Roundup Ready canola that year complied with the conditions set out in their licence and stewardship agreements (Parliament of Western Australia 2010).

In addition, buffers between properties (in the form of separation distances or physical barriers) could be used to manage the coexistence of GM and non-GM crops. Many local governments have guidelines in place for determining the nature of buffers to deal with different types of emissions, such as chemical spray drift, sediment and water run off (chapter 2). Similar arrangements could potentially be used to manage drift of GM seeds, pollen or other material to adjacent properties.

FINDING 6.1

There is no economic or health and safety justification for banning approved genetically modified (GM) organisms.

- The Office of the Gene Technology Regulator (OGTR) and Food Standards Australia New Zealand (FSANZ) assess GM organisms and foods for their effect on health, safety and the environment. Scientific evidence indicates that GM organisms and foods approved by the OGTR and FSANZ are no less safe than their non-GM counterparts.
- The successful coexistence of GM and non-GM crops is possible and has been demonstrated both in Australia and overseas. This means that if there are any market access or trade benefits (including price premiums for non-GM products), they would be achieved regardless of whether GM crops are in the market.

Moratoria are likely to impose net costs on the community

Several reviews and regulation impact statements (RISs) to evaluate the costs and benefits of the moratoria have consistently failed to demonstrate net benefits. For example, the RIS conducted by the Tasmanian Department of Primary Industries, Parks, Water and Environment to assess an extension of the Tasmanian moratorium until 2019 found that maintaining the moratorium would have a quantifiable net cost of \$1.5 million (box 6.10).

Box 6.10 Economic assessments of moratoria on cultivating genetically modified organisms**Tasmania's regulation impact statement for extending its moratorium**

Tasmania's regulation impact statement for extending its moratorium on genetically modified (GM) crops examined the costs and benefits of two options — maintaining Tasmania as a GMO-free area or allowing the cultivation of GMOs.

- A marketing advantage in domestic and international markets was noted as one of the main benefits of maintaining Tasmania as a jurisdiction free of GMOs. The value of that marketing advantage was not quantified, but was assessed to be 'not insignificant'.
- The benefits of allowing GM crops in Tasmania were theoretically assessed as being relatively small because only GM canola was suitable and available for commercial production in Tasmania at the time.
- The quantifiable net cost of retaining the moratorium for a further five years was estimated to be \$1.5 million, over 70 per cent of which were regulatory costs borne by the Tasmanian Government.

Despite this assessment, the regulation impact statement concluded that:

In light of the strong stakeholder support for extending the moratorium and feedback from producers who perceive that they gain a significant market advantage from the State's GMO free status the benefits of the moratorium, although difficult to quantify, are assessed as substantial. These benefits are assessed as likely to exceed the cost of extending the moratorium for 5 years. (TDPIPWE 2014a, p. 4)

Review of Victoria's moratorium on the cultivation of GM canola

In May 2007, an independent panel was established by the Victorian Government to review the State's moratorium on the commercial cultivation of GM canola. The four-year moratorium was established in Victoria in 2004 based on trade and market access considerations. The review found that:

- the moratorium imposed a direct net cost of \$60-65 million to the Victorian economy
- extending the moratorium for a further eight years would impose a direct net cost of \$110-\$115 million.

The review panel recommended that the moratorium be lifted. The Victorian Government accepted this recommendation and allowed the moratorium to expire in 2008.

Sources: TDPIPWE (2014a); VDPI (2007).

The Tasmanian Government extended the moratorium on the basis that the unquantified marketing benefits were likely to exceed the costs. In addition, it claimed the presence of sensitive information to justify not publicly releasing the full RIS and provided only a summary (TDPIPWE 2014a).

In contrast, Victoria's moratoria was lifted following an independent review which found that the moratoria imposed a net cost on the Victorian economy (box 6.10). The review identified the costs of the moratorium to include:

- reduced yields of non-GM varieties compared to GM varieties

-
- costs imposed by the use of more herbicides
 - increased cultivation costs
 - reduced ability of Victorian grain producers to adapt to changing circumstances and remain competitive over time, if the moratorium was extended (VDPI 2007).

Moratoria can also raise the operating costs of farm businesses.

- The presence of a layer of regulation by state and territory governments, in addition to regulation by the Australian Government, imposes unnecessary costs on farm businesses operating across jurisdictions. Farm businesses wanting to use new GM-related biotechnologies must effectively seek approval from two levels of government (AusBiotech 2014).
- The inability to transport GM crops and seeds through certain states increases transport costs. The Australian Seed Federation said that because of the moratorium in South Australia, ‘canola seed companies/producers in the Eastern states and Western Australia are now forced to ship GM canola seed by sea or move by road transport through Darwin, avoiding the natural transport route through South Australia’ (2011, p. 7).

The moratoria should be removed

New South Wales, South Australia, Tasmania and the ACT should remove their moratoria on GM crops. State and territory governments should also repeal the legislation that imposes the moratoria or gives them the discretion to designate their jurisdiction as a GM-free zone. This will increase certainty to businesses that the moratoria will not be re-introduced in the future.

The removal of state and territory moratoria will result in a nationally consistent system for the regulation of GMOs by the OGTR. To strengthen this system, state and territory governments should automatically adopt into law any amendments made to the Commonwealth legislation. This is the current approach in New South Wales and the Northern Territory, and is an efficient means of maintaining uniform regulations and avoiding periods of legislative inconsistency (and uncertainty), which can occur as each jurisdiction arranges for the passage of new amendments to the Commonwealth Gene Technology Act (OGTR 2011).

The removal of the moratoria does not necessarily mean that there will be widespread adoption of GM crops. Rather, farm businesses will be able to select the type of crops that they consider will maximise profits. In doing so, they will weigh up the costs and benefits of growing GM crops, including price differentials, domestic and international consumer demand, yields, and legal, financial and climate risks.

Is more effective communication needed to address community concerns?

Although the moratoria aim to address market access and trade concerns, many participants opposed their removal because of concerns about health and safety and the broader social impact of GMOs (discussed above). There is a question about whether governments can (or should) address these concerns — attitudes towards GM technology are influenced by a complex array of factors (box 6.11).

It is not the role of government to promote particular technologies. However, governments do have a role in addressing knowledge gaps that prevent consumers from making well-informed decisions. This includes facilitating an accurate understanding of the risks and benefits of GM technologies, and is analogous to the role of government in providing information about vaccinations to counter misleading safety claims which can harm public health.

Previous reviews of the Commonwealth and Queensland Gene Technology Acts, as well as participants to this inquiry, highlighted the need for governments and regulatory agencies to provide more information about GM technologies and their regulation to address public concerns (Allen Consulting Group 2011 AFGC, sub. 28; Australian Food Sovereignty Alliance, sub. 27; Taylor, Mitchell and Sward 2013). However, providing information is only one aspect of effective public communication, and it is unlikely to be effective on its own. The OGTR and FSANZ acknowledged that risk communication is more than providing scientific and technical information — it also involves active engagement with stakeholders (box 6.12).

Risk communication is the main public engagement approach used by FSANZ and the OGTR, and is important in building public knowledge and informing decision making. As the OECD recently said:

Without good risk communication, the public may underestimate some risks, and thus take insufficient precautions, and overestimate others, leading to sub-optimal allocation of resources. (2016a, p. 13)

However, some evidence suggests that risk information alone can have a negative effect on individuals' perceptions of GM products (box 6.11). This is because knowledge about the potential costs or threats to people or the environment can lead to negative attitudes towards GM technologies, or reinforce pre-existing negative beliefs. Conversely, communicating the benefits of GM technologies, including economic, health and environmental advantages, is more likely to lead to positive attitudes (although this depends on the level of trust in the source and nature of the information). A mix of information on the benefits and risks of GM technology, provided by trusted sources, is likely to be more effective in facilitating greater understanding of GM technology.

Box 6.11 **How are attitudes towards gene technology formed?**

There are two broad classes of cognitive processes through which attitudes towards gene technology are formed — ‘bottom-up’ and ‘top-down’ processes.

Bottom-up attitude formation

Bottom-up attitude formation occurs when attitudes towards a particular product are informed by knowledge about the product. This knowledge includes:

- *information about risks* — for example, a study involving 2486 university students in China found that knowledge about the risks (actual and perceived) of GM technology to people or the environment led to negative attitudes towards GM food (Zhu and Xie 2015)
- *information about benefits* — knowledge about the benefits (including economic, health and environmental advantages) of GM technology tends to be associated with positive attitudes (Zhu and Xie 2015). GM foods that provide more visible or direct consumer benefits (such as improved nutritional content, lower prices and increased competitiveness of locally produced food) are more likely to be acceptable to the public. Support for GM technology is also higher when it is used for medical purposes compared to agricultural or industrial purposes (Instinct and Reason 2015)
- *trust of information sources* — information about the risks and benefits of GM technology is moderated by consumers’ trust in the organisations providing the information (such as scientists, media, government and non-government organisations). For example, Marques et al. (2015) found that, in Australia, levels of trust in scientists, watchdogs and regulators were important predictors of consumer attitudes towards GM foods.

Top-down attitude formation

Attitudes towards gene technology that are formed through top-down processes draw upon higher-order (and often abstract) values, attitudes and beliefs. This means that attitudes about GM technology are embedded in, and influenced by, a broader landscape of personal values, including general attitudes to nature, the environment, technology, science, globalisation, free markets and modern agriculture (Grunert, Bredahl and Scholderer 2003; Lucht 2015). For example, a US survey found that the use of GM technology was less undesirable in processed than fresh foods (Lusk and Norwood 2011). Similarly, consumers express greater aversion to GM foods than to genetically engineered drugs (van der Hoeven 2015). These attitudes could derive from broader views about nature and technology — such as a belief that ‘unnatural’ processes should not be applied to ‘natural’ products (such as fresh food), but acceptance of their application to ‘unnatural’ products (such as processed foods and drugs).

Interaction between bottom-up and top-down processes

For most consumers, attitudes towards GM products are influenced by a combination of knowledge about GM products, as well as broader values, attitudes and beliefs. However, when consumers have limited knowledge or experience regarding particular GM foods, they are more prone to relying on top-down approaches (Bredahl 2001). For this reason, providing information can, to some extent, influence public attitudes, but is likely to have less effect where personal values are deeply rooted or strongly held (Frewer, Scholderer and Bredahl 2003; Grunert, Bredahl and Scholderer 2003; Scholderer and Frewer 2003; Zhu and Xie 2015). One study involving 1405 consumers from Denmark, Germany, Italy and the United Kingdom found that information provision had very little effect on attitudes towards GM foods (Frewer et al. 2013).

Box 6.12 Risk communication by the OGTR and FSANZ

Both the OGTR and FSANZ employ risk communication as part of their risk analysis frameworks. Risk communication is more than just providing technical and scientific information — it is an iterative exchange between decision-makers and interested and affected parties that primarily, but not exclusively, focuses on risks (and uncertainties). It is a two-way process that acknowledges concerns raised by stakeholders, identifies how these concerns have been addressed, and involves mechanisms to receive and analyse feedback (FAO 2008). It is not an attempt to change basic values or beliefs (OGTR 2013).

An effective risk communication strategy facilitates transparency and trust in the regulatory system for GMOs and GM foods, and provides decision-makers with access to information. It also allows decision-makers to identify the types of information that stakeholders need to better understand risks and uncertainties (FSANZ 2013c; OGTR 2013).

Consultation on applications form a large part of the OGTR's and FSANZ's risk communication strategy. As part of the process for reviewing applications, consultation is conducted with relevant government agencies, scientific and technical experts, and other interested parties (including the general public). Written submissions are also invited and taken into account during the risk assessment process. The OGTR prepares summaries that identify and address the issues raised in submissions, and these are included as appendixes to the risk assessment and risk management plans. FSANZ makes all submissions publicly available (FSANZ 2013c; OGTR 2013).

When engaging with stakeholders on social and ethical issues, the OGTR can request the advice of the Gene Technology Ethics and Community Consultative Committee. The committee comprises 12 members with expertise in areas such as community consultation, risk communication, ethics and law (OGTR 2016b).

The OGTR and FSANZ communicate risk information in many ways. For example, the OGTR publishes its Risk Analysis Framework and maintains the GMO Record, which contains information about authorised dealings with GMOs and GM product approvals, including licence conditions and locations of field trials. FSANZ (2015e) also publishes its responses to studies that claim to show that GM foods have adverse effects, or that have been interpreted by others as being evidence of adverse effects.

The Commission considers that the removal of the moratoria and the repeal of their enabling legislation provides an opportunity for governments to clarify misinformation and improve knowledge about the risks and benefits of GM technologies. Effective communication and public engagement on the risks and benefits of GM technology could help build community confidence in regulators, and provide a basis for more informed, evidence-based decisions and discussions about GM technology in Australia. It could also reduce the likelihood of governments resorting to costly regulatory responses to address community concerns, such as mandatory labelling of GM products (chapter 10).

Developing effective communication approaches requires an understanding of the factors that influence attitudes towards gene technology, including perceptions and knowledge of risks and benefits, individual values and beliefs such as attitudes towards nature, the environment and globalisation, general receptiveness to science and technology, and trust in the institutions involved in developing and regulating GM products (box 6.11).

A combination of communication approaches may be required, given the complexity of views and differences of opinion on GM technologies. This could include strengthening the communication role of technology and food-related policy and regulatory agencies at the Commonwealth and state and territory levels. It could also involve government agencies more proactively consulting with trusted, neutral and credible third-party experts or organisations, such as academics, research bodies and scientific agencies, including the CSIRO and/or the Office of the Chief Scientist. These experts may be able to assist in the development of more effective communication strategies, and could even participate in delivering them.

Different agencies and approaches may be required for different target audiences and purposes. For example, Australian and state and territory government departments of health and agriculture could play a greater role in communicating the benefits of GM technology (rather than the OGTR and FSANZ), so that trust in the role of regulators in applying scientific principles to regulatory assessments is not undermined. FSANZ and the OGTR could also be more proactive in communicating the risks of GM technology generally (and in a more easily accessible form), rather than only the risks associated with the specific GMOs being assessed. As part of the process to remove the moratoria, agencies should coordinate communication strategies designed to increase public knowledge about the benefits and risks of GM technology, and the regulatory framework for gene technology.

Communication on the benefits and risks of GM technology may not lead to an immediate increase in public knowledge or acceptance of GM technology, as attitudes tend to change slowly over time. And as noted earlier, some public concerns are not related to GM technology per se, but rather to more general ethical concerns and beliefs.

Nevertheless, to the extent that opposition to GM technologies is based on misunderstanding or inadequate information, more effective public communication and information provision could help to increase public acceptance of GM technologies. Attitudes may also change over time through experience that reveals direct benefits to consumers.

RECOMMENDATION 6.1

The New South Wales, South Australian, Tasmanian and Australian Capital Territory Governments should remove their moratoria (prohibitions) on genetically modified crops. All state and territory governments should also repeal the legislation that imposes or gives them powers to impose moratoria on genetically modified organisms by 2018.

The removal of the moratoria and repeal of the relevant legislation should be accompanied by coordinated communication strategies designed to increase public knowledge about the benefits and risks to the Australian community from genetic modification technologies. The Australian, state and territory governments, the Office of the Gene Technology Regulator and Food Standards Australia New Zealand should actively coordinate their communication strategies.

6.3 New breeding techniques

‘New breeding techniques’ (NBTs) refer to a suite of recently developed biotechnologies, including:

- reverse breeding, which involves using a combination of techniques to create parental lines that recreate an elite hybrid crop when crossed
- cisgenesis and intragenesis, which involve introducing traits or genetic material from the same or closely related species
- GM rootstock grafting, which involves the grafting of the vegetative part of a non-GM plant onto the rootstock of a GM plant (FoE 2015).

NBTs allow for more precise changes to genetic material compared to previous gene manipulation technology. AusBiotech said that:

New breeding techniques show technical advantages when compared to ‘older’ techniques: some ... allow site-specific and targeted changes in the genome ... the use of new breeding techniques [also] makes the breeding process faster, which lowers the production costs. (sub. 20, pp. 7–8)

CropLife Australia also said that:

In most cases, new breeding techniques are innovative improvements and refinements of traditional breeding methods used to optimise plant health, nutritional quality and yield. (sub. 14, p. 9)

However, uncertainty about whether or not NBTs are captured by the definition of ‘GMO’ in Australian legislation is affecting its adoption. AusBiotech said that:

Biotechnology companies and plant and animal breeders are particularly concerned about the legislative uncertainty of the GMO classification of new breeding techniques. The registration

costs will be low if a technique is classified as non-GMO or very high if classified as GMO. Therefore, the legal status of the new breeding techniques will influence the decision on whether to use these techniques only for the introduction or modification of traits in products with very high value or more extensively for a broad field of applications ... (sub. 20, p. 8)

It also said that regulatory uncertainty is affecting the competitiveness of the agricultural industry (sub. 20).

Uncertainty about the GM status of NBTs occurs because, as the OGTR explained:

... during the development of the [Gene Technology Act] it was felt that moving and rearranging genes between species constituted gene technology and therefore created GMOs, whilst techniques that either mimicked natural processes or worked through natural mechanisms did not create GMOs. At the time there was a clear distinction in this regard but technology has advanced and there is no longer such a clear distinction. (pers. comm., 27 May 2016)

FSANZ has also encountered similar issues regarding definitions under Standard 1.5.2 of the Food Standards Code. This standard regulates food produced using gene technology. FSANZ noted that when it began receiving inquiries about the regulatory status of various NBTs in 2011, 'it was not immediately clear whether ... such techniques would be captured by the current definitions' (2013b, p. 6).

Efforts to clarify the GM status of new breeding techniques

To determine whether or not to classify NBTs as gene technologies under regulation, it is fundamental to consider what would be most scientifically appropriate. The Commission heard conflicting views about whether or not NBTs should be regulated as GM technologies (box 6.13).

In 2012, FSANZ convened an expert scientific panel to enhance its scientific knowledge of several NBTs, and to gather scientific evidence on the nature of the food products derived from them. The panel concluded that foods produced using techniques such as cisgenesis, transgenesis and GM rootstock grafting should be regarded as GM foods and undergo mandatory premarket safety assessment. However, other techniques such as oligo-directed mutagenesis and zinc-nuclease technology were similar to those used in conventional plant breeding, and therefore foods produced using these techniques should not be considered GM foods. The panel also considered that more information was needed on some techniques (such as reverse breeding) to determine whether the foods produced using these techniques should be considered GM (FSANZ 2013b).

Box 6.13 Participants' views on whether new breeding techniques (NBTs) should be regulated as GM technologies

Participants' views on whether NBTs should be regulated as GM technologies were mixed. CropLife Australia said that:

Although the relevant Australian regulators (OGTR and FSANZ) have yet to reach a decision on whether products developed using NBTs will be regulated as gene technology, CropLife is concerned about the unnecessary regulation of products developed using NBTs simply based on the breeding technique employed and not on the characteristics of the final products. In many cases, NBTs result in products that are similar or indistinguishable from products developed through traditional breeding methods. (sub. 14, p. 9)

AusBiotech (sub. 20, p. 8) also considered that NBTs do not pose a health or biosecurity risk, and therefore urged a 'light touch' regulatory approach.

On the other hand, Friends of the Earth referred to NBTs as 'new GM techniques', and argued that:

... the current regulatory approach to GMOs should be the minimum requirement for these new GM techniques ... because it at least provides a basis for assessing any potential risks that result from the genetic engineering process. (2015, p. 7)

The OGTR is currently conducting a technical review of the Gene Technology Regulations 2001 (Cwlth) to ensure that the regulation of dealings with GMOs remains commensurate with risk, according to current science (OGTR, pers. comm., 27 May 2016). It is expected that the review will improve clarity about whether or not NBTs should fall within the scope of the regulations. The OGTR has prepared a discussion paper canvassing regulatory options for NBTs, and is currently seeking submissions from the public (2016a).

The regulatory experience regarding NBTs highlights the importance of ensuring that regulations keep pace with technological advances. Regulations that lag behind innovations can give rise to uncertainty, impose costs on businesses, and discourage innovation. The OGTR acknowledged that:

Stakeholders wishing to ascertain the regulatory requirements associated with proposals involving the application of emerging and new gene technologies are disadvantaged where the Regulator is unable to provide advice with legal certainty until requisite legislative amendments are in place. (OGTR 2011, p. 4)

By contrast, regulations that are flexible and responsive facilitate the adoption of new technologies, and enable Australia to increase its productivity and competitiveness. Regulators that are able to anticipate issues — through, for example, monitoring international developments in technology and the regulatory responses of overseas governments — are likely to be more effective in responding to developments. This includes reducing the extent of regulation when developments in science are sufficient to abate uncertainties about the safety of new technologies.

6.4 Regulation of drones

Farm businesses use drones for an increasing range of purposes, including remote monitoring of water points, stockyards and feed availability. Drones can also be equipped with sensors to diagnose animal health issues such as heat stress. As such, this technology can improve farm profitability by reducing treatment costs and cattle stress (CCA, ALFA and SCA 2015). While the adoption of this technology in agriculture is presently low, wider use in the future could lead to substantial productivity gains.

Some farm businesses argued that the regulations governing the use of drones imposed an unnecessary burden. This includes the requirement that drones only be used within the line of sight of the operator (CCA, ALFA and SCA 2015), which limits the use of drones on large farms and where cattle are located in remote locations.

Recent regulatory changes have made it easier for farm businesses to use drones as part of their daily activities. Private landholders (such as farmers) can now operate small remotely piloted aircraft (less than 25 kilograms) on their own land without requiring an operator's certificate or a remote pilot licence (CASA 2016). They are only required to notify the Civil Aviation Safety Authority five business days before operating such aircraft (notification is valid for 24 months). However, they must adhere to a set of standard conditions which includes a line of sight requirement.

Farm businesses have responded positively to the changes, with many choosing to purchase drones that enable them to check crops, stock and infrastructure (Foley 2016).

6.5 Access to telecommunications infrastructure

The lack of access to telecommunications infrastructure in regional Australia was a commonly reported source of frustration for farm businesses. For example, Larry Acton said that:

There are long delays in repairing [telephone cable] faults ... When we report a fault ... the operator suggests diverting the phone to our mobiles until repairs are done. There is almost no mobile service in our area ... also it means that our internet access for the computer, which is wireless, has to have a long aerial on the roof. (sub. 55, pp. 4–5)

The Australian Forest Products Association also submitted that:

Regional industries continue to face communications infrastructure constraints across phones, data and radio networks that impact on important operational (e.g. harvesting, processing and manufacturing) and emergency (e.g. firefighting and workplace health and safety) communications. (sub. 11, p. 14)

Unreliable internet services were also raised as an issue during the Commission's consultations and case study interviews. One farmer told the Commission that they were unable to access high-speed and reliable internet services despite the farm being within

10 kilometres of a major population centre (appendix C). The farmer said that unreliable internet services mean that emails containing information about important changes to regulation, or requests to comply with regulation, may never arrive. Similarly, responses to requests may need to be sent multiple times, or involve switching between devices depending on what is working at the time.

Unreliable phone and internet connections can add to the transaction costs associated with complying with regulation. As such, they can contribute directly to the regulatory burden felt by farm businesses. However, the Commission does not consider the availability of telecommunications infrastructure to be a regulatory issue, in that it is not limited by regulation but rather depends on investment decisions by governments, industries and the community.

The Commission notes that, in the Agricultural Competitiveness White Paper, the Australian Government stated its commitment to enhancing access to communications technology in regional areas by improving regional satellite services, improving coverage of the National Broadband Network, and improving mobile coverage through the Mobile Black Spots Program (Australian Government 2015a). The Commission is also currently conducting an inquiry into the future direction of a universal service obligation in the telecommunications market, which will address issues relating to access to telecommunications (PC 2016b).

7 Agricultural and veterinary chemicals

Key points

- Agricultural and veterinary (agvet) chemicals can improve the productivity, competitiveness and safety of farm businesses. Unnecessary barriers to accessing agvet chemicals should be removed.
- The regulation of agvet chemicals has been subject to numerous reviews, and subsequent reforms, but concerns remain. The concerns are primarily about:
 - unnecessarily lengthy, complex and duplicative registration procedures
 - interjurisdictional inconsistencies, particularly in control-of-use regimes, which can make it costly and confusing to comply with regulatory requirements.
- The Australian Pesticides and Veterinary Medicines Authority could increase its use of international assessments and decisions for products already registered by trusted comparable regulators overseas.
- Reforms to achieve a national control-of-use regime are currently underway. However, progress has been slow. In addition, the proposed scheme includes only minimal harmonisation of off-label use provisions.

Farmers use agricultural and veterinary (agvet) chemicals to protect their crops from weeds, pests and diseases and to manage the health and wellbeing of their animals. In 2014-15, Australian farmers spent almost \$1.5 billion on chemicals (or about 4 per cent of total farm costs) (ABARES 2015a).

Agvet chemicals, while beneficial to farmers, can also potentially be harmful to human health and the environment. For this reason, unregulated chemical use is not in the interest of the community. For example, on-farm chemical use can have negative spillover effects on humans, animals or the environment. There may also be a role for government in addressing information failures in the market for chemicals. For example, there can be weak incentives for suppliers to communicate hazards and risks to users of chemicals.

Regulation of agvet chemicals that is effective and efficient can benefit both farmers and the wider community by ensuring that:

- farm businesses have access to agvet chemicals suited to Australian conditions
- available agvet chemicals do not have harmful impacts on human health and safety, and the environment
- the level of chemical use in agricultural exports abides by the thresholds allowed in the importing country.

However, inefficient or ineffective regulations can unnecessarily slow down the approval process, or fail to approve chemicals that would provide net benefits to the Australian community. This can increase production costs and impede the productivity of Australian farm businesses.

This chapter discusses the regulation of agvet chemicals, including who is responsible for what (section 7.1) and efforts to reform regulatory arrangements (section 7.2). The chapter also examines areas of particular concern raised by participants. These include:

- the time and cost required to achieve chemical registration (section 7.3)
- inconsistencies in state and territory control-of-use regimes (section 7.4)
- difficulties in accessing chemicals for minor uses (section 7.5)
- labelling of agvet chemicals under work, health and safety regulations (section 7.6).

7.1 About agvet chemical regulation

Access to agvet chemicals in Australia depends on an array of regulations administered by the Australian, state and territory governments.

The Australian Government is responsible up to the point of sale

A national system of regulation applies up to the point of sale. The registration of all agvet chemicals in Australia is regulated through the National Registration Scheme for Agricultural and Veterinary Chemicals, a partnership between the Australian, state and territory governments. The scheme is underpinned by an intergovernmental agreement under which state and territory governments have conferred their power to the Australian Government to regulate the supply of agvet chemicals up to the point of sale. States and territories have also adopted a template Agricultural and Veterinary Chemicals Code (Agvet Code). The Department of Agriculture and Water Resources (DAWR) has a role in the governance and oversight of the scheme.

The Australian Pesticides and Veterinary Medicines Authority (APVMA) is an independent statutory regulator, established in 1993 under the *Agricultural and Veterinary Chemicals (Administration) Act 1992* (Cwlth). It employs approximately 150 staff and is within the portfolio of the Minister for Agriculture. The APVMA regulates agvet chemicals used by farmers, pest controllers, veterinarians, and other home or professional users up to, and including, the point of retail sale (APVMA 2016b).

Unless exempt, an agvet chemical product must be registered by the APVMA before it can legally be supplied, sold or used in Australia. Chemical products are assessed for their impact on human health, the environment and trade, as well as on their efficacy. Some aspects of assessment are performed within APVMA after consultation with other agencies, such as the Office of the Gene Technology Regulator.

There are more than 11 000 pesticides and veterinary medicines currently registered in Australia, including products for treating crop and garden diseases and pests, and medicines for treating agricultural and companion animals (APVMA 2015a).

State and territory governments are responsible for control-of-use

State and territory governments are responsible for controlling the use of agvet chemicals after the point of retail sale. This includes responsibility for:

- ensuring that agvet chemicals are used legally (according to the APVMA's specifications)
- formulating training requirements for licensing and the use of higher risk products
- licensing professional users
- monitoring licence compliance and chemical residues in produce and the environment
- conducting activities such as investigations, enforcement, compliance, education and extension.

7.2 Reforming the regulation of agvet chemicals

Problems with the regulation of agvet chemicals are not new. There have been a number of reviews of, and reforms to, the regulatory arrangements for agvet chemicals in recent years (box 7.1).

In its Agricultural Competitiveness White Paper (2015a), the Australian Government reiterated its commitment to improving access to agvet chemicals while maintaining adequate protections for the health and safety of people, animals and the environment. To that end, the DAWR is currently considering a range of reforms to better match regulatory effort with risk, to improve the efficiency and effectiveness of agvet chemical regulation and to improve access to agvet chemicals (box 7.2).

Citing a report by ACIL Allen Consulting (2015), AusBiotech commented that:

... when the performance of the [Pre-Application Assistance] was reviewed none of the veterinary industry participants indicated that they were satisfied with the administrative requirements, timeliness, cost or quality of the response they received. In fact they felt that the new arrangements provided a lower level of service than what was available before 1 July 2014. While Industry was encouraged by the APVMA's willingness to respond to its needs, its execution of these changes fell well short of industry expectations ... (sub. 20, p. 6)

Box 7.1 Recent reviews of, and reforms to, agvet chemical regulation

Reviews of the regulatory arrangements for agvet chemicals in recent years include:

- a review of plastics and chemicals regulation undertaken by the Commission in 2008, which found that the operations of the APVMA were ineffective and inefficient. For example, products that posed a low risk to public health and the environment were subject to lengthy and complicated assessments and registration processes.
- the review of the APVMA in 2011 by the Department of Agriculture, Fisheries and Forestry, which found that:
 - the APVMA's processes were inflexible and lacked clarity
 - a one-size-fits-all rather than a risk-based approach for applications was used
 - unnecessary data requirements were sometimes imposed on applicants.
- a 2013 study by the Australian Bureau of Agricultural and Resource Economics and Sciences, which found that access to agvet chemicals for minor use was restricted by factors such as the high cost of applying for a minor use permit.
- the 2015 Agricultural Competitiveness White Paper, which noted that agvet chemical regulation is often disproportionate to the risks that the products pose. The Paper argued that this increases the cost of agvet chemicals and limits access to productivity enhancing chemicals.

The operations of the APVMA have also undergone reform on several occasions.

- In 2013, changes were made to the approval, registration and reconsideration of agvet chemical products. The changes included implementing a risk framework to align regulatory effort with chemical risk, and implementing and publishing guidelines that the APVMA must adhere to.
- In 2014, the agvet chemicals legislation was amended to remove the need for agvet chemicals to be periodically re-approved and re-registered, and to improve access to information about the APVMA's processes.
- In 2015, certain types of animal feed (previously classified as veterinary chemical products) were excluded from regulatory assessment.

The purpose of these reforms were to improve the consistency, efficiency, timeliness and transparency of the APVMA's processes, to facilitate the ongoing registration of agvet chemicals, and to improve the transparency and predictability of the APVMA's decision making.

The Australian National Audit Office is currently undertaking an audit to assess the effectiveness of the implementation of these reforms and the extent to which operational efficiencies and reduced cost burden on regulated entities has been achieved. The audit is due to be tabled in April 2017.

Sources: ANAO (2016b); Australian Government (2015a); APVMA (2014a); DAFF (2011a, 2011b); DAWR (2015t); Gibbs, Harris-Adams and Davidson (2013); PC (2008a).

Box 7.2 **The reform agenda for agvet chemical regulation**

The Department of Agriculture and Water Resources is considering a range of reforms to improve agvet chemical regulation. In 2014 and 2015, it conducted several rounds of consultation to identify the main issues. The Department also recently published a series of discussion papers, covering:

- the use of overseas decisions as a basis for registration
- the scope of agvet chemical regulation
- the removal of efficacy and trade assessments
- crop grouping
- contestable provision of assessment services
- the streamlining of import and export regulation
- the APVMA CEO as a poisons scheduling delegate
- outstanding issues with legislation (DAWR 2016b).

The APVMA (sub. 21) noted that some reforms can be applied without the need for legislative change. These include:

- better profiling of applications and the risks involved, and establishing faster pathways to register products or make variations, including through online self-assessment, notifiable variations and compliance with standards
- increasing the use of assessments conducted by comparable regulators both domestically and internationally
- aligning technical guidelines and guidance material to those agreed internationally through recognised forums such as the OECD, the International Cooperation on Harmonisation of Technical Requirements for Veterinary Medicinal Products and the Codex Alimentarius
- seeking efficiencies in process through more contestable provision of assessment services and streamlining internal business processes to speed up the assessment of applications.

However, other reform measures, such as establishing a co-regulatory system for agvet chemical use, are longer-term propositions (DAWR 2016u).

More broadly, while CropLife Australia was supportive of the APVMA's efforts to improve its processes, it was critical of the role of DAWR.

... the APVMA has implemented a range of significant administrative and operational efficiency initiatives that CropLife is optimistic will deliver some regulatory efficiency ... It's about time the Department of Agriculture and Water Resources stops being an inhibitor to real efficiency reform and starts showing a similar willingness to deliver on the Minister's own drive and commitment to regulatory efficiency. (2016, p. 1)

The National Farmers' Federation also contended that:

Poorly managed processes and a lack of strategic vision has led to confusion and additional burden on the agricultural sector, without improved outcomes for human safety, the environment or farm input costs. (sub. 61, p. 13)

Is wholesale change needed to deliver reforms?

The Commission sought feedback on the overall performance and appropriateness of the regulatory framework for technologies and agvet chemicals. As noted by the APVMA, the scope of products that it regulates has expanded due to advances in technology, an increase in generic products, changes to farming practices, and a shift to products for the increasingly large companion animal sector, but ‘despite these changes, the regulatory framework under which the APVMA operates largely requires the same approach to assessment and registration of products as it has the last twenty years’ (sub. 21, p. 2).

Most participants who responded supported the current regulatory arrangements and objectives underpinning the APVMA’s operations.²² For example, Cotton Australia said:

The current regulatory framework for agricultural and veterinary chemicals (including transgenic crops) performs well regarding delivery of efficacious product with well-defined risk mitigation strategies, to industry. The framework is robust, science-based and risk-aligned. Provisions to provide regulatory oversight for efficacy have enabled industry to develop robust stewardship strategies with trait providers and chemical registrants, to ensure the longevity of access to agricultural chemicals. (sub. DR262, p. 10)

And in the context of recent reforms, Ausveg said:

The regulatory arrangements and objectives of both the OGTR and APVMA are appropriate and up to date. It must be noted that the APVMA has recently undergone a significant restructure, on 1 July 2014, and they have not had sufficient time to implement all changes and modifications due to backlog of chemical registrations and permits. There must be time allowed for the APVMA to appropriately transition to the new model and design, without significant modifications and engagement by the Government during this transitional period. (sub. DR193, p. 3)

However, two participants said there was unnecessary duplication of roles and responsibilities in the regulation of agvet chemicals — Accord identified duplication ‘between Commonwealth entities, state and territory governments as well as some local government bodies’ (sub. DR222, p. 1) as the main area of concern, whereas GrainGrowers (sub. DR247) pointed to duplication between APVMA and work, health and safety requirements (section 7.4).

On balance, the Commission considers that the overarching regime for regulating access to agvet chemicals is appropriate and in line with community expectations. That said, the regime should be monitored to ensure that it continues to be proportionate to the risks associated with agvet chemicals and reflects advances in scientific knowledge. This should include regular reviews of the APVMA, such as those outlined in box 7.1.

²² A number of participants provided feedback on the performance and appropriateness of the regulatory framework for technologies and agvet chemicals, including Australian Lot Feeders’ Association (sub. DR294); Ag Institute Australia (sub. DR182); Australian Veterinary Association (sub. DR167); Ausveg (sub. DR193); Cotton Australia (sub. DR262); University of Southern Queensland (sub. DR184).

The Commission considers that improvements to the regulation of agvet chemicals is best delivered through a series of regulatory adjustments — including the reforms under consideration by DAWR and the adoption of the recommendations in this chapter.

Such reform efforts have the potential to improve outcomes for farmers and the broader community. However, the success of reform efforts hinges on implementation — including whether or not the proposed reforms are implemented, as well as the manner in which this is done. While governments have identified issues with, as well as steps to improve, the regulatory system for agvet chemicals, the *implementation* of reforms continues to be a work in progress.

These issues will be addressed in the Australian National Audit Office’s audit of the APVMA, which is due to be tabled in April 2017 (ANAO 2016b) (box 7.1).

7.3 Excessive time and costs for registration

Some participants claimed that the process for registering agvet chemicals is unnecessarily complex, time-consuming and expensive. For example, Voice of Horticulture said that:

... Australia’s chemical registration system is still too slow, complex and expensive that growers are being left without cost-effective alternatives to manage pests and diseases. There needs to be a major overhaul of our current system to improve chemical access. (sub. 42, pp. 9–10)

Costly and time-consuming registration processes can mean that some chemicals are only available in Australia several years after they are available overseas (or they may not become available at all). AusBiotech provided the example of the vaccine for Bovine Ephemeral Fever virus:

A major international vaccine manufacturer submitted a change of site of manufacture variation for a vaccine that had previously been sold in Australia. The vaccine for Bovine Ephemeral Fever virus is used in the northern regions of the cattle industry. After two years this submission had not been dealt with and all existing vaccine supplies had either been sold or reached their expiry date. This situation left the cattle industry exposed to this disease with no treatment available. Unfortunately this is not an isolated example and urgent reforms are needed within the APVMA. (sub. 20, p. 6)

Timely access to the latest most cost-effective chemicals (while ensuring the safety of the community) is critical for the competitiveness of Australian farmers. DAWR explained that a lack of access to agvet chemicals can result in:

... Australian producers relying on older, less effective, or less tailored chemistries, where a chemical solution is not available at all. The costs of farm production for Australian chemical users are higher as a result. Limited chemical choice increases the risk of chemical resistance, increases reliance on chemistries developed before modern regulatory scrutiny, and increases the cost of pests and diseases through reduced yield and poorer crop and animal health. (2015d, p. 1)

Farmers interviewed by the Commission also spoke about the potential effects of not being able to access agvet chemicals — for example, one farmer suggested that he was at risk of losing a chickpea crop because approved chemicals to control a particular fungus were not available (box 7.3).

Box 7.3 Case study: chemical registration and missed market opportunities

The Commission interviewed a farmer who was sowing a winter crop of chickpeas in response to a doubling of world prices following repeated failures of south Asia's monsoon season. The farmer said that a sudden Australia-wide increase in demand had meant that stocks of the chemical approved to control a particular fungus in chickpea crops had run out, and that this meant he was exposed to the risk of an outbreak of this fungus wiping out his crop. While other chemicals were available for controlling the fungus, they were only approved for use on crops other than chickpeas (including lentils, which are a close relative of chickpeas).

According to the farmer, a major contributor to this problem was the lengthy and costly regulatory approval process for registering new applications of existing chemicals with the Australian Pesticides and Veterinary Medicines Authority. Australia's relatively small market means that the potential profits from obtaining costly regulatory approval in Australia often do not outweigh the costs.

Source: Productivity Commission case study interviews (appendix C).

While there are many potential reasons for the time and cost of registering chemicals, participants highlighted that the APVMA was not meeting its statutory timeframes and was not sufficiently considering overseas evidence in the registration process.

Failure to meet statutory timeframes

A number of participants criticised the APVMA for not meeting its statutory timeframes. The National Farmers' Federation, for example, said the APVMA:

... has a consistent track record of failing to meet set approval timeframes, and the uncertainty and expense of the approvals process acts as a deterrent to global chemical companies when assessing markets for new products. (sub. 61, p. 13)

The APVMA is required to finalise all agvet product evaluations within statutory timeframes. These vary from one to 18 months, depending on the type of application — timeframes for applications to vary an approval or registration are generally shorter than those to approve a chemical or register a chemical product.

APVMA performance statistics show that over the period July 2015 to June 2016, 68 per cent of applications were completed within legislated timeframes — well below APVMA's 100 per cent target. According to the APVMA, unexpectedly high levels of staff leave over the period meant that they were unable to meet the target (2016a). CPSU

also said that performance was affected by insufficient resourcing and that this would only get worse with APVMA's move to Armidale.

APVMA's performance has been affected by inadequate resourcing ... APVMA previously had struggled to find qualified staff to replace staff who have resigned ... While there has been improvement with APVMA getting back on track and meeting targets, as noted in the Report, the planned move to Armidale will detrimentally affect APVMA ... APVMA's chief executive Kareena Arthy is on the record saying it would be hard to rebuild a relocated agency without scientists, most of whom refuse to leave Canberra. (sub. DR204, p. 6)

CropLife Australia attributed the APVMA's poor performance to a lack of support from the DAWR.

The Department of Agriculture and Water Resources' complete disregard for the impact of their previous reform agenda, developed between 2010 and 2014, on the APVMA. The transitional funding provided to the APVMA was also largely insufficient, particularly when a quarter of the amount provided needed to be paid back to the Department well before any efficiency could be realised. (2016, p. 1)

There is some evidence that the APVMA's performance (in terms of the time it takes to complete an application) has improved over the past five years. A review by external auditors found that between the periods 1 July 2011 and 30 June 2014, and 1 July 2014 and 31 March 2016, the average timeframe improved by 3.2 months (Oakton Accounting and Assurance 2016).

The percentage of applications completed within the timeframe also increased from 33 to 68 per cent. However, the review noted a bias in the sample due to the small number of applications received (post 1 July 2016) for classes of applications within the timeframe of greater than 6 months.

The APVMA needs to be sufficiently resourced if it is to effectively undertake its duties. This includes ensuring that the APVMA is provided with adequate funding, as well as ensuring that it has access to adequate staff and skills to perform its functions. The APVMA noted that it has initiated a range of activities aimed at improving efficiency including:

- recruiting more regulatory scientists to work on applications
- removing internal red tape involved in assessing applications and recording decisions
- a dedicated resource to focus on managing overdue applications (sub DR228, p. 4).

Making greater use of international evidence

One of the reasons for the time and cost required for chemical registration is the limited use of international evidence in registration processes. The Australian regulatory regime requires that chemicals are assessed and registered by the APVMA, even if they have previously been assessed and registered by an overseas regulatory authority.

The Northern Territory Department of Primary Industry and Fisheries said:

There is currently an unreasonable burden to both industries and manufacturers with subsequent delays from having to generate additional Australian research data for registration ... The existing process is a brake to innovation and a drag on rural industry competitiveness in international trade. (sub. 67, p. 2)

The Consolidated Pastoral Company also said that:

In addition to the direct cost to pastoralists for agricultural and veterinary chemicals there is also a cost to business with new drugs that have been approved for use elsewhere, being forced to undergo a very long and expensive approval process by APVMA in Australia. (sub. 71, p. 37)

A farmer interviewed for this inquiry gave an example of where not recognising overseas testing contributed to a chemical being unavailable in Australia (box 7.4).

Box 7.4 Case study: lack of recognition of overseas tests

The owner and operator of a large horticultural business in south-east Queensland told the Commission that, in Australia, it costs ten times what it does in the United States to register a new chemical, but for only one tenth of the market. He said that companies sometimes do not bring new chemicals to Australia due to the high cost. As an example, he pointed to a recently developed pre-emergent herbicide that could replace some older chemicals that are 'harsh' on microorganisms and fungi in the soil. The farmer told the Commission that this chemical has not been registered in Australia, but has been registered in New Zealand and is providing growers there with a competitive advantage.

The farmer attributes the cost of chemical registration in Australia to the stringent and detailed scientific testing administered by the APVMA. A frustration for the farmer is that the APVMA does not recognise testing already conducted overseas, such as in the United States or Europe, regardless of how stringent this is.

Source: Productivity Commission case study interview (appendix C).

The APVMA does take into account international data and assessments in its registration processes (box 7.5) — it publishes a list of adopted international technical guidance material that is accepted for assessment by the APVMA for registration of agvet chemicals. However, many participants saw merit in increasing the use of international evidence.²³

²³ Participants supporting greater use of international evidence included: Accord (sub. DR222); AHBIC (sub. 34); Animal Health Australia (sub. DR250); Canegrowers (sub. DR169); Cattle Council of Australia (sub. DR290); CropLife Australia (sub. DR156); DAWR (sub. DR183, attachment); Environmental Farmers Network (sub. DR174); GrainGrowers (sub. DR247); Grain Producers Australia (sub. DR201); Horticulture Innovation Australia (sub. DR165); NSWFA (sub. DR161); NTDPIF (sub. 67); Herta Klein (sub. 38); NFF (sub. 61, sub. DR216); South Australian Government (sub. DR295); Tully Cane Growers (sub. DR170); WAFarmers (sub. DR226).

Box 7.5 The APVMA's use of international evidence

When approving and registering agvet chemicals, the APVMA considers four different types of international evidence — data, assessments, standards and decisions. Each of these are considered differently.

- *Decisions* — the APVMA does not accept the decisions per se of international regulators. However, it accepts data, assessments and standards that contribute to a particular international decision.
- *Data* — the APVMA accepts data generated according to a number of international guidelines, as long as they are relevant to the specific application for registration. Accepted data include those generated according to the OECD test guidelines, the Food and Agriculture Organization of the United Nations (FAO) and World Health Organization (WHO) guidelines, and the International Cooperation on Harmonisation of Technical Requirements for Veterinary Medicinal Products guidelines.
- *Assessments* — the APVMA accepts specific assessments if the data supporting them are made available. Accepted assessments include:
 - hazard assessments conducted by EU member states, Canada and New Zealand
 - risk assessments conducted by the FAO and WHO
 - risk assessments for products where the exposure assessment is comparable to one conducted by another regulator.
- *Standards* — the APVMA routinely uses international standards, including FAO standards and specifications, and international methodologies for exposure assessment.

Source: APVMA (2015b).

For example, the Australian Dairy Farmers said:

The dairy industry welcomes the use of international data, assessments, standards and decisions, where appropriate, to reduce the burden of regulation, particularly given Australia's position as a relatively small market for agvet chemicals. (sub. 63, p. 4)

Other participants, while supporting greater use of international evidence in principle, also emphasised the need to maintain rigour in the assessment process and to manage risks appropriately in the Australian context. For example, the Tasmanian Farmers and Graziers Association said:

[TFGA's] support is prefaced by the fact that this information from trusted sources should not be wholly used to make a final assessment, but rather as a supporting factor in the completion of an assessment. Any question with regards to the rigour of an Australian assessment of pesticides or veterinary medicines could potentially harm our trade in agricultural produce. (sub. DR281, p 8)

Similarly, Queensland Farmers' Federation said:

We support reforms that enable the APVMA to better access overseas data; however, this must be balanced by the need to ensure that risk is appropriately managed in the Australian context. While many individual growers would support a less stringent approach to chemical

registration, it is important at an industry level to ensure that it meets the highest scientific standards. (sub. DR217, p. 7)

The Australian Veterinary Association (sub. 26) supported recognising assessments conducted by trusted foreign regulators to speed up the process of bringing new medicines and chemicals to Australia. Goat Veterinary Consultancies also advocated for the adoption of international decisions.

We should look to New Zealand which has similar agricultural systems. If a veterinary medicine has been registered in New Zealand for 5 years and no problems have been identified seriously enough for the veterinary medicine to be under review, then it should automatically be allowed to be registered in Australia or at least imported into Australia directly by veterinarians or for over the counter products ... (sub. DR104, p. 3)

However, the APVMA will only use international evidence to the extent that it is relevant to the use of a product in Australia. As the APVMA pointed out:

Each regulator must make decisions as per the criteria set out in the legislation of their jurisdiction. It must also consider conditions of approval, label requirements, and compliance and monitoring regimes needed to support the decision. These components are strongly influenced by the different legislative, political, environmental and agricultural features of each country within which the regulator operates. (sub DR228, pp. 2–3)

The APVMA provided the example that conditions placed on herbicides used in the EU would probably not be automatically transposed to herbicide use in tropical Queensland due to requirements of state legislation to protect the Great Barrier Reef (sub DR228, p. 3).

Cotton Australia said that it supported a risk-based approach to using evidence from trusted international regulators. However, it:

... strongly recommends that the decision of international regulators should not be used as the sole justification for registering or cancelling product/active ingredient for the Australian market, particularly for unprotected cropping situations. (sub. DR262, p. 9).

The APVMA acknowledged that there is scope to increase the use of international evidence and it is currently exploring these opportunities.

[T]he APVMA is looking to expand its use of international data and assessments, and has run a series of consultations with industry over the last 18 months, with the most recent consultation on more detailed guidance for industry on accepted international data, standards and assessments for agricultural and veterinary products closing on 17 June 2016 ... The APVMA is finalising the guidance material in consideration of submissions received for publication on our website. (sub DR228, p. 2)

Greater use of international evidence by the APVMA would benefit farm businesses, including quicker access to agvet chemicals available overseas, and reduced regulatory costs through greater harmonisation with comparable overseas regulators. The Commission supports such an approach in principle. This approach is also consistent with the Australian Government's commitment not to impose any additional requirements on products that

have been approved under a trusted international standard or risk assessment, unless there is a good reason to do so (Australian Government 2014b).

RECOMMENDATION 7.1

The Australian Pesticides and Veterinary Medicines Authority should make greater use of international evidence in its decisions on agricultural and veterinary chemicals (including by making greater use of data and assessments from trusted comparable international regulators). Reforms currently underway in this area should be expedited.

7.4 Inconsistencies in control-of-use regimes

States and territories are responsible for controlling the use of chemical products after retail sale. Control-of-use regimes differ across states and territories, and there are differences in the rules for ‘off-label’ uses. Off-label use refers to when a chemical is used in a way other than what is stated on its APVMA-approved label. Labels include instructions on the rate and frequency of application, and the types of crops on which the chemical can be used, among other things. In some states such as Victoria, off-label uses are legal, subject to some restrictions (VDEDJTR 2015a). However in others such as New South Wales, off-label uses are generally illegal (NSW EPA 2013b).

CropLife Australia (sub. 14) argued that it is difficult, confusing and costly to comply with multiple state and territory control-of-use requirements.

Differences in control-of-use regimes may also have consequences for the chemical registration process (section 7.1). This is because control-of-use regimes must be considered as part of the APVMA’s decision.

In Australia, the APVMA must consider state and territory legislation and control of use regimes, environmental protection regimes, adverse experience reporting mechanisms and food testing systems, which all contribute to and impact upon a regulatory decision. (APVMA 2015b, p. 12)

As such, multiple control-of-use regimes can add to the time and cost taken to achieve registration. Inconsistencies in these regimes can also make it difficult for the APVMA to strike the right balance in terms of risk. For example, a registration decision (that applies across all jurisdictions) that accounts for a lenient control-of-use regime in one state may appear to be overly risk-averse to farm businesses operating under a more stringent regime in another state. This means that improvements to control-of-use regulation could also result in improvements in the APVMA’s registration process.

Many participants agreed that a harmonised approach to control-of-use regulation would be beneficial.²⁴ For example, Animal Health Australia said:

Harmonisation of the control of use of AgVet chemicals should be an objective of the regulatory bodies with the aim of having a system in place in the next three years. Off-label use currently differs dramatically between different jurisdictions, putting livestock producers operating in states and territories that have strict off-label use regulations at a competitive disadvantage. (sub. DR250, p. 9)

However, others suggested that harmonisation may not be supported if it resulted in loss of access to critical products or increased the costs to farm businesses in certain jurisdictions (GrainGrowers, sub. DR247; Voice of Horticulture, sub. DR232; South Australian Government, sub. DR295).

Concerns about inconsistencies in control-of-use regulations are not new. In 2008, the Commission found that there were significant differences in the content of state and territory regulations regarding off-label uses, and the licensing and training of pesticide applicators. Also, there was variability in the monitoring and enforcement of these regulations (PC 2008).

Concerns about control-of-use regulations were also highlighted in submissions to the Agricultural Competitiveness White Paper and the House of Representatives Standing Committee on Agriculture and Industry inquiry (Aerial Agricultural Association of Australia Ltd 2014; Agribusiness Yarra Valley 2015; King & Wood Mallesons 2014; Nufarm Limited 2014). For example, Agribusiness Yarra Valley said that:

It is a crazy system when a chemical can be used to treat a bug on one side of the Murray but not the other, or when a chemical can be used on a bug on one crop but not another. (2015, p. 3)

In its review of chemicals and plastics regulation, the Commission recommended moving to a national control-of-use regime for agvet chemicals (PC 2008a). A national regime was expected to overcome the fragmentation and inconsistency of state and territory laws, and improve the effectiveness of the National Registration Scheme in achieving consistent risk management outcomes across jurisdictions. The Commission recommended that the use of agvet chemical products be regulated by the APVMA, through the Agvet Code (to be delivered by the states and territories). And, at a minimum, the regulation should include uniform approaches to enforcing conditions of use on product labels, and the licensing and training of chemical users.

²⁴ The following participants supported a harmonised approach to control-of-use regulation: ALFA (sub. DR294); Animal Health Australia (sub. DR250); Cattle Council of Australia (sub. DR290); CropLife Australia (sub. 14, sub. DR156); DAWR (sub. DR183, attachment); GrainGrowers Limited (sub. DR247); Horticulture Innovation Australia (sub. DR165); NSW Department of Primary Industries (sub. DR292); Voice of Horticulture (sub. DR232); WAFarmers (sub. DR226).

Following the Commission’s recommendation, COAG directed the Standing Council on Primary Industries to develop a national framework — involving a regulatory model, funding model and an intergovernmental agreement — to improve the efficiency and effectiveness of the regulation of agvet chemicals (DAWR 2015b). The initial plan was that, following the COAG agreement, implementation of the proposed models would take approximately 18 months.

While the national framework has been developed, implementation is another story. Queensland’s Department of Agriculture and Fisheries said that it ‘is concerned that the process has slowed in recent times’ (sub. 58, p. 4). The Aerial Application Association of Australia also asserted that ‘COAG processes for the reform of chemical control-of-use regulation have all but ground to a halt’ (sub. 12, p. 1).

The proposed scheme may also not fully address concerns about differences in allowable off-label uses. The scheme harmonises some elements of off-label uses (for example, registered pesticides can be applied to approved crops at a lower rate), but allows states and territories to have varying off-label use provisions to respond to regional needs (Tim Harding and Associates and Rivers Economic Consulting 2013). ABARES suggested that this minimal harmonisation means inconsistencies between jurisdictions are likely to continue (Gibbs, Harris-Adams and Davidson 2013).

Where there are clear and demonstrated regional differences, regulatory frameworks should retain flexibility to address them. However, as previously stated by the Commission:

... much of the need for flexibility [in control-of use] derives from differences in environments that do not correspond to state and territory borders and therefore, there is no justification for retaining these jurisdiction-specific regulatory approaches. (2008a, p. 226)

The Commission considers that there is scope to increase the harmonisation of off-label uses, and governments should pursue this goal without delay. In addition, work on implementing the national control-of-use regime should progress more rapidly with a firm commitment from all jurisdictions. States and territories should aim to have the regime in place by the end of 2018 — this will be ten years after the Commission’s review of chemicals and plastics regulation. The lack of progress to date is disappointing.

RECOMMENDATION 7.2

The Australian, state and territory governments should implement a national control-of-use regime (including harmonisation of off-label use provisions) for agricultural and veterinary chemicals by the end of 2018.

7.5 Access to agvet chemicals for minor uses

For some low-volume use chemicals, the registration and assessment costs outweigh the benefits of commercialising new products. This can discourage businesses from registering new agvet chemicals in Australia. However, where agvet chemicals are not registered, access may still be permitted for ‘minor uses’ through the minor use permit system.

Several participants said that the minor use permit system benefits farm businesses by allowing them to use agvet chemicals without incurring the full costs of registration (AFPA, sub. 11; Voice of Horticulture, sub. 42). Agforce said:

The [minor use] permit system provides agriculture, local government and others with options to control new emerging pests, diseases and weeds that are not currently on pesticide labels. Niche agricultural products can also acquire minor use permits for their unique situation. AgVet chemical companies rarely update pesticide labels as there is a huge associated cost. Minor use permits fill this gap. (sub. 17, p. 7)

Even so, some participants said it was difficult to obtain access to chemicals for minor uses, particularly for minor species such as goats (box 7.6). As well as hampering productivity, this can have animal welfare implications for those species (chapter 5) — for example, if access to pain relief medication is limited.

A number of participants said there was a need to streamline registration and approval of minor uses (Australian Forest Products Association, sub. 11; NFF, sub. 61; Primary Producers SA, sub. 41). For example, the Australian Forest Products Association said:

Further reform of agvet chemical regulation including ... Streamlining of the minor use permit approval process and red-tape reduction is needed. (sub. 11, p. 10)

The NFF also recommended that the Australian Government:

... proceed with efforts to streamline the regulatory framework surrounding registration and use of agricultural and veterinary chemicals. (sub. 61, p. 13)

Some participants said that where products are registered for use in major species, the data requirements for obtaining a minor use permit should be reduced (Dairy Goat Society of Australia, sub. DR97; Goat Veterinary Consultancies, sub. DR104). Others called for further government funding to support a minor use program and to facilitate access to minor use chemicals (CropLife Australia, sub. DR156; Horticulture Innovation Australia, sub. DR165; NFF, sub. 61; NSW Farmers’ Association, sub. 72; Voice of Horticulture, sub. 42).

Box 7.6 Access to agvet chemicals for goats

Several participants expressed concern about the lack of access to veterinary chemicals for goats. In particular, participants were concerned about:

- an inability to access local anaesthetic and other pain relief medication for disbudding, dehorning, castration and tattooing procedures
- limited access to products for parasite control (including for worms and lice), and for managing diseases
- lack of access to products for managing acidosis, to which goats are especially susceptible.

Difficulty accessing these products stems, in the first instance, from the lack of chemicals registered for use in goats. This is because it is often not economical for manufacturers to register products for use in minor species. This can lead to a reluctance to prescribe products, even where it would be legal to do so:

Meloxicam injection [for pain relief] has recently been registered for use in cattle, sheep, pigs and horses, but not goats. Meloxicam buccalgesic products are registered for cattle and will soon be registered for sheep, but will not be registered for goats, due to lack of a large enough market. These products can be prescribed by a veterinarian but as vets lack a Farm Animal Residue Avoidance Database ... service that vets have in the USA, many vets therefore lack the information about the with-holding period (WHP) that must be given by law with the prescription and are reluctant to help goat owners due to liability issues. (Goat Veterinary Consultancies, sub. DR104, p. 1)

It can also be difficult to obtain access to veterinary chemicals under the minor use permit system and some control-of-use regimes.

Minor use permits

The cost of applying for minor use permits can be prohibitive, especially where the industry affected is small. This is because the cost and risks associated with holding these permits cannot be spread out across a large user base. Goat Veterinary Consultancies said:

[A]n organisation or an individual must apply for this permit and hold it and many are very reluctant to take on this responsibility fearing liability if any residue is found in an overseas market and the market then shut-down. Growcom holds many horticulture minor use minor crop and fruit chemical permits as the Horticulture Australia Board does not want to hold these permits. (sub. DR104, p. 2)

Control-of-use regulation

In some jurisdictions, control-of-use regimes may also prevent off-label use of products on goats, even where the product has been registered for use on similar species. In addition, some products are labelled with 'do not use' statements (e.g. 'not to be used on dairy goats'), preventing the use of these products on goats. Often, 'do not use' statements are included because the product has not been tested for residue levels or withholding periods on goats, rather than because there are established contraindications for that species.

Sources: Australian Dairy Goats (sub. DR120); Boer Goat Australia (sub. DR111); Dairy Goat Society of Australia (sub. DR97); Goat Veterinary Consultancies (sub. DR104).

The Commission agrees that there may be a case for government support for accessing chemicals for minor uses. Priority should be given to areas where:

- access to chemicals has positive externalities, such as improvements in animal welfare

-
- access to chemicals provides a net benefit to the community, but no person or organisation is willing or able to bear the cost of obtaining a minor use permit.

The Rural Industries Research and Development Corporation is hosting a project to increase access to chemicals for minor uses (RIRDC 2016), and the Australian Government has provided \$8 million over four years to improve access to minor use chemicals (Treasury 2014a).

Issues relating to accessing ‘minor use’ chemicals may also be ameliorated by improvements to the chemical registration system (section 7.1). In particular, reducing the cost of registration (through the increased use of international evidence and improved timeframes) can make it more attractive for manufacturers to register chemical products, eliminating the need for chemical users to obtain minor use permits.

7.6 Labelling of agvet chemicals under work health and safety regulations

Agvet chemical labels are approved by the APVMA, and reflect the risk of the product (as assessed by the APVMA) when it is used according to its approved use. Currently, agvet chemicals are exempt from labelling requirements under work health and safety regulations. The exemption was granted because it was previously considered that the regulatory framework for agvet chemicals (including APVMA-approved labels) adequately protected the health and safety of workers (Access Economics 2010).

However, from 1 January 2017, the exemption will be discontinued, and agvet chemicals used in the workplace will be required to be labelled in accordance with the Globally Harmonised System of Classification and Labelling (GHS). This requirement is in addition to APVMA requirements, and is part of broader reforms that will require GHS labelling for all workplace hazardous chemicals in most states and territories (Safe Work Australia 2016a). Including agvet chemical labels as part of these reforms follows several adverse incidents involving chemicals that were not labelled according to the GHS (box 7.7).

APVMA-approved labels may not contain information about all of the intrinsic hazards of a chemical product, but are based on the APVMA’s assessments of risk to the end user — that is, the labels are mainly directed at the point of application to crops, rather than at chemical users throughout the supply chain (Access Economics 2010; Safe Work Australia 2016a). Where the APVMA has assessed that the risk of a particular hazard being realised is mitigated by the inclusion of safety directions, information about intrinsic hazards may not be required (Access Economics 2010).

Box 7.7 Incidents resulting from the absence of GHS labelling on agvet chemical labels

During Senate Estimates in February 2016, Safe Work Australia was asked to confirm whether the additional requirement to label agvet chemicals according to the Globally Harmonised System of Classification and Labelling (GHS) was prompted by any worker incident.

The question was taken on notice, and Safe Work Australia's written response referred to several incidents where the absence of GHS labelling resulted in harm to the community.

In their response to the 2006 Consultation Regulatory Impact Statement for the hazardous chemicals framework, WorkCover NSW highlighted several agricultural chemical incidents where APVMA approved labels were identified as not communicating the hazard which resulted in the incident, including a fatality caused by the use of carbon disulphide as a grain fumigant. The APVMA label contained no information about the flammability of this chemical.

A recent incident involving a herbicide called 'Hotshot' has also highlighted inadequate labelling. The health hazards which resulted in the hospitalisation of a bystander were not communicated on the APVMA label. These hazards would have been communicated on a GHS label. (Safe Work Australia 2016b, p. 1)

The APVMA, however, noted that carbon disulphide has not been registered in Australia as a grain fumigant since 2004 and, if it were registered today, the APVMA would require flammability signal words. Also, it was not clear that the incident involving the herbicide Hotshot would have been avoided with the GHS hazard and precautionary statements (sub. DR228).

By contrast, the GHS requires all intrinsic hazards to be communicated. Because information about hazards is independent of any assessment of risk, GHS labelling allows workplaces along the supply chain to conduct their own risk assessments to protect worker health and safety. Access Economics said that:

... the absence of hazard information on labels could prevent a workplace from undertaking an acceptable statutorily-required workplace risk assessment, as this relies on the identification of applicable hazards, or to implement appropriate risk controls. (2010, p. 16)

Some industry groups do not consider that the new arrangements will improve worker safety, and argue that the additional requirements are costly and unnecessary (Bettles 2016). For example, Grain Producers Australia questioned whether the new arrangements would deliver a benefit to workplace health and safety.

[A]t no point has evidence been provided by SWA or the Department of Employment that an investigation of a Workplace Health Safety incident has shown that lack of these additional labels were a causal factor in the incident. Neither has evidence been presented which identifies any systemic weakness in the current APVMA regulatory process with regards the current hazard warnings or labelling decisions, making the actions being taken unnecessary. (sub. DR202, p. 3)

Similarly, the Australian Veterinary Association said:

The current system of APVMA assessment and labelling is robust and successfully addresses work health and safety risks. Any suspension in supply of medications due to the additional labelling requirements could be counterproductive for animal health and welfare. Agvet

chemicals showing APVMA registered labels should be considered to be already meeting the aims of the GHS. (sub. DR167, p. 4)

CropLife Australia submitted that:

Compliance with two separate sets of fundamentally conflicting regulations is not only costly for manufacturers, just one of our member companies expects the cost of compliance with the extra regulation to be in excess of \$800 000, but it is likely to confuse users and subsequently threaten worker health and safety. (sub. 14, p. 17)

Animal Medicines Australia said that GHS labelling requirements:

... impose an unnecessary regulatory burden that contributes nothing to worker health or safety. The provisions should be amended to recognise that the APVMA labelling process achieves the purported aims of the GHS. (sub. 52, p. 10)

And the NSW Farmers' Association said that the new requirements will:

... create unnecessary red tape resulting in unnecessary expense that will be borne by farmers
... GHS hazard statements may reflect hazards that are of negligible risk. (sub. 72, pp. 14–15)

To discuss these concerns and the implementation of the reforms going forward, a meeting between Safe Work Australia members, DAWR and representatives from the agvet chemical industry took place on 17 August 2016 (Safe Work Australia, sub. DR264).

Actions have been taken to mitigate the cost of the forthcoming changes, including:

- a five year transition period, which commenced in January 2012 (APVMA 2014b)
- a full exemption from GHS labelling for certain classes of veterinary medicines agreed by Safe Work Australia members in October 2016 (Safe Work Australia, pers. comm, 8 November, 2016)
- clarity around the partial exemption from GHS labelling requirements, which applies where the information required by the GHS is already required by the APVMA. The only additional labelling requirements will be GHS hazard and precautionary statements if they are not already communicated on the APVMA approved label (Safe Work Australia 2016a).

In addition, DAWR has initiated an external review that will focus on the potential duplication of effort and unnecessary costs associated with agvet chemicals having to comply with both agvet chemical legislation and work health and safety legislation (DAWR 2016t). The review will identify options to streamline and improve the current regulatory approach, and make recommendations for preferred options. It will include public consultation and is scheduled to be completed by mid-November 2016.

8 Biosecurity

Key points

- Australia's biosecurity system is critical to maintaining the competitiveness of the agricultural sector. The entry of serious exotic pests, weeds or diseases into Australia would have a major impact on Australian farmers (including loss of agricultural production and access to premium export markets), the environment and the broader community.
- Biosecurity is a shared responsibility between governments, industries and the community.
 - The Australian Government manages biosecurity risks pre-border and at-the-border (including quarantine). It also coordinates responses to outbreaks within Australia.
 - The states and territories are mainly responsible for managing risks post-border. This largely involves surveillance and diagnostics.
 - Farm businesses comply with biosecurity regulations including, for example, fumigating crops, controlling weeds, and treating infected animals, and contribute to broader measures by industry such as responses to outbreaks.
 - The community plays a role in alerting authorities to biosecurity risks.
- The *Biosecurity Act 2015* (Cwlth) took effect on 16 June 2016, replacing the *Quarantine Act 1908* (Cwlth). The new Act introduced approved arrangements that are designed to provide more flexibility for operators and recognise existing business processes. As such, the Act should reduce agricultural businesses' compliance costs.
- Import risk assessments consider the level of biosecurity risk that may be associated with the importation of a product, and identify appropriate ways to manage these risks. The main concern around these assessments is transparency. The Australian Government sought to address this issue through the development of Biosecurity Impact Risk Analyses.
- Biosecurity requirements vary from state to state reflecting different risks (and therefore priorities), but the differences can add to businesses' costs, particularly when transporting goods and accessing markets in other states.
- While some differences in biosecurity requirements across jurisdictions may be justified, better coordination across jurisdictions could harmonise requirements. Significant progress has been made towards a more co-ordinated approach, including through the Intergovernmental Agreement on Biosecurity, and the establishment of the National Biosecurity Committee. The current review of the agreement is looking at the effectiveness of the agreement and avenues for improvement. It is important that the review considers ways to involve industry more in decision-making. A national biosecurity strategy could assist in identifying and gaining agreement on key risks and priority areas for investment.
- Trespass on farms is unlawful and can lead to biosecurity risks. Reviewing the monitoring and enforcement of animal welfare standards and improving transparency around farms' operations (with the use of industry-led initiatives such as web cams), should reduce the motivation for trespass. Making the community more aware of the biosecurity risks that arise from unsafely accessing farm land could also assist.

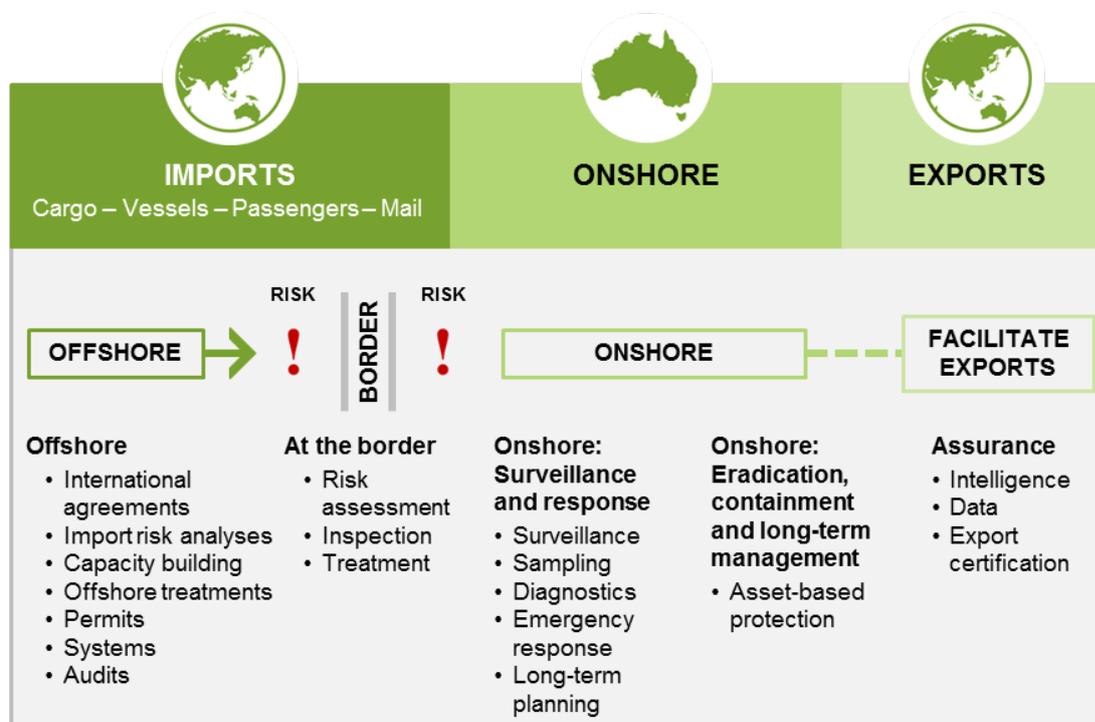
8.1 Australia's biosecurity arrangements

Biosecurity is about managing the risks of entry, establishment and spread of pests, diseases and weeds that could pose a threat to animal, plant or human health or the environment (Australian Government 2015a). Effectively managing these risks is important not only for agricultural industries, but also for protecting the environment, the community and economy.

Exotic pests, diseases and weeds can enter Australia via passengers, mail, air and sea cargo or by natural sources (such as wind, sea or migrating birds). In its 2014 report, *Australia's Biosecurity Future: preparing for future biological challenges*, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) highlighted a number of trends — such as increased movement of people and goods, urbanisation and agricultural intensification — that are placing Australia's biosecurity system under increasing pressure (box 8.1). An expansion of agriculture in Northern Australia is also expected to increase biosecurity threats, because of the proximity of neighbouring countries and the region's different ecoclimatic conditions (Australian Government 2015e).

Biosecurity risks are managed offshore, at the border and onshore, mainly by the Australian, state and territory governments (figure 8.1).

Figure 8.1 Australia's biosecurity system^a



^a Export regulation is discussed in chapter 14.

Source: Australian Government (2014a).

Box 8.1 Emerging challenges for biosecurity

Australia's geographic isolation provides protection from many external threats. However, a CSIRO report in 2014 — *Australia's Biosecurity Future: preparing for future biological challenges* — highlighted a number of trends that are likely to place pressure on Australia's biosecurity system.

- *Increased movements of vessels, aircraft, people and goods across our border from a wider range of countries and regions* — increased global trade and travel will create new opportunities for pests and diseases to enter and spread across Australia.
- *Agricultural expansion and intensification* — biosecurity will become increasingly important as agriculture expands and intensifies to meet rising global food demand. For example, while larger farming operations can generally better manage biosecurity risks compared with smaller operators (in part because they are better informed and benefit from economies of scale), the trend towards them may still require more stringent biosecurity practices due to factors such as the larger amounts of waste that they produce and greater numbers of livestock on their farms.
- *Urbanisation and changing consumer expectations* — urban encroachment and peri-urbanisation create new biosecurity challenges. For example, lifestyle farmers often have lower levels of knowledge about biosecurity risks and may be less likely to maintain good biosecurity standards. Other changes in farming practices can have similar effects, such as organic farming and free-range poultry. Free-range production systems can pose an increased biosecurity risk as the birds have greater exposure to wild birds that carry disease.
- *Biodiversity pressures* — the significance of biosecurity threats because of declining biodiversity and redistribution of species will become clearer over the coming decades.
- *Declining resources* — less biosecurity expertise and less biosecurity investment (with tighter government budgets) means improving the efficiency of biosecurity management must come from greater use of technology.

Agricultural expansion in Northern Australia is also likely to generate new biosecurity risks. As discussed in the Australian Government's white paper on northern Australia, the north's proximity to international neighbours, extensive coastline and sparse population make it particularly vulnerable to biosecurity threats, with most of Australia's biosecurity outbreaks in the past ten years occurring there. The growth of agriculture, mining and tourism industries increases links with the rest of Australia, and with that the probability of a pest or disease spreading to other regions.

Sources: Australian Government (2015e), Simpson and Srinivasan (2014).

Who is responsible for what?

The Australian Government is responsible for biosecurity activities offshore and at the border. Key activities include:

- providing information overseas about Australia's biosecurity arrangements
- conducting quarantine inspections and treatments overseas and at the border
- certifying and permitting goods to enter Australia.

The Australian Government also has a role in emergency responses to disease outbreaks through arrangements with industry such as the Emergency Plant Pest Response Deed, the Emergency Animal Response Agreement and the National Environmental Biosecurity Response Agreement (NEBRA) (COAG 2012b; DLA Piper Australia 2016a, 2016b). These arrangements outline emergency responses and cost-sharing principles, and complement the activities of state and territory governments in managing biosecurity risks within Australia's borders.

The state and territory governments are mainly responsible for onshore activities, including monitoring goods transported into the state or territory for both state-based and some nationwide threats.

The states and territories audit and inspect farm businesses for compliance with state-based biosecurity regulations and some federal regulations. They also provide input to Australian Government activities such as import risk assessments and responses to outbreaks.²⁵

The Intergovernmental Agreement on Biosecurity (IGAB) identifies the biosecurity roles and responsibilities across the Australian and state and territory governments (except the Tasmanian Government) (COAG 2012a). The agreement is aimed at strengthening the working partnership between the Commonwealth, state and territory governments, and improving the national biosecurity system. The National Biosecurity Committee has been set up to implement collaborative projects to meet the national priorities identified in the IGAB (box 8.2).

Local governments play a role in regional emergency pest and disease responses, and are also responsible for municipal services such as disposal of biosecurity waste material (Beale et al. 2008). Some states' and territories' biosecurity regulations also have specific requirements for local governments — for example, New South Wales' legislation, the *Biosecurity Act 2015* (NSW) requires local governments to manage biosecurity risks posed by weeds.

While governments play a major role in carrying out biosecurity activities, biosecurity is also the responsibility of all industries, businesses and the wider community. Industries play an important role in biosecurity risk management by reporting biosecurity risks that may threaten their businesses (they often benefit from this so have an incentive to do so). Government–industry partnerships, such as Animal Health Australia and Plant Health Australia, facilitate a national approach to enhancing Australia's management of established pests and diseases. A number of industries are signatories to the animal and plant emergency deeds and share with governments the costs of emergency measures when they arise.

²⁵ Import risk assessments consider the level of biosecurity risk that may be associated with the importation of a good, and identify appropriate ways to manage these risks.

Box 8.2 Instruments to facilitate a working partnership on biosecurity

The Intergovernmental Agreement on Biosecurity (IGAB)

The IGAB is an agreement between the Commonwealth and the state and territory governments, except Tasmania, which preferred to retain the ability to determine its own import requirements for produce entering from other states (Klumpp 2014). The agreement, which came into effect in January 2012, aims to strengthen the working partnerships between governments, improve the national biosecurity system and minimise the impact of pests and diseases on Australia's economy, environment and the community. The IGAB identifies priority areas for collaboration. They include:

- consistent decision-making on investments in biosecurity measures
- better sharing and collecting of data
- coordinated surveillance of pests and diseases.

The first deliverable under the IGAB was the National Environmental Biosecurity Response Agreement. It sets out emergency response arrangements, including cost-sharing arrangements, for responding to biosecurity incidents that affect the environment and/or social amenity and where the response is for the public good.

Governments have also established the National Surveillance and Diagnostics Framework, which aims to integrate funding and management of these activities across jurisdictions.

Australian Agriculture Ministers initiated a review of the IGAB to assess its implementation and the effectiveness of its schedules. The review is also considering the capacity of the national biosecurity system, and the suitability of the agreement to manage increased biosecurity risks going forward. The existing cost-sharing arrangements and the potential for implementation of new funding arrangements for biosecurity are also being considered. The review's draft report is due in late 2016.

The National Biosecurity Committee

The IGAB formally established the National Biosecurity Committee (NBC). The NBC identifies and implements collaborative projects between governments that meet the IGAB's priorities. The NBC provides advice to the Agriculture Senior Officials Committee and the Agriculture Ministers' Forum on national biosecurity and on progress in implementing the IGAB.

The NBC is supported by sectoral committees covering animal and plant health, invasive plants and animals, and marine pests. These sectoral committees provide policy, technical and scientific advice to the NBC.

Sources: COAG (2012a, 2012b); DAWR (2014, 2016p, 2016r).

Some industries have recognised that effective pest and disease management is in their interest and have coordinated industry-specific actions to manage biosecurity (one example is the cherry industry, box 8.3). Businesses also comply with biosecurity regulations including, for example, fumigating crops and treating infected animals.

Box 8.3 Australian Cherry Industry Biosecurity Management Programme

About 20 per cent of Australian cherries are exported to more than 20 countries, and the Australian cherry industry is looking to increase its export share. To help achieve this, the industry's peak body, Cherry Growers Australia, is developing a Biosecurity Management Programme aimed at providing confidence to all international markets that Australian cherries meet countries' quarantine requirements, and are of high quality.

The draft programme includes a full spectrum of management and quality principles in cherry production, pest and disease management, research, education, training and market access. These include:

- developing early warning systems to detect pests and diseases
- implementing a nationwide crop monitoring database to immediately highlight or detect any emerging pest issues
- providing regular training and education for all growers on biosecurity and good practice
- identifying future risks associated with climate change and shifts in the types of pests and diseases affecting the industry.

Sources: Cherry Growers Australia (2015, 2016).

The community plays a role in alerting authorities to, and managing, biosecurity risks. As the discussion paper for the review of the IGAB said:

Community understanding and acceptance of biosecurity risk is critical to the sustainability and operation of the national biosecurity system. Australian governments and industry work together to help the broader community, which includes landholders, travellers, scientists and non-government organisations, understand what biosecurity means for them so as to encourage participation and confidence in the national biosecurity system. (Craik, Palmer and Sheldrake 2016, p. 19)

The importance of community efforts has been recognised in fruit fly eradication programs — in Mildura and Swan Hill fruit fly trap kits were distributed to households to help manage pest control efforts (ABC 2015b).

Industry groups, universities, and research organisations also contribute to the knowledge base around the risks from pests or diseases.

Regulations covering Australia's biosecurity arrangements

Australia's primary legislation for biosecurity (the *Quarantine Act 1908* (Cwlth)) was replaced by the *Biosecurity Act 2015* (Cwlth) on 16 June 2016. The Act details the biosecurity arrangements administered at the national level, and also allows for the management of biosecurity risks in a manner that is consistent with Australia's international obligations.

The Department of Agriculture and Water Resources (DAWR) described the new Act as representing:

... a comprehensive modernisation of Australia's biosecurity legislation. The Act has been designed to be flexible and responsive to changes in technology and future challenges. The legislation has been designed to reduce unnecessary red tape and provide a more flexible risk based approach to compliance. (sub. 50, p. 9)

Each state and territory has its own legislation (table 8.1). New South Wales and Queensland have recently passed new biosecurity Acts and Tasmania is looking to develop a new biosecurity Act (TDPIPWE 2016b).

Table 8.1 State and territory main biosecurity legislation

<i>State/Territory</i>	<i>Legislation</i>
New South Wales	<i>Biosecurity Act 2015^a</i> <i>Animal Diseases and Animal Pests (Emergency Outbreaks) Act 1991</i> <i>Non-Indigenous Animal Act 1987</i> <i>Noxious Weeds Act 1993</i> <i>Plant Diseases Act 1924</i> <i>Stock Diseases Act 1923</i>
Victoria	<i>Livestock Disease Control Act 1994</i> <i>Livestock Management Act 2010</i> <i>Plant Biosecurity Act 2010</i> <i>Catchment and Land Protection Act 1994</i>
Queensland	<i>Biosecurity Act 2014</i>
South Australia	<i>Plant Health Act 2009</i> <i>Livestock Act 1997</i> <i>Natural Resources Management Act 2004</i>
Western Australia	<i>Biosecurity and Agriculture Management Act 2007</i>
Tasmania	<i>Animal Health Act 1995</i> <i>Animal (Brands and Movements) Act 1994</i> <i>Animal Farming (Registration) Act 1994</i> <i>Plant Quarantine Act 1997</i> <i>Seeds Act 1985</i> <i>Weed Management Act 1999</i> <i>Vermin Control Act 2000</i>
Northern Territory	<i>Plant Health Act 2008</i> <i>Livestock Act</i> <i>Weeds Management Act</i>
Australian Capital Territory	<i>Plant Diseases Act 2002</i> <i>Pest Plants and Animals Act 2005</i> <i>Animal Diseases Act 2005</i>

^a The *Biosecurity Act 2015 (NSW)* is expected to take effect in 2017 and the other legislation will be repealed at that time (NSW DPI 2015a).

Several international agreements also underpin Australia's biosecurity arrangements (box 8.4), including the World Trade Organization's (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), which defines the concept of an 'appropriate level of protection' (ALOP). This is the level of protection deemed appropriate by a WTO Member establishing a sanitary or phytosanitary measure to protect human, animal or plant life or health within its territory (WTO 2015). WTO Members are required to take into account the objective of minimising negative trade effects.

Australia's ALOP is expressed as 'providing a high level of sanitary and phytosanitary protection aimed at reducing risk to a very low level, but not to zero' (DAWR 2016c).

Box 8.4 A number of international agreements underpin Australia's biosecurity arrangements

In addition to the World Trade Organization's SPS Agreement, Australia's biosecurity arrangements are underpinned by:

- the Food and Agriculture Organization's International Plant Protection Convention, which establishes international standards on using phytosanitary measures to protect plant health (IPCC 2016)
- the World Organisation for Animal Health's international standards relating to animal health and zoonoses (which are diseases that can be passed on to humans from animals). The SPS Agreement encourages signatories to base their sanitary measures on the World Organisation for Animal Health's standards (OIE 2016b)
- the United Nations' Convention on Biological Diversity (Biodiversity Convention), which guides regulations on conserving diversity within species, between species and of ecosystems
- the World Health Organization's International Health Regulations, which guide regulations around public health risks that can threaten people worldwide (WHO 2005).

The *Biosecurity Import Risk Analysis Guidelines 2016* describe the process that DAWR follows when assessing proposals to import animals, plants and/or other goods (DAWR 2016h). The risk analyses consider the level of biosecurity risk that may be associated with the importation of a good, and identify appropriate ways to manage these risks.

Live plants and animals, and associated reproductive material, must also be listed as an approved type under the live import list according to the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) before they can be imported (Department of the Environment 2016). The Department of the Environment approves changes to the live import list for animals, while DAWR does the same for plants.

Biosecurity arrangements are also shaped by regulations in other areas of policy, such as food safety (chapter 10) and export certification (chapter 14).

Past reviews

The most recent comprehensive review of biosecurity and quarantine arrangements was the Beale Review (2008).²⁶ This review recommended wide-ranging reforms and many have been implemented, including a new Biosecurity Act, the IGAB, and the National Biosecurity Committee.

The review advocated for a shift towards a more national approach to biosecurity to improve the implementation of biosecurity activities, particularly surveillance and diagnostics, and to help ensure jurisdictions' requirements accurately reflect biosecurity risks. It also recommended developing a list of national priority pests and diseases on the basis of the likelihood of incursion and its impact.

An earlier review of biosecurity — *Australian Quarantine: a shared responsibility* (Nairn et al. 1996) — introduced the framework of addressing biosecurity risks pre border, at the border and post border. The Nairn report also promoted biosecurity as a shared responsibility between Australian and state governments, businesses and the general community, which is an underpinning principle of the new Biosecurity Act.

More targeted reviews have looked at specific aspects of the biosecurity system, and the system's response to outbreaks. For example, Matthews (2011) looked at Australia's preparedness for a foot-and-mouth disease outbreak. The review led to the development of the National Foot-and-Mouth Disease Action Plan by the National Biosecurity Committee, and the establishment of the Foot-and-Mouth Disease Taskforce (DAWR 2015a).

The Agricultural Competitiveness White Paper and the White Paper on Developing Northern Australia also outlined government initiatives to spend \$200 million to improve biosecurity surveillance and analysis to better target critical biosecurity risks (including \$12.4 million for Indigenous ranger groups in northern Australia) (Australian Government 2015a, 2015e).

8.2 Why are governments involved in biosecurity?

Biosecurity has both public good properties and spill-over effects (externalities). A pest- and disease-free environment is a public good. If providing such an environment was left to the private sector, this could lead to free-riding on the management efforts of others and result in underinvestment in biosecurity activities. This failure of the market to adequately address pest and disease risks is a major reason for government involvement in biosecurity.

²⁶ In 2012, the Senate Rural and Regional Affairs and Transport Committee looked at the adequacy of biosecurity arrangements, and progress in the implementation of the Beale Review's recommendations (SRRATRC 2012). The Senate Committee's recommendations included prioritising the Beale Review's reforms, and improving transparency around the import risk assessment process.

Some pests and diseases can be effectively managed by individual farms. For example, farmers undertake biosecurity activities to protect their own crops, flocks and herds. The benefit of these activities also accrues to other landholders and the broader community. However, other biosecurity risks can only be managed with a coordinated approach, and biosecurity arrangements often involve international negotiations, liaisons and coordination to develop conditions of entry into Australia. Farmers also benefit from a pest- and disease-free environment and effective surveillance and monitoring, including for example, improved access to export markets.

The efforts of individual farmers can be undermined when other landholders fail to prevent, manage or eradicate biosecurity threats. This can include threats which are present in residential or community areas and can spread to agricultural land, affecting crops and herds; and farmers abandoning their land and leaving threats in place such as poorly managed vineyards.

When should governments be involved?

Government involvement in biosecurity arrangements should depend on the extent of the failure of the market to manage pest and disease risks, and the potential benefits to the community of government intervention. There is also a strong case for government intervention where the benefits of a service are spread throughout the community and it is difficult to identify individual beneficiaries. An example is biosecurity arrangements at the border, which benefit the entire community. The market may not adequately provide such a service, and while the community can collectively benefit from the service, community members have little incentive to coordinate. Governments also have the regulatory authority to compel other parties to comply with biosecurity arrangements.

Where biosecurity measures affect a limited set of people, governments can play a lesser role. Industry or individual farmers, for example, can be motivated to coordinate, fund and provide biosecurity measures when the benefits are limited to those carrying out the measure. Examples include the cherry industry's biosecurity plan to improve its access to export markets (box 8.3) or a farmer protecting machinery from damage caused by fire ants. However, in some of these cases, governments can share responsibilities with industry when it is better at coordinating stakeholders, or when the measure also affects the community more generally.

8.3 Benefits and costs of biosecurity

Biosecurity activities confer benefits on the community, the environment and economy. The community is protected from harmful diseases (some animal diseases are zoonotic and can affect human health) and the natural environment is conserved, ensuring native plants and animals are not threatened. Examples of biosecurity risks include avian flu, a virus that affects poultry and can affect humans, and red imported fire ants which can harm native

plants and animals while also damaging agricultural equipment and being a nuisance to animals and people.

As an island nation, Australia is free of many of the pests, diseases and weeds that are found in other parts of the world. The South Australian Government described Australia as having ‘an enviable pest and disease free status’ when compared to many of our trading partners (sub. 57, p. 25).

A robust biosecurity system benefits Australian farmers by protecting Australia’s reputation for quality and safe produce, and so is important for safeguarding access to premium export markets. For example, Australia’s foot-and-mouth disease free status has helped it maintain access to premium markets for red meats (where prices are significantly higher than for meat products originating from countries where the disease is endemic) (Hafi et al. 2015). Also, the quarantine conditions that Japan and Korea put on cherries mean that only growers in Tasmania can meet them (Australian Government 2015a).

Keogh and Goucher suggest that biosecurity arrangements will become more valuable to Australian farmers.

As Australian agriculture transitions from being a supplier of bulk agricultural commodities towards being a preferred supplier of safe and high quality consumer products, the risks associated with a breakdown in Australian biosecurity systems become much greater. (2016, p. 1)

Farming yields can be higher because fewer crops and livestock are affected by pests and diseases, and farmers’ production costs are lower because fewer pesticides and veterinary services are required. A recent ABARES (2015) report found that Australia’s biosecurity system improves the annual profits for the average farm by between \$12 000 to \$17 500 (box 8.5).

Consumers also benefit from an effective biosecurity system. A study by ABARES looking at the potential impacts on horticulture from exotic fruit fly found that some of the increases in farmers’ production and marketing costs were transferred to consumers through higher average market prices for horticultural products across Australia (Hafi et al. 2013). Market prices fell with the implementation of the Torres Strait Fruit Fly Strategy, which involves detection of, and response to, fruit fly incursion in Torres Strait islands before they enter the mainland.

However, making import regulations more stringent can reduce biosecurity risks, but also increase the cost of imported inputs (such as animal feed or new crop species) and consumer prices, which in turn can protect local industry from overseas competition. As Beale et al. said:

... Australian consumers have a legitimate interest in being able to purchase competitively priced, quality foods produced safely in overseas countries. Biosecurity arrangements should not lightly employ measures that interfere with these preferences. (2008, p. XVII)

Box 8.5 The value of Australia’s biosecurity system at the farm gate

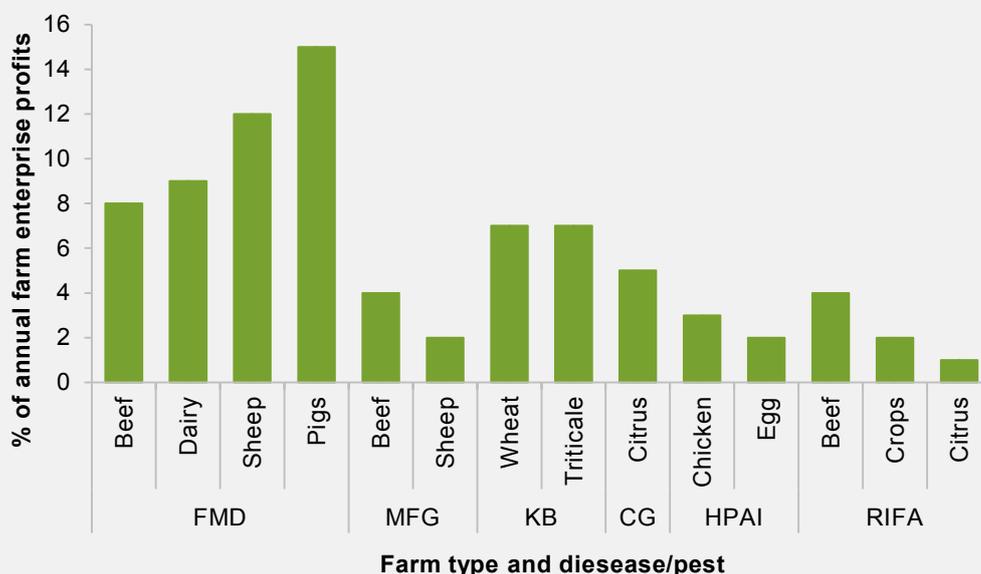
An ABARES study looked at the impact on farms’ profits from six significant biosecurity threats when biosecurity arrangements were and were not in place. The likelihood of a threat becoming endemic under each situation was calculated and the additional cost to farmers estimated. The study included the costs that could arise from:

- direct production losses (for example, reductions in the productivity of crops and livestock and output quality)
- additional expenditures on control measures, and damage mitigation
- market losses because importers refused infected products.

The results showed that the different diseases would have varying impacts on profits depending on the type of farm. For example, for foot-and-mouth disease, the study estimated that profits in pig farming would fall by 15 per cent. Other industries, however, would be less affected. For example, citrus farmers’ profits were estimated to fall by 1 per cent if affected by red imported fire ants.

Noting that broadacre farms typically do not farm a single product but several, combining cropping and livestock, the study also looked at the impact of diseases on typical broadacre farms, which generally could be affected by foot-and-mouth disease, Mexican feather grass, and Karnal bunt. The contribution of biosecurity activities to these broadacre farm profits ranged from \$12 000 to \$17 500 per year (or 5-13 per cent of these farms’ gross margin).

Contribution of biosecurity to annual farm profits^a



^a FMD: Foot-and-mouth disease; MFG: Mexican feather grass; KB: Karnal bunt; CG: Citrus greening; HPAI: Highly pathogenic avian influenza; RIFA: Red imported fire ants.

Source: Hafi et al. (2015).

The National Farmers’ Federation (sub.61) also said that the impact biosecurity regulations have on the importation of animals, animal genetics, plants and associated

material that can be used to increase productivity in farming systems needs to be considered.

Businesses and the broader community can incur other costs, such as the cost of pesticides (although these costs would potentially be higher if a biosecurity system was not in place or was ineffective). Many of the costs on businesses and the community are difficult to quantify because data are limited, and people's preferences are hard to assess. These costs include the time spent by businesses complying with regulations, and higher operating costs because they need to implement more measures to address biosecurity risks.

Other regulations can also affect the cost of managing biosecurity risks. For example, some state and territory moratoria on genetically modified crops (chapter 6) reduce farmers' access to pest-resistant crops, requiring them to spend more on biosecurity measures.

While it is difficult to quantify the costs, a number of Australian studies indicate that the benefits from biosecurity are large and likely justify the costs. For example:

- the Commission (2002a) estimated that there would be \$13 billion (\$18 billion at 2016 prices) in revenue losses to the agricultural industry over a decade from a multi-state outbreak of foot-and-mouth disease which takes 12 months to contain. The loss would be mainly due to lost access to markets and eradication efforts. The Commission estimated that this would lead to a \$8-13 billion loss in Australia's GDP over the period.
- Buetre et al. (2013) estimated that a large outbreak of foot-and-mouth disease in Australia would result in about \$50 billion in revenue losses to the agriculture industry over a decade. The larger impact when compared with the Commission's study reflects assumed additional market access requirements from trading partners following the outbreak due to Australia's time out of the market and loss of market share.
- Hafi et al. (2014) found that while government funded biosecurity activities to tackle red imported fire ants cost \$411 million (over the period 2001–2012), without them, red imported fire ants could cause losses of \$8.5 billion over a 70 year period.

These analyses focus on the economic benefits relating to just a few diseases. The benefits are likely to be greater when taking into account all potential biosecurity risks and the wider costs to the community.

Eliminating all biosecurity risks is not possible as there is always a risk that pests and diseases are present in imports to some extent, and that they can enter with migrating animals. As a result, biosecurity policy is about managing biosecurity risks (not eliminating them).

8.4 Issues raised about biosecurity

Many participants to this inquiry commented favourably about Australia's biosecurity arrangements. The benefits to Australian farmers from our biosecurity system, including a reputational advantage and access to premium markets, were also readily acknowledged (box 8.6).

Box 8.6 Positive comments on Australia's biosecurity arrangements

National Farmers' Federation:

A robust, efficient and science-based quarantine and biosecurity system is fundamental to maintaining Australia's enviable pest and disease-free status. The competitive advantage of Australian agriculture is our ability to produce and supply high-quality, safe, trusted products, which are traceable from farm to consumer and driven by a well-structured and thorough biosecurity system. (sub. 61, p. 25)

Australian Pork Limited:

Australia's favourable biosecurity status enables it to produce premium agricultural goods competitively, efficiently and sustainably. Current biosecurity protocols make Australia one of only a few countries that maintains a high disease-free status for pig herds ... Biosecurity is critical to the pork industry remaining cost competitive. Australia enjoys excellent pig herd health which underpins productivity, profitability, animal welfare and ongoing management costs. (sub. 37, p. 4)

Voice of Horticulture:

Avoiding pest and disease incursions is critical to the viability of the horticulture industry. Australia's unique biodiversity and relative disease-free status must be maintained, along with horticulture's reputation as a supplier of fresh, high quality, clean produce. Freedom from many of the world's major pests and diseases provides a clear advantage in both domestic and global markets. (sub. 42, p. 20)

Canegrowers:

Continued effort in biosecurity is important for the productivity and profitability of the Australian sugar industry. Stopping the entry, establishment and spread of exotic diseases and pests is vital for our industry's future. If unchecked, yield losses would be high and devastating to industry productivity and profitability. (sub. 22, p. 7)

Stephen Targett:

Australia currently benefits from being free from a lot of the pests and diseases that are present in the rest of the world. This is giving Australia's products a decisive edge when competing on the international arena. Bee Mites, Bee tracheal Mites, Deformed Wing Virus (all bee related) and Foot and Mouth Disease come to mind. Not having these pest and diseases reduces producer costs and helps produce a clean and green marketable product that can be sold for premium. (sub. 5, p. 2)

The World Organisation for Animal Health (OIE) also recently complimented Australia's biosecurity system in its evaluation of Australia's veterinary services. The OIE scored Australia at the highest competency level of five for 38 of its 47 criteria on animal health and biosecurity. The lowest level Australia received was three. The OIE said:

The evaluation results highlight Australia's extraordinary commitment to biosecurity, serving their national interests by maintaining their high animal health status. The very high level of biosecurity is founded on strong partnership collaboration and formal business arrangements amongst jurisdictions and with the private sector, including primary producers, processors, suppliers of inputs and laboratories. (Schneider et al. 2015, p. 1)

In addition, several participants commented positively on the new Biosecurity Act (box 8.7). The Consolidated Pastoral Company, for example, said ‘it is a good example of regulatory reform where century old prescriptive legislation has been replaced with an Act that provides for the efficient administration of the regime’ (sub. 71, p. 6).

Box 8.7 Favourable comments on the new Biosecurity Act and the consultation process

National Farmers’ Federation (NFF):

The NFF has welcomed the impending replacement of the *Quarantine Act 1908*, with the *Biosecurity Act 2015*. The NFF continues to work through the details of the new legislation with Government to ensure the regulations provide for a biosecurity framework that is fit for the 21st century. (sub. 61, p. 25)

AgForce:

The underpinning regulations to the *Biosecurity Act 2015*, currently in development, will largely determine success in managing biosecurity risk. AgForce commends the industry consultation process instigated by the Australian Government Department of Agriculture and Water Resources while developing the regulations. The series of forums between the Department and the National Farmers Federation Biosecurity Taskforce is providing excellent feedback loops for generating practical and effective regulations. This is a good consultation model for generating other legislative and regulatory instruments and is supported by AgForce. (sub. 17, p. 16)

Australian Veterinary Association:

The Australian Veterinary Association supports the planned implementation in June 2016 of the *Biosecurity Act 2015*, which aims to introduce a more flexible, risk-based approach to biosecurity regulation. It is critical that this new legislation and supporting regulatory arrangements are established in such a way as to protect Australia from threats to its animal and plant industries. (sub. 26, p. 5)

NSW Farmers’ Association:

NSW Farmers’ members have expressed a clear desire for the Australian Government’s regulation of entry points of Australia to biosecurity risk to be conducted through a clear regulatory science framework operating independently of political pressures.

This principle is in the process of being embedded in the *Biosecurity Act 2015* (Cwlth) through the development of regulations which ensure that expert scientific advice is central to the development of Biosecurity Import Risk Assessments (BIRA) through the oversight of a Scientific Advisory Group. Further, the independence of a statutory position of Inspector General of Biosecurity of review of BIRA provides a level of transparency that will ensure the primacy of science in the making of regulatory decisions over the importation of produce into Australia. (sub. 72, p. 29)

Queensland Farmers’ Federation (QFF):

QFF and its members are supportive of the modernising of the system and the trend within the new biosecurity legislation (both State & Commonwealth) to reduce red-tape and provide a more flexible and risk-based approach. (sub. DR217, p. 8)

Australian Sugar Milling Council:

Biosecurity regulation in Australia appears to be headed in the right direction. Both the Australian and Queensland Governments now have modern biosecurity arrangements that have been introduced in 2016, with other States considering closer alignment of their biosecurity legislation. (sub. DR234, p. 4)

However, some concerns were raised, including:

- the changed role for industry under the new Biosecurity Act
- the role of industry in decision-making
- import risk assessments
- the interaction between the Australian, state and territory governments
- internal surveillance and diagnostics of biosecurity risks.

Each of these issues are discussed below.

The role of industry under the new Biosecurity Act

The new Biosecurity Act aims to promote a shared responsibility for biosecurity between governments and industry (DAWR 2016g). Notably, it has streamlined the application process to enable businesses to monitor biosecurity risks themselves. While the Quarantine Act 1908 allowed for this, it required businesses to form an agreement for each biosecurity activity that they carried out, and each premise that they assessed. The new Act's *approved arrangements* combine these separate agreements into one. The Australian Government expects to conduct fewer audits of businesses, reducing their frequency from at least twice to once per year, on average, although audit rates will depend on factors such as a business's compliance and performance (DoA 2014a).

The approved arrangements account for most of the expected net reduction in compliance costs on business, which based on the regulation impact statement, is estimated to be \$6.9 million over ten years (DoA 2014a). Costs are also expected to fall because of changes to *first point of entry* requirements for vessels when they arrive in Australia (box 8.8). These reductions are partly offset by increased costs from changes to ballast water regulations and the creation of an Inspector General of Biosecurity.

While some participants were positive about approved arrangements, the Community and Public Sector Union (CPSU) flagged potential problems.

Many CPSU members have expressed concerns that the move away from Department-run inspections towards self-regulation by industry participants may have adverse impacts on quarantine outcomes. (sub. 6, p. 2)

In particular, the CPSU was concerned that the new legislation was not specific, providing industry with too much leeway when carrying out inspections. The CPSU was also concerned that allowing company employees to be biosecurity officers makes businesses less accountable for risks, and may lead to conflicts of interests as a company's profit motive may conflict with its biosecurity responsibilities.

Box 8.8 Main changes introduced by the new *Biosecurity Act 2015* (Cwlth)

In addition to the changes arising from approved arrangements, the provisions of the new *Biosecurity Act 2015* (Cwlth) differ in several ways from those in the previous *Quarantine Act 1908* (Cwlth). Changes include:

- allowing the Australian Government to permit vessels to apply for a standing approval to arrive at a port which has not been proclaimed as a first point of entry. The new Act also provides greater transparency around the process of proclaiming a first point of entry
- introducing a civil penalty regime which allows for civil penalties, enforceable undertakings, and infringement notices
- explicitly stating Australia's Appropriate Level of Protection
- providing the Australian Government with greater powers to manage incursions and respond to emergencies. For example, the Director of Biosecurity can declare biosecurity zones and apply biosecurity measures within these zones. However, states and territories continue to have primary responsibility for responses within their jurisdiction
- providing biosecurity officials with greater powers to gather information and manage conveyances
- appointing an Inspector-General of Biosecurity who will undertake independent audits of the Department of Agriculture and Water Resources' biosecurity activities and risk management to maintain or improve the integrity of the biosecurity system as a whole. The Inspector-General will have powers to compel compliance and provision of information
- changing the way ballast water is managed. (Ballast water is stored by ships to stabilise them during a journey. The water is taken on and discharged at different stages meaning that marine organisms can be moved from place to place with this process.) The changes bring Australia's requirements in line with international conventions and create a single, Australia-wide ballast water management regime. The main changes are to domestic ships' management of ballast water.

Sources: *Biosecurity Act 2015* (Cwlth); DAWR (2014a).

While assessing whether approved arrangements weaken Australia's biosecurity is difficult as the *Biosecurity Act* only took effect in June 2016, the risk is low. In particular, businesses were able to apply to self-assess biosecurity risk under the *Quarantine Act 1908*. The Beale review in looking at this issue said:

[The self-assessment arrangements] involve unnecessary administration with the requirement for biennial and even annual re-registration processes, and a lack of recognition of businesses with an excellent compliance history, for example, customs brokers with a long history of adhering to the requirements of a compliance agreement. (2008, p. 74)

The Beale review recommended improvements to the self-assessment arrangements so they would be more widely adopted and the regulatory burden for businesses with an excellent track record of compliance would be reduced. The new approved arrangements streamline the application process for businesses, reducing costs. Lower compliance costs should encourage more businesses to enter approved arrangements (self-assessing biosecurity risks are likely to be cheaper than government audits). However, Australia's

biosecurity could be weakened if businesses do not adequately assess their biosecurity risks. This could occur if businesses' interests conflict with Australia's biosecurity priorities.

However, businesses' interests often align with Australia's biosecurity objectives. Many businesses have their own biosecurity arrangements in place and, as a result, approved arrangements can reduce overlap of governments' and businesses' arrangements. In this way, approved arrangements can free up government resources to focus on other risks, which can improve Australia's overall biosecurity. Businesses also have a strong incentive to notify authorities of threats outside of their properties as this can reduce the harm to them.

That said, governments' and businesses' interests are not always aligned — for example, a farmer transporting cattle may not disclose the symptoms of a particular animal to avoid the entire load from being quarantined or destroyed. As the CPSU noted, 'it only takes one business failing to adequately assess their biosecurity risk to lead to a biosecurity outbreak which has the potential to do significant economic and reputational damage to Australian agriculture' (sub. DR204, p. 3). As such, governments continue to play an important role in monitoring and acting on biosecurity threats.

The effectiveness of approved arrangements relies on DAWR ensuring that approved businesses' objectives are aligned with Australia's biosecurity priorities. The new civil penalties under the Biosecurity Act provide DAWR with additional tools to effectively manage businesses that undertake their own biosecurity activities. In addition, biosecurity officers are now able to direct an approved business to carry out a biosecurity measure or refrain from doing so. The Director of Biosecurity also has power to revoke a business' arrangements.

Involving industry in decision-making

A greater role for industry in making decisions about biosecurity arrangements was advocated by a number of participants. The Sheepmeat Council of Australia said:

Industry has much to offer in helping to protect Australia from biosecurity threats and managing existing incursion ... The 'shared responsibility' advocated by Nairn and Beale is still short of optimal realisation ...

Traditionally industry has only been engaged in an advisory capacity; however, industry has a significant interest in building awareness and capability in the agricultural sector to help in achieving these outcomes ... (sub. DR245, pp. 5–6)

WAFarmers also said:

Industry currently has limited engagement with government on development of priorities, policy and response strategies. However governments are increasingly pushing biosecurity function and funding obligations back onto industry, without providing industry with the

opportunity to engage properly in the decision making process, or acknowledging the valuable contribution industry experts can offer to this process. (sub. DR226, p. 19)

Submitters to the IGAB review put forward similar views in relation to the IGAB. For example, Animal Health Australia said:

The current IGAB has been successful in bringing governments together to strengthen their working partnerships and investments to improve the national biosecurity system, but has failed to fully realise its partnership opportunities with others such as industry ...

There still remains no clear mechanism for industry to engage with [the National Biosecurity Committee] on relevant areas of IGAB ... (2016, p. 3)

Industry already plays a role implementing biosecurity measures, and contributes as part of emergencies (such as through the Emergency Plant Pest Response Deed) and within Animal Health Australia and Plant Health Australia.

The shared responsibility for biosecurity between government and industry has the potential to involve industry more in decision-making. Industry is more likely to implement biosecurity measures when they are involved in their design. Also, industry's on-the-ground knowledge can improve biosecurity measures, and allows for rapid feedback on the effectiveness of measures. As Richards and Higgins said:

Shared responsibility improves engagement with groups of actors who may have had limited previous input into biosecurity policy and programs. Such engagement is crucial for governments in better recognising how producers perceive and respond to pest and disease risk, as well as how they make biosecurity workable in the context of (a) their experience of living with disease ... and (b) the imperative to operate an economically viable and sustainable farm.

... The sharing of responsibility for biosecurity has the potential to foster a more polycentric governance approach in which information from localised hubs of actors is passed upwards to authorities rather than just being received from the top-down. (2016, pp. 5–6)

The IGAB review should look at ways to involve industry more in decision-making processes.

Industry awareness of biosecurity and their responsibilities

While greater industry involvement in biosecurity can be beneficial, its effectiveness relies on businesses knowing and carrying out their roles. As the National Biosecurity Committee said:

Successful collaborative action to manage established pests and diseases, including those that are considered to be nationally significant, depends on all stakeholders having an understanding of their roles and responsibilities. (2015, p. 8)

The Northern Territory Department of Primary Industries and Fisheries said that some farm businesses may not understand their responsibilities:

It is our view that some Australian primary producers do not fully recognise the increasing threats posed by the pests and diseases nor fully appreciate the significance of biosecurity programs in maintaining or enhancing market access, both domestically and internationally. In order to help mitigate these increasing risks, an improved national approach to biosecurity is required. (sub. 67, p. 2)

If businesses do not understand their responsibilities they are unlikely to adequately manage their biosecurity risks, and this could weaken Australia's overall biosecurity arrangements, harming other businesses and the community. As the CPSU said regarding approved arrangements:

A business may have little or no understanding that a failure to inspect properly for biosecurity risks could devastate an entire industry unrelated to the industry the business is operating in. (sub. DR204, p. 3)

The Northern Territory Department of Primary Industries and Fisheries (sub. 67) noted that while the move to individual property biosecurity management (rather than state and territory based regulation) is about minimising regulatory burden, it also needs to be recognised that there is an inherent risk that a disease could become established on a property, spread to other properties and affect collective market access.

Smaller producers and hobby farmers can lack knowledge about biosecurity risks and may not maintain good biosecurity standards (box 8.1). These farmers are often disconnected from traditional agricultural networks, particularly as some may keep livestock and plants without selling them. If pests and diseases establish on these farms (particularly those located in peri-urban areas close to ports), and they spread, they can affect commercial operations and weaken the biosecurity system.

The Commission heard little evidence that a significant number of businesses are unaware of the need for biosecurity. Because many businesses benefit from biosecurity efforts and/or can face penalties for not complying with regulations, they have an incentive to know their responsibilities.

Governments and industry groups are also often engaged in the biosecurity issues that businesses face, developing management plans with stakeholders and conducting information sessions. For example, the Livestock Biosecurity Network, an industry initiative established by the Cattle Council of Australia, Sheepmeat Council of Australia and Wool Producers Australia, seeks to provide livestock producers with the necessary tools and information to manage disease, pest and weed events on livestock producers' farms (LBN 2016). However, more may need to be done to inform small producers and hobby farmers about their responsibilities around biosecurity.

Shared responsibility requires clearly defined roles, responsibilities and accountability. Several submitters to the current IGAB review noted that industry do not clearly understand their role under a shared responsibility. For example, WAFarmers said:

We don't believe the components and function of the national biosecurity system are consistently understood by industry stakeholders and to some extent government personnel ... (2016, p. 4)

And Plant Biosecurity CRC stated:

There is considerable confusion around the meaning of the term 'shared responsibility'. A schedule to the IGAB setting out the roles and responsibilities would improve the common understanding of this term. (2016, p. 2)

In practice, making the distinction between who should be responsible for what is not always straightforward. The Tasmanian Department of Primary Industries, Parks, Water and Environment observed that:

The notion of shared responsibility is easily invoked because it speaks to principles of equity and cooperation with which few people would argue. However, the practical application of shared responsibility in biosecurity is difficult because it involves making concrete distinctions between, and decisions about, public versus private goods, and therefore who ought to pay, why, under what circumstances and how much. (2010, p. 97)

Industry confusion about their role under shared responsibility could harm the biosecurity system, particularly as industry becomes more involved in decision making. There would be benefit from more clearly defining governments' and industry's roles, and establishing a framework for engaging with each other.

Concerns about import risk assessments

DAWR assesses the risk of any proposed imports into Australia through either a review of existing assessments or a more formal Biosecurity Import Risk Analysis (BIRA) (DAWR 2016h).

A BIRA identifies the pests and diseases of biosecurity concern that may be carried by the imported goods, and assesses the likelihood that an identified pest or disease would enter, establish or spread, and the probable extent of the harm that would result. Economic considerations are only 'taken into account from matters arising from potential negative and indirect impact of diseases and pests' (DAWR, sub. 182, p. 5) from imported goods. Wider economic considerations, such as the benefits to consumers from increased competition after importing a good, are not considered. In principle, taking into account these wider considerations can be beneficial for the community overall, but doing so in practice is problematic (Binder 2002; Snape and Orden 2001).

DAWR liaises with stakeholders when conducting BIRAs. Biosecurity measures are proposed if the assessed level of biosecurity risk exceeds Australia's ALOP. If measures cannot reduce the risk to an acceptable level, the good will not be imported. The Director of Biosecurity makes the final decision on whether to allow the import of a good, and takes into account the BIRA and its recommendations, any reports by the Inspector General of

Biosecurity, which may be asked to review the BIRA process for a good, and other relevant information (DAWR 2016h).

BIRAs replaced earlier Import Risk Analyses and took effect under the new Biosecurity Act in June 2016. Details applying to their operation are in the Biosecurity Regulations 2016 and the Biosecurity Import Risk Analysis Guidelines (DAWR 2016h).

Some participants raised concerns about the transparency of BIRAs (Voice of Horticulture, sub. 42) and the role of the Scientific Advisory Group, which may be requested to examine and provide comments on any aspect of a BIRA. Participants noted that the Scientific Advisory Group could benefit from external experts (AgForce, sub. 17) and suggested that industry should have the opportunity to appoint a scientific delegate (Voice of Horticulture, sub. 42).

The Tasmanian Department of Primary Industries, Parks, Water and Environment also noted that risk assessments do not adequately account for regional differences.

Of concern to Tasmania is that arrangements for import assessments under the *Biosecurity Act 2015* (Cwlth) adequately address regional differences. These differences may be due to uneven distribution of susceptible hosts, significance of an industry on a regional basis, or climatic and other environmental issues that may impact on the survival and spread of the pest or disease. If assessments adequately address these issues and importation conditions are set to reflect them, for example by only permitting imports into specific regions of Australia, then Tasmania may not need to undertake a separate import assessment or impose additional conditions, which would result in significant savings to government and a saving to industry. (sub. 62, pp. 7–8)

DAWR sought to address these issues as part of its review of Import Risk Analyses (DAWR 2015g). The review, which began in 2014, involved stakeholder consultation, and led to the new BIRAs.

Aspects of the BIRA process designed to address stakeholders' concerns are:

- additional details about the risk assessment process and methodology to improve transparency (DAWR 2015d). DAWR is trialling biosecurity liaison officers who are conduits between DAWR and stakeholders, informing and updating stakeholders about ongoing risk assessments (Joyce 2016b)
- using external expertise in the Scientific Advisory Group and taking into account stakeholders' views (DAWR 2015d, 2016h)
- looking to improve transparency about the ways risk assessments take into account, and assess, regional differences (DAWR 2015d, 2016h). However, completely accounting for regional differences can be difficult (discussed below).

As with other aspects of the new Biosecurity Act, the effectiveness of the BIRA process is difficult to assess as the regulations and guidelines have only recently taken effect.

Issues with state and territory regulations

Stakeholders raised concerns about difficulties operating across state and territory borders, and reduced funding for surveillance and diagnostics activities.

Difficulties operating across state and territory borders

Biosecurity regulations vary across jurisdictions, as does the assessment of the risk arising from particular products which may contain pests and diseases. NT Farmers described Australia's biosecurity regulatory arrangements as:

... one of the most complex structures around, one which brings to play Federal, and Territory regulations, as well as cross jurisdictional regulations. For example, regulation governing market access between the Northern Territory and South Australia, is onerous and creates an us versus them mentality. (sub. 8, p. 1)

Different regulations can cause problems when businesses look to access other states' markets or transport products between states. For instance, states have different regulations relating to the movement of fodder and delays assessing other states' fodder for biosecurity risks has meant that some Tasmanian farmers could not adequately feed their cattle (Hanson 2016).

While pests, diseases and weeds do not recognise state borders (which points to the need for a national biosecurity framework), diseases are often regional in distribution and the states and territories do face different risks. As the Western Australian (WA) Government said:

WA has distinct requirements for biosecurity regulations which have driven the need for variations to arrangements ... applying in the eastern states of Australia. WA, because of its relative isolation, has pest and disease free status that does not exist in the eastern states. This gives the State access into valuable and emerging markets. (sub. 54, p. 32)

As a result, some regional variation in biosecurity regulations is appropriate, but issues can arise when jurisdictions evaluate their risks independently from each other.

Trade-restrictive regulations

States and territories aim to set regulations on goods arriving from interstate in line with an ALOP, which states and territories (except Tasmania) agreed under the IGAB would be Australia's ALOP (COAG 2012a). Tasmania sets its own ALOP on goods, which like Australia's is 'very low' but can vary from the outcomes under Australia's ALOP (TDPIPWE 2010).²⁷

²⁷ Tasmania's Department of Primary Industries, Parks, Water and Environment noted that 'despite expressing ALOP in similar terms and adopting similar methods for assessing import risk against it, it is

However, jurisdictions can be motivated to implement trade restrictions through regulations that are more conservative than the jurisdiction's ALOP, or through other methods, such as delaying approval for goods to be imported from other jurisdictions.

Trade-restrictive regulations generally protect a particular group, but can be detrimental to others in the state (such as either producers or consumers) and those in other jurisdictions. The South Australian Government said:

Some jurisdictions have implemented restrictive regulations that prohibit some commodities being traded between states (e.g. potatoes). It is imperative that such restrictions are based on sound evidence supporting the need to manage biosecurity risks only. Restrictive trade arrangements between states which have no biosecurity basis send the wrong message to our international trading partners and significantly increase costs to growers and to consumers.

National leadership is needed to take action to resolve interstate trading that may be in excess of the 'Acceptable Level of Protection' (ALOP) under the *Biosecurity Act 2015*. (sub. 57, p. 25)

Provisions under the IGAB should limit state and territory use of trade-restrictive regulations. States and territories (except Tasmania) agreed under the IGAB to ensure that their biosecurity regulations will be 'the least trade restrictive possible and based on a scientific analysis of the risk of entry, establishment and spread of a pest or disease and applied only to the extent necessary to achieve Australia's ALOP' (COAG 2012a, p. 8). When a dispute arises, jurisdictions agreed to use a formal resolution process.

There is little information available on the effectiveness of these provisions under the IGAB. The current review of the IGAB is looking at these arrangements and assessing whether they should be revised, and if other arrangements are needed to effectively resolve disputes (Craik, Palmer and Shelldrake 2016). It is important that the review look at the impact of Tasmania's decision not to participate in the IGAB on the Agreement's effectiveness.

Accounting for jurisdictions' priorities

Even when state and territory biosecurity regulations accurately reflect their ALOP, because jurisdictions make decisions independently (and may not consider the broader economic impacts from interstate trade), the best outcome for Australia overall may not be achieved.

Under the IGAB, states and territories agreed to permit a good into their jurisdictions if the good's risk meets the jurisdiction's ALOP. Risk assessment for interstate movement of goods is similar to the national process carried out for imports — it combines the

possible for Tasmanian import risk analyses to result in different, and typically more conservative conclusions about risk compared with those made for Australia as a whole' (TDPIPWE 2010, p. 94).

likelihood of a pest or disease carried with the good entering and spreading, and the consequences of this.

This assessment does not generally account for broader economic impacts from a good entering, such as the impacts on competition. Considering these impacts can lead to different outcomes: for instance, a good's risk can be higher than a state's ALOP, but the benefits to consumers from lower prices and increased product choice may still yield a net benefit.

However, a jurisdiction's consideration of broader economic impacts may not be ideal for the nation overall if it does not account for the impact of its decisions on other jurisdictions. For instance, a state could be better off from restricting or regulating the entry of a good, but the benefits may not outweigh the costs to other states from losing market access or complying with regulations. Cases like this reduce the welfare of the Australian community, and suggest that a more nationally focused approach would be better.

Reduced funding for surveillance and diagnostics

Surveillance and diagnostics of pests and diseases is vital so that they are detected before becoming established. Because the design and resourcing of the national system by the Australian Government is premised on certain levels of state resourcing, jurisdictions cutting back on biosecurity spending could put at risk Australia's biosecurity system.

Some evidence suggests that state and territory surveillance and diagnostic activities have weakened with reduced funding for biosecurity. In particular, a report by the Victorian Auditor-General's Office highlighted the potential impact of reduced biosecurity funding in Victoria.

[The Victorian Department of Economic Development, Jobs, Transport and Resources'] capacity to effectively detect, prepare for and respond to an emergency livestock disease outbreak has been weakened by a decline in financial and staff resourcing for core biosecurity functions. This decline has resulted in a significant drop in surveillance coverage and the increased likelihood of a major disease outbreak going undetected until it has become established. This would increase the scale and complexity of an emergency response. The potentially severe economic and health impacts of such an outbreak in Victoria highlight the urgent need to address this risk. (2015, p. X)

The WA Government also submitted that a 2012 forum on biosecurity preparedness in the state's grains industry identified that 'surveillance and diagnosis was considered inadequate to maintain data sets for trade purposes and new market access submissions' (sub. 54, p. 35).

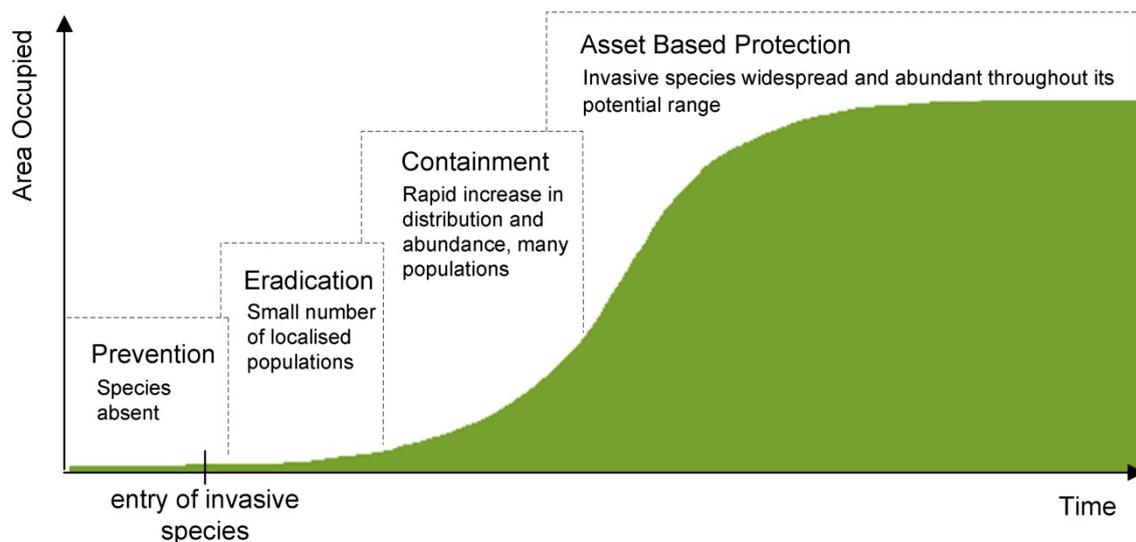
Reduced surveillance of biosecurity risks at the state and territory level increases the likelihood of a disease outbreak going undetected until it is established. If this occurs, states could impose more stringent regulations to compensate for others' lax regulations,

which would in turn make it difficult for businesses to transport products into or through some states.

However, the effectiveness of surveillance and diagnostics also depends on how efficiently resources are used, and there appears some scope to improve this, particularly through a more coordinated approach between jurisdictions. As with regulations for moving goods interstate, when states and territories act independently from each other, they have little incentive to carry out surveillance and diagnostics activities that are beneficial to other jurisdictions, but not to them. Also, they are likely to focus surveillance on their biosecurity priorities as they have limited resources to spend. This may not lead to an ideal outcome for the national biosecurity system and the Australian community.

More generally, when deciding where to spend biosecurity dollars, governments must choose the most effective measure to tackle a threat. Determining the balance between different types of projects is guided by the generalised invasion curve (figure 8.2).

Figure 8.2 **Generalised invasion curve**



Source: Agriculture Victoria (2016a).

There are four key types of action that may be appropriate at different stages of a pest or disease incursion:

- *prevention* for keeping out pests and diseases from entering Australia (including quarantine and offshore inspections)
- *eradication* to eliminate a threat within Australia, generally to prevent it from establishing
- *containment* to restrict a pest or disease to a defined area and limit its spread and impact

-
- *asset-based protection* for pests and diseases that are widespread so eradication and containment are unfeasible.

The returns on investment are different for the various phases of invasive species management, with the highest return on investment generally achieved through preventing entry of exotic and new threats, followed by eradication. Public benefits from protecting private assets (the far right of figure 8.2) are generally lower when compared with other activities where government can play a role. As a National Biosecurity Committee discussion paper recently said:

The benefits of managing an established pest or disease accrue predominantly to the owner of the land or the owner of the asset, so asset-based management may be the most cost-effective for an individual and/or as the basis for collective action by a community or industry. (2015, p. 5)

Many asset-based protection and containment measures fall under this category. Eradication and prevention measures can also be implemented more cost effectively in some instances when governments and industry share responsibilities for funding and implementation.

Scope for nationally coordinated policies under the IGAB

There are clear benefits to the Australian community from coordinating state and territory regulations on moving goods interstate, and their surveillance and diagnostic activities. Similar benefits would arise from a coordinated policy for other biosecurity measures, such as containment and eradication measures.

A collaborative policy would benefit from states' and territories' capability to administer biosecurity, and their understanding of state-specific issues. However, a collaborative policy also requires national leadership, a point made by some inquiry participants. Grain Producers Australia, for example, said that it 'strongly supports the need to set the priorities for the national investment on biosecurity. We would agree that clearer national leadership would improve the Australian biosecurity system' (sub. DR201, p. 4).

The IGAB takes steps towards a collaborative and coordinated approach for biosecurity measures. For example, the NEBRA establishes national arrangements between governments for responding to nationally significant biosecurity incidents, and the Australian Government provides leadership (COAG 2012b).

Sectoral committees take a lead role in developing strategies under the National Surveillance and Diagnostics Framework. The Framework was developed to facilitate an integrated approach to the funding and management of surveillance, and its policy principles are national strategies for surveillance and diagnostics and identifying priorities for investment and promoting harmonisation of jurisdictional approaches (NBC 2014).

The National Biosecurity Committee's proposed policy for a national framework for managing 'nationally significant' pests and diseases suggests that either government, industry or the community can take a lead role depending on the circumstances (NBC 2015). The policy suggests developing a national management plan or strategy for these threats, which would include those that affect Australia's economy. A strategy could include responsibilities for government, industry and the community, and part of government's role would be to 'apply nationally consistent regulatory measures only to the minimum extent necessary to manage unacceptable risks' and 'facilitate coordinated policy across jurisdictions for the management of established pests and diseases' (NBC 2015, p. 9).

The review of the IGAB is looking at the effectiveness of the agreements and the policies developed under it. It is important for the review to consider the effectiveness of these policies in coordinating jurisdictions' interests for the overall benefit of the Australian community, and whether clearer national leadership (by the Australian Government or another national body) could improve Australia's biosecurity system.

Allocating resources to areas of greatest return

Several policies developed under the IGAB aim to allocate government resources to biosecurity measures that provide the greatest net benefit. An example is the National Surveillance and Diagnostics Framework, which aims:

... to ensure that surveillance and diagnostics are supported by risk based decision making to help prioritise the allocation of government resources and investment to areas of greatest return, and to maximise the use of existing capability and infrastructure. (NBC 2014, p. 1)

Governments generally use cost-benefit analysis (CBAs) to assess whether to carry out a biosecurity measure, and will only embark on a measure if the project yields a net benefit. The *National Framework for Biosecurity Benefit:Cost Analysis* was developed to guide CBAs under the NEBRA. It consists of key requirements that a cost-benefit analysis should address, with the aim of facilitating a consistent approach to analyses to help achieve best practice (COAG 2012b).

While CBAs are useful for deciding whether to carry out a project, Kompas (2016) noted problems when CBAs of biosecurity measures are viewed in isolation and not compared with the potential benefit from other projects. In particular, a biosecurity measure may yield a net benefit, but still may not be the best use of resources. Another measure that addresses the same threat, or even one that addresses a different threat, may yield a higher return for each dollar spent, leading to a more efficient use of biosecurity resources.

Kompas advocated for investing in a 'portfolio' of biosecurity measures that produce the greatest overall return given the total level of resources. A portfolio could include any combination of measures that address risks across the different stages of a pest or disease incursion (as shown by the invasion curve, figure 8.2). Choosing measures for the portfolio

would depend on where each additional dollar could be best spent to reduce the overall biosecurity risk to Australia.

The Queensland Biosecurity Capability Review (of which Kompas was a member of the review panel) put forward a similar approach (Brooks, Glanville and Kompas 2015). The National Biosecurity Committee has been exploring a portfolio investment approach when developing a national biosecurity investment strategy (DAWR 2015r).

A portfolio approach appears the most efficient way to allocate limited biosecurity resources. However, there can be limits to which measures can be compared, particularly given the broad number of biosecurity threats and response measures, and limited available data. This may explain the limited use of such analysis historically (Heikkila 2011). However, wherever feasible, governments and industry should look at adopting a portfolio approach to deciding where to spend biosecurity dollars.

Adopting new technology

Technology can also improve the efficiency of biosecurity measures. There are a number of examples of governments, research organisations and industry using technology to improve measures. For example:

- the Queensland Department of Agriculture and Fisheries uses helicopters fitted with infra-red and thermal cameras to help identify red imported fire ant colonies. The helicopters can monitor larger areas and save money when compared with ground-based surveillance involving sniffer dogs and field officers visually checking the ground (Queensland Department of Agriculture and Fisheries 2013)
- staff at quarantine stations and government departments use remote microscope systems to upload images of infected plants which experts in different countries can access and help identify pests and diseases. This reduces the cost and time of identifying a pest or disease, which would otherwise be identified by physically mailing the specimen to an expert (Thompson et al. 2011)
- researchers at the CSIRO are using tiny sensors on the back of bees to monitor bee populations for biosecurity risks such as Varroa mite, which can destroy bee populations, affecting farmers' yields (CSIRO 2016b)
- the Victorian Department of Economic Development, Jobs, Transport and Resources developed its 'MAX' data and case management system to help monitor disease outbreaks. The system allows biosecurity officers to access and enter information on the move, and contains analysis tools such as maps which can improve government's responses to outbreaks (VDEDJTR 2016c)
- governments and the livestock industry use the National Livestock Identification System (NLIS) to identify and trace cattle, sheep and goats along the supply chain (NSW DPI 2016b). Livestock are usually tracked through a device or tag on the animal's ear, and a national database records animals' movements. The Australian

Meat Industry Council commented that the introduction of the NLIS ‘has also provided the opportunity to manage many disease conditions with a targeted risk based approach’ (sub. 77, p. 14). The NLIS also helps when responding to food safety incidents and in ensuring suppliers meet other countries’ import requirements.

Continued and increased use of technology will improve the efficiency of limited biosecurity resources.

Is a national biosecurity strategy needed?

While most jurisdictions have, or have previously had, a biosecurity strategy, there is currently no national policy statement or national biosecurity strategy agreed to by governments, industry and the broader community (Craik, Palmer and Sheldrake 2016). However, as the discussion paper to the IGAB review noted, ‘it has been suggested that the IGAB has taken on the role of a “quasi-national strategy”’ (Craik, Palmer and Sheldrake 2016, p. 18). But as Animal Health Australia said:

[The] IGAB was developed by governments principally for governments to improve the national biosecurity system by strengthening the co-ordination of government policy and the resources and working partnerships between governments. As a government to government agreement the national goals and objectives and principles to underpin Australia’s national biosecurity system continue to remain relevant ... but it is nonetheless some way from being an inclusive and national biosecurity strategy. (2016, p. 8)

A number of submissions to the IGAB review called for a national biosecurity strategy. For example, the ACT Government said:

It would be timely to develop a national biosecurity strategy now that the Commonwealth Biosecurity Act has been enacted. (2016, p. 1)

Animal Health Australia also said:

Minimising and managing future national biosecurity risks would benefit from the development of a national biosecurity strategy. A national strategy would assist in helping stakeholders gain a shared vision, a shared understanding of how the strategic priorities bring about the overarching outcomes and importantly how their work/their investments fit with the bigger picture. (2016, pp. 3–4)

A national biosecurity strategy could assist in identifying and gaining agreement across governments, industry and the community on the key risks and priority areas for biosecurity investment at the national level. This can help to achieve a more strategic and anticipatory approach to investment. A strategy could also help transition the biosecurity system towards greater shared responsibility, such as by:

- better defining who is responsible for what
- helping to identify gaps in the system
- guiding how industry and governments will work together and resolve disputes.

8.5 Other regulatory issues

Participants to this inquiry raised concerns about some specific regulatory issues, particularly interstate certification assurance and the risks that arise from farm trespass. These are addressed below.

Interstate Certification Assurance

The Interstate Certification Assurance (ICA) scheme is a national scheme that allows accredited businesses to self-certify the health of their plants to ensure their plant products meet importing state or territory requirements. This provides an alternative for businesses to being certified by government inspectors (and it can be less expensive).

The South Australian Government raised concerns about the ICA scheme:

The greatest biosecurity regulatory burden on agricultural business in Australia is through the Interstate Verification Certification Arrangements (IVCA) and Interstate Certification Arrangements (ICA). These regulatory regimes implemented by each jurisdiction under their respective Plant Health legislation has created a labyrinth of regulation, processes and procedures which restrict and in some cases stifles interstate trade in horticulture produce. (sub. 57, p. 25)

However, few other stakeholders to this inquiry or the Agricultural Competitiveness White Paper raised concerns about the scheme. This appears in line with ABARES conclusion in its *Review of Selected Regulatory Burdens on Agriculture and Forestry Businesses* (Gibbs, Harris-Adams and Davidson 2013). The review concluded that concerns about commodity classifications subsided with government initiatives aimed at improving businesses' understanding of the ICA scheme. The review also said multiple commodity classifications are reasonable when they reflect the many factors that can affect a commodity's biosecurity status.

Measures developed under the IGAB should also facilitate more consistent regulations, and the current review of the IGAB will assess whether it is helping to harmonise regulations.

There is also scope to harmonise regulations through the work of the Subcommittee on Domestic Quarantine and Market Access and under the National Plant Biosecurity Strategy. The Subcommittee comprises state, territory and Australian Government representatives and Plant Health Australia, and aims to minimise regulatory burdens on industry, and ensure regulations are coordinated and harmonised across jurisdictions (Subcommittee on Domestic Quarantine and Market Access 2016). The National Plant Biosecurity Strategy is a 10-year plan for Australia's plant biosecurity system developed by Plant Health Australia with one of its component strategies being to adopt a 'nationally consistent plant biosecurity legislation, regulations and approaches where possible within each state and territory government's overarching legislative framework' (Plant Health Australia 2010, p. 7).

Concerns about risks to biosecurity from trespass on farms

In the Agricultural Competitiveness Green Paper, the Australian Government said that ‘stakeholders suggested, and the Australian Government encourages, that States and Territories strengthen their laws to stop trespass on farms and to meet the challenges of new invasive technology including surveillance devices’ (2014a, p. 23).

Concerns about biosecurity and reputational risks associated with trespass on farms were also raised in this inquiry. For example, the Australian Veterinary Association said:

Farm trespass poses risks to biosecurity and disease control. It also may impact directly on the welfare of the animals involved. (sub. DR167, p. 5)

Primary Producers SA said that:

Animal welfare has become a fertile ground for political activists. Intensive animal producers should not have to live in fear of activists raiding them and creating bio-security issues. (sub. 41, p. 4)

And the Victorian Farmers Federation said:

Farm trespass is a concerning trend in activism in Australia. Having groups trespass on your property is a distressing experience. Farmers must then deal with additional concerns around whether animals have been interfered with and if there is a biosecurity risk. (sub. DR189, p. 29)

Vegan Australia, however, disputed that farm trespass by animal activists significantly increases biosecurity risks.

The argument that farm trespass, and in particular trespass by animal activists, significantly increases biosecurity risk has no basis in evidence ... Any stakeholders using biosecurity as a justification for advocating tougher penalties for animal activists trespassing on farms must provide evidence, and not merely rhetoric, demonstrating that these animal activists pose a significant biosecurity risk. (sub. DR115, p. 13)

But others provided examples of disease outbreaks arising from activists entering properties. For example, Australian Pork Limited said it is:

... aware of at least two instances where pigs on two separate farms that were raided by activists on subsequent nights, broke out with the same endemic disease, and for which they had been free for several decades.

A disease incursion can result in many costs to animal health and welfare, and to the production system. For pigs, the only way to resolve some endemic diseases is to depopulate the piggery. For an average farm, this can result in costs upward of \$1 million. (sub. DR282, p. 8)

Ausveg pointed to the quarantine controls required in response to trespass.

In cases of notifiable pest outbreaks, properties may be attributed a ‘linked status’ if trespassers are known to have travelled directly from a quarantined property. The ‘linked’ land will ultimately come under a quarantine arrangement, regardless of a pest detection on that property. (sub. DR193, p. 4)

Trespass is unlawful and undesirable, and landholders are entitled to legal protection against it. Trespass can increase biosecurity risks. Solutions proposed by some participants included implementing stricter farm trespass laws and penalties (Victorian Farmers Federation, sub. DR189) and doing more around enforcing these laws (AUSVEG, sub. DR193; Grain Producers Australia, sub. DR201). Others, however, argued that the legal mechanisms in place are adequate (for example, Voiceless, sub. DR166). Animals Australia argued that:

... any focus on altering or bolstering trespass law would be misplaced; ‘trespass’ is in our view merely a symptom of the legally sanctioned suffering caused to farmed animals ... (sub. 268, p. 12)

Stricter laws and penalties, and better enforcement to deter farm trespass, may simply be treating the symptom rather than the cause. As such, addressing activists’ underlying motivation to trespass appears to be a better solution. Several participants agreed that this was the better approach. The RSPCA said:

We note the [Commission’s] draft report addresses concerns relating to farm trespass by animal advocates. This is a very real concern as trespass activities have increased significantly in recent years. We believe this is partly associated with a loss of confidence in government’s role in monitoring and upholding animal welfare standards and therefore agree with the Commission’s observation [in its draft report] that ‘one way of reducing it is to remove the motivation for it’ by increasing ‘confidence within the community that livestock welfare outcomes are being achieved.’ (sub. DR223, p. 5)

World Animal Protection also said:

... the best strategy to discourage trespass is improved transparency and trust. Industry initiatives to improve transparency through CCTV and web cams offer a good response to this need. Compulsory use of CCTV should be considered for stages of production where animal welfare is particularly at risk. (sub. DR137, p. 12)

The community’s level of confidence in animal welfare outcomes is a wider animal welfare issue and is addressed in chapter 5. The Commission recommends that state and territory governments review their monitoring and enforcement of farm animal welfare standards, and suggests ways to encourage industry-led initiatives, including quality assurance systems, that can increase transparency around farms’ operations.

Implementing these initiatives can avoid potential regulatory costs which can arise from adjusting trespass laws and have the potential to improve the community’s understanding of livestock industries’ welfare practices.

Greater awareness of the risks from accessing farms

The Ag Institute Australia said rural land owners and managers can lack understanding of trespass legislation and the biosecurity risks that arise from trespass, and recommended that regulatory authorities implement education programs:

[T]here is limited understanding of trespass legislation by rural land owners and managers. Regulatory authorities, particularly those responsible for biosecurity and land tenure more generally, should consider increasing awareness of farm trespass issues, laws and their relationship to biosecurity risk, to land users, owners and other parties likely to trigger biosecurity risks. (sub. DR182, p. 7)

Some participants also noted that workers from utility and mining companies that enter properties unsafely (but often legally) can lead to biosecurity risks (Animal Health Australia, sub. DR250; Australian Pork Limited, trans., p. 352; NFF, sub. DR216).

The Commission agrees that education programs about trespass laws and the biosecurity risks that can arise from unsafely accessing farms can help reduce the biosecurity risks. An example of such a program is Cotton Australia's (sub. DR262) 'come clean, go clean' program for the cotton industry to promote biosecurity protocol awareness to growers and farm visitors. Companies should also coordinate with farmers when planning to access their land.

9 Transport

Key points

- Given the large distances between many of Australia's farms, intermediaries and end users, an efficient and cost effective transport system is critical to the competitiveness of the agricultural sector. Transport costs from farm gate to destination (both domestic and overseas destinations) account for 21 per cent of farm gate value on average.
- The majority of Australia's agricultural goods are transported via roads. Differences in heavy vehicle dimension and weight restrictions on road access, especially on local roads at the start and end of a journey, force operators to use inefficient heavy vehicle combinations, limiting freight efficiency and productivity gains. This burden could be reduced by:
 - streamlining and simplifying road access arrangements
 - building a better understanding of road-user needs across the road network
 - over the longer term, establishing institutional arrangements to ensure road investments are made where there is the greatest net benefit. Reform in this area should include introducing direct road-user charging for selected roads, ensuring road revenues are spent in ways that incentivise the efficient supply of roads, and creating Road Funds.
- The creation of a national heavy vehicle regulator is a step in the right direction in improving road access for heavy vehicles, but there remain inefficiencies in heavy vehicle regulation, with delays in processing road access permits a significant issue. The National Heavy Vehicle Regulator should be reviewed to ensure that responsibilities are appropriately assigned under the national system, and that the system is operating efficiently and delivering benefits to road users and farm businesses.
- The Road Safety Remuneration Tribunal imposed costs that were not commensurate with its safety benefits. Its abolition reduced regulatory burdens for farm businesses.
- The poor state of some rail infrastructure increases both journey times and the overall cost of freight for agricultural producers, and can exacerbate pressure on road networks as producers increasingly switch to road freight. While a number of factors have contributed to this situation, progressing road pricing reform will help address concerns about the effect of pricing distortions on investment in rail networks.
- Efficient access to ports is crucial for agricultural producers as most agricultural exports are transported by sea. Privatisation of major ports can lead to efficiency gains and be in the public interest if undertaken appropriately, including ensuring that sale conditions do not seek to increase the sale price by conferring monopoly rights over port services to the buyer.
- Current coastal shipping regulations which give preference to Australian-flagged ships for transporting domestic cargo between Australian ports increase costs for farm businesses reliant on sea freight. To improve the efficiency of coastal shipping services, barriers to entry for foreign vessels should be removed to allow greater competition.
- Farmers and the community would benefit from the removal of ethanol mandates and excise arrangements, as these policies deliver negligible environmental benefits at a high cost.

Access to efficient and reliable transport networks is essential for the competitiveness of farm businesses and is a significant determinant of agricultural productivity.

Transport costs from farm gate to destination (both domestic and international destinations) account for 21 per cent of farm gate value on average (Goucher 2011). Transport costs, however, vary by agricultural industry and destination, and can range from 4 per cent to almost 50 per cent of farm gate price (Goucher 2011; Sheepmeat Council of Australia and Cattle Council of Australia, sub. 88, att. 1).

AgForce provided some examples of transport costs for livestock.

... transport of a 550 kilogram steer from Surat in southern inland Queensland to Yokohama, Japan represents 13.1% of the total farm gate value. Similarly, to deliver a live beast from Queensland to Indonesia represents around 30% of the total farm gate price. (sub. 17, p. 9)

Agricultural supply chains can involve transport distances in Australia of over 1000 km (Goesch et al. 2015a) and, according to some participants, domestic transport can cost more than sea freight from Australia to some international destinations. The Export Council of Australia, for example, said that:

... to export 1 x 20ft container of beetroot door-to-door from Gippsland to the United Arab Emirates would cost approximately \$12 000. The actual sea freight cost from Melbourne to Jebel Ali would be in the vicinity of \$4000, while the balance of \$8000 is needed to cover the land based transport costs and the documentation costs for quarantine arrangements. (sub. 74, p. 5)

All levels of government in Australia are involved in regulating transport networks. Transport regulations are in place to ensure public safety and amenity, to promote competition and facilitate access to infrastructure.

This chapter looks at transport regulation in the areas of heavy vehicles (section 9.1), rail (section 9.2), ports (section 9.3) and coastal shipping (section 9.4). Section 9.5 examines the mandates and excise arrangements that are used to support the biofuel industry.

Some agricultural products (including fruit, vegetables, meat and seafood) are exported by air. Concerns about air freight were not raised by participants to this inquiry and as such, are not examined.

Governments also play a key role in the provision of transport infrastructure. Ways to improve the efficiency of infrastructure provision were considered in detail in the Commission's inquiry into public infrastructure (PC 2014c), and are beyond the scope of this inquiry.

9.1 Heavy vehicles

The majority of Australia's agricultural goods are transported via roads (Tulloh and Pearce 2011). Grains, milk, fruit, vegetables and livestock are all collected from farms and transported by road to processing plants or end users. As the NSW Farmers' Association said:

Integral to the operation of a farm business is the use of road transport to freight farm produce to either an intermediary, such as a grain receival site, saleyard or abattoir, or an end user. (sub. 72, p. 22)

The agricultural sector accounts for about 27 per cent of the volume of road freight — in 2013-14, the sector consumed about \$1.1 billion of road transport services (ABS 2016d; BITRE 2015b). About two-thirds of the food and livestock that are transported by road are moved by articulated trucks (load carrying vehicles consisting of a prime mover with a turntable device for towing trailers), primarily by B-double, road train or single trailer truck configurations (ABS 2015e, 2016j).

A wide range of regulations affect heavy vehicle operations. Regulations are largely aimed at addressing negative spillover effects from heavy vehicles and their use of the road network (including damage to roads and bridges, safety concerns, traffic congestion and noise pollution). But while heavy vehicle regulations address legitimate safety and amenity concerns, they may be more stringent than necessary to address concerns over social impacts, or they could be administered in a way that places unnecessary burdens on businesses. It is important to minimise any unnecessary regulatory burdens.

A national system of heavy vehicle regulation

Historically, states and territories adapted the national model law on road transport — the Australian Road Rules — according to their individual needs and preferences. This resulted in inconsistent heavy vehicle regulations between jurisdictions. A stocktake of heavy vehicle regulations across the states and territories in 2011 identified 368 interjurisdictional variations, 34 of which had 'medium or high' economic impacts on businesses (NTC 2011). Local governments can also make decisions about, or set restrictions, on heavy vehicle access, which adds further regulatory complexity.

In 2009, the Council of Australian Governments agreed to establish a single national heavy vehicle regulatory regime to cover all vehicles over 4.5 tonnes, managed by the National Heavy Vehicle Regulator (NHVR). Its role is to administer a single set of national heavy vehicle laws in all jurisdictions under the Heavy Vehicle National Law (HVNL), to ensure the objectives of the HVNL are achieved — including promoting industry productivity and efficiency in heavy vehicle freight. To date, New South Wales, Victoria, Queensland, South Australia, Tasmania and the ACT are participating in the HVNL; Western Australia and the Northern Territory are not.

The objectives of establishing a national regulatory system are to deliver:

... seamless national regulation of heavy vehicles that achieves the same outcome in the same circumstances; and consistent and streamlined administration and service provision for the regulation of heavy vehicles. (COAG 2011, p. 5)

The NHVR began operating in January 2013, and at that time provided the National Heavy Vehicle Accreditation Scheme and Performance Based Standards (PBS) services. On 10 February 2014, the HVNL commenced in the six participating jurisdictions, and the NHVR became responsible for all regulatory services under the HVNL. This includes matters relating to vehicle standards, mass, dimensions and loadings, fatigue management, heavy vehicle accreditation and on-road enforcement (NHVR 2016d).

One of the key functions of the NHVR is to act as a ‘one stop shop’ for heavy vehicle road access permits in participating jurisdictions. That is, heavy vehicle operators who are planning a journey that would take place in multiple participating jurisdictions apply to the NHVR for permission to access roads, and the NHVR then obtains consent from all relevant state, territory and local government road managers.

The regulations governing heavy vehicle road use are complex

Heavy vehicles can only use roads if they meet rules on dimensions (height, length and width), mass and loading. Restricted access vehicles²⁸ — a category which includes higher mass limit²⁹ vehicles — do not have ‘as of right’ access to the road network and require a NHVR notice or permit to operate on parts of the network.

In general, larger heavy vehicles like road trains are permitted in remote areas, but the size of permitted heavy vehicle combinations become progressively smaller as operators move towards the coast (figure 9.1).

Heavy vehicle road access is further complicated by longstanding differences in state and territory rules governing heavy vehicles. For example, even though under the HVNL all participating jurisdictions allow ‘as of right’ access for B-doubles less than 19 metres long (or 21 metres in Tasmania), the accessible road network becomes restricted once the vehicle exceeds a certain mass limit which differs across participating jurisdictions. These weight limits are published in a national notice made under the HVNL³⁰ as a collection of

²⁸ Restricted access vehicles are vehicles that either do not comply with prescribed mass or dimension limits under the HVNL (in general, wider than 2.5 metres, higher than 4.3 metres or longer than prescribed lengths for the specified vehicle configuration, or exceed the allowable mass limits based on vehicle axle groups) or are specific large combinations (including road trains, B-doubles and livestock carriers) (NHVR 2016h, 2016k).

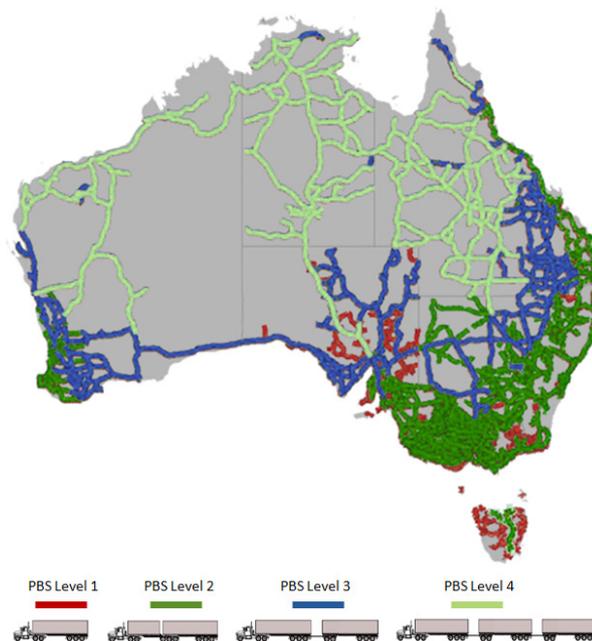
²⁹ The higher mass limit scheme allows particular heavy vehicles to carry additional mass provided that the vehicle is fitted with road-friendly suspension and that the operator holds NHVR accreditation (NHVR 2016e).

³⁰ The National Class 2 Heavy Vehicle B-double Authorisation (Notice) 2014 (No. 2).

schedules containing all access conditions applicable to B-doubles in each jurisdiction. Each schedule also contains references to external documents that further specify the weight or time-of-travel restrictions on particular routes. NHVR national notices for other vehicle classes present information on access conditions in a similarly complex and legalistic manner.

Restrictions on the use of certain roads are not new — indeed, there is written evidence of such restrictions dating back to ancient Rome.³¹

Figure 9.1 **Road access as specified by Performance Based Standards (PBS) road class^a**



^a PBS vehicles are vehicles which have been assessed according to a set of safety and performance standards. The PBS system is designed to provide operators with flexibility in vehicle design and operation. Road networks of PBS level 1 is similar to general access. PBS level 2 is similar to B-double routes. PBS level 3 is similar to type 1 road train routes. PBS level 4 is similar to type 2 road train routes. Lower levels can access higher level routes.

Sources: Adapted from NHVR (2016g, 2016j).

Heavy vehicle road access regulations affect productivity

Heavy vehicle road access regulations can limit the ability of operators to transport goods by road to their destination in the most efficient manner — either by the most direct route,

³¹ Land transportation, in particular, was heavily regulated in ancient Rome. Many streets were limited to smaller vehicles — much like today where Australia has different routes for B-double and larger vehicles (Kaiser 2011).

by the preferred vehicle type or during preferred times. The evidence presented to this inquiry highlighted the burden of having different vehicle dimension and weight restrictions across the road network — it forces operators to resort to inefficient vehicle combinations, and can preclude opportunities to use more productive vehicle combinations (appendix C). This in turn adversely affects the productivity of farm businesses.

The National Transport Commission³² gave the following example.

[In the Sunraysia region on the border of New South Wales, Victoria and South Australia, the] most efficient vehicle for transporting the grapes would be a road train, but these are not currently permitted on a stretch of highway linking two of the states ... Consequently, wine producers use less efficient semitrailers, leading to more trips, more emissions and higher consumer prices ... the cost to the wine industry [from using semitrailers instead of road trains] in the region, is around \$1.6 to \$2 million per annum. (NTC 2011, pp. 5–6)

Heavy vehicle operators must either employ a vehicle combination or loading method that meets all requirements along the route (the lowest common denominator approach), or decouple larger heavy vehicle configurations outside the restricted area and continue on smaller approved truck combinations (Larry Acton, sub. 55; Ausveg 2015b; Sheepmeat Council of Australia and Cattle Council of Australia, sub. 88, att. 1; Retailer and Supplier Roundtable Ltd 2014). In either case, transport and operational costs are increased (box 9.1).

Where regulatory settings support more extensive use of high productivity (restricted access) vehicles, this has the potential to lead to improvements in the efficiency of agricultural supply chains (Australian Forest Products Association, sub. 11; Ronda and Allen Harmer, sub. 15). The Australian Food and Grocery Council noted that:

While there has been a lot of focus on the use of high productivity freight vehicles on major freeways, the collection of grains, fluid milk, fruit, vegetables and livestock from farms is a critical opportunity for the use of [high productivity freight vehicles]. Industry acknowledges the investment required to support high productivity freight vehicles, particularly in rural areas, and the regulatory change [to heavy vehicle regulations] required. (AFGC 2014, p. 8)

Interjurisdictional inconsistencies remain a concern

Inquiry participants pointed to inconsistencies in heavy vehicle regulations between jurisdictions. These inconsistencies remain despite the establishment of the NHVR and the adoption of the HVNL in six jurisdictions. Participants said that inconsistencies make it difficult to transport inputs and agricultural products efficiently between farms and delivery destinations. The National Farmers' Federation (NFF), for example, said:

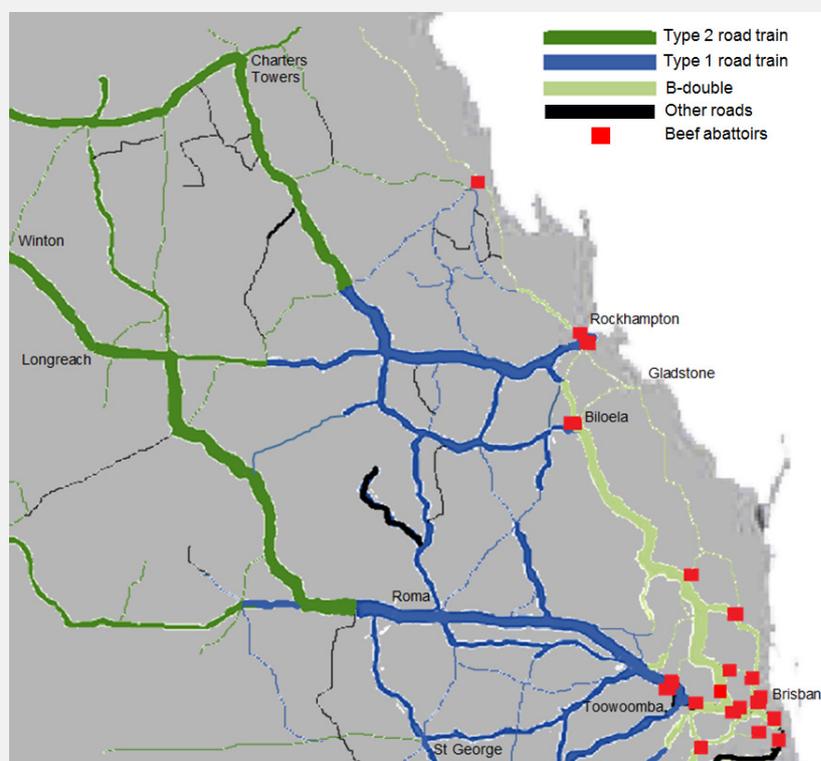
... the move towards a single National Heavy Vehicle Regulator ... is a step in the right direction and will lead to productivity improvements across the nation, but there is still a lot of work required to implement consistent requirements across states. (sub. 61, p. 18)

³² The National Transport Commission is responsible for monitoring and maintaining the HVNL with advice from the NHVR (NTC and NHVR 2016).

Box 9.1 Heavy vehicle access restrictions in Queensland

Cattle freight routes

Cattle producers in Queensland can use road trains inland, but on the road network used to move stock towards the coast (where most of the saleyards, feedlots and abattoirs are located) only smaller heavy vehicle combinations are allowed (as shown in the figure below^a). Loads might need to be broken down into smaller units, sometimes more than once, due to road restrictions. For example, moving cattle from Longreach to an abattoir in western Brisbane can mean downsizing the vehicle twice — once near Roma and again at Toowoomba. The inability to use larger heavy vehicles for the entire journey increases transport costs considerably. By one estimate, using a B-double for the entire journey to transport 120 cattle across 1000 km can cost about 37 per cent more than using a road train (Goesch et al. 2015a).



Road train access to Gladstone Port

Restrictions on road train access to Gladstone Port mean that all road train freight originating from southern inland areas must drive north to Gracemere (near Rockhampton), and be broken down to B-doubles before continuing to the port. The diversion is mainly because Sheepstation Bridge on the highway connecting Biloela and Gladstone Port is unable to accommodate road trains. This diversion is estimated to double the travel distance (a further 100 km) from Biloela for vehicles travelling to Gladstone Port (RDAFCW 2015). Allowing road trains on the highway between Biloela and Gladstone could reduce the cost of live cattle transport on that route by about \$85 000 per year (CSIRO 2016d).

^a The width of the line used to depict each road represents the frequency with which that road is used by cattle transport vehicles. Type 2 road trains are the largest, and B-doubles the smallest, of the three heavy vehicle types displayed.

Source: Adapted from Goesch et al. (2015a).

Similarly, the Queensland Farmers' Federation said that 'implementation of the NHVR has not been seamless, and in many cases it has led to confusion, duplication and caused delays' (sub. DR217, p. 9). GrainGrowers argued that 'unworkable inconsistencies in regulations between states ... make it difficult to transport grain or oversize machinery across state borders ... The establishment of the National Heavy Vehicle Regulator has been troublesome, particularly regarding different approaches by various compliance and enforcement bodies' (sub. 73, pp. 13–14). Voice of Horticulture (sub. 42) provided several examples of the effects of interjurisdictional variation (box 9.2).

According to the Australian Lot Feeders' Association:

... inefficiencies in heavy vehicle regulations would be significantly reduced with further harmonisation of state regulation including for driver fatigue laws, weight/mass restrictions, effluent spill, use of road trains and B doubles. (sub. DR294, p. 14)

The Cattle Council of Australia advocated harmonisation of jurisdictional requirements, noting that 'transport is a major cost for beef producers, especially those located in the north of Australia' (sub. DR290, p. 10).

Inconsistencies also persist because Western Australia and the Northern Territory are not currently participating in the HVNL. The Consolidated Pastoral Company said:

The three heavy vehicle transport systems still operating across northern Australia [in Western Australia, the Northern Territory and Queensland] cause additional reporting and recording requirements. This generates extra work and therefore extra costs, for businesses than would otherwise be the case if a truly national system were in place. (sub. 71, p. 33)

NT Farmers said that 'the movement of goods and machinery across jurisdictional boundaries is the main concern' (sub. 8, p. 2). Co-operative Bulk Handling (CBH) Group said that in Western Australia, 'a road pathway can pass through various State and Local Government instrumentalities with each proffering a different [restricted access vehicle] rating making it impossible for users to have any clarity regarding an acceptable consistent pathway for a particular vehicle configuration' (sub. 36, p. 8). Similarly, AgForce called for greater consistency in road ratings as a way to improve road network access.

Inter-jurisdictional (local and State Government) harmony for the rating of road networks to improve the freight-efficient movement of agricultural products, so that costly changes to vehicle configurations and loads do not have to be made at borders and to simplify the compliance task for drivers of heavy vehicles. (sub. 17, p. 10)

The NFF suggested that consideration be given to wider-ranging reform, such as creating 'a system in which agricultural supply routes in farming areas are automatically classed as open access for heavy vehicles unless road managers give cause as to why this should not be the case' (sub. DR216, p. 37). A similar outcome to that advocated by the NFF could be achieved when roads are gazetted for high productivity vehicles access (see below).

Box 9.2 **Some insights into the effect of interjurisdictional variations in heavy vehicle regulations**

Voice of Horticulture provided an example of the way that variations in heavy vehicle regulations restrict opportunities for more efficient freight movement.

... a vertically integrated horticultural business based in Shepparton, Victoria, operates a fleet of heavy vehicles transporting fruit from their packing shed to a number of interstate wholesale markets and supermarket distribution centres. Their B Doubles [under Victorian laws] are able to operate up to a 68[.5] tonne gross vehicle weight ... However, to access the Brisbane Market and Brisbane distribution centres the trucks must use NSW roads, and the NSW State regulations stipulate that without operating the Intelligent Access Program (IAP) the maximum allowable weight under the Concessional Mass Limit (CML) is 64.5 tonnes. Consequently all trucks departing Shepparton to either NSW or Queensland must use the lower maximum weight of 64.5 tonnes, which reduces efficiencies and sales volumes, and adds to both costs and extra vehicles on the roads ... to gain the higher 68 tonne permit for NSW the company would have to invest in additional hardware and systems in order to comply with the requirements of the NSW IAP. Investment of this kind is seen as wasteful and duplicates the costs already invested to achieve Victorian Accreditation ... (sub. 42, p. 17)

Voice of Horticulture also pointed to interjurisdictional variations in conditions for increased mass limits (such as enrolment in the Intelligence Access Program described in box 9.5) that lead to inefficiencies.

Maximum load restrictions are also a significant issue for many growers and exporters of dense products and differences in maximum load restrictions between states have a real impact on the efficiency of transport through wasted container space ... Horticulture exporters usually use 40 foot containers weighing 13 tonnes when empty for transporting product. However, because of weight restrictions horticulturalists cannot fill the container without exceeding maximum weights. The container has a capacity of 30 tonnes but can only yield 24.3 tonnes due to weight limits – 5 tonnes short. (sub. 42, p. 17)

Commenting on the additional burden that arises because states and territories are able to make derogations to the Heavy Vehicle National Law, it said:

... a number of states, such as NSW, have introduced variations to the national model. This simply defies the point of harmonisation. For example, operators from NSW that choose to trade interstate will continue to face the paperwork juggle to ensure that compliance with both state and national laws are met. (sub. 42, p. 17)

Local government ‘first and last mile’ restrictions

Local governments manage about 80 per cent of Australia’s 811 000 km of public roads (AustRoads 2010). They determine which restricted access vehicles are permitted to use their roads, and the conditions under which such vehicles must operate. The HVNL recognises local governments as road managers (NHVR 2013), so vehicle operators require consent from local governments to access local roads (however, as noted above, the NHVR acts as a ‘one stop shop’ for interstate journeys — heavy vehicle operators contact the NHVR, which then obtains consent from all relevant road managers including local governments).

Concerns about restricted access for high productivity vehicles on the local roads used at the start and end of a freight journey are often referred to as the ‘first and last mile’

problem (ALGA 2016). Many participants commented that the first and last mile problem is limiting improvements in freight efficiency (box 9.3).

Box 9.3 Concerns raised about local government restrictions

The National Farmers' Federation claimed that restricted access for high productivity vehicles on local roads used at the start and end of each journey — often termed the 'first and last mile' problem — is limiting improvements in freight efficiency.

Inefficiencies abound when a truck or truck configuration cannot drive the full distance of a freight journey; this is the 'first and last mile' issue. The next generation of freight vehicles or 'interoperable high productivity vehicles' (long, double stacked trains and B triple or super B double trucks at higher mass limits) offer improvements in freight efficiency but their use is currently restricted. (sub. 61, p. 18)

The Australian Livestock and Rural Transporters Association raised concerns about the basis upon which local governments restrict heavy vehicle road access.

Many local road managers simply deny access because of unfounded or ill-informed concerns about safety or local amenity impacts. Decisions about [high productivity vehicle] access should be based on engineering principles, network design and measurable impacts, not underlying attitudes towards industry or heavy transport. (sub. 47, p. 8)

The Pastoralists and Graziers Association of Western Australia expressed similar concerns.

In the agricultural areas of Western Australia movement of livestock, grain harvests, fertilizer and agricultural lime sands starts and finishes on local roads. Local government authorities are not always adequately resourced to operate these roads, and preservation of the road to avoid maintenance expenditure is often a priority over their use for economic activities. (sub. 70, p. 7)

The Queensland Audit Office found that many stakeholders shared this view.

Stakeholders told us that some local governments do not have the resources and expertise readily available to make evidence-based consent decisions [on heavy vehicle road access] that often require a technical assessment of risks to the relevant infrastructure on those roads. (QAO 2016, p. 4)

And Australian Dairy Farmers pointed to access approval delays at the local government level.

It appears that many councils have not classified roads within their jurisdictions ... or do not possess a detailed understanding of the load-restrictions, to determine whether the road may or may not be used by PBS vehicles. This is causing lengthy time-delays when processing companies are seeking to register new milk collection vehicles on regional roads. (sub. 63, p. 5)

The Commission heard that many access decisions made by local governments are unnecessarily risk averse. This risk aversion may stem from an absence of information: local governments can be reluctant to grant greater heavy vehicle access to local roads because they do not know the level of heavy vehicle traffic, and the associated risk of accidents and road damage, that will result. Meanwhile, the benefits of increased heavy vehicle movements primarily accrue to transport operators.

There is just not necessarily an understanding of the frequency or the type of use for either general access freight vehicles or agricultural implements on those local roads to allow those decision makers to [act] confidently ... (NHVR, trans., p. 549)

Local government restrictions can reduce the effectiveness of state and territory governments' efforts to increase heavy vehicle productivity. For example, the New South Wales Livestock Loading Scheme was introduced in 2012 to address longstanding

concerns by livestock businesses, including the Australian Lot Feeders' Association (ALFA 2014), that differences in loading limits for livestock transport limit the efficiency of livestock transport across state borders. (Victoria and Queensland have volumetric loading limits for livestock vehicles.) However, according to Transport for NSW (2015), local government restrictions on higher mass limit vehicle access mean that the accessible road network does not provide adequate connectivity for the scheme to be successful.

Lengthy processing times for road access permits

Heavy vehicles are required to obtain permits to access many roads, to minimise risks to public safety and infrastructure from their use of those roads (NHVR 2016b). Despite the NHVR's role as a one-stop shop for operators to apply for road access permits for interstate journeys, many inquiry participants (including AgForce, sub. 17; ALRTA, sub. 47; Cotton Australia, sub. 23; Office of the NSW Small Business Commissioner, sub. 4) considered the process of obtaining road access permits to be unnecessarily lengthy and onerous.

The delays are in part caused by the requirement to obtain explicit consent from all road managers (including local governments) under the HVNL. The NHVR is required to obtain road managers' consent even 'for vehicles that pose a lesser impact on the network than vehicles that are currently afforded access' (NHVR, sub. DR192, p. 3).

Several participants (including ALRTA, sub. 47 and Cotton Australia, sub. 23) considered the statutory timeframe of 28 days for processing permits to be too long, particularly for primary industries. Others reported incurring financial and productivity losses, including contractual penalties, while waiting for road managers to issue permits (QAO 2016).

The 28 day period for permit processing under the HVNL has been designed in response to the requirement that the NHVR obtain consent from every relevant road manager each time a permit is applied for. Of the permits processed by the NHVR, the majority of the 28 day period is taken up by state and local government processing — it took an average of 23.5 days to process heavy vehicle access permit applications in 2014-15. About 4 days were taken up by the NHVR and the remainder (equally) by state or local governments (NHVR 2015a).

The systems used by local government to assess high productivity vehicle road access applications are often not well developed (PC 2012b), which can increase the time taken to process access permits. According to Cotton Australia, some local governments have only recently become aware of their responsibilities as road managers.

While in theory the advent of the National Heavy Vehicle Regulator is meant to streamline transport movement approvals ... it has also led to an increase [in] local governments requiring the issuing of permits for local road movements, as they become more aware of their role as road managers. While some road managers are better than others, the fact remains that they have 28 days to respond to applications made through the NHVR, and this does represent an unjustified burden on road users. (sub. 23, p. 16)

And delays by a single road manager can affect the entire journey. This can be particularly critical when harvesting is underway. As Cotton Australia said:

... permission to move a cotton picker from southern Queensland to northern New South Wales was delayed for weeks, simply because one council the picker had to travel through had not responded. (trans., p. 282)

The Queensland Audit Office said that ‘the NHVR was not effective in supporting local government road managers to prepare for processing the volumes of heavy vehicle requests relating to their roads — some had not been involved in processing permits before the HVNL, despite the previous road access laws requiring them to [do so]’ (QAO 2016, p. 5).

In response to industry concerns about delays in processing permit applications when the NHVR first took over this task in 2014, permit processing for travel wholly within state borders was temporarily handed back to the relevant state road agencies (except in Tasmania). According to the Queensland Audit Office, this situation arose because the NHVR agreed to implementation timeframes for assuming responsibility for processing road access permits that:

... were overly ambitious. [The NHVR] did not allow sufficient time to plan and deliver the new access management arrangements successfully. Funding was also uncertain due to the different arrangements entered into with the states and territories. (QAO 2016, p. 6)

It is uncertain when these functions will be returned to the NHVR — governments are monitoring the temporary arrangements and are yet to decide when those arrangements should end (NHVR 2016a). While it was predicted that the NHVR could take until 2018 to develop mature processes (NTC 2014), the Queensland Audit Office found that ‘the NHVR has learnt its lessons and demonstrated it is prepared to delay rollout of the new [road access permit management] system if it is not ready’ (2016, p. 20).

In contrast to the delays experienced with the transition to the NHVR, in Western Australia, the Commissioner of Main Roads has the power to issue permits (local government approval is not required). The Western Australian Government said that this:

... allows WA to ordinarily issue permits within a 24 hour period. Mains Roads WA has collaborated with local governments to develop a series of networks and pre-approved routes which are matched to the various heavy vehicle types, rather than seek individual approvals [from] local governments, who do not have the resources to process permit requests. (Western Australian Government, sub. 54, p. 24)

However, producers in Western Australia reported similar delays in processing road access permits, in part because roads have not been approved for heavy vehicle access (Regional Development Australia Wheatbelt WA, sub. DR176; Western Australian Farmers Federation, sub. DR226).

The Western Australian Government said that if Western Australia was to adopt the national law it could ‘create additional regulatory burden for farmers, particularly in relation to road access and heavy vehicle driver fatigue’ (sub. 54, p. 25). The Livestock and Rural Transport Association of Western Australia shared these concerns (sub. DR172).

The Northern Territory Department of Primary Industry and Fisheries also said that the introduction of the HVNL in the Northern Territory would need to be considered in relation to the Land Transport Standards which ‘will place further restrictions on the transport industry’ (sub. 67, p. 4).

Other issues in heavy vehicle regulation

Livestock transport regulations

Some transport regulations, especially those relating to livestock transport, have a particular impact on the agricultural sector. The NFF highlighted inconsistencies in fatigue management regulations and animal welfare requirements for transport of livestock, and noted that drivers ‘are required to comply with both fatigue management laws and also standards for transport of livestock, in regions often without facilities to rest livestock within the specified period’ (sub. 61, p. 18).

In September 2015, the NHVR introduced the Livestock Transport Fatigue Management Scheme. The scheme ‘provides a pre-approved template Advanced Fatigue Management accreditation system designed to give livestock and rural transporters the flexibility to respond to the dynamic, uncertain and complex livestock transport task’ (NHVR 2015c, p. 4), and has been welcomed by the industry (ALRTA 2015). To the extent that this scheme increases flexibility and reduces administrative burden, it should make it easier for operators to comply with both livestock transport and fatigue management regulations.

Time-of-travel restrictions

In many jurisdictions, there are time-of-travel restrictions which limit the hours or days on which heavy vehicles are permitted to operate. For example, certain classes of vehicles are not permitted on some roads between sunset and sunrise, or on public holidays.

As most agricultural goods are perishable, limitations and differences in time-of-travel regulations can impede productivity and increase operating costs (Retailer and Supplier Roundtable Ltd 2014). For example, across New South Wales, Victoria and Queensland, different time-of-travel restrictions apply to different heavy vehicles, with night travel regulations in New South Wales being the most restrictive of the three states. Requiring heavy vehicles to travel only during daylight hours or in certain specified time periods can also exacerbate road congestion, particularly along major routes that lead to key ports or airports that are shared with light vehicles (Goesch et al. 2015a). Limiting stock pick-ups to daylight hours can also compound the effect of other restrictions on stock movement times, such as the limited opening hours of quarantine facilities.

Concessional farm vehicle registration

Primary producers are eligible for reduced vehicle registration fees in all states and territories. In general, vehicles are eligible if they are primarily used for the purpose of farm production and seldom travel on public roads. For example, South Australia provides for restricted primary producer registration for agricultural vehicles, subject to travel within certain distances (South Australian Government 2015).

However, the application process for concessional registration for agricultural vehicles can be time consuming. For example, in Tasmania, applicants must physically attend government offices to complete a statutory declaration, which can involve two hours of travelling (TDPIPWE, sub. 62, att. 1). Requirements to register and obtain permits for multiple agricultural vehicles also impose considerable burden (Cotton Australia, sub. 23).

There may be scope for governments to streamline and simplify application requirements. This could involve allowing multiple vehicles to be registered in one application or removing requirements to attend government offices in person, which would help to ensure that concessions provide their intended benefits.

A disconnect between road revenues and expenditure

Variations in heavy vehicle access regulations can be efficient, as the road network operating environments differ across the country. However, it is important that variation is minimised, so that the road network supports moving goods as quickly and efficiently as possible, particularly given the perishable nature of many agricultural products.

One reason for road access restrictions, particularly on local roads, is the disconnect between road revenues and government expenditure on upgrading and maintaining road networks. Heavy vehicles are a significant contributor to road wear and tear and road damage, and the shift from rail to road freight has exacerbated the pressure on local roads (section 9.2). As the Commission said in its inquiry into public infrastructure:

Under current arrangements, investment in roads is subject to political pressures arising from annual budget processes and election cycles. Decisions are often based on inadequate and non-transparent information and assessment of the costs and benefits of road projects. (PC 2014c, p. 20)

And as Terrill, Emslie and Coates said in a report prepared by the Grattan Institute:

Too often, politics comes ahead of the public interest. Too much has been spent on highways that are not especially important to the economy, but are popular with local voters. Decisions on particular projects are dubious or made on the basis of weak or undisclosed business cases. The Commonwealth and Victorian governments spent \$438 million on the Geelong to Colac road, not a project of national economic significance ... Although governments have funded many worthwhile projects over the past decade, the overall investment has been poorly directed. (2016, p. 2)

The disconnect between road funding and expenditure means that there is no mechanism to directly allocate road-related revenues to road investments. It is therefore difficult for road managers to recover the full cost of supplying, maintaining or upgrading road infrastructure so that it is suitable for heavy vehicles. As a result, road managers, including local governments, restrict heavy vehicle access to protect road assets.

Also, almost 60 per cent of local governments are in rural and remote areas, where there are fewer residents and smaller revenue bases to support regulatory functions (Nguyen et al. 2013; PC 2012b). Recent experience with the Roads to Recovery (R2R) Program and the Bridges Renewal Programme suggests that local road managers sometimes cost shift when Australian Government funding is made available for roads (that is, they substitute R2R program funds for their own expenditure on roads) (ANAO 2010, 2016a). Consequently, local government expenditure on roads may not always be at the level necessary for asset maintenance and renewal.

Participants to the Commission's inquiry into public infrastructure reported that local governments frequently neglect basic maintenance (PC 2014c). Participants to this inquiry echoed those concerns. NSW Farmers' Association, for example, noted that 'the resources available to many local councils in New South Wales are not commensurate to the size of the road network that they manage' (sub. DR161, p. 22). As noted below, the closure of parts of rural rail networks has also increased pressure on road networks. And according to the Peri Urban Group of Rural Councils, in Victoria:

Roads and bridges funding already consumes half of the capital works budgets for each of the Peri Urban Councils. The maintenance and [upkeep] of unsealed roads is a significant issue in the [Victorian] peri urban region and all rural and regional areas of Australia. (sub. DR220, p. 6)

Reducing the burden of heavy vehicle road access regulations

The introduction of the HVNL and the creation of a national regulator were important first steps towards removing unnecessary restrictions and variations in heavy vehicle regulations. But the NHVR is still a work in progress — the objective of seamless national regulation of heavy vehicles is still some way off, and state and territory governments have an important role in ensuring that this is achieved. To this end, more needs to be done to:

- remove unnecessary restrictions and variations in road access conditions
- address gaps in information about heavy vehicle access decisions and the state of the road network
- work towards the introduction of direct road-user charging over the longer term.

Under an ideal heavy vehicle road access regulation system, access conditions and permit requirements would be consistent across the road network. Permits and conditions would also only be required when there is a material risk to public safety or infrastructure that can only be managed, or amenity objectives that can only be achieved, on a case-by-case basis.

Removing unnecessary restrictions and variations

Increase the number of roads assessed and approved for use by heavy vehicles

One way to reduce road access restrictions is to increase the number of roads formally assessed and approved for use by high productivity vehicles, particularly on local roads. Generally, these approvals are published as gazette notices, which are government declarations that particular classes of vehicles are permitted on particular routes or areas, from which they would otherwise be prohibited.

Making greater use of gazette notices would enable more efficient road access — removing the requirement to obtain a permit for the roads specified in the gazettal notice would mean freer access to those roads by all heavy vehicle operators.

The NHVR is also seeking to reduce permit processing times by encouraging road managers to grant pre-approvals of access (NHVR 2015a; trans., p. 554). Pre-approvals allow the NHVR to issue permits without seeking additional road manager consent (NHVR 2016k). The NHVR is using ‘heat maps’ — which show where demand (and blockages) for road access permits are located — to target efforts to assist road managers in the impacted areas (NHVR 2016f).

Schemes such as those in place in Queensland and South Australia (box 9.4) can also reduce the need for, and time taken to, obtain road access permits.

Box 9.4 Examples of initiatives to reduce road access restrictions

Initiatives are underway in some states to reduce heavy vehicle road access restrictions.

- In South Australia, road users can initiate road assessments for proposed roads for gazettal. Once an applicant obtains a road assessment from an authorised assessor and clearances from the local government road manager for the proposed route (and from the railway authorities if level crossings are involved), the applicant can lodge a final report with the South Australian Department of Planning, Transport, Energy and Infrastructure for approval and gazettal (SADTEI 2008).
- Through the Road Alliance initiative (QDTMR and LGAQ 2013), the Queensland Department of Transport and Main Roads funded all Performance Based Standards route assessments on both state and local government roads in Queensland, along with other routes deemed important (PC 2012b). The Queensland Government is also working with the agricultural industry to increase transport efficiency by reducing the need for permits, through a range of special access schemes for the agricultural sector (QDTMR 2013; Queensland Department of Agriculture and Fisheries, sub. 58).

Better information about usage patterns and vehicle telematics (see below) could help alleviate communities' and local road managers' apprehension about potential increases in heavy vehicle traffic on approved roads (NHVR, trans., p. 550) — such as those expressed by Regional Development Australia Wheatbelt WA members.

The majority of traffic on these final miles will be from the people actually living on these roads and if we allow, even under permit conditions, large vehicles to travel on unsuitable roads, it is these farmers and their families that will be at risk ... It is not only the risk of collisions and run offs, but also the detrimental impact of heavy vehicles on poorly constructed road surfaces, and the resulting damage that could cause accidents. (sub. DR176, p. 3)

Greater harmonisation will also assist

Increased harmonisation between jurisdictions would help to minimise regulatory compliance costs, and ensure that productivity enhancing measures in one state are not undermined by regulatory constraints in an adjacent state.

Many participants supported greater harmonisation,³³ though the Livestock and Rural Transport Association of Western Australia made the important point that 'an improvement in productivity and efficiency should be the main objective of national regulation, not national regulation itself' (sub. DR172, p. 2).

While some variation to cater to local conditions is necessary, the focus of harmonisation should be on removing unnecessary regulatory inconsistencies. One such example is the Multi-State Class 1 Load Carrying Vehicles Mass Exemption 2016 Notice (No. 1), made under the HVNL. In addition to not being national in coverage (as it contains the requirements of only three of the six participating jurisdictions), the notice provides for mass limits to be calculated differently in different jurisdictions: mass limits in New South Wales are based on each 8-tyre axle grouping, while mass limits in South Australia are based on overall axle spacing.

The legalistic nature of the current national notices means they may be difficult for operators to understand.

... [the national notices,] I'm not sure they're necessarily the right way of expressing [road access] information into the future. They tend to be, you know, fairly legalistic documents that are published on the commonwealth government gazette website, and they have to be read by someone trained in it. (NHVR, trans., p. 556)

Consolidating the notices into a single national notice would minimise compliance effort for the heavy vehicle industry (provided the requirements contained in the notice are truly national, and are not simply a list of each jurisdiction's requirements).

³³ Participants who supported greater interjurisdictional harmonisation of heavy vehicle regulations included: the Australian Lot Feeders' Association (sub. DR294); Cattle Council of Australia (sub. DR290); Cotton Australia (sub. DR262); GrainGrowers (sub. DR247); and the Livestock and Rural Transport Association of Western Australia (sub. DR172).

Replacing a number of jurisdiction-specific notices and initiatives with single national notices that apply across states and territories is already part of the NHVR’s work program (NHVR 2015a). If implemented in a truly national fashion, in time this should reduce the number of permits road users need to obtain to use the road network. It would also reduce the effort that transport operators must invest to ensure that they are compliant with the different requirements published in each of the notices. Ensuring that road users can identify the road access conditions that apply to the road network through the online NHVR journey planner (see below) would further reduce road users’ compliance burden.

The NHVR acknowledged that interjurisdictional differences in regulations persist, but said that harmonisation is complex to achieve and a staged approach is required (NHVR 2016h). More critically, the NHVR is reliant on participating jurisdictions to fulfil their role in the harmonisation process. The NHVR noted that it:

... is entirely dependent upon the will of its participating jurisdictions to negotiate a way to consensus when harmonising notices. Without the active cooperation of participating jurisdictions, the NHVR is unable to deliver these vital national reforms. (sub. DR192, p. 2)

The NHVR recently committed greater resources to the harmonisation process, including establishing a national harmonisation team (NHVR, trans., p. 555). The effectiveness of these efforts can be considered as part of a broader review of the NHVR (recommendation 9.4).

FINDING 9.1

Despite the commencement of the Heavy Vehicle National Law and the establishment of the National Heavy Vehicle Regulator, there remain significant variations and inefficiencies in heavy vehicle regulation, including costly delays in processing road access permits.

RECOMMENDATION 9.1

States and territories that are participating in the Heavy Vehicle National Law should, as a high priority, increase the number of routes that are assessed and gazetted for heavy vehicle access. Permits should only be required in locations where there are significant risks to public safety or infrastructure that must be managed on a case-by-case basis.

There are arrangements in South Australia to allow road users to propose and undertake road route assessments for gazettal, and in Queensland to fund road route assessments and gazetals on both state and local roads. These arrangements should be considered for adoption in other jurisdictions or expansion in respective states.

Addressing information gaps

A better understanding of road access decisions is needed

The NHVR only has full visibility over road access decisions for the permits it processes. This is about 12 per cent of all permits, with the remainder processed by participating state and territory road managers (NHVR 2015a; QAO 2016). As such, no single agency has good information about the majority of road access permits issued in Australia. And, not all state road managers are aware of all the access decisions made by local governments. For example, access permit processing is highly decentralised in New South Wales — the delegation from the NHVR gave all road managers (including local governments) in that state powers to issue access permits (NSWRMS 2016).

Information about road access outcomes at the national level is incomplete. Without sufficient visibility of road access decisions across the road network, the NHVR has limited ability to assess and monitor how long access decisions take, where access is approved or denied, what is approved or denied, or the reasons for denial. This limits the NHVR's capacity to improve the consistency of road access decisions.

A better understanding of road access decisions would allow the NHVR to:

- target current pre-approval efforts at high demand routes across the road network
- identify road managers and areas that need more support
- identify roads in need of investment across the road network (see below)
- build transparency in the timeliness of access processing
- help to tailor permit requirements and permit validity periods to the risk profile of the road route or vehicle type, so that operators are not 'simply going and recycling permit applications which are granted in 88 per cent of cases' (NHVR, trans., p. 553).

The NHVR could work with participating jurisdictions to collect road access permit data on a regular basis. Such efforts would be in line with the Queensland Audit Office's recommendation for the NHVR to 'monitor and periodically review the reasons given by road managers for refusing consent and assess whether they are consistent, evidence-based and clearly explained' (QAO 2016, p. 7).

Other ways to help the NHVR build a better understanding of access decisions across the road network should be assessed as part of the review of the NHVR (recommendation 9.4).

Building an evidence base for road investment priorities

Building an evidence base on the condition of public roads and bridges by compiling road asset registers would help with prioritising investment needs and the transparency of decisions. It could allow road investments to be directed to where they would achieve the greatest net benefit, and ultimately minimise the need for road access restrictions. Better

information could also contribute to public confidence that road revenues are being invested effectively.

Developing a national set of road asset registers, and expenditure plans, is part of a shift towards a national ‘forward looking cost base’ for setting heavy vehicle charges (Fletcher 2016, p. 14). This strategy follows from the (now ceased) Heavy Vehicle Charging and Investment (HVCI) reform project, which recommended the development of road asset registers and assessments of road conditions according to agreed standards (QDTMR 2015). The first edition of the road asset registers and infrastructure ratings, along with investment plans, for designated key freight routes was published by early 2016. The key freight routes identified — mostly highways — covered about 46 000 km (6 per cent) of the public road network. The intention is for future editions of the road asset registers and expenditure plans to be progressively extended beyond key freight routes over the next two years (TIC 2016).

Including local roads in future editions of the road asset registers will be essential for addressing the first and last mile problems affecting farm businesses. Some good examples include:

- Western Australia’s regional freight transport network plan, which involved identifying significant local government impediments to a continuous freight network (WADT 2013)
- South Australia’s Change@SA 90 day project, under which the South Australian Government worked with primary industries to create a priority list of last mile and access issues. According to the South Australian Government and Livestock SA, this program led to increased high productivity vehicle access and productivity improvements (SADPI 2015; South Australian Government, sub. DR295; Livestock SA, sub. DR303).

Data on road use could feed into road asset reports to justify investment decisions, and instil road-user confidence that they will benefit from future reforms to road charges. Identifying important access points would also ensure road modifications do not adversely affect farm vehicle movement (such as the installation of guard rails on a road blocking access to an adjacent property, reported by one of the farmers who participated in the Commission’s case studies — appendix C).

Better data on road-user needs would complement road asset reports by identifying where investments are needed to meet user demand. This information is necessary to direct investments even if a transition to full mass-distance-location pricing does not take place, and should be easier to obtain once vehicle telematics become more widespread (see below).

More information is becoming available on road-user needs, which will in turn help to identify where road investments would generate the greatest net benefit.

- The interactive online journey planner³⁴ developed by the NHVR allows operators to map routes and request access permits for proposed routes. The data from the journey planner and ‘heat maps’ could be used to identify roads for extending the key freight routes, and to inform planning and investment decisions.
- Simulated maps of road use, such as modelled agricultural commodity freight routes using the National Livestock Identification System data (Goesch et al. 2015a; Higgins 2013) or CSIRO’s TraNSIT model (CSIRO 2016c), could further inform road investment decisions to meet farm business needs.
- The Transport and Infrastructure Council (2016) endorsed AustRoads’ framework which provides ‘an opportunity for [private industry] to invest in public roads directly where it is a primary beneficiary of the upgrade’ (AustRoads 2015, p. i). Although it is unclear how extensively this framework has been adopted in practice by governments, private investment in public roads provides a clear signal of users’ needs and should be encouraged.

Introduce direct road-user charging

Currently, heavy vehicle charges are based on averaged annual road expenditure, and are collected through a combination of registration fees (collected by state and territory governments) and fuel-based charges (collected by the Australian Government) — known as the pay-as-you-go (PAYGO) framework.

There are several shortcomings with the current heavy vehicle charging system.

- It does not provide price signals to road users about the cost of road provision, or to suppliers about where users want road investments to be made.
- It is inequitable, as those who use the road network infrequently effectively cross-subsidise those who impose higher costs on the network through their greater use of it. Some farm businesses can be disadvantaged under the system as, while they often have heavy vehicles, they do not necessarily use those vehicles on long trips. According to the NFF (2010), farm businesses generally own at least one heavy vehicle, but these vehicles travel less than 5000 km per year on average. Also, ‘road train registration fees are subsidising infrastructure spending on parts of the network from which they are prohibited’ (ALTRA, sub. 47, p. 10).
- It is complex, and, in combination with these shortcomings, has ‘resulted in a pricing framework that impedes productivity within the land freight transport sector’ (Freight on Rail Group, sub. DR266, pp. 7).

³⁴ The online journey planner is available at <http://gis.nhvr.gov.au/journeyplanner/>.

A direct (or more cost-reflective) road-user charging system would support better road investment decisions. Direct road charging systems could lead to more efficient infrastructure use and provision because road managers would be better informed about the demand for road capacity and quality. (However, some roads will always need to be funded by the government on community service grounds.)

Direct road-user charging could remove price distortions in the choice between transport modes and drive appropriate investments along the supply chain. Not only could road pricing reform improve road networks, it could also provide price signals for modal choice between rail and road and reduce bottlenecks around ports (ACCC 2013a). For example, as the West Wimmera Shire Council (sub. 49) pointed out, the poor condition of road networks leading to the Port of Portland has a significant effect on agricultural producers. Cost-reflective pricing could address such concerns by facilitating an efficient level of investment in road networks that lead to ports.

More cost-reflective road pricing could involve adjusting charges for pavement wear based on axle configuration, as damage is related to a truck's weight per axle (Winston and Mannering 2014). This pricing adjustment could incentivise the uptake of truck designs that minimise pavement damage.

The shift to a mass-distance-location charging model (which requires the monitoring of total distances travelled, road use and actual vehicle mass) has been recommended previously by the Commission and other organisations (HVCI 2014; NCA 2014; NTC 2008b; PC 2006a, 2014c). New technologies, such as vehicle telematics, will provide opportunities for such cost-reflective road pricing (Harper et al. 2015; PC 2014c), and allow road managers to enforce safety standards efficiently (box 9.5).

While the Australian Government has stated its support for the Competition Policy Review (Harper Review) recommendations on more cost reflective road pricing for heavy vehicles, it has not committed to direct road-user charging (Fletcher 2015b, 2016). The Transport and Infrastructure Council acknowledged that more direct user charging is needed to fully close the link between the needs of heavy vehicles and the charges they pay, but is of the view that these linkages can be improved within the current heavy vehicle charging system (TIC 2016). The Australian Government is also considering the establishment of an independent price regulator for heavy vehicle road charges, with work underway to identify potential steps to transition to independent price regulation by 2017-18 (Fletcher 2016; TIC 2016) — this is in line with recommendations by the Harper Review (Harper et al. 2015) and the HVCI reform project (HVCI 2013).

The Commission's view is that there would be substantial gains from transitioning to a more direct road-user charging system for heavy vehicles. There is also a limit to the extent that the current road charging system can be altered further to reflect actual road use and expenditure (NTC 2013).

Box 9.5 **Intelligent Access Program**

The Intelligent Access Program (IAP) is a voluntary national program that is built around using vehicle telematics and Global Navigational Satellite System technology to monitor participating heavy vehicles' compliance with road access conditions. The objective of the IAP is to give road managers the confidence to allow heavy vehicles access to the road network.

The IAP remotely collects data on the time, speed and location of heavy vehicles through an in-vehicle unit supplied by a certified IAP service provider, or through existing in-vehicle units that have been certified for delivering IAP services (TCA 2016).

In New South Wales and Queensland, operators running at higher mass limits are required to enrol in the IAP, to enable monitoring of operator compliance with approved routes, times and speeds (NHVR 2016e). While the focus of the IAP is currently on compliance (road authorities currently only receive data on access breaches), intelligence gathered via vehicle telematics would be valuable for informing road investment decisions and logistical coordination of freight to resolve bottlenecks. The Swedish Transport Administration (Trafikverket) is also trialling the IAP technology as part of its national program of heavy vehicle reform (Walker 2016).

The National Heavy Vehicle Regulator (NHVR) is looking at how telematics could be used to improve driver safety, and noted that 'the introduction of telematics will be a significant step forward in the modernisation of heavy vehicle regulation in Australia' (sub. DR192, p. 1). The NHVR is currently developing a discussion paper on heavy vehicle operator incentives to voluntarily participate in regulatory telematics as a first step towards a national telematics strategy.

While some industry groups are opposed to direct road-user charging (Australian Lot Feeders' Association, sub. DR294), other are cautiously supportive.³⁵ A key concern is the impact on regional areas and producers. For example, the NFF called:

... for further detail on what this model may look like and evidence based analysis on the impacts of the model on farmers. It must be demonstrated that the new model is more beneficial to primary producers than the current reduced registration fees and fuel excise ... this would most likely involve the retrofitting of costly technology. (sub. DR216, p. 39)

An important step in the transition to a more efficient and effective approach to the provision and funding of roads should be the establishment of Road Funds (dedicated bodies responsible for managing the allocation of road revenues to road projects) by state, territory, or groups of local governments. Road Funds can be viewed as a move towards clear governance arrangements that are focused on incorporating the interests of road users in the process of allocating road funding, and subjects funding decisions to wider public scrutiny (PC 2014c, p. 315). Hypothecating road revenues in a way that better reflects road-user needs is an important part of this transition, as this would help convince road

³⁵ Support for the principle of road-user charging was expressed by: AgForce (sub. DR246); Cotton Australia (sub. DR262); CCA (sub. DR290); GrainGrowers (trans., p. 476); Livestock SA (sub. DR303); NFF (sub. DR216); NSW Farmers' Association (sub. DR161); Queensland Farmers' Federation (sub. DR217); WA Famers (sub. DR226).

users that the reforms are aimed at more efficiently and effectively allocating road revenues.

Road Funds, and the importance of hypothecation of road revenues to the Fund, are discussed in more detail in the Commission's inquiry reports on road and rail freight infrastructure pricing (PC 2006a) and public infrastructure (PC 2014c). The proposed models for collecting and distributing road revenues developed by the ceased HVCI project should also be considered in the road pricing reform process.

RECOMMENDATION 9.2

The Australian, state and territory governments should pursue road reforms to improve the efficiency of road infrastructure investment and use, particularly through the introduction of direct road-user charging for selected roads, the creation of Road Funds, and the hypothecation of revenues in a way that incentivises the efficient supply of roads.

Regulations for moving agricultural machinery on public roads

Many agricultural machines exceed prescribed mass and dimension limits, and are consequently restricted access vehicles that require permits to operate on public roads. Multiple permits can be required to move agricultural machines on public roads.

- *Road access permits.* Permits for moving agricultural machines on public roads are issued by:
 - relevant state or territory road authorities and local governments, for moves entirely within New South Wales, Victoria, Queensland, South Australia and the ACT
 - the NHVR, for moves within Tasmania, and between participating jurisdictions
 - the NHVR and the road authorities of Western Australia or the Northern Territory, for moves between participating jurisdictions and Western Australia or the Northern Territory.

There is also a system of gazettal notices, under which the gazettal notice replaces the permit for certain specified types of machinery. Permits might only be granted for daylight hours (such as in New South Wales).

- *Third party approvals or permits.* Where the dimensions of the vehicle might interfere with public infrastructure (such as railway lines or overhead wires), the applicant must seek approval or permits from relevant third parties, such as utility companies and rail companies, before the road access permit is approved. Permits from third parties can be required each time the machine is moved, and can be valid only for a specified time bracket on the particular day.

In some cases, a condition of the road access permit will be that a pilot vehicle or police vehicle must accompany the machine on public roads.

Restrictions on moving agricultural machinery impose a considerable burden

Many participants, while acknowledging the importance of ensuring the safety of other road users, expressed considerable frustration with the requirements for moving oversized agricultural machines on public roads.³⁶ The NFF said that:

Agricultural equipment and vehicles are increasing in size and dimension, making the transport and movement of equipment more complex. Travelling on and crossing critical, major and minor roads ... is becoming more restrictive. Safety is imperative, however it needs to complement farming activities, cropping cycles and harvest timeframes. (2014a, p. 12)

And Regional Development Australia Wheatbelt WA said that:

... it is essential that farmers are able to move machinery between farm locations with minimal regulatory paper work and operational disruption. This has grown as an issue due to the increase in the land area of Wheatbelt farms ... With the increase in size many farm businesses have found themselves working locations within the same area but not directly adjoining the original property and having to access the road network to undertake farming operations. (sub. DR176, p. 4)

Participants expressed concern that the conditions on the permits can be restrictive and the process to obtain them time consuming and inflexible (box 9.6), including for third-party railway crossing permits (GrainGrowers, sub. 73). According to a farmer from southern New South Wales (sub. 83), in one instance, moving an agricultural machine over 14 kilometres in western Sydney required three pilots, a police escort, letter drops to businesses and residents, and liaising with two local governments and a motorway owner.

The process of obtaining permits can be lengthy, and takes time away from productive activity. The farmer from southern New South Wales said that:

Farmers have to jump through the same hoops as a business in the city ... I obtained my permit after at least 20 hours of office work that took me away from my farm business. I spent hours on the phone with various people trying to work out what I had to do to comply and then hours writing the documents and filing out the forms required ... In many instances [farmers] have the physical escorts and flags etc but just haven't done the paperwork to get a permit. (sub. 83, att. 1, p. 1)

³⁶ See for example: Agforce (subs. 17 and DR246); Australian Sugar Milling Council (sub. 68); Karen Baines (sub. 13); Canegrowers (sub. 22); Cotton Australia (sub. DR62); Farmer from southern NSW (sub. 83); Grain Producers Australia (sub. DR201); Office of the NSW Small Business Commissioner (sub. 4); Jonathan Pavetto (sub. DR227); Regional Development Australia Wheatbelt WA (sub. DR176); University of Southern Queensland (sub. DR184); Voice of Horticulture (sub. 42); Wimmera Development Association (sub. 19).

One cotton farmer who the Commission interviewed said that he no longer offers the farm's heavy vehicles for contracting work because registering them and obtaining the required permits for moving them on the roads is too difficult and costly. The farmer said that this was a significant forgone business opportunity, and it reduced competition in the local market for contracting services (appendix C).

Box 9.6 Regulatory requirements for moving oversized agricultural machinery in Capella, Queensland

For a producer in Capella to move an agricultural machine — that is 7 metres wide and 4.8 metres high — for 25 km, the following were required:

- *transport permits* — two permits were required from the Department of Main Roads (the department): one for the machine, and another for the route taken. Each permit was issued by a different section of the department, and needed to be obtained each time the machine was moved
- *railway crossing permits* — a permit was required from Queensland Rail and the application needed to be lodged four days in advance. A new permit was required if the move ended up occurring outside of the nominated time frame. An uncomplicated move, with no overhead wires and infrequent train services (that ran twice a week), costs \$100 as the department had to confirm when the train ran. If the department deemed it necessary to send out a flagman the cost would have been \$300
- *police escort* — two police drivers needed to be dispatched from the Emerald police station because the machine was 7 metres wide. The cost — \$118 per police officer, and 88 cents per kilometre per police vehicle (calculated from the time the police officers depart from and returned to the Emerald police station). The total cost — about \$500
- *local government permit, Telstra permit and Ergon Energy permit*. These permits lasted 12 months but needed at least five working days to process.

Source: Ivan Gowlett, pers. comm., 5 May 2016.

The need to obtain permits can also delay agricultural activities that are time sensitive. For instance, planting takes place when rain arrives, and machines need to be moved across numerous paddocks at short notice. This can lead to significant logistical problems and associated costs. AgForce said that:

Agricultural producers face unnecessary costs associated with waiting for these permits, such as costs to delayed production and the additional time and energy used in following up applications that should have been processed promptly. Alternatively, they are faced with the risk of operating without a permit due to the serious threat of losing a crop if it cannot be harvested prior to impending adverse weather such as a significant rainfall event. (sub. 17, p. 9)

The NSW Farmers' Association argued that the regulations governing the movement of oversized agricultural machines in New South Wales are excessively risk averse.

... many of these movements are presently considered to be 'High Risk' by the NSW Roads and Maritime Service (RMS). This is regardless of the actual risk posed by the permutation of the machinery combination and the road route undertaken ... a requirement exists to contact the NSW Police regarding escort requirements a minimum of five days prior to the planned

movement and to obtain approval from a Rail Infrastructure Manager if the movement involves traversing a railway crossing. During the time sensitive planting window the period of time required prior to approval constitutes a major cost to a farmer's productivity, or to a contract planting operator's ability to work. (sub. 72, p. 23)

In contrast, the Livestock and Rural Transport Association of Western Australia pointed out the risks that machinery can pose to other road users, and noted that its 'members repeatedly raise concerns about near misses on rural roads when encountering agricultural equipment being towed' (sub. DR172, p. 2).

Cotton Australia questioned the rationale behind permit renewals.

Currently, there are many examples where the farmer must apply for [oversized agricultural machines] permits either on a per-trip basis or an annual basis, and when due for renewal they are in effect automatically renewed (except for the fact that an application still has to be made). (sub. 23, p. 16)

Curfews on moving agricultural machinery also interfere with farming activities. For example, restrictions on night travel in New South Wales preclude balers from being moved in time for baling hay before dawn, which can limit the efficient operation of hay baling contractors.

Scope to increase flexibility?

There does appear to be scope to increase flexibility for moving oversized agricultural machines without impacting public safety. As a farmer from southern New South Wales put it:

The only disruption that is caused by a slow moving [oversize or overmass] farming plant on the road is that other drivers may have to slow down for a couple of minutes until the farmer can move over to the side of the road. Drivers are on the whole very courteous and patient and I'm sure the threat of these movements to public safety has been over-stated and over-regulated. (sub. 83, att. 1)

A relevant example is night travel for agricultural vehicles wider than 2.5 metres, which is not permitted in New South Wales, but is permitted in Victoria (NHVR 2015d; VicRoads 2012). The question has to be asked as to why those vehicles can be safely driven at night in Victoria but not in New South Wales.

Agricultural machines (and other vehicles) should be afforded the greatest flexibility for moving on public roads, once any impacts on public safety, amenity and infrastructure are addressed. In locations where noise and infrastructure constraints (such as the presence of overhead wires) are not concerns, restrictions for agricultural machines could be replaced with precautions to alert other drivers to the presence of the agricultural machine, or be allowed exemptions from permits during cropping season. Concerns over recovering the cost of any eventual damages caused by agricultural machines could be better addressed through requiring adequate insurance cover for the vehicle, rather than through stringent conditions on the movement of agricultural machines.

There are ways to reduce the time and cost burden for obtaining permits to move oversized agricultural machines. In particular, permit validity periods could be extended for low risk routes.

- The reason for requiring a permit from the NHVR or road manager for each journey for oversized agricultural vehicles is unclear. Multi-journey permits could be issued or exemptions could be made for vehicles that regularly undertake the same journey, particularly if that journey only covers a short distance.
- Navigating machines around fixed infrastructure, such as power or telephone lines, along the same route could be done without requiring new permits for every move.
- Rail authorities could issue permits that have a longer validity, or allow machinery movements at fixed locations and time periods in line with train timetables.

There are a range of measures in place to increase flexibility for moving oversized agricultural machines at both the state and national levels which could be considered for wider adoption. For example:

- a trial is underway between the Queensland Government, canegrowers and the NHVR to facilitate the movement of oversized vehicles within restricted zones during the crop cycle (Canegrowers 2016)
- the New South Wales Government has introduced an exemption (published as a NHVR notice) from mass and dimension regulations for all farmers and contractors transporting silage trailers, which aligns with Victorian regulations. The exemption allows a laden silage trailer up to three metres wide carrying feed to travel up to 25 km (although not at night)
- oversized agricultural machines in South Australia are exempt from permits so long as operators comply with a code of practice that sets out the conditions of travel within various zones (SADTEI 2008)
- there are a number of NHVR notices that exempt agricultural machines (and other restricted access vehicles) from prescribed mass and dimension limits or travel conditions (such as bans on travelling on public holidays). The NHVR is also targeting routes expected to experience large numbers of heavy vehicle movements, including for oversized vehicles, for local governments pre-approvals (NHVR 2016i).

A cotton farmer said that he was pleased with the recent approval of a new trailer technology that expands the loads each truck can transport from 12 to 18 round cotton modules — a 50 per cent productivity increase. He pointed out that tailoring restrictions on weight, height and size to local conditions can improve safety and productivity (appendix C).

Increased use of state and national gazette notices could provide greater flexibility in travel conditions that have a significant impact on farm businesses, and potentially eliminate the need to apply for permits for agricultural machines.

In addition, a national notice for agricultural vehicles is scheduled for development. According to the NHVR, the notice will ‘include exemptions for local movements’ and will aim to promote ‘the shift towards gazetted access over permitted access’ (sub. DR192, p. 3). However, the timeframe for the creation of the notice remains uncertain, as do details of the ways in which it could benefit the agricultural sector.

RECOMMENDATION 9.3

The National Heavy Vehicle Regulator, road managers, and relevant third parties (such as utilities and railway companies) should ensure that requirements for moving oversized agricultural machinery are proportionate to the risks involved. To achieve this they should, wherever possible, make greater use of gazettal notices or other exemptions for oversized agricultural machinery, and issue permits that are valid for longer periods and/or for multiple journeys.

Heavy vehicle driver safety regulation

Heavy vehicle operators are required to comply with a number of driver safety regulations, including driving hours and fatigue management, which are necessary to achieve the standards of road safety that the community expects.

The driver safety requirements of the HVNL apply to drivers in participating jurisdictions (box 9.7) where almost 90 per cent of all truck-related fatalities occur (Safe Work Australia 2014). Jurisdictions that have not adopted the HVNL have their own heavy vehicle driver safety regulations.

- Heavy vehicle operators in Western Australia are subject to its fatigue management and chain of responsibility regulations (WAMR 2015).
- The Northern Territory does not regulate driving hours, and regulates driver fatigue as a workplace health and safety hazard. Only 2 per cent of all truck-related fatalities occur in the Northern Territory (Safe Work Australia 2014).

A wide range of other state-based regulations govern heavy vehicle safety, including roadworthiness inspections, use of safety stations, safe following distances, limits on stopping in built-up areas, inspection of driver log books, and speed limits (NSWRMS 2015; NTDT 2014; QDTMR 2016; Queensland Government 2015; South Australian Government 2016; WARSC 2015).

From 2012 until April 2016, there was also a separate road safety remuneration (RSR) system. As part of that system, the Road Safety Remuneration Tribunal (RSRT) made orders prescribing minimum remuneration and other entitlements for road transport drivers (both employees and contractor drivers), as well as conditions for loading and unloading vehicles, waiting times, working hours, load limits, payment methods and payment periods

(RSRT 2013a). Compliance with RSR legislation was administered by the Fair Work Ombudsman.

Views on driver safety regulations

As farm businesses are heavily reliant on heavy vehicles to transport goods, heavy vehicle driver safety regulations can have significant implications for farm businesses' operating costs.

Participants raised relatively few concerns with the driver safety requirements of the HVNL or the requirements of non-HVNL jurisdictions. The NSW Farmers' Association (sub. 72) and the NFF expressed concern about the chain of responsibility requirements, with the latter saying that 'the costs (and continuing regulatory creep) imposed on businesses by the chain of responsibility and fatigue management rules in relation to heavy vehicles is an ongoing concern' (sub. 61, p. 19). Voice of Horticulture also raised concerns over regulated rest breaks, which 'add substantially to the cost of low value horticultural produce and reduce the produces freshness in the market, further eroding grower returns' (sub. 42, p. 18). While there remain areas for improvement, recent reforms (box 9.7) should help to address these concerns.

Ausveg said that 'drivers transporting live cattle have special dispensations due to the welfare of the cargo. Highly perishable goods such as vegetables should be allowed the same concessions' (2015b, p. 6). However, there is no case for extending special provisions put in place to support minimum standards of animal welfare during transportation to products other than animals. Delivering fresh produce to its destination more quickly entails only private benefits. Heavy vehicle operators who desire greater flexibility in work–rest hours can choose to become accredited to do so under the NHVR's advanced fatigue management system.

The main driver safety issue for participants was the RSR system. Key concerns included that the RSR system overlapped with other regulations, and increased costs without commensurate safety improvements.

The Australian Livestock and Rural Transporters Association, for example, said that the RSRT was 'a most concerning source of new and unnecessary red-tape in the agricultural transport supply chain' (sub. 47, p. 3). It pointed to particular difficulties that the agricultural sector faced in complying with the RSRT's remuneration orders (box 9.8). The Western Australian Government (sub. 54), Sheepmeat Council of Australia and Cattle Council of Australia (sub. 88), the Limestone Association of Australia (sub. DR152) and the Consolidated Pastoral Company (sub. 71) also expressed concern about the effect of the RSRT's decisions on the cost and efficiency of transporting agricultural goods.

Box 9.7 Fatigue management requirements under the Heavy Vehicle National Law

Under the Heavy Vehicle National Law (HVNL) and the associated Heavy Vehicle (Fatigue Management) National Regulation, drivers are required to keep work diaries and adhere to maximum work and minimum rest hours.

The HVNL provides for fatigue management exemptions (permits and notices), which enable operators and drivers to apply for exemptions relating to work and rest hours, work diary and record keeping if they cannot reasonably work under the legislated fatigue management requirements.

The HVNL also prescribes a ‘chain of responsibility’, under which anyone with influence over a transport task — including employers, exporters, producers, corporations involved in consigning, packing, loading or receiving goods — is deemed to be part of the supply chain and shares responsibility for compliance with the HVNL.

After the HVNL came into effect several changes have been made to reduce the burden imposed by its fatigue management requirements.

- Reforms to chain of responsibility requirements replaced the obligations for all parties in the chain of responsibility with a set of Primary Duty of Care over safety aspects of the transport task. Prior to the reform, all parties had to comply with multiple duties for separate areas such as speed and fatigue, which led to confusion about which parties were responsible for each obligation (NTC 2015).
- The National Heavy Vehicle Regulator has introduced voluntary electronic work diaries — an electronic device that records the driver’s work hours — as an alternative to written work diaries (NHVR 2015b).
- Primary producers delivering goods within 160 km have been exempted from work diary requirements (which is usually required for travel over 100 km) (Commonwealth of Australia 2015b). However, some issues remain with the implementation of this exemption, including that it precludes the pickup of farm inputs as a part of the return trip (NSW Farmers’ Association, sub. DR161, p. 24) (though the NSW Farmers’ Association also noted that the National Heavy Vehicle Regulator is working to extend the exemption to include these types of journeys). In addition, farmers may not always be aware of how the system operates in practice, including the availability of exemptions (TDPIPWE, sub. 62; TFGA, sub. 16).

The NSW Farmers’ Association considered that:

Even though the RSRT was relatively short lived, it threatened the livelihood of small business owner drivers and created significant confusion and uncertainties in the industries that rely on them, including agriculture. The creation of the RSR system was flawed and the same mistake should not be allowed to occur again. (sub. DR161, p. 23)

The NFF also said that the *Road Safety Remuneration Act 2012* (Cwlth) did not ‘... meet the test of ‘good regulation’’ (sub. 61, p. 19).

Box 9.8 Rural transporters report difficulties complying with Road Safety Remuneration Orders

The Australian Livestock and Rural Transporters Association said that:

The 2014 [Road Safety Remuneration Order] requires written contracts between hirers and contractors before work is undertaken and mandates the use of detailed safe driving plans for all long-distance work. These are new requirements that result in increased paperwork without any significant benefit for the operator.

Very little of the work of most livestock or grain carriers is done under an ongoing written contract. Jobs are more often allocated on a piece-meal basis, as they arise, including during seasonal highs such as the grain harvest. While some carriers have retainers to handle, say, all product moving between a particular feedlot and a certain abattoir which may be amenable to a written contract, most work is ad hoc and at short notice.

Rather than being continuously located at 'the end' of a sub-contracting chain, small rural operators often share work amongst each other and find that they are constantly changing roles. On one day, they will be the 'prime contractor' handing off some work to 'a mate that I trust' and, on the next day, they will act as a sub-contractor, bringing in a backload for 'a mate who can't get out this way' to service his usual client.

This reciprocity and the continuing exchange of roles in rural sub-contracting creates a market that is quite different to that found, for example, in the long-distance 'general freight' business that runs each night on Australia's East Coast highways. (sub. 47, p. 4)

The safety benefits of the RSR system did not justify the costs

The RSR system was in place for less than four years, and the road safety remuneration orders it imposed³⁷ were in place less than two years or were never enforced (FWO 2016a). It is therefore necessary to draw on the literature, in conjunction with participants' views, to consider any benefits that may have arisen from the RSR system.

In this context, an examination of the relationship between remuneration and driver safety behaviour would point to ways that the RSR system could have potentially improved road safety outcomes. However, the nature of the relationship has not been clearly established.

- The literature suggests that remuneration can be a reflection of the heavy vehicle driver's qualification and skills rather than a factor leading to safer driving. For example, Belzer, Rodriguez and Sedo (2002) concluded that transport companies that pay more can afford to be more selective and to hire better quality drivers. (The follow-up study, by Rodriguez, Targa and Belzer (2006), confirmed this finding.) The Federal Motor Carrier Safety Administration in the United States also noted that:

... a number of studies purport to draw a relationship between driver compensation and safety outcomes, for example, that increased pay is associated with a reduction in crashes. The reviewers offer a cautionary note to these assertions: generally, it is not possible to understand the true nature of the relationship between these two factors. Specifically, it may be unclear

³⁷ The Road Transport and Distribution and Long Distance Operations Road Safety Remuneration Order 2014, and the Contractor Driver Minimum Payments Road Safety Remuneration Order 2016.

whether cash bonuses for safe driving are responsible for higher pay, or that offering better pay at a company improves its ability to recruit and hire greater numbers of quality drivers. (FMCSA 2007, p. vi)

- The effects of increased remuneration on safety outcomes are inconclusive. The concern that financial pressures have implications for safety led to research comparing employee and owner–driver groups, because owner–drivers were thought to be under greater financial pressure than employee (or union) drivers. However, there was no conclusive evidence that owner–drivers are more accident prone, and at least three studies (Cantor et al. 2013; Dammen 2005; Williamson et al. 2009) found that they have fewer accidents than other driver groups. Indeed, owner-drivers are likely to have a greater incentive to maintain and care for their trucks as they bear the full cost of accidents and breakdowns (Cantor et al. 2013). One of the reviews of the RSR system found that:

... while the research shows a link between low remuneration and unsafe on-road practices such as speeding and driving excessive hours, it does not appear that the detrimental effects noted in the research are being translated into poor road safety outcomes as there is no significant difference between the safety performance of owner drivers, small operators and employee drivers. (Jaguar Consulting 2014, p. 81)

The limitations of the literature were summarised in the regulation impact statement for the creation on the RSR system (box 9.9).

Given there is little evidence to suggest that regulatory intervention over remuneration in the road transport sector would improve road safety, regulated minimum rates would likely impose unjustified costs.

Anything higher than a price floor, under which drivers can achieve cost recovery for inputs plus receive an income that meets living standards, may go above what is needed to reduce adverse economic incentives that spur unsafe behaviour and therefore place an unnecessary burden on industry. (PwC 2016, p. 53)

The costs of complying with the RSR system were also considerable — the most recent review of the RSR system estimated that the two orders imposed by the RSRT would have imposed costs in excess of \$2 billion over the period 2012–27 (PwC 2016).

An inquiry into the effect of the 2016 order (which mandated minimum payments for owner–drivers) by the Australian Small Business and Family Enterprise Ombudsman showed that it had a considerable impact on owner drivers. Many owner drivers reported losing work before the Payments Order commenced, and that some are still struggling after the Payments Order to regain sustainable levels of work and to recover financially.

[The Payments Order] exacerbated the competitive pressures already faced by owner drivers ... [The impact of the Order] on individual owner drivers and small businesses was significant, with financial hardship and stress placed on personal relationships and mental and physical health. (ASBFEO 2016, p. 4)

Box 9.9 **The regulatory process in practice: the Road Safety Remuneration System**

The Road Safety Remuneration (RSR) system was established in response to a report published by the National Transport Commission in 2008. Known as the 'Safe Payments' report, it found there was a link between driver remuneration and safety outcomes, and recommended that the link be addressed through regulatory intervention (NTC 2008a). In response, the Australian Government established the RSR Tribunal under the *Road Safety Remuneration Act 2012* (Cwlth). The Tribunal commenced operation on 1 July 2012.

There were several flaws in the process of establishing the RSR system.

- There was no conclusive evidence of a link between remuneration and safety, making it unclear whether regulating remuneration was an effective way to improve safety outcomes.
 - The Safe Payments report acknowledged the lack of evidence that payments directly cause crashes, but urged that 'discussion should not be limited to a simple analysis of crash data', as economic pressures have implications for safety (NTC 2008a, p. 19).
 - The regulation impact statement for the creation of the RSR system found that data were limited and studies were inconclusive about the extent to which remuneration and safety are related.

There is some research to suggest that the remuneration for drivers is a factor in safety outcomes, however data at this point in time is limited and being definitive around the causal link between rates and safety is difficult. (PwC 2011, p. 3)

The regulation impact statement for the RSR system found that it would lead to net economic costs but also noted that the assessment did not take into account the potential economic benefits of addressing any market failures (including low market power or barriers to exit from the industry). Although it recommended establishing the RSR Tribunal, it noted that further investigation was needed before determining safe rates.

- At the time of the creation of the RSR system, fatality rates involving heavy vehicles were improving. They had improved between 2002 and 2007 (the year that the Safe Payments report was produced), and continued to improve before the commencement of the RSR Act in 2012 (DITRD 2007, 2013). In this climate of improvement, there was no justification for such a strong regulatory response in the form of price regulation.

Given the Safe Payments report and regulation impact statement pointed to the inconclusive link between remuneration and safety, independent research to build an evidence base around this link should have been prioritised before establishing a specialised body.

Reviews of the RSR system were completed in 2014 (Jaguar Consulting 2014) and 2015 (PwC 2016) to assess the regulatory burden on the road transport industry, and whether road safety outcomes can be more appropriately addressed through existing regulations. The reports were not publicly released until April 2016 (DoE 2016). Both reviews reiterated concerns about the lack of conclusive evidence around the links between remuneration and safety, that the RSR system leads to net economic costs, and overlapped significantly with existing driver safety regulations (such as those governed by the National Heavy Vehicle Regulator and state workplace safety regulations).

In addition, the RSR system created 'confusion and uncertainty' (PwC 2016, p. 21), and this uncertainty 'continues beyond abolition of the Tribunal and the Payments Order' (ASBFEO 2016, p. 24).

A particular area of uncertainty was the interaction between the RSR system and other relevant regulations. For example, the Road Transport and Distribution and Long Distance Operations Road Safety Remuneration Order 2014 (RSRT 2013b) — which required safe driving plans for managing fatigue and speeding — overlapped significantly with the HVNL and Western Australia’s chain of responsibility regulations. Aspects of the RSR orders on pay, leave and protections against unfair conduct also overlapped with the Fair Work Commission responsibilities and other existing regulations (including the *Independent Contractors Act 2006* (Cwlth), the *Owner–Driver (Contracts and Disputes) Act 2007* (WA), and the *Owner Drivers and Forestry Contractors Act 2005* (Vic)). While some aspects of this overlap could have been avoided had the RSRT adequately considered existing regulatory systems when making orders, in practice this did not occur (PwC 2016).

The use of RSRT funding by the NHVR

When the RSRT was abolished, the Australian Government announced that its funding (\$15.6 million over four years) would be transferred to the NHVR for implementing practical safety measures (Treasury 2016a). The NHVR is using the additional funds to accelerate safety programs that have been in development, including integrating heavy vehicle monitoring sites into one national system (the national compliance information system), undertaking a heavy vehicle roadworthiness survey throughout Australia,³⁸ developing industry codes of practice guidelines (which clarify how industries could prevent breaches of the HVNL), and providing education about chain of responsibility obligations (Chester 2016; NHVR 2016c, 2016m, trans., pp. 550-552).

Other ways the NHVR could allocate this funding towards improving driver safety include:

- conducting an evidence-based evaluation of where state and territory regulation needs to be strengthened or streamlined to improve driver safety, including in Western Australia and Northern Territory, to ensure all cross-border safety issues are addressed
- gathering available data (such as data from the Intelligent Access Program) to identify and target safety-improvement efforts at high-risk locations or behaviours. Data can also help to tailor safety strategies to different types of heavy vehicles, as different vehicles have different crash profiles (BITRE 2016).

Safety is important. It is essential that any additional expenditure by the NHVR results in clear and demonstrable benefits to heavy vehicle driver safety, or to broader community goals such as road safety or robust information to support efficient infrastructure investment.

³⁸ The national compliance information system and roadworthiness surveys aims to include Western Australia and Northern Territory, though these jurisdictions are not part of the HVNL (NHVR, trans., p. 552).

It has been announced that the Productivity Commission will review the national transport regulation reforms, including the HVNL and NHVR (NTC nd; PC 2012a), although the timing of this review is still to be confirmed. Timely reviews of new regulatory systems are important, and areas for improvement in the national system — including ways in which new funds allocated following the abolition of the RSRT could best be used by the NHVR to improve road safety in all states and territories — could be identified through that review. The review will also be an opportunity to assess the funding requirements of the NHVR for road safety, as it was not demonstrated at the time of abolishing the RSRT that the NHVR can effectively and efficiently use the funds for the purposes of road safety.

FINDING 9.2

The road safety remuneration system (including the former Road Safety Remuneration Tribunal) imposed costs on businesses, including farm businesses, without commensurate safety benefits, and its abolition has reduced this burden.

RECOMMENDATION 9.4

The Australian, state and territory governments should review the National Heavy Vehicle Regulator (NHVR) as part of the planned review of the national transport regulation reforms. The review should:

- assess the efficiency and effectiveness of heavy vehicle regulations, including the scope to improve the allocation of responsibilities under the national system
- identify ways in which new funds allocated following the abolition of the Road Safety Remuneration Tribunal could best be used by the NHVR to improve road safety in all states and territories.

9.2 Rail

Grains, sugar, fertilisers and other bulk products make up 8 per cent of the rail freight task in Australia (BITRE 2014). The grains industry is particularly reliant on rail transport, with most grain transported from grain producing regions to ports in the same state (Tulloh and Pearce 2011). About 5100 km of operational railway were dedicated to grain haulage in 2013-14 (BITRE 2015c).

Rail can be an expensive mode of transport for farm goods. In some cases, the rail freight cost component of exporting is greater than the cost of shipping from the port to the export destination — such as when exporting wheat or cotton from New South Wales to Asia (Australian Farm Institute 2011; Goucher 2011).

There can also be considerable differences in rail freight costs in different jurisdictions due to each region's unique cost structures (Stretch, Carter and Kingwell 2014). For example, CBH said that:

In Victoria, the cost of below rail access of raiing grain from Dimboola to port (300 km) is >\$1.90 per tonne. In Western Australia, the below rail access cost of raiing grain from Merredin to port (300km) is >\$7.90/t. (sub. 36, p. 6)

In some cases, speed and weight restrictions have been imposed due to the poor condition of parts of the rail network. As the Freight on Rail Group said:

... across many regional networks in Australia ... service quality due to lower track standards and a lack of investment has adversely impacted on the competitiveness of the remaining rail freight services – particularly, transport of bulk commodities like grain. (sub. DR266, p. 10)

Rationalisation of branch lines that are largely dedicated to grain is expected to continue (Nguyen et al. 2015). These factors, among others, have contributed to the switch from rail to road freight (see below).

While some stakeholders (including the NFF, sub. DR216) called for greater harmonisation of rail networks to make rail freight more competitive, harmonisation is largely a commercial decision for rail network owners. Considerable financial investment would be needed to harmonise physical parameters of the rail network — including rail gauges and loading limits — but the economic returns of doing so could be relatively low. The optimal level of harmonisation depends on the costs of having different standards and, because rail assets are long-lived, harmonisation might only be viable when the infrastructure is being renewed (BITRE 2006).³⁹

Reducing the distortion in price signals between road and rail services would ensure the market has the right incentives to make efficient investments towards harmonisation.

Price distortions between road and rail services

Privatisation of rail freight services has been a feature of reforms in the rail sector. However, price distortions between road and rail services remain. Most roads remain unpriced and this increases competitive pressure on rail freight.

Pricing distortions contribute to transport inefficiencies

Commercial rail network providers have difficulty recovering the costs of investments as the price they can charge is effectively capped by the cost of road transport (which, as

³⁹ Rail operators are able to harmonise aspects of their operations if they so choose. The Rail Industry Safety and Standards Board (RISSB) — a body jointly funded by government and industry — develops and promotes the uptake of harmonised rail industry standards, rules and codes of practice for application across Australia (RISSB 2016).

noted above, is not always priced on a cost-reflective basis) (Goesch et al. 2015a; Harper et al. 2015). The price distortion between road and rail services has contributed to persistent underinvestment in rail infrastructure, leading to transport bottlenecks for some agricultural producers (although rail networks are also subsidised and the relative price distortion is unclear). It could also deter appropriate investments from harmonising or integrating rail network infrastructure in the long term.

The move from rail to road transportation for many goods has been influenced by a number of other factors, including technology and changes in preferences. For example, just as canals and inland water transportation were displaced by the development of railways, larger and more efficient trucks have led to reduced use of rail lines (PC 2014c).

In some areas, the poor state of rail infrastructure increases both journey times and the overall cost of freight for agricultural producers, and can exacerbate pressure on road networks. For example:

- freight trains on the Mildura–Maryborough line are limited to a maximum speed of 80 km per hour due to the poor condition of the rail line (MDC 2014)
- rail network issues have been identified as key impediments for moving wheat efficiently from farm to port, limiting the potential for wheat export growth (NFF 2013a). For example, a considerable portion of grain rail lines in New South Wales have speed limits of less than 30 km an hour due to poor rail conditions (Nguyen et al. 2015). Pinch points such as these preclude the use of larger capacity trains to transport goods from regional centres to ports, which in turn can limit exporters' ability to use larger, more efficient, ships (Fletcher 2015a)
- modelling by Nguyen et al. (2015) suggested that the closure of rail lines that are mainly dedicated to wheat in Western Australia would lead to a doubling of wheat freight volumes moved by road
- the volatility in export grain volumes, particularly as producers recover from drought conditions, affects the demand for rail transport and the ability of rail operators to service the grain rail network, in turn accelerating the switch to road freight (RFNRC 2007).

The switch from rail to road freight has implications for rural local governments that are responsible for most public roads (and which, as noted above, already have difficulty funding road maintenance).

Rail is also impractical for some products. The degree of substitutability between road and rail freight can be limited — by one estimate, about 10–15 per cent of total freight task (PC 2006a). This varies between products and regions; in some regions, for example, potentially up to 50 per cent of agricultural road freighted containerised volume in (mostly meat and fertiliser) could be substituted to rail (PwC 2015). As Voice of Horticulture said:

The potential to increase the amount of product transported by rail from rural and regional Australia is very sector-specific. Rail works well in some circumstances, but it is impractical for other industries or businesses due to the length of time it takes, the cost of getting goods on

and off trains, and the physical limitations of the nation's current rail infrastructure. (sub. 42, p. 16)

Improving price signals for the choice between rail and road

More efficient investment in rail and supporting infrastructure (such as loading facilities for larger dimension shipping containers and intermodal hubs) could be achieved through reduced pricing distortions in alternative modes of transport, particularly roads. While some infrastructure projects are likely to have benefits for producers — the planned Inland Rail is expected to attract 2 million tonnes of agricultural freight from roads⁴⁰, for example (Australian Government 2015d) — cost-reflective road pricing would lead to more efficient infrastructure investments and more efficient distribution of goods moved by road and rail.

Importantly, this is not an argument for additional subsidies to rail. Rather, the Commission considers there would be benefit in ensuring that there is an efficient pricing system on roads (and rail) to reduce distortions and to encourage transport resources to flow to their most efficient use. The level and allocation of government investment in both road and rail infrastructure should be based on rigorous cost–benefit analysis.

Access to the grain rail network in Western Australia

The Australian and some state governments have established access regimes for infrastructure services such as railways. These regimes are designed to address the market failure that can arise if there is an enduring lack of effective competition, due to natural monopoly, in markets for infrastructure services such as rail. Large, usually sunk, fixed costs and economies of scale typically associated with natural monopolies can serve as impediments to prospective competitors entering rail (and other) infrastructure service markets.

In this inquiry, CBH — the largest grain exporter in Western Australia — expressed concern that it is no longer able to access parts of the grain rail network.

Brookfield Rail has closed those sections of the [Western Australian Grain Freight Rail Network] on which it is not making very high levels of profit, without surrendering them to an alternate user, on the basis that it can continue to increase revenue and margins from a reduced section of the rail network without increasing its own productivity. (sub. 36, p. 6)

CBH also pointed to delays of many months — and even years — in negotiating access through the state's Railways (Access) Code 2000 (the Code).

⁴⁰ The Inland Rail is expected to give grain exporters more port options, leading to exports being diverted from the Port of Newcastle to Brisbane and Port Kembla, for example (ARTC 2010).

The process of obtaining access under the Code has had a significant negative effect on the efficiency of CBH's operations, and has resulted in uncertainty and increased costs for CBH and its grain grower members. (sub. 36, p. 6)

Similarly, WAFarmers considered that:

... the current access issues currently with negotiations between CBH Group and Brookfield Rail are an example of regulatory failings. Parts of the WA rail network have also been closed through changes to the original lease agreement between government and the lease holder ... WAFarmers remain frustrated that the regulatory regimes implemented by the Western Australian government do not work for monopoly infrastructure. (sub. DR226, p. 24)

The regulation of Western Australia's grain freight rail network has been reviewed in detail in recent years, by both the Economic Regulation Authority of Western Australia (WAERA 2015) and the Economics and Industry Committee of the Western Australian Legislative Assembly (WALAEISC 2014). The Western Australian Government also indicated that it is considering whether to conduct a 'broad policy review' of its rail access regime (sub. 54, p. 28), which would cover the grain rail networks used by CBH, to determine if the regime is beneficial and cost effective. The Commission considers that inefficiencies in that state's rail access regime could be identified and addressed through such a review, provided it is conducted in a timely manner.

9.3 Ports

Access to ports is crucial for agricultural producers as almost all agricultural exports are transported by sea. Improved access to port facilities can promote competition in stevedoring services and shipping, and improve the efficiency with which agricultural goods can be moved domestically and internationally.

Ports are often characterised by high fixed costs and economies of scale, which provide port operators with potential market power in some cases. In recent years, most major ports in Australia have undergone privatisation and port authorities act as landlords for competing service providers (Harper et al. 2015).

The deregulation of the 'single desk' marketing of bulk wheat exports has also left grain exporters with ownership of grain port terminals in a dominant position over the supply chain. Regulatory regimes that can efficiently and effectively constrain the monopoly power of port owners and port service providers are therefore important for all port users, including farm businesses.

Concerns about access to port services

Insufficient port capacity, or limitations on access to ports, pose a significant logistical risk to certain agricultural industries.

- Port capacity constraints are an issue for livestock exporters in the west and north of Australia, where there is strong competition from the resources sector for port capacity. Despite being the two largest export ports for live cattle in Australia, capacity at the ports of Darwin and Fremantle has been crowded out by the resources sector, and live exporters report having access to only one berth at each port (ALEC 2014; Gleeson, Martin and Mifsud 2012). Cattle producers in the Kimberley region face similar competition from the resources and tourism sectors at the ports at Broome and Wyndham (Gleeson, Martin and Mifsud 2012; Sd+D 2008).
- Grain exporters face congestion at ports during peak seasons (though at other times of the year grain flow is easily managed with existing infrastructure) (Stretch, Carter and Kingwell 2014).

Port services can account for a substantial share of costs for farm businesses. For example, port services account for about one third of grain producers' supply chain costs. And the cost of port services is rising faster than other grain handling charges partly because, unlike other parts of the supply chain where there is excess capacity, port capacity is limited and grain exporters face competition for limited port shipping slots from other sectors (Stretch, Carter and Kingwell 2014).

The NSW Farmers' Association expressed concern that an absence of competition in grain port terminal service providers puts farm businesses at a disadvantage.

... investment in port capacity has increased the marginal cost of the supply chain across the whole export task for a port zone. Under these conditions the increased marginal costs are passed back to the farm gate creating economic inefficiency ... The ability of port terminal service providers to pass back these inefficient costs to farmers creates an appropriation of rents from the farm gate, in turn impacting the international competitiveness of Australian Agriculture. (sub. 72, pp. 35–6)

In this context, the NSW Farmers' Association (sub. 72) considered that the exemptions from the Port Terminal Access (Bulk Wheat) Code of Conduct granted to grain port facilities in New South Wales were premature. Exemptions from parts of the Wheat Port Code of Conduct have been granted to all grain terminal operators except Viterro (in South Australia) and to GrainCorp's operations at Portland, Victoria (ACCC 2016j). The Australian Competition and Consumer Commission (ACCC) noted that it 'continues to monitor exempt ports, including examining market shares and engages with industry stakeholders more generally' (sub. DR121, p. 5).

There are procompetitive developments that will, in time, ameliorate the concerns expressed by grain producers (box 9.10), and the Commission maintains the view that the industry should ultimately transition to rely on Part IIIA of the *Competition and Consumer*

Act 2010 (Cwlth), subject to the outcome of a review of the Wheat Port Code of Conduct planned for 2017 (PC 2010d).

Box 9.10 **Wheat Port Code of Conduct**

Port terminals for wheat exports have been subject to access regimes since the ‘single desk’ operated by the Australian Wheat Board was deregulated in 2008. An industry-specific access test, under the *Wheat Export Marketing Act 2008* (Cwlth), was put in place to prevent incumbent bulk handling companies that have port terminals from excluding new exporters. The Commission’s inquiry into wheat export marketing arrangements recommended that the access test requirement end on 30 September 2014 (PC 2010d). The Commission envisaged that regulated access to grain port terminals would then rely on general competition law (Part IIIA of the *Competition and Consumer Act 2010* (Cwlth)), with continuation of mandatory disclosure and supplemented by a voluntary code of conduct for port terminal services operators.

Concerns that continued regulatory oversight was required to contain monopolistic behaviours in some grain export supply chains led the Australian Government to introduce a mandatory code of conduct in September 2014 — the Port Terminal Access (Bulk Wheat) Code of Conduct (the Code). The Code requires port terminal operators to negotiate with wheat exporters for access to port terminal services, unless an exemption has been granted by the Australian Competition and Consumer Commission or the Minister for Agriculture and Water Resources (who may exempt cooperatives from parts of the Code under certain conditions) (ACCC 2014f).

In November 2014, the Minister for Agriculture granted an exemption to all four of CBH Group’s ports in Western Australia. According to CBH, the exemption has facilitated agreements with major exporters that would not have occurred without the exemption, which in turn benefits its grower members.

Since the exemption has been in place, CBH has been able to sign up long term agreements with its grain exporting customers [10 million tonnes with 10 marketers] providing these organisations with a level of service and flexibility that was not possible under the rigid regulatory arrangements previously in place. (sub. 36, p. 9)

As CBH is a grower-owned cooperative but is also a major bulk handler in Western Australia, some stakeholders are concerned that the exemption disadvantages grain growers and enhances CBH’s monopoly over grain ports in Western Australia (SRRATRC 2015b). However, others believe that where growers have direct influence over the provision of port terminal services — as CBH does — ‘regulation would impose costs that would not exceed the expected benefits’ (DoA 2014c, p. 33).

There have been a number of procompetitive developments along the grain export supply chain recently that may reduce concerns over the potential abuse of monopoly power, including new entrants at Port Kembla in New South Wales (Quattro Ports) and Bunbury in Western Australia (Bunge) (ACCC 2015a, 2015d; PC 2014f). Growing investment in on farm storage capacity, particularly in eastern Australia, would introduce competition in the upstream market (Rabobank 2016; Stretch, Carter and Kingwell 2014); and from October 2016, CBH is governed by an access undertaking for its upstream grain receipt, storage and handling services in Western Australia (CBH Group 2016). The Inland Rail project is also expected to enhance competition on the east coast by increasing grain access to all eastern export grain terminals between Brisbane and Geelong (DIRD 2015a).

The Wheat Port Code of Conduct will be reviewed by the end of 2017 to assess whether there is justification for it to continue, taking into account the level of competition in the supply chain.

Port privatisation is in the public interest under certain conditions

Several inquiry participants (including Stuart Chignell, sub. DR208 and the NFF, sub. DR216) expressed concern about access to port services in the context of port privatisation. Others considered that port privatisation should only occur if there are clear benefits for the agricultural sector (Ag Institute Australia, sub. DR182; WAFarmers, sub. DR226). The Tasmanian Government noted that:

... given Tasmania's reliance on Bass Strait shipping for connections to interstate and international markets, continued access to the Port of Melbourne at fair and reasonable prices is critical to the Tasmanian agricultural sector. (sub. DR287, p. 16)

Concerns about port access and pricing have arisen because, in an attempt to maximise sale revenue, governments have not always put mechanisms in place to constrain ports operators' monopoly power.

- Restrictions on the development of a second port in the Melbourne region were considered by the Victorian Government during the privatisation of the Port of Melbourne (ACCC 2014b). Such restrictions would have particular implications for the dairy industry in both Victoria and Tasmania, given the high proportion of dairy exports through the Port of Melbourne (PC 2014a). While the rights to a second container port were ultimately not included in the lease, the legislation allows for compensation if a second port is developed within the 15 years from the lease's commencement (VDTF 2016).
- The Chairman of the ACCC, Rod Sims, expressed concern that the privatisation of the Port of Fremantle might confer rights to develop a new port in the region to the new owners, as occurred in relation to Sydney Airport over ten years ago (Sims 2016). An arrangement of this type would curtail the potential for Fremantle to be serviced by two competing ports, to the detriment of port users.

Restrictions on competition during privatisation of port assets may achieve a higher sale price, but this is not in the community's interests if it comes at the expense of a less competitive market structure. As the Harper Review noted:

Maximising asset sale prices through restricting competition or allowing unregulated monopoly pricing post sale amounts to an inefficient, long-term tax on infrastructure users and consumers. (Harper et al. 2015, p. 196)

Similarly, the ACCC said that:

... it is important that governments selling public assets ensure that the appropriate market structure and/or access and pricing arrangements have been put in place as part of the privatisation process. Failure to do so will come at the cost of an effective 'tax' on future generations of farmers and the general community. (sub. DR121, p. 5)

Restrictions on competition should be avoided in the process of selling or consolidating public port assets. As the Commission noted in its inquiry into public infrastructure (PC 2014c), privatisation of public enterprises has the potential to increase economic efficiency and be in the public interest where:

- user charges make commercial operation feasible
- private ownership can be made compatible with legitimate public policy objectives, through structural separation, regulation, sale conditions and government payment for appropriately valued community service obligations
- sale proceeds exceed the value of the assets under continued government ownership.

With these conditions addressed, privatisation of a port is likely to improve commercially relevant decision making and support major export commodities, including agricultural commodities.

FINDING 9.3

Privatisation of major ports has the potential to increase economic efficiency, provided the public interest is protected through structural separation, regulation or sale conditions. Increasing the sale price of ports by conferring monopoly rights on buyers is not in the public interest.

9.4 Coastal shipping

In 2013-14, coastal shipping (broadly defined as the carriage of cargo between ports in Australia) was used to move 2 million tonnes of food and live animals through Australian ports (BITRE 2015a). Coastal shipping is also important in the movement of farm inputs such as fertiliser (QTHLGC 2014). The NFF highlighted the importance of shipping to the agricultural sector.

For many farmers, shipping is an essential link in the supply chain. Australian products must be able to move quickly from the farm gate into domestic and overseas markets at a price that delivers a return to the farmer. (sub. 61, p. 20)

The Australian Government regulates coastal trading under the *Coastal Trading (Revitalising Australian Shipping) Act 2012* (Cwlth) (Coastal Trading Act). For the 100 years prior to the Coastal Trading Act, the Australian Government regulated coastal shipping through various iterations of the *Navigation Act 1912* (Cwlth). On introducing the Bill for the new Coastal Trading Act to replace Part VI of the Navigation Act (thereby creating a new licensing regime for coastal trading), Minister Albanese said that the reforms were to encourage the ‘revitalisation of the Australian shipping industry’ (Albanese 2012, p. 4). In practice, this meant protecting the Australian shipping industry from foreign competition by creating a regulatory framework that ‘maximises the use’ of Australian vessels.

The regulation of coastal trading includes limitations on trade by foreign-flagged vessels within Australian coastal waters (known as cabotage restrictions). All domestic maritime movements of cargo on interstate voyages must be authorised by a licence, and foreign vessels are treated differentially through the licensing system.

The licences are:

- *general licences* — these are available to Australian-flagged vessels (that is, vessels registered on the Australian General Shipping Register) and provide unrestricted access to Australian waters for five years. The vessel must be majority owned by an Australian national, and each seafarer on the vessel must be an Australian citizen, permanent resident or hold a visa with appropriate work rights
- *temporary licences* — these are granted to foreign-flagged vessels or vessels registered in the Australian International Shipping Register, and allow a vessel to be used in coastal trading over a 12-month period. Temporary licence holders must undertake at least five voyages during the licence period, and must specify the details of each voyage when applying for the temporary licence. Information about each application is provided to holders of general licences, who have the opportunity to provide notice that a general-licensed vessel is available to conduct any of the voyages. This triggers a mandatory negotiation process between the applicant and the general licence holder. The Minister must take the outcomes of the negotiation into account when deciding whether or not to grant the temporary licence
- *emergency licences* — these can be granted in response to specified national emergencies that require a significant and coordinated response.

Regulatory changes in 2009 also extended the application of the *Fair Work Act 2009* (Cwlth) to workers on foreign-flagged vessels operating in Australian waters.

While the regulation impact statement (RIS) for the Coastal Trading Act found that its introduction would have a net benefit (DIT 2011), this conclusion was based on the assumption that a productivity compact between the Australian shipping industry and maritime unions would lead to substantial savings, which would offset the costs associated with the changes in shipping licensing. That is, ‘the RIS analysis identifies the compact as a major component of the productivity benefits of the reform’ (SELC 2012, p. 75). However, as the compact was not in place when the RIS was prepared, the basis for this conclusion is not clear (PC 2014g). Assumptions made about the compact and the extent to which it delivered productivity improvements may not have eventuated (DIRD 2014a).

The Commission’s inquiry into Tasmanian shipping and freight (2014g) recommended that the Australian Government review coastal shipping regulations (including cabotage) as a matter of priority, partly due to concerns about apparent flaws in the findings of the RIS.

Coastal shipping regulations harm farm business competitiveness

The cabotage restrictions protect Australian-flagged ships by shielding them from competition by foreign vessels. As outlined above, foreign vessels are subject to a range of restrictions, and the combined effect of these requirements is that Australian vessels receive preferential treatment in coastal trading.

Cabotage restrictions are a significant impost for Australian businesses that rely on coastal shipping, and they deter businesses from using coastal shipping (Harper et al. 2015; PC 2014g).

While the volume of domestic freight has grown steadily over the past 40 years, coastal shipping volumes have remained largely static. According to the National Commission of Audit, this is partly because the regulatory settings have increased shipping costs (NCA 2014). High shipping costs have in turn seen some businesses move operations offshore (SRRATLC 2015b) or shift to land freight (Shipping Australia 2015; Sheepmeat Council of Australia and Cattle Council of Australia, sub. 88, att. 1).

The NFF explained how current coastal shipping regulations increase costs and uncertainty.

... a temporary license applicant and its customers have no right to choose who they contract with to deliver the freight services they require. A third party can take over their contracted voyage, without any obligation to meet the agreed terms. For example, initial contracting parties might agree on a price of \$20 per tonne. A third party then nominates to undertake the voyage, ships the contracted goods at a price of \$25 per tonne, and leaves the initial parties to work out the difference. (2015a, p. 8)

The Business Council of Australia gave numerous examples of increased shipping costs following the introduction of the Coastal Trading Act.

Tonnage rates for Australian ships, where there is the right to contest, can be up to double the rates offered by foreign ships for effectively the same service. This can add tens of millions of dollars to the cost base of businesses that use coastal shipping ... One company saw freight charges increase by between \$3,000 to \$3,500 a day up and down the east coast of Australia ... When challenged by a General Licence holder, one company seeking a temporary licence was faced with a 100 per cent freight cost increase. (BCA 2014, pp. 9–10)

Similarly, the Minerals Council of Australia said that:

... the Coastal Trading Act has increased domestic transport and administrative costs and made it more difficult to source coastal shipping services when they are needed. (sub. DR244, p. 8)

Current restrictions preclude firms from using spare capacity that is available on foreign vessels already operating in Australian waters.

Changes to Australian coastal shipping regulations in recent years have impeded foreign shipping lines from competing with Australian vessels for domestic trade. The higher costs and administrative requirements have deterred the vast majority of international lines from carrying

domestic cargo, despite the obvious efficiencies for vessels already calling at a number of Australian ports. (ACCC, sub. DR121, p. 5)

Cabotage restrictions also disproportionately affect Tasmanian businesses which are heavily reliant on coastal shipping to deliver produce to the market (box 9.11).

Box 9.11 Disproportionate impact of coastal shipping regulations on Tasmanian businesses

Cabotage regulations have a disproportionate impact on Tasmania, as over 99 per cent of freight volume moves in and out of Tasmania by sea (PC 2014g). From 1976, the Australian Government has provided a subsidy to Tasmania under the Tasmanian Freight Equalisation Scheme, due to the perceived cost disadvantage of the Bass Strait transit. Increased shipping costs due to cabotage restrictions raise Tasmanian producers' dependence on the subsidy to be competitive.

The Tasmanian Farmers and Graziers Association claimed that, as a result of the coastal shipping regulations, the route across the Bass Strait is the most expensive sea transport route in the world (TFGA 2014), and therefore greater competition in coastal shipping will benefit Tasmanian farmers (TFGA, sub. DR281). And according to the National Farmers' Federation, shipping from Tasmania to Melbourne can cost the same as subsequent freight legs overseas (NFF 2015a). Voice of Horticulture said that it can cost more to ship fruit to the mainland than to China.

... as a result of the restrictive Australian cabotage regime, the cost to ship fruit from Tasmania to Brisbane is approximately \$7.00 [Australian dollars] per 18 kg box compared with \$5.60 [Australian dollars] per 18 kg box shipped to Shanghai, via Melbourne. (sub. 42, p. 19)

The necessary journey across the Bass Strait makes processing in Tasmania relatively less competitive than on the mainland.

The costs of transporting livestock from locations such as King Island and Finders Island to Tasmania for process is expensive and in a cost per kilometre considerably greater than on mainland Australia. The challenges and costs around positioning empty containers in Tasmania and transporting finished product by road and vessel to the mainland for transshipment, is also very expensive in comparison to mainland costs. (JBS Australia 2013, p. 2)

Recent attempts to improve the competitiveness of coastal shipping

In April 2014 — a month after the release of the Commission's inquiry into Tasmanian shipping and freight (PC 2014g) — the Australian Government released an options paper on reforms to the Coastal Trading Act (Truss 2014). In June 2015, the Australian Government proposed amendments to coastal shipping laws under the Shipping Legislation Amendment Bill 2015 (the Shipping Amendment Bill). Proposed changes included:

- introducing a single permit system allowing unrestricted trade for both Australian and foreign vessels
- removing the contestability provision (foreign and Australian registered vessels would be subject to the same access and operation conditions)

-
- excluding ships that are engaged predominantly in international trading (that is, foreign vessels operating in coastal waters for less than 183 days per year) from:
 - the application of the Fair Work Act (the parity condition)
 - the requirement to hire two Australian senior crew members.

The Shipping Amendment Bill was referred to the Senate Rural and Regional Affairs and Transport Legislation Committee, which pointed to the estimated benefit from the proposed amendments of over \$667 million over 20 years (SRRATLC 2015b). These benefits would arise through increased competition from foreign vessels.

The existing legislation — the Coastal Trading Act — is clearly inadequate. It has failed to revitalise coastal shipping ... There are now fewer Australian flagged vessels, there is less reason to use them, and there are more and more impediments which prevent shippers making efficient and rational transport choices ... Failing to pass the bill will not change the course of Australia's coastal shipping industry. It's slow decline is likely to continue ... On the other hand, passing the bill is likely to enable Australian producers to access cheaper, more flexible and more responsive options for transport. (SRRATLC 2015b, pp. 30–31)

However, Parliament did not pass the Bill due to concerns over the potential loss of Australian jobs (Albanese 2016).

Concerns about the potential effect of increased competition in coastal shipping on workers' remuneration and conditions were raised by several inquiry participants, including the Ag Institute Australia (sub. DR182), Stuart Chignell (sub. DR208) and Peter Flanagan (sub. DR107). They were concerned to preserve Australian wages, which 'are typically three to four times those recommended by the International Labour Organization for international seafarers' (Phil Potterton, sub. DR163, p. 4).

These stakeholders were also concerned about attracting substandard foreign vessels. However, the Australian Maritime Safety Authority undertakes vessel inspections to inspect areas critical to the safe operation of the ship and the ship's overall condition, equipment and crew, and can detain noncompliant vessels in Australian waters (AMSA 2016).

In itself, protecting an industry to preserve jobs is not justified. The cabotage restrictions protect some jobs at the expense of growth in other industries (PC 2014g). Protecting an industry from competition not only harms consumers (in this case farmers), but also reduces the incentives of the protected industry to improve its efficiency and competitiveness. Over time, the protected industry falls further behind foreign competitors, requiring ever more protection and increasing the cost to consumers and the community in general.

As Phil Potterton pointed out with regards to the difference between Australian and international wages:

Such cost differences would be experienced in virtually all industries throughout the economy and are not unique to shipping. The difficulty for shipping policy arises from the generally

homogenous character of the shipping service or ‘product’, on the one hand and the ‘borderlessness’ of the global shipping industry, on the other ... Thus, regardless of the level of technical efficiency of the Australian industry, the opportunity almost always exists to facilitate a lower cost service for shippers ... (sub. DR163, pp. 4–5)

Put differently, the Australian coastal shipping industry will inevitably face competition from lower-cost competitors.

Reforming coastal shipping regulations

As outlined in the Commission’s inquiry into Tasmanian shipping and freight, on balance, coastal shipping regulations tend to:

- increase the costs of providing domestic coastal trading services
- deter non-Australian vessels from engaging in Australia’s coastal trade and direct international services that rely on coastal trade volumes for commercial viability
- reduce the level of competition in Australia’s coastal trading network and reduce the incentives for efficiency improvements by Australian ships.

The high cost of coastal shipping imposes an additional, significant, burden on farm businesses dependent on coastal freight, with particular effect on Tasmanian producers. It also deters farm businesses and related processing and supplier industries from using sea freight.

Rather than revitalising the Australian shipping industry, the requirements of the Coastal Trading Act ‘impose additional regulatory burdens on businesses that use shipping without any clear benefits for Australian licenced shipping’ (DIRD 2015b, p. 9). In the first two years of operation of the Coastal Trading Act there was a 63 per cent decline in the carrying capacity of the major registered Australian vessels, relative to levels seen in 2011-12 (Truss 2015). Farm businesses have had few options but to switch to alternative, less efficient, ways of moving their goods as a result of the rising coastal shipping costs, which contributes to a further decline in demand for Australian shipping services.

Reforms to coastal shipping regulations to increase competition will likely lead to long-term economic benefits by reducing the cost of shipping and incentivising Australian ships to be more competitive. Reforms that reduce shipping costs would also help ‘reduce the number of trucks on increasingly congested roads’ (ACCC, sub. DR121, p. 5). Reforms such as those proposed in the (now lapsed) Shipping Amendment Bill would lower market entry requirements and induce greater competition in the coastal shipping industry. Allowing international operators to compete on coastal routes if they are part of a continuous international voyage (as is the case in New Zealand under its *Maritime Transport Act 1994*) would also improve competitiveness.

The shipping policy of the United Kingdom could also be considered. In the United Kingdom, there are no cabotage restrictions for foreign ships, no crew nationality

requirements for UK-registered non-strategic vessels (European Commission 2002; Sampson 2015), and nonresident seafarers' wages are bound by international labour standards (GOV.UK 2016; Triesman 2004).

Another option to attract more international vessels and increase competition in coastal shipping would be to relax the eligibility for an Australian flag. As Phil Potterton suggested:

... all ships on the coast would again come under the Australian flag. But the content of 'Australian flag' should be different from the past. Domestic shipping would be open to foreign ship owners ... internationally competitive arrangements would apply and there would be mixed nationality crews. (sub. DR163, p. 7)

Whichever reform path is taken, reforms to allow greater competition from foreign vessels in coastal waters would allow Australian businesses (including farm businesses) to access more cost effective shipping services. This would be welcomed by a range of inquiry participants (including the Institute of Public Affairs (sub. DR164), Dan Norton (trans., p. 750), Tully Cangrowers (sub. DR170) and WAFarmers (sub. DR226)). Increased competition in coastal shipping would be particularly beneficial for Tasmanian producers, and could reduce the extent to which those producers rely on the Tasmanian Freight Equalisation Scheme to be competitive.

RECOMMENDATION 9.5

As a matter of priority, the Australian Government should amend coastal shipping laws to substantially reduce barriers to entry for foreign vessels, to improve competition in coastal shipping services.

9.5 Biofuel support programs

Biofuels are liquid fuels made from organic material, such as plants and animal material. Both Queensland and New South Wales currently have (or have passed laws to implement) biofuel mandates.

Queensland's *Liquid Fuel Supply Act 1984* requires that, from 1 January 2017, a minimum of 3 per cent of non-premium petrol sales be ethanol (ethanol is a renewable, clear and colourless liquid that mixes with petrol). That is, to achieve the target, at least one in three litres of non-premium petrol sold at stations stocking E10 must be an E10 product. The Queensland Department of Energy and Water Supply stated that:

A biofuel mandate is a step towards growing our biofuel and bio-manufacturing industries. It will provide certainty so the industry can invest, innovate and create jobs as part of a cleaner, greener future for Queensland. A flourishing biofuels industry will also create the foundation for a new high-value bio-manufacturing industry. (QDEWS 2016)

In New South Wales, under the *Biofuels Act 2007* (NSW) there is an ethanol target of 6 per cent of total fuel sale volumes.

Both states also have biodiesel targets — in New South Wales the target is 2 per cent of all diesel sold, and in Queensland it is 0.5 per cent of all diesel sold.

Also, until recently the Australian Government operated an Ethanol Production Grants (EPG) program. In place from 2002 to 30 June 2015, the EPG program effectively removed excise rates for domestic ethanol (imported ethanol remained subject to full excise). After the EPG program rebate ceased, the full excise rate applicable to ethanol was reduced to zero for domestic production for 2015-16, after which the excise rate will increase incrementally over five years until it reaches 32.8 per cent of the excise rate for gasoline (ATO 2016c; Treasury 2014a). Imported ethanol continues to be subject to the full excise — currently 39.5 cents per litre (ATO 2016b). In effect, local ethanol production continues to be protected by arrangements equivalent to a tariff.

A range of participants (including the Australian Forest Products Association, sub. 11; Australian Sugar Milling Council, sub. DR234; Canegrowers, subs. 22 and DR169; NFF, sub. DR216; and Queensland Government, sub. DR154) expressed support for biofuel subsidies and mandates. For example, the Queensland Government said that:

Queensland's biofuel mandate is designed to provide certainty to the biofuels sector to encourage investment, innovation and growth, and lead to more jobs. (sub. DR154, p. 3)

In addition to supporting current arrangements, the NFF advocated for 'greater support for small-scale biodiesel production and consumption' (sub. DR216, p. 46).

Biofuel support can increase fuel costs and may not help the environment

Assessments of the New South Wales biofuel mandate showed that:

- retailers cut the supply of regular unleaded petrol to meet the biofuel sales target
- the mandate reduced consumer choice and increased the price consumers paid for petrol because they substituted to premium fuels
- the mandate affected the competitive dynamic between retailers by reducing the availability of regular unleaded petrol at many retail sites (ACCC 2013b, sub. DR121; IPART 2015).

The extent to which farm businesses are affected by biofuel mandates depends on whether they are able (and willing) to switch to biofuel blends. Quality control issues for biodiesel have led to some apprehension over its use in heavy vehicles (Australian Institute of Petroleum 2015), which means that some farm businesses might avoid (or prefer to avoid) blended products.

About 84 per cent of fuel consumption in agriculture is diesel and 14 per cent is petrol (ABS 2004), so the impact of biofuel mandates on farms would likely be felt through the biodiesel target. That said, the price impact of biodiesel mandates on consumers is uncertain, as:

- the highest biodiesel target in Australia is 2 per cent (New South Wales), and it has not yet been achieved (see below)
- at least one major petrol retailer does not label biodiesel blends below 5 per cent (BP Australia 2016). This means consumer preferences for biodiesel blends, and thus the price impacts of mandates, cannot be observed.

Despite molasses-based ethanol of the type produced in Queensland being ‘the lowest greenhouse emission intensity source of ethanol’ (Australian Sugar Milling Council, sub. DR234, p. 5), the environmental benefits from ethanol support programs in Australia have been modest. Only about 1 per cent of all road transport fuel volume in Australia is ethanol, which means only a small displacement of fossil fuels has been achieved. The cost of abatement through the EPG program was relatively high — estimated to be between \$274 and \$496 per tonne of carbon emissions abated (BREE 2014; PC 2011b).

Also, the extent to which biofuels offer carbon emissions savings depends on how they are produced. If native vegetation is cleared in order for the land to be used in biofuel production (or to replace agricultural land diverted to biofuel production), this can lead to several times more carbon emissions being released than the fossil fuels they displace (Fargione et al. 2008).

Tariffs for ethanol also reduce the use of ethanol imports, thus reducing the net carbon abatement benefits which could have been gained by using imports that have lower greenhouse gas emissions (such as from Brazil which is regarded as one of the world’s most advanced ethanol producers) (de Gorter, Just and Tan 2009; UN-Energy Knowledge Network 2011) — even though the emissions reductions benefits of imported ethanol may be partially offset by the emissions associated with its transport (Australian Sugar Milling Council, sub. 234).

Biofuel mandates have limited benefits for farmers

A viable domestic biofuel market remains elusive after decades of support

As the Queensland Department of Energy and Water Supply noted, the biofuel mandate aims to provide an alternative market for primary producers (QDEWS 2015). The Queensland Government believes that a biofuel mandate would stimulate the biofuel market in Queensland which has ‘remained relatively static for the last several years’ (sub. DR154, p. 3).

However, in spite of various government support programs in Australia since 1980, they have been ineffective in developing a viable domestic biofuel market (ANAO 2015).

Biofuel support programs, including the EPG program and biofuel mandates and targets, have had limited effects on stimulating domestic production capacity, which limits the market for producers to sell feedstock. Currently, there is only one producer in New South Wales (Manildra Group, which owns the Manildra Ethanol Plant and received over 70 per cent of all EPG program funding) and two producers in Queensland (ANAO 2015; BREE 2014). In relation to the EPG program, the Australian National Audit Office found that:

After 12 years of operation and some \$895 million in government support directed towards improving the long-term viability of the domestic ethanol industry, in 2014 only three domestic producers (up from two in 2002) were operating, and an expanded Australian ethanol industry based on market priced feedstock was considered unlikely to be commercially viable in the absence of the EPG rebate. (ANAO 2015, p. 17)

Moreover, the New South Wales ethanol target has never been achieved, and the scheduled increase in the biodiesel target was suspended due to insufficient local production capacity (ACCC 2013b; Hartcher 2011). Mobil (2015) and the Australian Institute of Petroleum (2015) also claimed that there is insufficient local biodiesel production to achieve the Queensland target, and that the significant risk of supply disruption could impose costs on the fuel supply chain. The market for selling biofuel feedstock is therefore likely to remain limited and concentrated, and could lead to increased costs being passed onto consumers.

Feed price implications for farmers

Several stakeholders expressed concern that demand from biofuel producers could result in additional competition for feedstock. Australian Pork Limited (sub. DR282), for example, raised concerns about the impact of ethanol mandates on pig producers, particularly during dry periods when feed grains can represent up to 80 per cent of cost of pig production. Australian Dairy Farmers also said that:

... anything which artificially increases the cost of a production input (such as mandated and subsidised ethanol production) disadvantages the thousands of individual dairy producers across the country. (sub. DR218, p. 5)

However, there are two main factors that limit the direct influence of domestic biofuel mandates on crop prices.

- The feedstock used in Australia is predominantly composed of byproducts — starch (Manildra Ethanol Plant) and molasses (Sarina Distillery) — which have a limited impact on other markets. One plant (Dalby Bio-Refinery) uses sorghum as its feedstock and represents 18 per cent of industry production capacity (BREE 2014). Feedstock is the largest cost component in ethanol production, and an expanded domestic ethanol industry using market-priced crops as feedstock is unlikely to be economically viable in the absence of the EPG program rebate (whereas producers using waste residues face zero or low costs) (BREE 2014).
- Australian farmers are price takers in global markets, which means it is unlikely that domestic biofuel mandates will directly influence crop prices received by farmers.

While sorghum producers in Australia have benefited from global grain prices that were driven up by overseas ethanol policies (Wylie 2008), in the long run ethanol support policies (both in Australia and overseas) have the potential to raise the cost of feed grain prices and impact livestock industries (PC 2008b; Serra and Zilberman 2013).

Biofuel industry outcomes should be market driven

Some participants (including Ag Institute Australia (sub. DR182) and the Australian Lot Feeders' Association (sub. DR294)) supported the removal of biofuel support policies. The latter considered that the mandates distort the development of more advanced biofuel technologies, including second generation ethanol production technologies:

... [the Queensland's mandate would] lead to a misallocation of resources towards a small number of ethanol producers in the state who have demonstrated over time to be unviable without such assistance [and foster] reliance on Government support and further 'rent seeking' behaviour into the future. (sub. DR294, pp. 15–16)

Cotton Australia also argued that, while 'bio-fuels have been proven to be technically feasible [it] should be up to the market to determine their up-take' (sub. DR262, p. 14).

The Commission considers that farmers and the community would benefit from the removal of ethanol mandates and excise arrangements, as these policies deliver negligible environmental benefits and come at a high cost.

RECOMMENDATION 9.6

Arrangements to support the biofuel industry — including excise arrangements and ethanol mandates — deliver negligible environmental benefits and impose unnecessary costs on farmers and the community. The Australian, New South Wales and Queensland Governments should remove these arrangements by the end of 2018.

10 Food regulation

Key points

- Governments in Australia regulate food to support public health and safety and consumer decisions about buying food products.
- Food labels are used to convey information to consumers, such as information about ingredients, nutritional value, production processes and country of origin.
- Misleading or confusing labelling can result in consumers making choices that do not reflect their preferences. This could occur, for example, where standards and definitions do not accord with consumers' expectations or where consumers do not have an accurate understanding of the product.
 - Country-of-origin labels have confused consumers and limited the ability of Australian producers to differentiate their products. Recent changes are expected to provide consumers with country-of-origin claims that are easier to understand, and provide greater clarity to producers about what is expected. However, it is unclear if a mandatory system delivers greater net benefits than a voluntary system. Any future reforms to the country-of-origin labelling framework should assess the option of a voluntary system.
 - A national standard for 'free-range' egg labelling was recently announced to help ensure that free-range eggs are produced according to consumers' general expectations. However, consumers' expectations are difficult to gauge and do not always reflect scientific evidence of welfare outcomes or best-practice husbandry practices. The standard may need to be revised after the national standards and guidelines for poultry welfare are in place in 2017.
- The case for mandatory labelling of genetically modified (GM) foods is weak. Given that Food Standards Australia New Zealand assesses GM foods for their health and safety, GM labelling is a consumer value rather than a food safety issue. Consumers' preferences to purchase non-GM foods can be met by information provided through voluntary labelling.
- The Australian Consumer Law, together with advances in technology that enable gluten to be detected to increasingly minute levels, prevents producers from making a 'gluten-free' claim even where the level of gluten poses little risk to consumer health. However, producers can still make other claims for foods that have very low but detectable levels of gluten (which are not likely to be harmful). A food standard that defines a safe level of gluten for gluten-intolerant consumers would provide greater certainty for producers and consumers.
- Being able to trace eggs is necessary to address outbreaks of foodborne illnesses. However, it is unlikely that egg stamping is the most efficient and effective policy tool. Requirements for egg stamping should be removed, unless it can be demonstrated that this approach provides the highest net benefits to the community.

In Australia, there are food regulations at every stage of the production process. Food regulations seek to support public health and safety, provide clear and accurate information about food products, and protect the international reputation of Australia's food. They also allow Australian food to be distinguished in domestic and international food markets.

Commenting on the benefits of food regulations, the Department of Foreign Affairs and Trade said that:

Australia's stringent regulations on food safety ... increase the level of confidence that foreign governments and consumers have in the quality and safety of Australian products. These regulations improve returns and reduce risks for a range of food producers, manufacturers and brand owners. They assist exports, as evidenced by the success of an increasing number of Australian food brands across the immediate region. (sub. 56, pp. 2–3)

However, regulations that impose excessive compliance burdens on food producers, including farmers, may have unintended consequences such as higher food prices and less product variety.

While many inquiry participants recognised the benefits of food regulations, concerns were raised about regulations relating to:

- labelling requirements
- egg stamping
- food safety audits.

This chapter looks at the rationale for food regulation (section 10.1) and the food regulation system in Australia (section 10.2), and examines concerns raised about regulation of food labelling (section 10.3) and regulation of food safety in the production process (section 10.4).

10.1 Rationale for food regulation

Consumers purchase food based on a variety of attributes such as taste, nutritional value, convenience, food safety and country of origin. They weigh up the costs and benefits of various food attributes, and decide the price they are willing and able to pay for a given food product. Producers, by differentiating products based on quality and other attributes, can often receive a premium price. Consumers' purchasing decisions in turn send signals to retailers, wholesalers and farmers about what (and how much) to supply.

For their purchasing decisions to accurately reflect their preferences, consumers need clear, succinct and relevant information about food products. However, asymmetric information between consumers and producers can be a feature of some food markets, and this can mean that markets do not work as well as they might (chapter 12). In these cases, there may be a case for government involvement through, for example, mandating that certain information be provided with products, or setting minimum standards.

That said, recent developments in technology are providing opportunities for consumers to obtain more detailed information about their food choices and to compare prices between different sellers.

In some cases, governments prohibit certain foodstuffs to safeguard human health or other community interests. For example, it is illegal to sell raw milk for human consumption in Victoria (DFSV 2015). The Australian Industrial Hemp Alliance pointed out that ‘Australia is one of the few countries in the world to ban the human consumption of hemp food products’ (sub. 69, p. 3).

Regulation of food labelling

Food labels can help consumers select the foods that best satisfy their preferences. Labels provide information about food safety (allergen information, use-by dates), health (nutrition information) and consumer values (such as free-range, organic and country of origin).

Producers (including primary producers, processors and marketers) have an incentive to label their products with attributes that are favoured by consumers, such as ‘fat-free’, ‘free-range’ or ‘made in Australia’. They may also choose to participate in third-party schemes, such as the Heart Foundation Tick, and kosher or halal certification. Producers who successfully communicate to consumers that their products have desirable qualities may be able to increase the volume of sales, charge a premium for their products and/or enhance their reputation.

However, consumers cannot always verify if producers’ claims are accurate. As Rod Sims, Chairman of the Australian Competition and Consumer Commission (ACCC), said:

Consumers are increasingly placing weight on premium claims and are likely to value the types of claims that directly affect the integrity of the product, such as where something was made, grown or produced and how it was made, grown or produced. These are claims made by producers that a consumer cannot test or validate; for example, a claim such as ‘free to roam’. These claims, if made improperly, have an impact on consumers, and equally important can give suppliers an unfair competitive advantage. (2013)

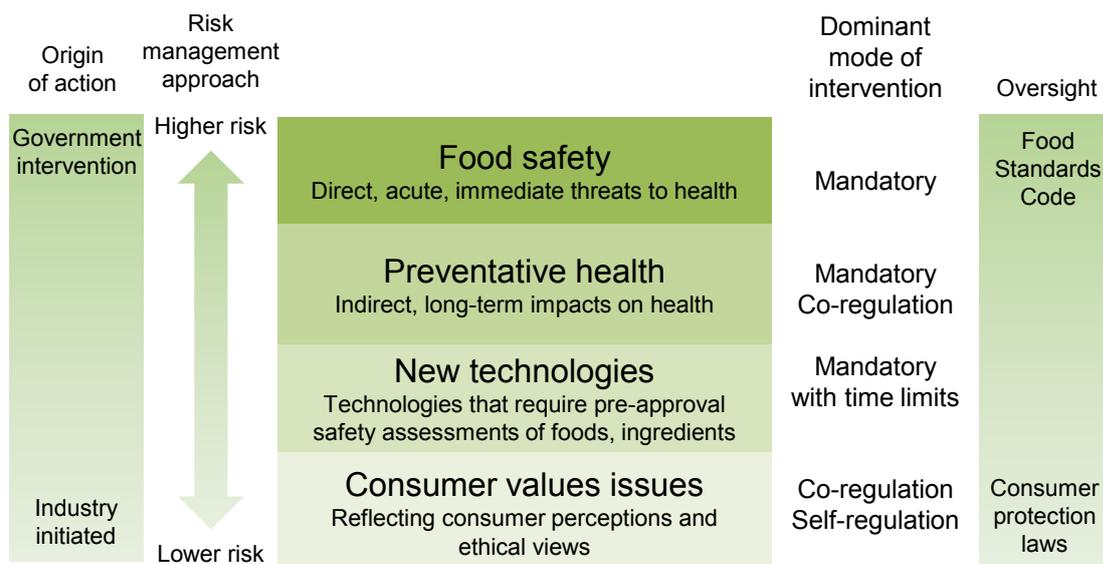
To deal with such matters, many countries have consumer protection measures to ensure that the information provided to consumers is current, accurate and reliable. In Australia, there is a requirement under the Australian Consumer Law (ACL) that food labels are not false or misleading. Governments can also define certain phrases (such as ‘free-range’), set labelling standards and/or provide consumer information. Governments should choose the policy tool that yields the greatest net benefit to the Australian community.

The food labelling hierarchy

The 2011 Blewett review (Blewett et al. 2011) conceptualised the need for government action relating to food labelling using a food labelling hierarchy (figure 10.1). The hierarchy provides a conceptual framework to assess the role of government in regulating food labelling, and outlines the different purposes of labels and the risks that labels can be used to address. In general, the higher the risk, the stronger the justification for government intervention (subject to a net benefit test).

- Food safety is at the top of the labelling hierarchy and is designed to protect consumers from direct and immediate threats to their health — the review panel considered mandatory requirements to provide information to be most effective in managing this risk.
- Preventative health focuses on longer-term risks, with government action aimed at allowing individuals and populations to make healthier food choices — the review panel considered both mandatory requirements and co-regulation to be effective for this purpose.
- Foods produced using new technologies could be labelled where there is a lack of experience with the use of the technology — the review panel considered that in these situations, time limits on regulations would allow them to be reviewed in light of experience.
- For consumer values issues which present minimal or no risk to human health, the panel suggested that ‘more flexible, participatory and devolved forms of intervention’ such as co-regulation or self-regulation should apply (Blewett et al. 2011, pp. 43–44).

Figure 10.1 The food labelling hierarchy



Source: Blewett et al. (2011).

Regulation of the food production process

Consumers rarely observe how their food is produced, resulting in information asymmetries between producers and consumers about production processes. However, the market may still achieve an efficient level of food safety (that is, the level of food safety that consumers want and are willing to pay for) based on reputation. Reputation can be effective because of repeat customers or word of mouth (increasingly via social media) — it creates a strong incentive for sellers to supply safe food (Rama and Harvey 2009).

However, reputation may be insufficient to ensure efficient levels of food safety if the source of foodborne illnesses cannot be easily identified or if producers do not have sufficient knowledge about food safety risks. In such cases, government regulation may be necessary to ensure minimum food safety practices (including traceability) during the production process.

The role of technology

Technology can reduce the costs of information exchange and help overcome information asymmetries between producers and consumers. For example, Choice (2016a) recently released a mobile phone application called ‘CluckAR’, which allows consumers to learn about the hen stocking densities of different brands of eggs by pointing their mobile phone camera at egg cartons. Some free-range egg producers, such as Manning Valley Free Range Eggs (2016), have also chosen to broadcast footage of their hens ranging outdoors. This allows consumers to observe a part of the production process to determine if ‘free-range’ claims meet their expectations. Greater adoption of such technology may reduce the need for government involvement in setting regulatory standards.

However, regulation may still be required to ensure that the information provided via technology is not misleading or deceptive. Free Range Eggs Farms, which supplies eggs labelled as ‘free-range’ under the brands Ecoeggs, Port Stephens and Field Fresh, was recently fined for misleading and deceptive ‘free-range’ claims on websites, Facebook and Twitter (ACCC 2016c).

10.2 Food regulation in Australia

The food regulation system is a co-operative international arrangement between Australia and New Zealand. All three levels of government in Australia are involved in food regulation (figure 10.2).

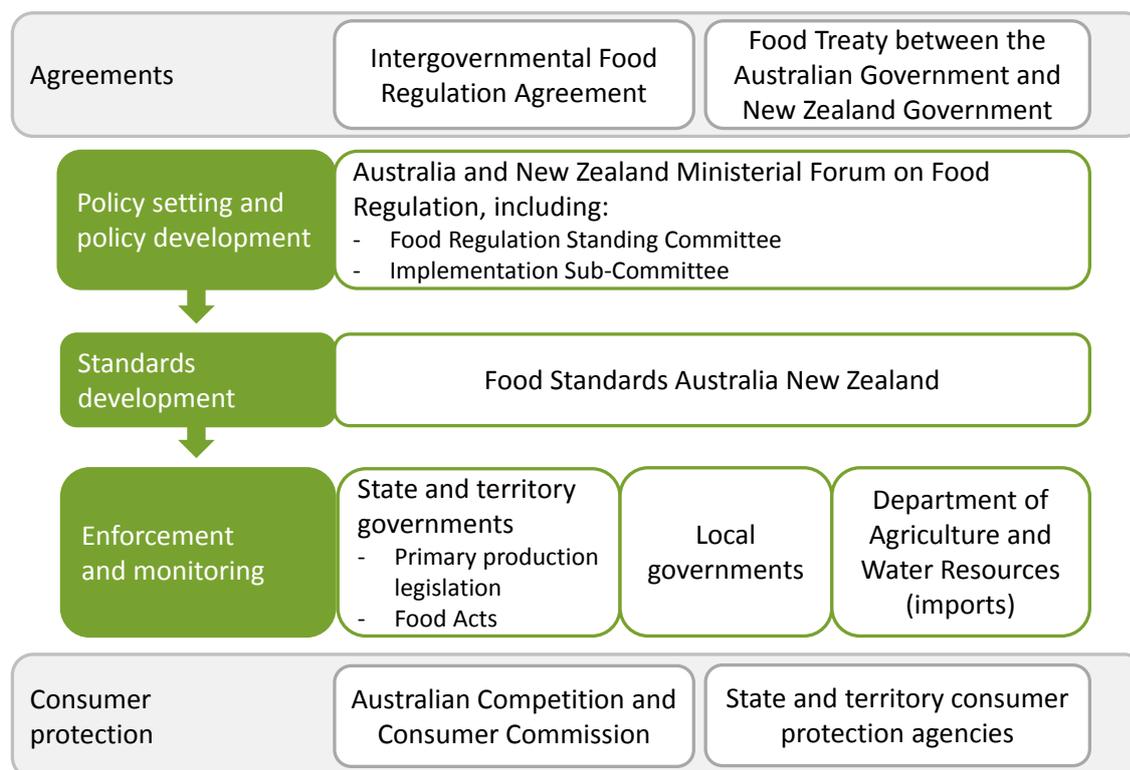
The food regulation system is established through:

- an intergovernmental agreement between the Australian, state and territory governments (the Food Regulation Agreement). This agreement gives effect to the commitment by all Australian governments to a national approach to food regulation,

and establishes the Australia and New Zealand Ministerial Forum on Food Regulation (FoFR) (DoH 2014)

- a treaty between Australia and New Zealand, which establishes a system for the development of joint food standards. The treaty aims to harmonise food standards, reduce unnecessary barriers to trade, and reduce compliance costs for industry (DoH 2014; FSANZ 2015a).

Figure 10.2 Food regulation in Australia



Food Standards Australia New Zealand (FSANZ), an independent statutory agency, uses scientific and technical criteria to establish food standards, which form the Food Standards Code (box 10.1). Requirements in the Code relate to food safety, food labelling, food additives and novel foods, among other things. FSANZ is part of the Australian Government’s health portfolio. When setting standards, FSANZ must have regard to the policies and guidelines set by the FoFR.

Anyone can make an application to FSANZ to change the Food Standards Code (FSANZ 2015b). This involves submitting information to FSANZ regarding the purpose of the application and its costs and benefits, as well as providing supporting information or data that demonstrate how the changes would enable the achievement of FSANZ’s objectives (these requirements are outlined in the *Food Standards Australia New Zealand Act 1991* (Cwlth)). Applications are considered using FSANZ’s assessment process

(figure 10.3). After FSANZ has approved or varied a standard, it notifies the FoFR, which has the power to amend, reject or seek a review of the standard. If the FoFR does not seek a review of FSANZ's decision, the standard is gazetted and registered as a legislative instrument.

Box 10.1 The Food Standards Code

The Food Standards Code (the Code) contains food standards developed by Food Standards Australia New Zealand, and applies in Australia and New Zealand unless otherwise stated. The Code is split into four chapters, covering:

- **standards that apply to all foods** — certain information must be provided on product labels, such as ingredients, date markings, and country of origin (mandatory country-of-origin labelling applies in Australia only)
- **food product standards** — contains requirements relating to specific categories of products, such as cereals; meat, eggs and fish; fruits and vegetables; and dairy products
- **food safety standards (Australia only)** — sets out food safety requirements, such as those for food safety programs, food safety practices, and premises and equipment
- **primary production standards (Australia only)** — contains primary production and processing standards for seafood, poultry, meat, dairy products, eggs (and egg products) and seed sprouts. Part 4.5 also outlines wine production requirements. The standards in this chapter cover issues such as food safety and traceability.

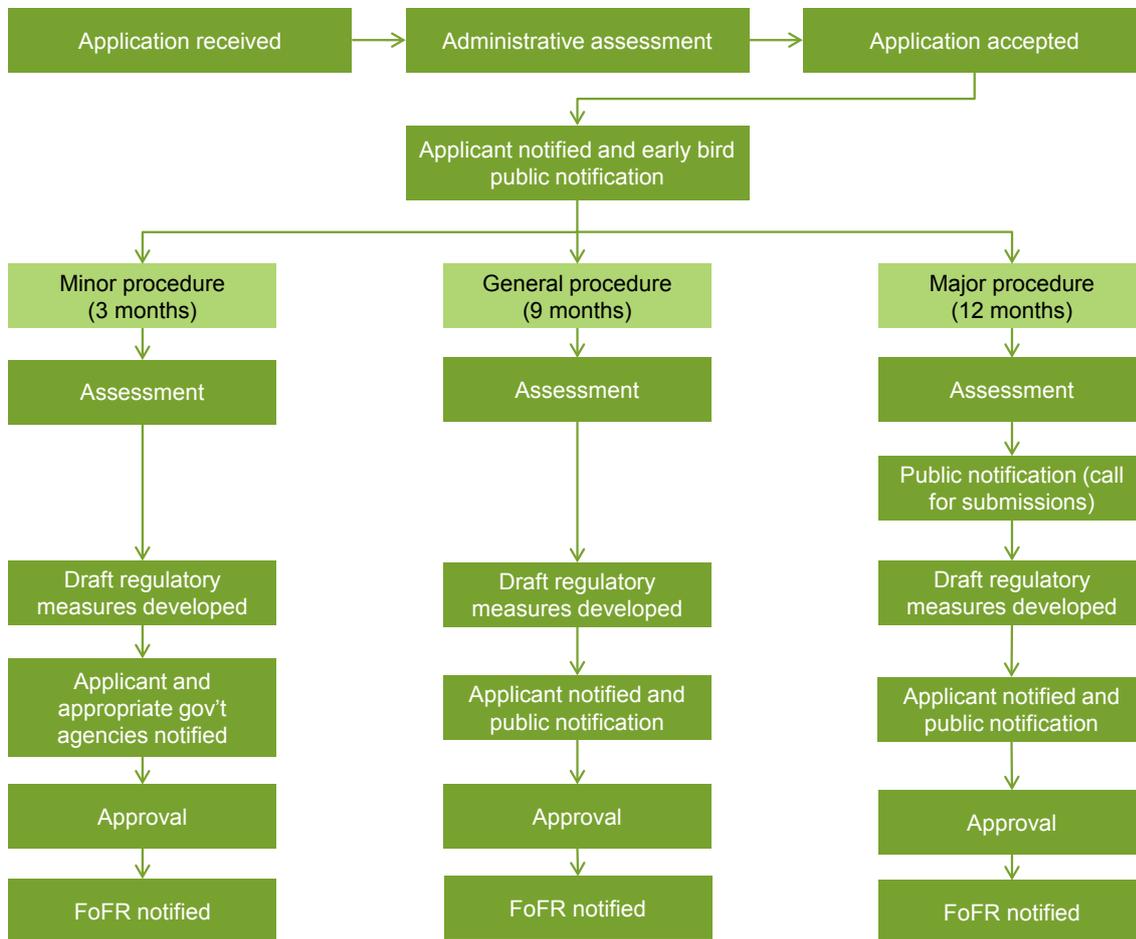
Source: FSANZ (2015d).

Gazetted standards or variations are adopted automatically, by reference and without amendment, into state and territory food laws (FSANZ 2014). Regulation of food produced at the farm level is usually covered by state and territory primary production legislation, while food Acts usually cover processing and sale requirements. Provisions in the food Acts are generally based on those in the Model Food Act developed by a Senior Officers Working Group and agreed by ministers as part of the Food Regulation Agreement.

Foods imported into Australia must comply with the Food Standards Code. The Department of Agriculture and Water Resources (DAWR) enforces the Food Standards Code through the *Imported Food Control Act 1992* (Cwlth), and may request that FSANZ provide risk assessment advice about imported foods (sub. 1). Imported foods must also meet Australian quarantine requirements (chapter 8), and the labels must comply with requirements under the Imported Food Inspection Scheme (DAWR 2015f, 2015k).

Consumer law also applies to food products. The ACL is contained within the *Competition and Consumer Act 2010* (Cwlth), which is administered by the ACCC. It prohibits producers from engaging in misleading or deceptive conduct and making false or misleading representations. These provisions apply to claims about the nature of food products on labels, packaging or advertising material. States and territories also have some responsibility for consumer protection.

Figure 10.3 **FSANZ’s process for assessing applications to change the Food Standards Code**



Source: FSANZ (2016a).

10.3 Regulation of food labelling

Food labels can help markets work better by providing information to consumers. The importance of labels to help consumers make informed choices was acknowledged by some participants. For example, Choice said that:

Consumers rely on labels to enable them to buy food that is safe to consume (use-by-dates, allergen information), in line with their beliefs (free-range, organic), healthy to eat (ingredient list, nutrient information panel) and/or locally produced (country of origin labelling). (sub. 33, p. 1)

Food labels can also increase producers’ competitiveness by allowing them to differentiate their products.

Concerns raised in this inquiry about food labelling included that:

- country-of-origin labels are confusing to consumers and limit the ability of Australian producers to differentiate their products
- eggs labelled as ‘free-range’ do not always meet consumers’ expectations about how free-range eggs should be produced
- mandatory labelling of genetically modified (GM) foods is inappropriate because GM foods have been assessed to be as safe as non-GM foods
- the requirement for products labelled ‘gluten-free’ to have no detectable gluten is unrealistic in light of advances in technology, and is a barrier to the adoption of innovations within the food industry.

Country-of-origin labelling (CoOL)

Information about country of origin is important to Australian consumers. According to a Choice survey of 743 members conducted in 2012:

- 84 per cent of respondents said it was ‘crucial or very important’ to them to be able to identify if their food was *grown* in Australia
- 80 per cent said it was ‘crucial or very important’ to be able to identify if their food was *manufactured* in Australia (Choice 2015a).

And, based on a survey for Australian Made Campaign Limited, country of origin is becoming increasingly important to consumers — 55 per cent of consumers surveyed in 2013 reported that ‘buying Australian’ had become more important to them in the last 12 months (AMCL 2013). Consumers state that they buy Australian foods to support Australian farmers and manufacturing employment, and because they perceive Australian products to be of higher quality or safer than imports (AMCL 2012; Choice 2015a; Deloitte 2015).

Some evidence suggests that the country of origin of foods is most important for fresh, unprocessed or minimally processed foods (Colmar Brunton 2015). Therefore, while an effective country-of-origin labelling (CoOL) system could increase the competitiveness of the Australian food sector more broadly, there are likely to be larger benefits for farm businesses that produce fresh or minimally processed foods.

The arrangements for CoOL are changing. A new CoOL system commenced on 1 July 2016, but a two year transition period means that these arrangements will not be mandatory until 1 July 2018 (FSANZ 2016b). Unless businesses choose to adopt the new arrangements before 1 July 2018, they must continue to comply with the current requirements (box 10.2).

Box 10.2 **The current country-of-origin labelling framework**

Under the Food Standards Code, country-of-origin labelling is mandatory for all packaged foods and most unpackaged foods. Some food is exempt, such as food sold for immediate consumption (for example, in a restaurant) and food made, packaged and sold on the same premises (for example, in a bakery). In addition to ensuring that claims are not false or misleading, the Australian Consumer Law provides 'safe harbour' defences for certain claims.

Mandatory country-of-origin labelling

Standard 1.2.11 of the Food Standards Code requires food sold in Australia to be labelled with its country of origin. The kinds of country-of-origin claims that must be made differ according to whether the food is packaged, and whether it consists of fresh fruit or vegetables.

- For packaged food other than fresh fruit or vegetables, the food must have a statement that identifies:
 - the country where the food was made, produced, or grown; or
 - the country where the food was manufactured or packaged; or
 - that the food is made from imported ingredients or local and imported ingredients.
- For packaged fresh fruit and vegetables and unpackaged food (including meat, fruit and vegetables), the food must have a statement that identifies its country of origin, or indicates that it is a mix of local and imported foods or a mix of imported foods.

Safe harbour defences

Businesses can be assured that their claims are not false or misleading if they meet certain criteria outlined in the safe harbour defences under the Australian Consumer Law. There are three safe harbour defences in relation to country-of-origin claims.

- The general country-of-origin safe harbour defence covers claims such as 'made in', 'Australian made' and 'manufactured in'. Goods carrying such claims must have been substantially transformed in the country of origin being claimed, and 50 per cent or more of the production or manufacturing costs must have occurred in that country.
- The 'produce of' safe harbour defence requires that each significant component or ingredient of the good originated in the country being claimed, and that all, or virtually all, of the production process also took place in that country.
- The 'Grown in' safe harbour defence requires that the country being claimed could also be represented as the country of origin of the goods, or the country that the goods are the produce of. Each significant ingredient or component of the goods must also have been grown in that country.

Source: ACCC (2014c).

Confusion about the meaning of country-of-origin claims

Producers can identify a food's country of origin in any way that satisfies the Food Standards Code, and that is not false or misleading under the ACL. However, many producers use phrases that are covered under country-of-origin safe harbour defences (box 10.2), as this provides increased certainty relative to claims that are not covered by a

safe harbour defence.

The National Farmers' Federation (NFF) raised concerns about the way country-of-origin claims can be made, suggesting that it undermines Australian farmers who seek to capitalise on their reputation.

... the current Country of Origin Labelling (CoOL) rules allow imports to masquerade as local produce, through the 'Made in Australia' claim, while making it difficult for locally grown products to achieve the perceived premium claim of 'Product of Australia'. ... this undermines Australian farmers, who are seeking to capitalise on their good reputation for animal welfare, quality and above all food safety. (sub 61, p. 27)

Primary Producers SA also said that:

It is still a major issue that shoppers wanting to support Australian and more local products find it hard to identify the true local product. ... we need a system where consumers wishing to support local producers have trust and ability to buy local produce without having to interrogate every label. (sub. 41, p. 5)

In the context of honey and CoOL, Herta Klein said that:

Honey is a commodity and not a product of elaborate manufacture so when there is only Australia honey in packaging I want to see 'Product of Australia' written on the label and not 'made in'. Consumers want to be able to shop with confidence and know where their food comes from. (sub. 38, p. 6)

Claims that consumers are confused by, and have difficulty interpreting, country-of-origin labels are supported by the findings of a number of reviews (Blewett et al. 2011; FPISG 2012; HoRSCAI 2014; SSCAFPS 2012) and recent consumer research.

- Choice (2015a) found that only 12 per cent of survey respondents were able to interpret the phrase 'made in Australia' in accordance with its definition under the ACL safe harbour defence.
- Colmar Brunton (2015) found that 30 per cent of Australian consumers interpreted the phrase 'made in Australia' to mean that all the ingredients were from Australia. A similar result (32 per cent) was found by Choice (2015a).

As the New Zealand Commerce Commission explained (in relation to New Zealand origin claims), interpretations of the phrase 'made in' varies between different consumers for different products because:

Whether a product is New Zealand made is a question of fact and degree. The relevant considerations will vary depending on the nature of the product and what consumers may understand about it. It is not possible to set out a precise formula which will prescribe exactly which products can be called 'New Zealand made'. (2015)

Confusion about country-of-origin claims may therefore arise because many consumers interpret 'made in' as referring to the origin of the ingredients, even though this is not necessarily the case under the current rules.

A new CoOL system

In response to concerns about consumer confusion, in March 2016, the Australian Government announced plans for a new CoOL framework (box 10.3). The objective of the new system is to increase clarity for consumers about the origin of their food, without imposing excessive costs on industry. Among other things, the new system requires products labelled ‘made in Australia’ to identify the proportion of Australian ingredients. It also removes the 50 per cent production cost test from the general country-of-origin safe harbour defence.

Box 10.3 The new country-of-origin labelling framework

In March 2016, the Australian and state and territory consumer affairs ministers agreed to implement a new country-of-origin (CoOL) system. Under the new system, CoOL is regulated only through a mandatory information standard under the Australian Consumer Law. The new system commenced in July 2016, and includes:

- new country-of-origin labels for priority foods (foods for which country-of-origin information has been found to be most valuable to consumers, such as fruit and vegetables, meat and meat products, fish and fish products, and dairy products)
- removal of the 50 per cent production cost test from the general country-of-origin safe harbour defence under the Australian Consumer Law. Non-food producers will also be affected by this change as safe harbour defences are available to all producers who make country-of-origin claims
- clearer country-of-origin labels on imported priority foods
- voluntary industry provision of country-of-origin information through digital platforms
- an education campaign (funded by government) to communicate the new arrangements to consumers and businesses.

The cornerstone of the new system is that products labelled ‘made in Australia’ will indicate the minimum proportion of Australian ingredients. Products that are packed in Australia will also have a statement regarding the origin of the ingredients.



Producers can continue to make ‘Product of Australia’ claims, and in most cases, such claims would be equivalent to the claim that a product is ‘made in Australia from 100% Australian ingredients’.

Sources: DIIS (2015a, 2015b, 2015c).

Consumer group Choice (2016b) welcomed the changes, saying that the new system was useful for consumers who want to know how much of a product's ingredients were grown locally. However, it noted that the system would be less useful to consumers who want to know the origin of imported ingredients in products labelled 'Australian made'.

Humane Society International (sub. DR253, p. 12) also said that 'one downfall of the new system is that it leaves it up to the manufacturers to voluntarily declare the origin of a product's main ingredient'. Under the new system, producers are encouraged to provide additional information such as the origin of key ingredients, but this will not be a requirement (DIIS 2015c).

Producers generally acknowledged that the new system provides consumers with clearer information, but they were concerned about the costs of the reforms, including administrative and labelling costs. Some producers supported the changes being limited to 'priority foods' (foods for which country-of-origin information was found to be most valuable to consumers) to minimise the cost burden, but others argued that it could cause consumers to be confused about why some products had the new labels and others did not (DIIS 2016). Under a dual system, businesses that produce both priority and non-priority foods could also face increased costs.

Voice of Horticulture (sub. 42) was supportive of the objective of improving the CoOL system, and welcomed the requirement to disclose the proportion of Australian ingredients. However, it did not support the use of the kangaroo logo where there are no Australian ingredients (that is, where the product has been manufactured in Australia from wholly imported ingredients), as it believed consumers would rely on the kangaroo logo as an indication that the product contains Australian ingredients.

Costs and benefits of the new system

Compared to the current system, the new system will enhance consumers' ability to identify and purchase Australian products where they have a preference to do so. The regulatory impact statement (RIS) for the new system identified the benefits to consumers as:

- the ability to purchase products that align with their preferences (and to avoid those that do not)
- knowing a food's country of origin, even if it does not change behaviour
- time savings from better visual elements of labels (DIIS 2016).

These benefits are difficult to quantify, as they depend on the value of country-of-origin information to different consumers. However, the Department of Industry, Innovation and Science (2016) calculated that the average time saving required per consumer to offset net

costs to businesses in the food sector would be 11 seconds per shopping trip.⁴¹ The RIS stated that this is likely to be exceeded, as consumers currently spend approximately 4 minutes and 48 seconds of a 60-minute shopping trip searching for country-of-origin information.

If consumers prefer foods with Australian ingredients and are better able to identify those foods, businesses that produce those foods will benefit from the new arrangements. Businesses that make a country-of-origin claim (including non-food businesses) will also face reduced compliance costs due to the removal of the production cost test from the general country-of-origin safe harbour defence. This was estimated to be almost \$550 million (in present value terms) over 20 years (DIIS 2016).

The largest costs imposed by the new system are administrative and labelling costs to businesses. Some businesses do not currently keep records of the percentage of Australian ingredients in their products (which can change seasonally or for other reasons), and will need to put in place new systems to keep this information. This may require updating information technology and communications systems. Administrative costs were estimated to be \$241 million over 20 years (DIIS 2016).

Businesses will also incur costs to change their labels to comply with the new requirements. These can be divided into an initial cost and ongoing costs, which can occur if there is seasonal variation in the proportion of Australian ingredients. Labelling costs will be mitigated by a 24-month transition period that aims to allow businesses to update labels within existing processes and labelling cycles. Where there is seasonal variation, businesses will also be allowed to make a statement about the average proportion of Australian ingredients as long as more specific information is provided through another source such as a website.

Labelling costs over 20 years were estimated to be \$228 million for all packaged stock keeping units⁴² and \$3 million for all unpackaged stock keeping units (DIIS 2016).

Overall, the Department of Industry, Innovation and Science estimated that the new system will deliver modest net benefits to the Australian community of \$66 million over 20 years (relative to the status quo). This will be achieved primarily through a reduction in compliance costs for producers due to the removal of the 50 per cent production cost test.

⁴¹ The RIS assumed that there were 8.8 million shoppers in Australia who went shopping once a week, and whose leisure time was valued at \$29 per hour.

⁴² Stock keeping units refer to each separate item in a product line. For example, each combination of fruit juice flavour and package size would be regarded as one stock keeping unit in a range of fruit juice products.

Would a voluntary system deliver higher net benefits?

The new CoOL system enhances consumers' ability to make effective purchasing decisions relative to the previous system. However, it is unclear whether the new information standard under the ACL would deliver higher net benefits as a mandatory or voluntary standard.

A voluntary standard would allow producers to weigh up the costs and benefits of making a country-of-origin claim, and to do so if they perceive that there is a net benefit. By contrast, a mandatory standard imposes costs on all producers. This could result in lower net benefits to the Australian community, because not all consumers' purchasing decisions are driven primarily by country of origin (Colmar Brunton 2015).

Many inquiry participants supported a mandatory CoOL system⁴³. For example, Choice said that:

Food labels provide useful information for consumers and current mandatory information should be retained ... Country of origin labelling is a consistent priority for consumers. (sub 33, pp. 1–2)

The NFF also said that it:

... welcomed the proposed [CoOL] framework, including the mandatory labelling, as it will provide consumers with this understanding of where their food comes from. (sub 61, p. 27)

The underlying rationale for a mandatory system is that, unless food producers make country-of-origin information available, only they have this information. This information asymmetry can result in consumers not being able to make purchasing decisions in line with their preferences (DIIS 2016). However, if consumers have a preference for products from certain countries, businesses selling products from those countries have an incentive to disclose country-of-origin information, and are likely to do so voluntarily (provided the benefits exceed the costs). Consumers would then be able to assume that unlabelled products are likely to be from less-favoured origins. A mandatory system is not necessarily required to achieve the objective of '[providing] consumers with information so they can make informed purchasing decisions in line with their personal preferences' (DIIS 2015b, p. 10).

Under a mandatory scheme, products that would otherwise be unlabelled due to unfavourable origins would be required to state their country of origin. This increases the amount of information available to consumers, but does not necessarily enable more effective purchasing decisions — consumers who place a high value on country of origin would already be relying on voluntary claims made by producers.

⁴³ Inquiry participants supporting a mandatory CoOL system included: APL (sub. DR282); Australia Food Sovereignty Alliance (sub. DR211); Ausveg (sub. DR193); DAWR (sub. DR183); DoH (sub. 261); NFF (sub. DR216); University of Southern Queensland (sub. DR184); VFF (sub. DR189); VoH (sub. DR232).

Some participants considered that requiring all products to state their country of origin would provide Australian producers with an advantage in the marketplace. For example, the Australian Food Sovereignty Alliance said that:

Currently the mandatory country of origin labelling (CoOL) provides some, although limited, protection for Australian farmers, by ensuring that the consumer can make a conscious decision to support Australian farmers. (sub. DR211, p. 6)

Similarly, the VFF said that:

The intent of the regulation is to support Australian business and farming through the mechanism of informing consumers; informing consumers is not the lone intent of this policy ... (sub. DR189, p. 30)

The purpose of CoOL is to enable consumers to buy products from their preferred countries, regardless of which countries they prefer, not to support Australian businesses. CoOL regulations should not be used to ‘protect’ or ‘support’ any specific group of producers, including Australian businesses, at the expense of others.

The fact that there are voluntary CoOL schemes in Australia operating alongside current mandatory requirements indicates that producers are not prevented from making country-of-origin claims when there are sufficient incentives to do so (box 10.4).

Box 10.4 Examples of voluntary country-of-origin labelling schemes

Australian Made Campaign

The Australian Made Campaign involves the use of a logo depicting a green triangle with a yellow kangaroo. The use of the logo is administered by Australian Made Campaign Limited, a not-for-profit company under contract from the Australian Government. The logo is a certification trademark that can only be used if the code of practice is met.

Australian PorkMark

The Australian PorkMark identifies pork products that contain exclusively Australian pork with a pink square. The scheme is administered by Australian Pork Limited.

Buy West Eat Best

The Buy West Eat Best program is managed by the Western Australian Department of Agriculture and Food and allows consumers to identify food that has been grown, farmed, fished and produced in Western Australia. It is a state-of-origin rather than a country-of-origin labelling scheme.

Sources: AMCL (2016); APL (2009); WA Department of Agriculture and Food (2016).

In New Zealand, although CoOL is not mandatory, many producers choose to participate in the Buy NZ Made Campaign. Similarly, in the United Kingdom, although only some imported products are required to have CoOL, many producers choose to take part in the UK Red Tractor Scheme. Australian Dairy Farmers (sub. 63) noted that where

industry-driven voluntary labelling schemes are in place, mandated arrangements are difficult to justify.

Where does that leave us?

In principle, the Commission supports a voluntary approach that allows each producer to weigh up the costs and benefits of making a country-of-origin claim. As the Institute of Public Affairs said:

A voluntary system would allow the value of information to emerge through the market process, as consumers reveal their willingness to pay and preferences toward origin labelling, and producers respond to this information accordingly. (sub. DR164, p. 11)

Under a voluntary system, the claims made by producers would still need to be accurate and presented in a way that is easily understood. To that end, the new information standard is likely to increase clarity for consumers. Continued enforcement of the ACL will also ensure that consumers are not misled by country-of-origin claims.

However, in addition to identifying products that satisfy their preferences, some consumers may want to know the origins of products that they view less favourably, even if this would not change their ultimate purchasing decision. Under a voluntary standard, this would not be possible, as products of less-favoured origins are likely to be identified by the absence of a claim rather than an explicit disclosure of country of origin. Consumers may thus incur costs in searching for the origin of unlabelled products through, for example, websites or supplier details printed on food labels. The costs of obtaining information in this way could be larger than the costs of requiring producers to provide the information. The RIS for the recent CoOL reforms did not assess the costs and benefits of a voluntary standard. Therefore, it is unclear whether, and to what extent, consumers would search for information that may not be directly relevant to their purchasing decisions. The proportion of consumers who would search for additional information is also a relevant factor, as a mandatory standard could increase prices, and all consumers (rather than only those who desire more information) would bear the cost of more accessible country-of-origin information.

As part of any future reforms to the CoOL framework, it is essential that RISs assess the costs and benefits of voluntary labelling. This will establish whether voluntary labelling results in higher net benefits to the Australian community compared to mandatory labelling.

Free-range egg labelling

In recent years, a segment of Australian consumers have increasingly favoured purchasing 'free-range' eggs over 'cage' or 'barn-laid' eggs. The Australian Egg Corporation Limited reported in 2005 that 14.5 per cent of eggs sold in the grocery retail market were free-range (AECL 2005). By 2014, this had increased to 39 per cent (AECL 2014).

Some consumers are willing to pay a premium for free-range eggs. The average price for free-range eggs is almost double that of cage eggs (Choice 2015b). However, evidence also suggests that some consumers are price-sensitive or are willing to trade off higher hen welfare for lower prices (Julie Dang & Associates 2012; Quantum Market Research 2015).

Consumers' preferences for free-range eggs are largely driven by animal welfare concerns, but are also influenced by other considerations such as taste and health (Choice 2015c; Julie Dang & Associates 2012). When consumers are asked about the conditions under which they expect free-range eggs to be produced, they most often identify the ability of chickens to roam about freely and to access the outdoors (Choice 2012, 2014; Julie Dang & Associates 2012).

However, many consumers are unsure if eggs labelled as 'free-range' are being produced according to their expectations.

- Choice (2014) found that 28 per cent of free-range egg buyers do not have confidence that the eggs they buy are produced under conditions they expect.
- Julie Dang & Associates (2012) found that 67 per cent of consumers are not always convinced that they are getting what they expect when they buy 'free-range' or 'organic' eggs.

The difference between eggs from free-range, barn-laid or cage systems cannot be observed by consumers, so they must rely on labels for this information. As the Treasury said, 'it is relatively easy to mislead consumers and there is a financial incentive for producers to do so' (Treasury 2015b, p. 5). Choice also said that consumers were being 'ripped off' by some producers' claims that their eggs were free-range (2015b, p. 3). Consumers bear costs (detriment) where egg production methods that they value, and for which they have paid a higher price, have not been used.

Producers also bear costs where they have made investments in free-range production methods that align with consumers' preferences, but are unable to differentiate their products or charge a price premium over others that do not meet these same criteria. Some producers have sought to assure consumers of the credibility of their free-range claims by participating in voluntary free-range certification schemes (table 10.1). However, the benefits to producers and consumers of certification schemes can be limited by the presence of numerous schemes with different standards.

Animals Australia (sub. 53) claimed that the large number of different schemes undermines consumer choice and information and creates confusion. Also, the standards under certification schemes do not always accord with consumers' expectations. For example, while some certification schemes have a maximum outdoor stocking density of 10 000 hens per hectare⁴⁴, Choice (2014) reported that only 2 per cent of free-range egg consumers believe this to be an acceptable stocking density.

⁴⁴ 10 000 hens per hectare is equivalent to an average of one hen per square metre.

Table 10.1 Voluntary certification schemes for free-range eggs

Selected standards under different schemes

	<i>Australian Certified Organic</i>	<i>Free Range Egg & Poultry Australia Ltd.</i>	<i>Free Range Farmers Assoc. Inc. Vic</i>	<i>Humane Choice</i>	<i>RSPCA (Outdoors)^a</i>	<i>Coles Free-Range</i>
Maximum outdoor stocking density (birds/ha)	1 500 or 2 500 ^b	Unknown	750	1 500	1 500 or 2 500 ^b	10 000
Do hens have access to pasture?	Yes	Yes	Yes	Yes	No ^c	No
Is beak trimming prohibited?	Yes	No	Yes	Yes	No	No
Is toe trimming prohibited?	Yes	Yes	Yes	Yes	Yes	No

^a Certification by the RSPCA does not necessarily mean that eggs are free-range. The RSPCA certifies both eggs produced using indoor systems (barn-laid) and outdoor systems (free-range). ^b A maximum of 1500 birds/ha applies to fixed outdoor areas and a maximum of 2500 birds/ha applies to outdoor systems with rotational range management strategies in place. ^c Hens do not have to have access to pasture, but they must still have unrestricted daylight access to the outdoors.

Sources: Australian Organic (2013); FREPA (2015); FRFA Inc. (2016); Humane Society International (2015, nd); RSPCA (2015).

What standards do consumers expect for free-range egg production?

While consumers expect free-range eggs to be produced by hens that are not confined in cages, there is conflicting evidence about the specific standards and practices that they have in mind. Julie Dang & Associates (2012) found that 26 per cent of consumers nominated 8000 to 12 000 hens per hectare as their preferred hen stocking density for free-range eggs, which differs to the results obtained by Choice (2014) (1500 hens per hectare). This may be partly due to research methodology — the Choice survey presented consumers with a text menu of options, while Julie Dang & Associates provided a computerised diagram where the number of hens on the paddock changed according to consumers' selections on a sliding scale (the scale was initially set at the maximum of more than 20 000 hens per hectare, but consumers were not given the stocking density at each point along the scale). Julie Dang & Associates (2012) noted that its result is higher than might be expected from qualitative feedback.

The NSW Farmers' Association (2015) also reported that a survey it commissioned showed almost three-quarters of consumers expected 'free-range' eggs to come from hens with a stocking density of 10 000 per hectare or more. However, closer examination of the research reveals that consumers were asked about what they thought current standards were, rather than the stocking density they would expect for 'true' free-range eggs (Quantum Market Research 2015).

Another factor that complicates an assessment of consumers' expectations is that many are unfamiliar with farming and animal husbandry practices. This is evidenced by the

proportion of consumers in surveys who respond that they do not know what the standards should be. For example:

- 41 per cent of respondents to a Choice survey said that they did not know what a reasonable maximum outdoor stocking density should be for hens that lay free-range eggs (Choice 2015c). After being given information about stocking densities, 20 per cent were still unsure.
- Julie Dang & Associates (2012) also found that 15 per cent of respondents did not know if hens should be debeaked — this was after it was explained that beak treatment is used to control problems of aggressive behaviour.

Consumers' limited understanding of farming practices can also result in reliance on a small number of indicators as a proxy for overall animal welfare. For example, the NSW Young Lawyers Animal Law Committee (sub. DR284) said that consumers are not necessarily interested in stocking densities per se, but rely on stocking density as an indicator of hen welfare more generally.

In addition, if consumers are unsure about what standards they consider to be appropriate, they may be easily influenced by information provided by producer or animal welfare groups, or by the way questions are framed in consumer surveys. For example, consumers may be led to believe that free-range eggs always embody a higher level of animal welfare, although this is not necessarily the case (chapter 5). As Choice explained, standards for free-range eggs:

... shouldn't be predominantly based on consumer research, but rather on a broader body of relevant independent, scientific research in conjunction with consumer research, and with consultation with all stakeholder groups. (2014)

Current regulations that affect free-range egg labelling

There is currently no nation-wide standard for when eggs can be labelled as free-range, although in March 2016 the Australian and state and territory consumer affairs ministers announced a national free-range egg labelling standard (discussed below). The new standard is expected to be implemented in 2017 (Treasury, pers. comm., 20 June 2016).

Free-range egg labelling is primarily regulated through the ACL, where producers are prohibited from making false and misleading claims. Therefore, producers must consider whether their 'free-range' claims could be deemed false or misleading. This applies whether or not they participate in a voluntary certification scheme. The ACCC has prosecuted egg producers on several occasions for making false or misleading 'free-range' claims.⁴⁵

⁴⁵ See, for example, *ACCC v Pirovic Enterprises Pty Ltd (No 2)* [2014] FCA 1028, *ACCC v RL Adams Pty Ltd* [2015] FCA 1016, *ACCC v Derodi Pty Ltd* [2016] FCA 365 and *ACCC v Snowdale Holdings Pty Ltd* [2016] FCA 541.

Some states and territories have also introduced egg labelling regulations.

- In the ACT, different types of eggs must be displayed separately at retail outlets, and displays must be labelled with the production method used. The legislation also provides definitions for ‘cage’, ‘barn’, ‘aviary’ and ‘free-range’ eggs.
- In South Australia, the Government recently announced a voluntary industry code for free-range eggs to help consumers purchase free-range eggs with confidence (SA Attorney-General’s Department 2013). Producers that adhere to the code can display a certified trademark logo (SA Attorney-General’s Department 2016).

Animal welfare arrangements can also affect how eggs are labelled — a definition of a free-range production system under animal welfare regulations can be used as a basis for an egg labelling standard. Under the Model Code of Practice for the welfare of poultry, free-range production systems are defined as having a maximum stocking density of 1500 hens per hectare, unless range rotation practices are used. Some have interpreted this to mean that if these conditions are met, the Model Code does not specify a maximum free-range stocking density (Treasury 2016b).

The Model Code is voluntary in most states. Queensland, which has adopted the Model Code into its animal welfare regulations, allows up to 10 000 hens per hectare in free-range production systems. The Model Code is currently being converted into national standards and guidelines, and this process will result in the development of mandatory standards and voluntary guidelines to be implemented by states and territories (chapter 5).

A national free-range egg labelling standard

In March 2016, in response to consumer confusion, consumer affairs ministers from the Australian and state and territory governments agreed to a national standard for free-range egg labelling (box 10.5). The new arrangements include an information standard under the ACL that allows a maximum outdoor stocking density of 10 000 hens per hectare if a free-range claim is made, and requires disclosure of hen stocking density.

Some producers welcomed the new standard — the NFF and Victorian Farmers’ Federation said that a national standard would enable consumers to understand how their free-range eggs were produced, and help them make informed choices about their food (NFF 2016a; VFF 2016a). A spokesman for Egg Farmers Australia said that the new standard reflected a common sense approach backed by science (Kotsios 2016).

However, some producers with lower stocking densities were critical of the standard. Freeranger Eggs, whose flock has a stocking density of less than 750 hens per hectare (approximately one hen per 13.3 square metres), said that the new standard would make it even more complex for consumers to make an informed purchasing decision, and that ‘Ministers for Consumer Affairs were nobbled by the big corporations’ (Freeranger Eggs 2016). Smaller producers have begun to label their eggs as ‘pastured’ to distinguish themselves from more intensive producers who use ‘free-range’ labels (Soldani 2016).

Box 10.5 **New arrangements for free-range egg labelling**

In March 2016, the Australian and state and territory consumer affairs ministers agreed to new arrangements for free-range egg labelling. The new arrangements comprise two elements: an information standard and a safe harbour defence.

The information standard provides a definition for the term 'free-range' and allows a maximum outdoor stocking density of 10 000 hens per hectare. It also requires producers who claim that their eggs are free-range to prominently disclose the outdoor hen stocking density on the label.

While the exact wording of the definition will be finalised according to legal advice during the drafting of the legislative instrument, the following has been proposed.

Free range eggs must come from laying hens that had meaningful and regular access to an outdoor range where the hens were free to roam and forage during daylight hours except on days when on the open ranges such things as weather conditions endangered the safety or health of the laying hens, or predators were present, or the laying hens were being medicated. (Treasury 2016b, p. 16)

Compliance with the requirements above provides producers with a safe harbour defence against allegations that they have engaged in false and misleading conduct.

Source: Treasury (2016b).

Animal welfare organisations and consumer and law groups also expressed disappointment at the new standard. Humane Society International (sub. DR253) and the NSW Young Lawyers Animal Law Committee (sub. DR284) said the new standard does not align with consumers' expectations. The RSPCA said that the decision '[put] the interests of big business ahead of consumers, with hen welfare coming a distant third', and that the new standard 'failed to provide the animal welfare assurances that consumers were seeking' (RSPCA 2016a). It is calling for more prescriptive standards in the interests of animal welfare (RSPCA 2016b).

Choice was concerned that consumer affairs ministers were 'locking in' misleading egg labels, and said that:

... eggs which come from hens that don't go outside and have high stocking densities don't meet consumer expectations, and don't deserve a 'free-range' label. (2016c)

It urged consumers to boycott free-range eggs that had been produced under conditions that did not meet the Model Code.

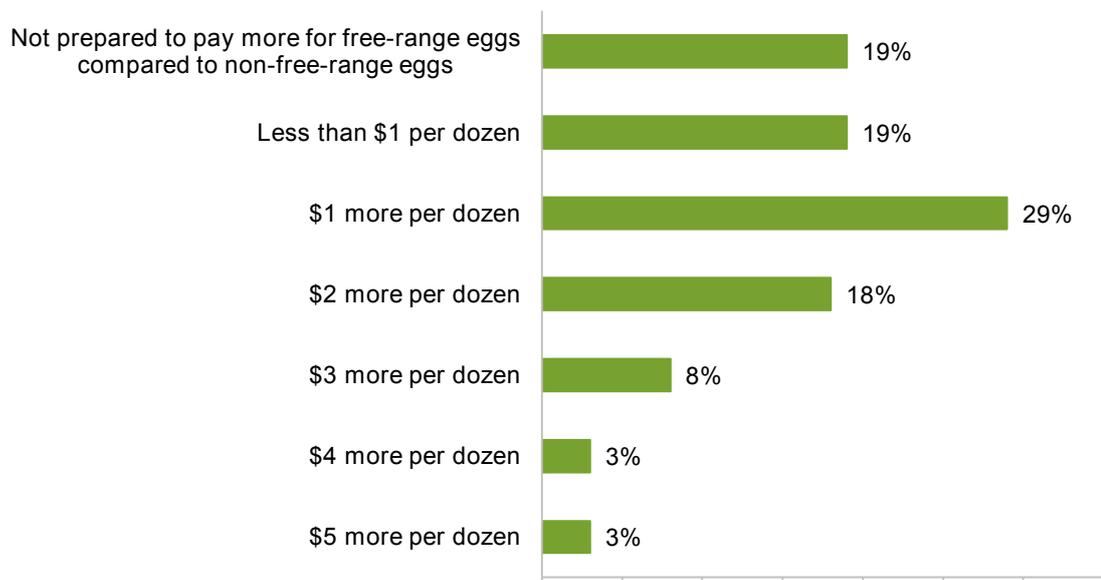
The ACCC (sub. DR121) considered that the recent judgment of the Federal Court in *ACCC v Snowdale Holdings Pty Ltd* [2016] FCA 541 provides clear guidance on when eggs can be labelled as free-range.

The costs and benefits of the new arrangements

The new arrangements will make it easier for consumers to purchase eggs that align with their expectations. It gives consumers confidence that free-range eggs meet a prescribed minimum standard, and that this is consistent across different producers. The benefit to

consumers can be measured in terms of their willingness to pay — Choice (2015c) found that most consumers say that they are willing to pay for the assurance that eggs labelled ‘free-range’ meet their expectations (figure 10.4).⁴⁶ While the new definition of ‘free-range’ does not appear to meet all consumers’ expectations (as discussed above), consumers benefit from being able to compare the stocking densities of different free-range eggs.

Figure 10.4 How much more will consumers pay for free-range eggs?^a



^a Survey respondents were asked the question ‘if a mandatory national standard for free-range eggs was in place which meets consumers’ expectations of free-range, how much more would you be willing to pay for free-range eggs compared to non-free-range eggs?’.

Source: Choice (2015c).

Producers benefit from the clarity provided by the information standard and from the legal protection afforded by the safe harbour defence. An information standard decreases the risk of the definition of free-range being subject to regular change in response to court judgments, and allows producers to make investments in production infrastructure with confidence. It should reduce the time producers spend monitoring developments in case law, and decrease the time producers spend on monitoring and maintaining compliance.

Producers also face costs to understand the new arrangements (estimated to take 24 hours) and to revise labels to meet the new requirements. The RIS conducted by the Treasury

⁴⁶ While surveys such as that conducted by Choice can provide useful information, these results only indicate consumers’ stated willingness to pay, which is not necessarily the same as what they would actually pay. Revealed preference is the true measure of willingness to pay, and as outlined in chapter 5, consumers’ stated willingness to pay is not always matched by actual behaviour.

estimated upfront compliance costs to businesses of \$4.9 million, which are expected to be offset by annual compliance savings of \$0.7 million. Over ten years, there is estimated to be an average annual compliance saving of \$0.2 million (Treasury 2016b).

Standards should also be based on scientific evidence

Although the reforms are about increasing consumer confidence and certainty regarding egg labelling rather than to prescribe certain animal welfare standards (Treasury 2015b), production and labelling standards are inextricably linked. Poultry welfare outcomes are affected by the production system used and welfare is one of the key reasons why consumers purchase free-range eggs. As such, the standards for free-range egg labelling should be based on scientific evidence about hen welfare and egg production. This evidence should be balanced against consumer and community expectations about what is an acceptable level of welfare, as well as the economic costs associated with achieving these outcomes.

There should also be consistency between animal welfare standards and egg labelling standards. As such, there may be a need to revise the free-range egg labelling standard once the Model Code of Practice for poultry has been converted into national standards and guidelines (chapter 5). Animals Australia (sub. DR268) and the Animal Law Institute (sub. DR213) supported the alignment of labelling and production regulations.

Mandatory labelling of genetically modified foods

Under the Food Standards Code, GM foods, ingredients, additives or processing aids that contain novel DNA or protein are required to be labelled with the words ‘genetically modified’ (FSANZ 2013a). Labelling is also required when the genetic modification results in altered characteristics, such as increased oleic acid content in soybeans (FSANZ 2013a). Foods which are derived from GM crops but which do not contain novel DNA or protein and do not have altered characteristics, such as some canola oils, are not required to be labelled.

The purpose of mandatory GM labelling in Australia is to enable consumers to make informed choices about the food they buy, not to protect consumers against unsafe foods (FSANZ 2013a). This is consistent with the purpose of GM labelling internationally (box 10.6) As discussed in chapter 6, Australia’s robust gene technology regulatory framework requires that GM organisms and food are assessed for their impact on human health and safety and the environment before they are approved. FSANZ has declared, based on a rigorous assessment process that considers credible scientific evidence, that approved GM foods are as safe and nutritious as similar conventional foods. The Commission also heard that GM foods can be safer than conventional or organic produce (Professor Mike Jones, sub. DR141).

Box 10.6 International approaches to GM labelling

- In the European Union, foods must be labelled if they contain genetically modified (GM) ingredients or if they are produced from GM crops, even if no GM material is present.
- In the United States, laws were passed in July 2016 that will require foods with GM ingredients to be labelled. Producers will have the option of informing consumers of GM ingredients through a QR code, which requires a smartphone to read. The US Department of Agriculture will have two years to establish a national mandatory disclosure standard for bioengineered food.
- Some countries, such as Singapore and Canada do not require GM foods to be labelled.

Sources: Addady (2016); European Commission (2003); GMA (2016); Rifai (2016).

Some biotechnology industry participants submitted that the requirement to label GM foods is invalid, given that they have been assessed by regulators to be no less safe than conventional (non-GM) foods. For example, AusBiotech said that it:

[B]elieves that FSANZ’s approach to the labelling of GM foods is at odds with its otherwise best-practice, evidence-based approach to food-safety regulation. (sub 20, p. 10)

A number of participants also argued that mandatory labelling requirements implied that GM foods were unsafe and reinforced misperceptions.

FSANZ requires labelling of genetically modified organisms in such a way as to confer, in the consumer’s mind, a ‘danger warning’ on the product. (AFGC, sub. 28, p. 16)

Mandatory labelling for non-health and safety reasons can imply a regulatory concern where none exists and can reinforce misconceptions in the community. (CropLife, sub. 14, p. 12)

AusBiotech members suggest that market acceptance has been negatively influenced by poorly supported, mandatory-labelling requirements and a public perception that if GM products require special labelling and are banned in some states then there must be uncertainty regarding the safety of these foods. (AusBiotech, sub. 20, p. 5)

It is unclear whether mandatory labelling reinforces misperceptions about GM foods (box 10.7).

Some defended the need for mandatory GM labelling on the basis that it allows consumers to choose non-GM foods that they believe to be safer or healthier. For example, in its submission to the Blewett review, Madge Australia said that:

Consumers are expected to *choose* to eat healthily, and are assumed to have the choice to eat non-GM rather than GM foods if they desire. However, **consumers cannot make those choices unless they are given adequate information** [sic], and food labelling is an important part of that. (2010, p. 17)

The Commission also received a large number of personal views in support of mandatory labelling of GM foods (box 10.8). Many participants appeared to be under the false impression that GM foods are unhealthy or unsafe, and supported mandatory labelling on

the basis that it allowed them to avoid these foods. There appears to be a real disconnect between the credible scientific evidence and the beliefs of some consumers (chapter 6).

Box 10.7 **Does mandatory GM labelling imply foods are unsafe?**

- Lusk and Rozan (2008) found that US consumers who believe that the government has a mandatory labelling policy for GM foods are more likely to believe that GM foods are unsafe compared to those who believe that no such policy is in place. However, it is unclear if this relationship is causal (Costanigro and Lusk 2014).
- Costanigro and Lusk (2014) found that the signalling effects of GM labels (the extent to which the existence of a label itself influences views about food safety) are likely to be small. However, this research did not differentiate between the effect of the mere presence of a label and the effect of a label required by government, which may be larger. At the same time, it may be difficult for consumers to determine from the label whether it was required by government.
- Tegene et al. (2003) found that consumers' demand for GM foods depended on the source of the information they received (for example, whether the information was from a biotechnology company or environmental organisation), but they did not test if demand was affected by the knowledge that labels were mandated by government.

Box 10.8 **Some personal responses and views — GM labelling**

I want all GM foods to be labelled because I'm not convinced any GM foods are safe.

I want all GM foods to be labelled because most members of my family have food intolerances or serious compromised health problems. And because consumers have a democratic right to know what they are eating.

I want all GM foods to be labelled so I can avoid buying GM foods. I don't support corporations controlling the food system. Farmers have the right to remain independent, GM free and not be contaminated with GM.

I want food that contains gmos to be labelled as containing them.

I do not trust the claims that they are safe. I have never seen articles published in refereed science journals that attest to the safety of those products.

I do not want to consume them until scientific safety tests are readily available to the general public.

I want all GM foods to be labelled because the people have the right to know what they are buying and what they are putting in their bodies.

... legislate Federally for mandatory labelling. STOP POISONING US. We are already forced to use Fluoridated, chemical laden water.

I want all GM foods to be labelled because information on food labels allows me to make an informed purchase. I choose not to eat GM products as I don't believe that we have sufficient evidence to ascertain their safety.

Assessing the need for mandatory GM labelling

GM labelling is a consumer value issue rather than a food safety issue, and, as with other consumer values (such as country of origin and ‘free-range’), the aim of ensuring consumers have information is not a sufficient rationale for mandatory labelling. Where consumers prefer to purchase GM-free foods (for example, if they believe that gene technology is unethical, unsustainable or unsafe), producers have an incentive to voluntarily label their products as ‘GM-free’. Many Australian producers do make such claims (GM-Free Australia Alliance 2015), which demonstrates that the market is able to respond to consumers’ preferences where the benefits of doing so outweigh the costs.

In addition, while many consumers state that they want GM labelling on foods (FSANZ 2003), some research has found that GM status is often not a high priority in consumers’ purchasing decisions (FSANZ 2003, 2008; WA DAF 2011). This indicates that the benefits to consumers of mandatory GM labelling are not likely to be large.

Mandatory GM labelling could also reduce consumer choice. Research suggests that when governments require GM labelling, producers face an incentive to swap GM ingredients for non-GM ingredients because of the lack of significant profit incentives and low expected market share for GM products (Carter and Gruère 2003). If this is the case, the number of products available with GM ingredients at the retail level would decrease, which in turn would mean less product diversity and choice for consumers. Carter and Gruère (2003) suggest that this explains why, in countries with mandatory labelling such as Australia, New Zealand and Japan, there are few products at the retail level containing GM ingredients.

Where does that leave us?

While some consumers may prefer not to purchase GM foods based on beliefs about health and safety, it is difficult to justify a mandatory labelling regime on the basis of providing information to address these concerns. Approved GM foods have been assessed by regulators to be as safe as conventional foods, and labelling requirements should align with these regulatory assessments. Governments have a responsibility to set policy and regulations based on credible scientific evidence. Community concerns about the health and safety of GM foods would be better addressed by using communication strategies to increase public understanding about the risks and benefits of GM foods and the regulatory processes that are in place to protect the community (chapter 6).

RECOMMENDATION 10.1

The Australia and New Zealand Ministerial Forum on Food Regulation should amend its policy guidelines to make labelling of genetically modified foods voluntary, and Food Standards Australia New Zealand should remove the requirement in the Food Standards Code to label genetically modified foods.

Gluten-free labelling

Gluten-free labels enable consumers who have coeliac disease, a non-coeliac gluten sensitivity⁴⁷ or wheat allergy to easily identify foods that meet their dietary requirements. Under the Foods Standards Code, products labelled as ‘gluten-free’ must not contain any:

- detectable gluten
- oats or oat products
- cereals containing gluten that have been malted, or products of such cereals.

This differs to the standard under the Codex Alimentarius⁴⁸, where gluten-free foods can have gluten levels of up to 20 parts per million (ppm)⁴⁹ (FAO and WHO 2008). The United States and European Union have adopted the Codex approach (European Commission 2009; US Food and Drug Administration 2015b).

Australia’s regulations mean that whether or not a product can be labelled ‘gluten-free’ depends in part on the state of gluten-detection technology. In 2000, when the current standards were put in place, the limit of detection was 30 ppm. By 2010, this had decreased to 3 ppm (Price 2010). As a result, some foods that were previously labelled gluten-free can no longer be labelled as such.

There is some evidence to suggest that the current levels at which gluten can be detected are not harmful to most gluten-intolerant consumers (box 10.9). However, gluten sensitivity varies among consumers, and scientific evidence on the level of gluten that can be tolerated by all coeliac consumers is inconclusive (box 10.9). The Australasian Society of Clinical Immunology and Allergy (sub. DR203) and Allergy and Anaphylaxis Australia (sub. DR134) also pointed out that individuals with wheat allergy (which differs from gluten intolerance) can be extremely sensitive to gluten, and exposure of these individuals to minute traces of gluten can result in anaphylaxis.

The current gluten-free standard does not mean that foods bearing gluten-free labels are free of any traces of gluten (only that current testing methods do not detect any gluten). Therefore, wheat allergic consumers may need to rely on ingredients lists and allergen labelling (which is required in all states and territories) rather than gluten-free labels. In addition, some consumers with wheat allergy may tolerate other grains containing gluten, such as rye and oats (Healthy Eating Advisory Service 2014). Gluten-free labels may

⁴⁷ Non-coeliac gluten sensitivity is a condition with symptoms similar to coeliac disease, but there are no associated antibodies and no damage to the lining of the gut. The role of the immune system in non-coeliac gluten sensitivity is unclear (Coeliac UK 2016).

⁴⁸ The Codex Alimentarius (Codex) is a set of harmonised international food standards developed by the World Health Organization and the Food and Agriculture Organization of the United Nations. Codex standards are voluntary, but form the basis of food safety legislation in many countries (WHO and FAO 2016).

⁴⁹ This is equivalent to 20 milligrams per kilogram.

therefore be less useful to wheat allergic consumers compared to gluten-intolerant consumers.

Box 10.9 Scientific evidence on a tolerable level of gluten for consumers with coeliac disease

Scientific evidence has been unable to establish a precise level of gluten that can be tolerated by all consumers with coeliac disease.

- In 2006, a review of the scientific literature on tolerable amounts of gluten for people with coeliac disease, conducted on behalf of the UK Food Standards Agency, found insufficient evidence to propose a clinical threshold dose of gluten or a threshold concentration of food products that would be tolerated by all people with coeliac disease (Akobeng and Thomas 2006).
- In 2016, a similar review conducted by Cochrane Australia (on behalf of Coeliac Australia) concluded that a lack of robust scientific evidence precluded the establishment of a definitive threshold that is safe for all people with coeliac disease to consume (Cochrane Australia 2016).

However, gluten sensitivity varies among gluten-intolerant consumers (Akobeng and Thomas 2006; Catassi et al. 2007; US Food and Drug Administration 2011). Some studies suggest that there is a threshold that is acceptable to most consumers.

- Catassi et al. (2007, p. 165) found that while small amounts of gluten in individual foods can have a cumulative adverse impact, ‘the threshold of 20 ppm keeps the intake of gluten from “special celiac food” well below the amount of 50 mg/d, which allows a safety margin for the variable gluten sensitivity and dietary habits of patients’.
- Collin et al. (2004) found that the threshold for gluten contamination of gluten-free products can be safely set at 100ppm.
- In 2011, a study by the US Food and Drug Administration found that:
... a less than 1 ppm level of gluten in foods is the level of exposure for individuals with [coeliac disease (CD)] on a [gluten-free diet] that protects the most sensitive individuals with CD and thus, also protects the most number of individuals with CD from experiencing any detrimental health effects from extended to long-term exposure to gluten. (2011, p. 46)

The Catassi et al. and Collin et al. studies were cited during the discussions that led to the 20ppm threshold under the Codex Alimentarius (FAO and WHO 2005).

If the level of gluten that can be detected is not sufficient to harm most gluten-intolerant consumers, the current standard may be imposing unnecessary costs on the community. Food producers who want to label their products as gluten-free are likely to face increased costs in achieving the gluten-free standard, and this could be passed on to consumers. Consumers who rely on gluten-free labels may also experience a reduction in food choices if producers choose not to make gluten-free claims due to prohibitive costs.

In addition, the gluten-free standard may act as a barrier to the adoption of beneficial innovations, such as the ultra-low gluten barley developed by the CSIRO (box 10.10). It may also inhibit the introduction into the Australian market of products that are sold

overseas using a ‘gluten free’ label — if processors assess the costs of relabelling products (to align with Australian labelling requirements) to outweigh the benefits.

Box 10.10 The ultra-low gluten barley

In 2015, researchers at the CSIRO successfully developed a hulled barley with reduced levels of hordeins, the type of gluten found in barley. This ultra-low gluten barley is produced using conventional (non-GM) breeding techniques, and contains gluten levels of below 5 parts per million (ppm). It can be used in malt products or brewed beverages such as beer. Use of the ultra-low gluten barley would provide some gluten-intolerant consumers with a wider range of food choices.

However, producers in Australia have been reluctant to commercialise this innovation. Since it is a barley and the gluten can be detected, producers who commercialise this innovation would not be able to make a gluten-free claim under the current Australian food standards.

The CSIRO is therefore focussing on commercialisation opportunities in the United States and European Union, where products labelled ‘gluten-free’ can contain barley as long as the gluten content does not exceed 20 ppm.

Sources: CSIRO (2015e); DIIS (pers. comm., 22 April 2016); European Commission (2009); US Food and Drug Administration (2015b); Tanner et al. (2016).

In principle, a standard that aims to enable gluten-intolerant or gluten-allergic consumers to select foods that meet their dietary requirements should balance food safety risks against the benefits of more accessible food products and wider choice. This is consistent with FSANZ’s primary objective to protect public health and safety, and the requirement for FSANZ to have regard to ‘the need for standards to be based on risk analysis using the best scientific evidence’ (*Food Standards Australia New Zealand Act 1991 (Cwlth)*, paragraph 18(2)(a)). There is a question about whether the current standard adequately balances these tradeoffs.

FSANZ, in setting food standards, must also have regard to the promotion of consistency between domestic and international food standards and the desirability of an efficient and internationally competitive food industry.

In 2013, the US Food and Drug Administration set the US threshold for the level of gluten permitted in ‘gluten-free’ foods at 20ppm, in line with the Codex threshold (box 10.11). This was based on scientific evidence and an assessment of risks and benefits to the US community.

Box 10.11 **Determining a ‘gluten-free’ threshold in the United States**

In 2013 the United States adopted the Codex threshold of 20 ppm. In doing so, the US Food and Drug Administration (FDA) evaluated the costs and benefits of adopting a more stringent standard than what could be tolerated by most consumers with coeliac disease. (The scientific evidence considered by the FDA suggested that this was 20 ppm). The FDA considered that lowering the threshold beyond 20 ppm would increase the risk of US consumers with coeliac disease not following a gluten-free diet because of decreased food choices or more expensive food. It therefore concluded that a threshold of 20 ppm was sufficiently protective of public health in the United States, and that ‘the varying needs of individuals with celiac disease may be best addressed by focused education and outreach’ (US Food and Drug Administration 2013, p. 47160).

Can the requirement for ‘no detectable gluten’ be changed?

Regardless of whether the current gluten-free standard adequately balances the risks and benefits to the Australian community, relaxing the standard (to allow detectable levels of gluten) may be prevented by the ACL (the ACL prohibits producers from making false or misleading representations as to the composition of goods).

A producer who makes a gluten-free claim on a product with detectable levels of gluten risks prosecution under consumer law. This is because consumers are likely to understand the term ‘gluten-free’ to imply an absolute standard. The Department of Industry, Innovation and Science explained that:

The Australian Competition and Consumer Commission’s (ACCC’s) interpretation of ‘free’ is absolute (ie there can be no detectable level of the relevant substance in the product). This interpretation is enforced through the ACL which prohibits a business from making statements in trade or commerce that are false, misleading or deceptive, or which are likely to mislead or deceive. (sub. DR258, p. 1)

This also applies to similar claims, such as ‘lactose-free’, where the presence of the substance being claimed is negligible but detectable.

FSANZ (sub. DR98) submitted that in developing and reviewing food standards, it is required by its Act to consider any relevant legislation, including the ACL. In effect, the ACL prevents FSANZ from implementing a risk-based approach to setting gluten-free standards. It also precludes alignment of Australian standards with international gluten-free standards.

Alternatives to ‘gluten-free’ claims

It is essential that consumer laws are in place to prevent consumers from being misled. While this may prevent some foods (that have negligible but detectable levels of gluten) from being labelled ‘gluten-free’, producers who want to market their products as safe for

gluten-intolerant consumers are not limited to making ‘gluten-free’ claims. Producers are free to inform consumers about the nature of their products in any way, as long as their conduct is not deceptive and they do not make false or misleading representations.

Producers could establish certified trademarks or alternative claims, such as ‘ultra-low gluten’, to communicate food safety to gluten-intolerant consumers. These could be accompanied by information that increases consumers’ understanding of the health consequences of the claims being made, which would allow them to ascertain which claims they can rely on. Less sensitive gluten-intolerant consumers would then have access to a wider range of foods beyond those labelled ‘gluten-free’.

In keeping with its primary role of protecting public health and safety, FSANZ should establish a standard that defines the level of gluten that is safe for gluten-intolerant consumers. Such a standard would take into account the fact that consumers have varying levels of gluten-sensitivity, the scientific evidence on food safety risks to these consumers, and the costs to consumers of a more stringent standard, such as increased prices or reduced choice. While the standard would not define the specific claims that can be made to communicate gluten content, it would provide the basis for producers to establish their own claims, and provide guidance to producers on when claims would not be deemed false or misleading. It would also provide information to enable consumers to better make food choices. Ensuring that there is wide community awareness of the standard would decrease the likelihood of consumers misinterpreting producers’ claims.

RECOMMENDATION 10.2

Food Standards Australia New Zealand should establish a standard defining the level of gluten in foods that can be generally tolerated by gluten-intolerant consumers, taking into account:

- the varying levels of gluten sensitivity among gluten-intolerant consumers
- scientific evidence on the risks of gluten to these consumers
- the costs and benefits to the Australian community.

10.4 Regulation of food safety in the production process

As noted earlier, governments regulate to ensure minimum food safety practices during the production process. The benefits of food safety regulations were acknowledged by a number of industry bodies. For example, the Australian Chicken Meat Federation said that:

Food safety is critical to the chicken industry, and regulation in this area is necessary to protect consumers and also the reputation of the product and the industry itself ... The ACMF therefore believes that all producers of chicken meat, no matter how big or small, must comply with a common set of standards and compliance arrangements. (sub. 40, p. 7)

Similarly, the Australian Dairy Farmers said that:

Australia has comprehensive food standards and a system of legislation and regulation across the whole dairy production and processing chain. The system monitors compliance with food standards to ensure the integrity of the dairy supply chain ... The dairy sector would not like to see the model we have worked hard at over many years be devalued ... (sub. 63, p. 5)

However, concerns were raised about:

- the high costs (relative to other options) of the requirement for individual eggs to be stamped, to enable them to be traced
- the costs and duplication of food safety audits, including those required by regulators, food retailers and importing countries.

Egg stamping

All states and territories require eggs to be individually stamped with a unique marking that identifies the producer or processor of the egg. (Some exemptions apply for small egg producers). With the exception of Queensland which introduced egg stamping in 2005, egg stamping was progressively introduced in Australian states and territories from 2011 following the introduction of Standard 4.2.5 in the Food Standards Code (the Primary Production and Processing (PPP) Standard for Eggs and Egg Products). FSANZ developed the new standard ‘in response to the large number of foodborne illness outbreaks suspected of being linked to eggs or egg products’ (FSANZ 2015c).

Egg stamping is used as a traceability tool in the event of an outbreak of salmonellosis caused by contaminated eggs. Traceability enables the source of the contamination to be quickly identified, and allows only eggs that are likely to be unsafe to be recalled or withheld from sale. This protects public health and reduces financial losses to the egg industry. It also protects the reputation of producers not involved in the contamination.

While traceability has benefits for consumers and the egg industry, there are also costs involved in setting up traceability systems. The system adopted should be the one that achieves the objective with the highest net benefit. That is, egg stamping would only be justified if the benefits exceeded the costs and it delivered superior traceability compared to other options.

Several inquiry participants were supportive of egg stamping as a traceability tool⁵⁰. The NSW Farmers’ Association said that:

Egg stamping has demonstrated clear benefits for consumer health and food safety and any commonsense assessment of the net benefit to farmers and the community would implicitly endorse the continuation of this practice. (sub. DR161, p. 25)

⁵⁰ Participants who supported egg stamping as a traceability tool included: the NFF (sub. DR216); NSW Farmers’ Association (sub. DR161); SFPQ (sub. DR135); Tasmanian Government (sub. DR287); and the VFF (sub. DR189).

However, the NSW Egg Farmers' Association argued that the introduction of egg stamping was 'based on faulty and inaccurate information and its cost outweighs the benefits to the community and to the industry' (sub. 7, p. 1). It also raised concerns about the RIS used to justify egg stamping.

Others said that egg stamping was an unnecessary regulation. Stuart Chignell, for example, said that:

The regulation requiring eggs to be stamped is ... an unnecessary and burdensome regulation on farmers in general and family farmers in particular. (sub. DR208, p. 3)

Katherine Snoswell (sub. DR297) expressed a similar view.

Concerns about the costs of egg stamping are not new. FSANZ, in its final assessment report for the (then) proposed PPP Standard for Eggs and Egg Products, reported that:

Several submitters raised concerns about the specific nature of the traceability requirement in that it required shell eggs to be stamped. This could impose undue costs, particularly on small businesses. (2011b, p. 44)

FSANZ (2011b) stated that it addressed these concerns by assessing the impact of egg stamping on small producers as part of its RIS.

Weighing up the costs and benefits of egg stamping

The costs of egg stamping were outlined in the RIS for the PPP Standard for Eggs and Egg Products published by FSANZ (2011c). In addition to requirements for egg stamping, the standard includes requirements around waste disposal, ensuring producers have the necessary food safety skills and knowledge, bird health and other food safety elements. The purpose of the standard is to reduce the incidence of foodborne illness from *Salmonella* bacteria by minimising the prevalence and concentration of this pathogen in eggs and egg products (FSANZ 2011b).

FSANZ (2011c) estimated that the initial cost to the industry of egg stamping would be almost \$3 million, with additional ongoing annual costs of about \$1.9 million. When divided between small and large egg producers, FSANZ estimated that \$2.8 million of the initial cost would be borne by large egg producers (those with more than 600 hens) and \$106 900 by small egg producers. Of the ongoing annual cost, \$800 000 would be borne by large producers and \$1.1 million by small producers. The costs of egg stamping represented about 65 per cent of the total costs of the standard. The compliance costs for egg producers and processors in Queensland and Tasmania were excluded from the RIS as these businesses were already required to comply with a comparable food safety scheme.

The NSW Egg Farmers' Association (sub. 7) said that the RIS underestimated the cost of egg stamping. It estimated that, for large producers, realistic costs were \$3.9 million in initial costs and \$1.1 million in ongoing costs. It agreed with the FSANZ estimates for small producers.

Safe Food Production Queensland (sub. DR135) submitted that for 83 per cent of small egg producers in Queensland surveyed, it costs \$100 or less to purchase the necessary stamping equipment, and \$100 or less per year to maintain the equipment. The Tasmanian Government (sub. DR287) also considered that there was no significant time cost associated with egg stamping, as stamping either occurs during automated packing and grading processes, or takes 10-20 seconds per dozen where hand-held stamps are used.

In 2009, the Commission estimated the cost of egg stamping in Queensland to be in the order of 0.4 cents to 2.7 cents per dozen eggs for businesses using a stamping machine, and around 1 cent per dozen eggs for businesses hand-stamping their eggs (PC 2009).

In some jurisdictions, governments have introduced measures to mitigate the costs of egg stamping for small producers.

- In Victoria, there is an exemption from egg stamping for producers with fewer than 50 chickens, and producers of duck and quail eggs (VDEDJTR 2016a).
- In New South Wales, an exemption applies for egg farmers that produce less than 20 dozen eggs a week and sell them direct from the farm gate, or use those eggs in a fundraising activity where the eggs will be cooked (NSW Food Authority 2015a). The New South Wales Food Authority also provides free hand-held, self-inking stamps to businesses that produce less than a thousand eggs a day (NSW Food Authority 2015a, 2015b).
- Biosecurity Tasmania provides handheld stamps to registered businesses that produce less than 20 dozen eggs per week (Biosecurity Tasmania 2016).

The benefits of egg stamping are difficult to ascertain. Although the RIS assessed the benefits of the PPP standard, it did not identify what proportion of these were due to egg stamping. In addition, no analysis was conducted on the additional benefits that egg stamping would deliver compared to alternative traceability systems, such as labelling on egg cartons or requiring restaurants and caterers to keep records of the eggs they receive. FSANZ expected that the standard as a whole would reduce the burden of egg-related disease by 20 to 50 per cent (estimated conservatively), improve the reputation of producers, reduce the risks that producers face in an outbreak, and deliver savings to government through reduced surveillance, recall and investigation of outbreaks.

Egg traceability in the retail sector

Most eggs for retail sale in Australia can be traced using the information on egg cartons. Under Standard 1.2.1 of the Food Standards Code, food in a package for retail sale must have a label that states the:

- name of the food
- lot identification number (or other information that allows lot identification)
- name and address of the supplier

-
- use-by or best-before date.

Eggs that are not sold in cartons are not covered by the regulation. However, as the majority of consumers buy eggs from supermarkets and other retail outlets where cartons are used (FSANZ 2009), eggs sold without cartons make up a small proportion of the retail egg market. And, as discussed below, consumers who buy eggs that are not sold in cartons are likely to know the source of their eggs.

Egg stamping has the potential to enhance traceability if eggs cannot be traced using information on cartons. Roberts and Runge (2011) suggest that egg stamping could deliver benefits where eggs are swapped between cartons at retail outlets or where consumers reuse egg cartons, particularly at farmers' markets.

It is unclear how often consumers swap eggs between cartons at retail outlets. The Commission did not find evidence that egg swapping is a widespread practice, and while some consumers do check individual eggs within a carton before purchase (FSANZ 2009), it is more likely that they would return the carton to the shelf and select another if they are unsatisfied with the quality of the eggs. The Commission heard that some retailers do consolidate eggs (of the same brand) from different cartons where there are broken eggs.

Consumers could move eggs to a different carton or container at home, after purchase, because of a broken egg. A consumer survey by FSANZ (2009) found that 35 per cent of consumers do this. They could also be consolidating eggs from different cartons. Egg stamping allows eggs to be identified even if they are removed from their carton. However, other policy options could achieve the same objective at a lower cost. Consumer education, for example, could communicate the importance of egg traceability and encourage consumers to retain traceability information.

Some consumers do reuse egg cartons. FSANZ (2009) found that 16 per cent of households 'always' or 'almost always' reuse egg cartons, while 15 per cent 'sometimes' reuse them. However, egg cartons are more likely to be reused by households that obtain their eggs from backyard producers, their own chickens or farmer's markets, compared to households that buy their eggs from supermarkets (FSANZ 2009). It is not clear that egg stamping in these instances would confer significant additional traceability benefits, as end-consumers are likely to know the source of their eggs. And regardless, eggs in reused cartons may not always be stamped, either because they are not being sold, or because of the exemption for small egg producers in some states.

In 2005, when the New South Wales Government introduced a food safety scheme for eggs (which did not include a requirement for egg stamping), the New South Wales Food Authority acknowledged that labelling requirements were sufficient to enable traceability.

The Australian New Zealand Food Standards Code Standard 1.2.2 presently requires traceability of food back to the manufacturer or supplier by printing name of food, lot identification, and name and address of the supplier on the carton. The requirement for lot identification can be satisfied by Standard 1.2.5 Date Marking of Packaged Food ... There is no

further requirement for stamping of eggs or use of a unique identifier. (NSW Food Authority 2005, p. 27)

It also noted that there would be ‘a need for some education and enforcement of traceability where recycled cartons are used’ (NSW Food Authority 2005, p. 27).

Egg traceability in the catering sector

Requirements under the Food Standards Code also enable traceability for eggs sold to restaurants and caterers. Under Standard 1.2.1, food sold to a caterer in a package must have a label that has lot identification information and date markings (among other things). If the food is not sold in a package, such information must be provided to the caterer with the food. The information required on labels of food for retail sale, including the name and address of the supplier, must also be provided to caterers. In instances where catering packs (trays overwrapped with plastic) are used, these requirements would apply.

In addition, under Standard 3.2.2, food businesses must be able to provide the name and address of the supplier of any food they receive, if asked by a regulator. This requires food businesses to maintain records. Businesses engaged in the wholesale supply of foods must also have a system to ensure the recall of unsafe food. Standard 3.2.2 enables traceability one step forward and one step back at every stage in the supply chain (FSANZ 2012).

Does egg stamping deliver superior traceability compared to other arrangements?

While egg stamping identifies the source of individual eggs, it does not necessarily improve traceability compared to other arrangements such as labelling egg cartons or requiring businesses to keep records. For example, egg shells are likely to be discarded immediately after use, before an outbreak occurs or an investigation commences. It is therefore unlikely that ‘the source of the problem ... will usually be immediately identifiable from the product itself’ (Tasmanian Government, sub. DR287, p. 17).

FSANZ said that:

While it is correct that consumers and food businesses will have discarded contaminated eggs they have used, other stamped eggs are likely to still be in the pack, which will assist in tracing the source of an outbreak. (2011a)

However, it is unclear why in this case stamping individual eggs would be preferable to providing identification information on the pack itself. In the case of catering packs, egg producers could provide their unique identification on the underside of the tray.

Egg stamping is also unlikely to be able to identify the implicated farm where eggs from multiple sources are comingled at a food business, or where large quantities of eggs from multiple cartons or trays are used in a food product. As with the use of labels or invoices, relying on stamped eggs remaining on the premises would only allow the various suppliers

of the food business to be identified, rather than the supplier of the eggs that caused the outbreak.

Egg stamping may offer superior traceability compared to relying on invoices if there is a long chain of resale, and traceback to the original farm would require gathering invoices from multiple businesses throughout the supply chain. However, a requirement to provide a farm identifier as part of invoices or product packaging throughout the supply chain would enable the producing farm to be easily identified.

Where does that leave us?

Egg stamping is unlikely to be the most effective nor efficient method of egg traceability, especially in light of requirements that are already in place in the retail and catering sectors. If supplier details are insufficient to trace eggs back to their originating farm (because the supplier is not necessarily the producer), a requirement to provide producer details on invoices, labels, or product packaging could replace the egg stamping requirement in the PPP standard.

In the absence of a regulatory requirement, producers may still choose to stamp their eggs if they believe it is in their interest to do so. Stamping eggs can protect producers against recalls if there is an outbreak caused by pathogens originating from another farm. Producers may also choose to stamp their eggs with a Julian date⁵¹ so that any recalls of their products can be limited to those with particular Julian dates. This is a commercial decision that producers can make if they believe that there is a net benefit.

RECOMMENDATION 10.3

Food Standards Australia New Zealand should remove the requirement for egg stamping under the Primary Production and Processing Standard for Eggs and Egg Products, unless it can be shown through a transparent and rigorous cost–benefit analysis that egg stamping is more effective and confers higher net benefits compared to alternative traceability methods.

Food safety audits

Food safety audits are required by governments for regulatory purposes. They can also be required by commercial customers, such as supermarkets and quick-service retailers, to satisfy commercial quality assurance programs. Businesses may undergo multiple audits by different levels of government, different commercial customers, or both.

⁵¹ Julian dates are a three-digit number identifying the day of the year that the egg was produced. For example, a stamp showing 001 indicates that the egg was produced on 1 January.

Commercial food safety audits

Participant concerns about the burden imposed by food safety audits primarily related to commercial audits, including that they were often more burdensome than regulatory audits. For example, Voice of Horticulture said that:

One major fruit grower from Western Australia experiences 10 different audits each year and needs to employ a person 3 days a week to ensure all compliance policies are met. Most of the different audits are required by supermarkets. The audits are either related to employment, safety or product integrity and due to differing requirements from different buyers (supermarkets) cost the business approximately \$150 000 per annum. (sub. 42, p. 25)

The AFGC and AMIC also provided an example from the meat industry.

One of the more extreme examples is a multi-species plant in Victoria with multiple market access listing receiving almost 200 days of audit per year not including the regulators audit and Department of Agriculture on-site veterinarian's verification activity. This processor actually employs additional staff just to deal with audits and their follow up. (AFGC, sub. 28, p. 18; AMIC, sub. 77, p. 9)

Producers can be required to undergo multiple commercial audits if customers require different standards to be met. Many of the large supermarkets and quick-service retailers, such as Coles and McDonalds, have bespoke company standards, and some customers use industry standards such as the British Retail Consortium Global Standard for Food Safety (Annisson and Fleming 2015). The AFGC (sub. 28) noted that retailers use commercial audits to differentiate themselves in the marketplace, which explains the lack of mutual recognition between audits and the need to undergo multiple audits.

While multiple commercial audits can impose high costs on producers, these are not the result of government regulation. Government action would only be warranted if large retailers were unfairly using their market power to transfer the risks or costs of doing business to producers through audits. Competition issues are discussed in chapter 12.

Retailers should have the ability to use commercial audits to ensure safe, high-quality food where consumers demand this, and to protect or enhance their reputation. If the costs and number of commercial audits are unacceptable to producers, parties within the food industry should negotiate to achieve mutually acceptable outcomes. The food and horticulture industries are currently working together to reduce the number of commercial audits that horticultural producers face (box 10.12).

Box 10.12 The Harmonised Australian Retailer Producer Scheme

In 2012, Horticulture Innovation Australia Limited, at the request of the fresh produce industry, initiated a project to harmonise the food safety certification requirements of the major grocery retailers for the growing and packing of whole produce. The aim of the project was to reduce the time and cost to producers of complying with multiple quality assurance schemes when supplying multiple retailers.

The project has resulted in five major supermarket retailers — Aldi, Coles, Costco, Metcash (IGA) and Woolworths — working collaboratively to develop the Harmonised Australian Retailer Producer Scheme (HARPS). Under HARPS, producers of fresh horticultural produce supplying direct to one or more retailers will be required to be audited against 60 food safety elements, which have been harmonised from over 200 bespoke company elements, plus one of the following internationally recognised standards:

- the British Retail Consortium Global Standard for Food Safety, Issue 6
- the GlobalG.A.P. Integrated Farm Assurance Scheme, Version 5
- the Safe Quality Food Institute Code, 7th Edition Level 2
- Freshcare Food Safety and Quality Code of Practice (provisional pending benchmarking by the Global Food Safety Initiative, which is expected to be achieved by late 2017).

Implementation of HARPS will be managed by Kitchener Partners and PMA Australia-New Zealand Limited, beginning in late 2016. The HARPS project team has estimated the project to generate savings of \$40 million per year.

Sources: Kitchener Partners (pers. comm., 5 May 2016); PMA A-NZ (pers. comm., 5 May 2016).

Regulatory food safety audits

Regulatory food safety audits are conducted by, or on behalf of, regulatory authorities to verify compliance with domestic food safety regulations or to satisfy export requirements. Businesses are generally audited against a food safety management program which is approved by the relevant authority, and which may be a condition of a business licence. Food safety management programs identify potential food safety hazards and document the systems used to manage them. The Western Australian Government explained that:

... [t]he purpose of food safety audits is to ensure that a food business is adhering to its food safety program/quality assurance system, and hence, safe food production and processing requirements. This not only provides assurance to government and the public as to the safety of the food, but also demonstrates to international markets that there are adequate controls in place to protect Australia's clean, green and safe food environment, and maintain a viable and attractive export market for agriculture. (sub. 54, p. 40)

Under the domestic food regulation system, primary producers such as dairy businesses, producers and processors of eggs and egg products, and businesses that handle, process or store meat are required to have food safety management programs. Businesses that export food (except for exporters of plants and plant products) are required to have Approved Arrangements, which include food safety management controls. Domestic food audits are

required by state and territory authorities, while audits for export purposes are required by the Australian Government.

Audit duplication can arise if export establishments are required to undergo audits by both state and Australian Government regulatory authorities. The AFGC said that:

The State authorities are primarily responsible for food safety. Due to export certification requirements the Commonwealth has also become involved. There are overlaps between State and Federal jurisdictions in this area. (sub. 28, p. 18)

The Western Australian Government also submitted that:

Some food businesses undergo audit or inspection by a state and federal regulator ... and can subsequently be inspected by a local government officer ... (sub. 54, p. 38)

However, no specific examples were identified. Governments have sought to reduce overlap between audits for export and domestic purposes, for example by having agreements that allow one authority to conduct audits on behalf of the other (DAWR, pers. comm., 5 April 2016). The South Australian Government (sub. 58) said that a memorandum of understanding between DAWR and Primary Industries and Regions South Australia has allowed audits for domestic and export purposes in the red meat industry to be streamlined to a large degree. Similar arrangements exist in the dairy sector (box 10.13).

DAWR (pers. comm., 5 April 2014) also said that work to streamline domestic and export audits has been undertaken for prescribed goods including eggs, poultry, meat and game products, although some of this work is yet to be completed.

Other measures that governments have adopted to reduce the burden of regulatory food safety audits include:

- risk-based auditing, where audit frequency depends on the outcomes of previous audits. For example, all food businesses in New South Wales and South Australia are subject to risk-based auditing (NSW Food Authority 2016; SA Health 2016)
- the National Food Safety Audit Policy, which promotes national consistency in the management of food safety audits and auditors (Implementation Sub-Committee of the Food Regulation Standing Committee 2006)
- allowing businesses to employ third-party auditors to conduct audits. For example, DAWR trains and approves third-party Approved Auditors to carry out regulatory audits of export establishments (DAWR 2016d). Some state authorities also approve third-party auditors, who may be authorised to conduct audits for both domestic and export purposes, such as in the dairy industry (box 10.13).

The ability for governments to reduce the burden of regulatory audits may be limited by importing country requirements. For example, establishments that prepare or store meat for export to the United States may only be audited by an auditor employed by DAWR (DAWR 2016d). Although these requirements cannot be directly controlled by the Australian Government, the Government can use its influence in trade negotiations and

international trade fora to minimise duplication due to importing countries' audits (chapter 14).

Overall, the Commission considers that DAWR and state food authorities have made good progress in reducing the burden of regulatory food safety audits.

Box 10.13 Food safety audits in the dairy sector

Under Standard 4.2.4 of the Food Standards Code, dairy production, transport and processing businesses must control potential food safety hazards by implementing a documented food safety program. A food safety program is also required by state and territory dairy authorities as a condition of a dairy business' licence. Audits are required to ensure that a dairy business is complying with their food safety program, and that the food safety program remains adequate for the business' activities.

Dairy establishments that export products are also required to be registered with the Australian Government Department of Agriculture and Water Resources. For a dairy establishment to gain export registration, it must have an Approved Arrangement (AA), which is a documented food safety management system that describes how it manages food safety and traceability. Dairy export establishments are audited at least annually to ensure that they meet the requirements in their AAs and in export legislation.

The Australian, state and territory governments have worked together to reduce the burden of food safety audits on dairy businesses. Once a new AA has been approved by the Department of Agriculture and Water Resources, state and territory dairy authorities are responsible for ensuring that businesses continue to comply, and for conducting audits on behalf of the Australian Government. Dairy businesses can engage third-party approved auditors to conduct audits for domestic purposes, and Authorised Officers can be engaged to conduct audits for both domestic and export requirements. The Australian Dairy Farmers explained that:

This enables a single regulatory audit system to be implemented to meet both domestic (state) and export requirements. This has also reduced overall dairy export certification costs and reduced the need for multiple audits. (sub. 63, p. 6)

The dairy industry supports these arrangements. Australian Dairy Farmers stated that 'it is important that this model is maintained' (sub. 63, p. 6). The Australian Dairy Industry Council Inc. and Dairy Australia went further, saying that 'this is a good system that needs to be actively promoted, and could be considered as a model for other industries' (Australian Dairy Industry Council and Dairy Australia 2014b, p. 36).

Sources: DAWR (2015c, 2015u, 2016j); DFSV (2016).

The cumulative burden of commercial and regulatory food safety audits

As noted above, concerns about food safety audits primarily related to commercial audits, and responsibility for reducing the burden of commercial audits lies with the private sector. However, regulatory audits can add to the cumulative burden faced by producers, and, as the Tasmanian Government (sub. DR278) said, producers often do not distinguish between the mandatory audits imposed through regulations and the quality assurance systems.

Harmonisation or mutual recognition of regulatory and commercial audits has the potential to decrease the cumulative burden of food safety audits felt by producers.

The Western Australian Government (sub. 54) noted that numerous attempts have been made over the years by government and industry to harmonise regulatory and commercial food safety schemes or to effect mutual recognition, and these have been without success due to the different purposes of the audits. The South Australian Government also highlighted that many of the requirements of commercial audits are:

... based on quality as well as food safety, and the food safety requirements do not always align with the Code and they are inconsistent between supermarket chains. (sub. 57, p. 28)

In many instances, the objectives of food safety authorities and producers are aligned, as unsafe food jeopardises both public health and producers' profitability. However, producers are also likely to face incentives to provide high quality food, and therefore commercial audits often have more stringent standards directed at food quality over and above safety. A harmonised set of standards is unlikely to satisfy both commercial customers' demands and the principle of minimum effective regulation.

Rather than creating a harmonised set of standards, authorities could recognise situations where compliance with a commercial quality assurance program satisfies regulatory requirements, and waive the requirement to be re-audited, or reduce the frequency of government audits. The Western Australian Government (sub. 54) said that where private sector audits were in full compliance with regulatory food safety standards, mutual recognition by governments should be achievable.

The Department of Industry, Innovation and Science (sub. DR258) also submitted that there is scope to reduce duplication through increased recognition of commercial audits by regulatory authorities. This is in line with recommendations from previous inquiries to pursue work to increase recognition of private sector food safety standards as a means of reducing the food safety audit burden on businesses (RRC 2013; SSCAFPS 2012).

The Commission supports such an approach in principle. However, ultimate responsibility for administering the food safety regulatory scheme should continue to rest with governments. Food safety authorities would need to retain appropriate powers — such as the ability to require commercial auditors to report significant breaches to authorities, or the ability to conduct subsequent audits — to ensure compliance with food safety standards.

RECOMMENDATION 10.4

The Department of Agriculture and Water Resources and state and territory food safety authorities should determine whether regulatory food safety audits could be reduced by recognising compliance with commercial quality assurance programs.

Food regulation in the honey sector

Two participants — the Australian Honey Bee Industry Council (AHBIC, sub. 34) and Herta Klein (sub. 38) — raised concerns about food regulation in the honey sector, in particular with Standard 2.8.2 of the Food Standards Code (the honey standard) and its enforcement. The AHBIC pointed to inadequacies regarding the honey standard, noting that it:

... has been lobbying for a new honey standard for Australia for several years now without success. The answer given by Food Standards Australia and New Zealand (FSANZ) is that this is a quality issue and not a food safety issue. (sub. 34, p. 4)

Herta Klein also said that:

The honey standard as set out in the Australia New Zealand Food Standards Code ... is too brief and requires updating. The fake honey discovered on sale in Victoria highlights the need for a standard that defines what honey is beyond simply stating the glucose and fructose levels, and moisture range. (sub. 38, p. 4)

This refers to an incident in 2014 involving Basfoods Australia, where products labelled ‘Victoria Honey’ were found to comprise mainly of sugars from plants, including corn and sugar cane. The ACCC issued three infringement notices on the grounds that it believed Basfoods’ labelling and information on its website contained false or misleading representations. Basfoods admitted that its conduct contravened the ACL and paid penalties totalling \$30 600 (ACCC 2014a).

AHBIC (sub. 34) submitted that prior to this, it had found products labelled as honey that were not honey but most likely corn syrup. It lodged a complaint with the Victorian Department of Health, which is the authority responsible for enforcing the honey standard in Victoria. The response that AHBIC received was that:

... even though it was most likely in breach of 2.8.2, as it was not a health issue, they would not act. (sub. 34, p. 4)

Herta Klein (sub. 38) also claimed that labelling standards for honey are seldom enforced in Queensland. In the event of a food safety incident, the lack of labelling could mean that products cannot be traced, and Australia’s export competitiveness could be jeopardised.

In order to encourage productivity and competitiveness in the food industry, it is important that governments enforce food standards where they are in place. There is also a need to review regulations periodically to ensure that they remain relevant. In the case of honey, relevant and enforced regulations will complement provisions in consumer law that prohibit false and misleading conduct. In addition, there is opportunity for the honey industry to develop a voluntary certification scheme to increase consumer confidence, and allow producers of high-quality honey to differentiate themselves in the marketplace.

11 Labour regulation

Key points

- Labour costs, flexible workplace arrangements and access to workers in rural and remote areas are important for the competitiveness of farm businesses. While many farm businesses are family-run (and hire few ongoing workers), some farm businesses (especially those in horticultural industries) rely on temporary migrant workers (particularly backpackers) to meet seasonal labour demands.
- Farmers mainly hire working holiday makers to fill their seasonal labour needs. To a lesser extent, farmers also meet their seasonal labour needs through the Seasonal Worker Programme and sponsored temporary skilled workers (visa subclass 457).
- Participants raised concerns about recently proposed increases to income tax rates for backpackers and compulsory superannuation payments for temporary residents. Following a review, the Government revised down its proposed tax change, and proposed increasing the tax on the superannuation that working holiday makers claim when leaving Australia. With this change, nearly all working holiday makers' superannuation would be collected as tax, but a portion would be collected by superannuation funds as management fees. Alternative approaches to collecting the tax on working holiday makers' superannuation should be examined.
- Many of the concerns raised about accessing temporary skilled migrants were addressed by a recent *Independent review of the 457 programme* (the Azarias review). This review recommended: streamlining the processing of sponsorship, nomination and visa applications; improving the assessment of labour market shortages; and expanding the Consolidated Sponsored Occupations List to include emerging skilled occupations.
- Overtime and penalty rates can impose significant costs on farm businesses that employ workers outside ordinary hours and on weekends. The three-hour minimum shift for part-time and casual employees under the Pastoral Award and parts of the Horticulture Award were seen as inflexible, adding to farm business costs.
 - The Fair Work Commission is currently looking at these issues as part of its review of all modern awards. The Productivity Commission's Workplace Relations Framework inquiry recommended amendments to the modern awards objective that should assist the Fair Work Commission in its decisions.
- Agricultural work health and safety (WHS) risks are diverse, particularly as many farmers live and work on their property. Agricultural workers have amongst the highest rates of fatality and serious workers' compensation claims across industries. Concerns included the perceived and actual regulatory burden arising from the number of requirements, and the level of responsibility placed on employers and employees.
 - Regulators have taken steps to improve information dissemination to businesses, and have reviewed parts of WHS laws to reduce their regulatory burden. WHS laws are due to be comprehensively reviewed in 2017.

Labour costs, flexible workplace arrangements and access to workers (both high and low skilled) are important for the competitiveness of farm businesses. The National Farmers' Federation (NFF) said that:

Australian businesses face a distinct disadvantage in competing with international competitors when it comes to labour input costs ... This is why flexible regulation and streamlined and efficient processes in place to manage workplace relations are so important in the Australian context to ensure that Australian agriculture is globally competitive. (sub. 61, p. 33)

Growcom also noted that its 'consultation with individual growers has consistently identified red tape around labour as their number one issue' (sub. 43, p. 1).

Labour costs vary across agricultural industries (table 11.1). ABARES farm survey data show that labour directly employed by farmers (excluding contractors, such as those hired through labour hire companies) accounted for between 3 to 6 per cent of an average broadacre or dairy farm's total costs in 2013-14. The share is higher (16 per cent) for vegetable growing farms, which, like other horticultural farms, are typically more labour intensive.

Table 11.1 Labour costs vary across agricultural industries
2013-14

<i>Farm type</i>	<i>Hired labour^a (\$)</i>	<i>Share of total cash costs^b (%)</i>
Dairy	37 264	6.4
Vegetable growing ^c	116 200	16.3
<i>Broadacre farms</i>		
Livestock and crops	10 923	3.1
Sheep	7 753	4.2
Beef	10 507	5.3
Sheep and beef	9 536	4.9
Wheat and other crops	27 456	3.6

^a Hired labour refers to wages paid to permanent and casual workers, but excludes contractors such as shearers and wool classers. ^b Cash costs exclude capital expenditures (such as depreciation) and household expenditures. ^c Preliminary data.

Sources: DAWR (2016e, 2016f); Mifsud and Valle (2015).

Labour costs also vary across individual farms. Many farms are family-run and hire few ongoing workers. In 2015, 71 per cent of farms employed no workers (excluding contractors) and just one per cent employed 20 or more workers (ABS 2016f).

However, farmers are major employers of seasonal workers. Voice of Horticulture noted that 'in peak harvest periods, some growers can have an additional 100 plus employees on the books at any one time' (sub. 42, p. 41).

In a joint submission to an inquiry into the Seasonal Worker Programme, the Department of Employment; the Department of Immigration and Border Protection; the Department of Agriculture; and the Fair Work Ombudsman said that:

The horticulture industry faces dramatic but predictable seasonal peaks in demand for labour. During harvest the numbers of workers required by horticulture enterprises typically increases more than ten-fold, from a small base of permanent staff. The peak in labour demand is often regionally concentrated, as the crops of a number of enterprises across a region will ripen and require harvesting at similar times. (2016, p. 9)

The submission also noted that it is challenging for industry to ‘develop permanent local labour pools, despite attempts to source both local job seekers and other Australian labour’ (2016, p. 9).

Some evidence also suggests that hiring local workers may be difficult because they are unwilling to work on farms or relocate for agricultural jobs (JSCM 2016). Cotton Australia said that ‘while there are issues of unemployment occurring, that doesn’t necessarily translate to being able to access that labour on farm’ (trans., pp. 284–285).

As such, many farmers rely on overseas workers to meet their seasonal labour demands, which is facilitated by aspects of Australia’s migration system. Farmers also use contractors to meet their labour demands or to carry out specific activities, such as shearing.

This chapter looks at: the distinctive features of labour markets and why governments intervene (section 11.1); access to overseas workers and taxation and superannuation payments for temporary overseas workers (section 11.2); workplace relations, including overtime and penalty rates, and the prescribed minimum length of shifts (section 11.3); and work health and safety (section 11.4).

11.1 The role of government in labour markets

Labour markets have distinctive features that differentiate them from other competitive markets (box 11.1) and governments intervene in several ways, including by providing:

- a workplace relations framework. This governs the way that employers and employees negotiate to set wages and conditions. Australia’s workplace relations framework aims to address imbalances in bargaining power to ensure that parties can achieve outcomes that are fair (PC 2015e)
- migration and visa programs. Labour market objectives has become a prominent motivation for accepting immigrants from many countries (although migration and visa programs also address a range of other economic and social objectives). Migration, particularly temporary migration, can help meet labour shortages in a timely fashion (PC 2016a)

- work health and safety regulations. These aim to protect the health and safety of people engaged in work. While in many cases employers and employees recognise the importance of health and safety at work, they may face insufficient incentives to prevent injury or disease, or have insufficient knowledge of how to manage workplace risks (PC 2004b).

Box 11.1 Characteristics of labour markets

Although no market completely aligns with the model of a perfectly competitive market, labour markets can be more imperfect than others due to the following features.

- *Information asymmetries:* Jobseekers may find it difficult to know the extent of competition for a job, levels of remuneration and conditions for a comparable employment opportunity, and the non-wage conditions of a new workplace (such as workplace morale or the behaviour of managers). Similarly, employers may find it difficult to evaluate a potential employee's skills or personal attributes, and other opportunities or offers the employee is considering.
- *Search costs:* Job searching is costly, as is recruitment. It is also an uncertain process — parties usually make and receive offers in a sequential fashion, and so must consider the likelihood of receiving a better offer or applicant in the future.
- *Impediments to individuals freely entering and exiting the labour market:* Many people do not have sources of non-labour income or savings to support themselves if they do not work. Even where safety nets such as unemployment benefits are available, the personal and social costs of unemployment mean that many people may not see exiting unsatisfactory employment as a viable alternative.
- *Barriers that limit the mobility of labour between segments of the labour market:* Factors such as age, family circumstances, education, life events, dual-income households, housing, employment factors and local infrastructure can be significant determinants of an individual's labour mobility. These factors mean that labour may be less mobile than other production inputs (for example, raw materials or machinery).
- *Employers that wield substantial purchasing power in the labour market (monopsonies):* While 'one company towns' (the traditional example of a monopsony) are generally considered a relic of the past, monopsonies still persist in some sectors. These include government services such as health, education, policing and defence, or where the skills required by firms are sufficiently differentiated ('monopsonistic competition').

Sources: PC (2014b, 2015e).

11.2 Access to overseas workers

Access to overseas workers, as noted by a number of participants, is particularly important for the agricultural sector. The NFF, for example, said that:

Migration programs provide an essential source of labour for many Australian farmers. The seasonal nature of agriculture, and its location in rural and remote areas of Australia, often makes it difficult to attract and retain Australian workers. (sub. 61, p. 38)

The West Australian Pork Producers Association noted that piggeries employ overseas workers because:

... the inability to obtain skilled employees for piggeries is identified as a significant risk to the viability of pork producing operations and a threat to the industry's ability to meet local and international demand through expansion of operations. (sub. 24, p. 7)

Access to overseas workers is also important for agribusinesses. The Australian Food and Grocery Council noted that:

Improved access to overseas workers where suitably qualified staff, or an insufficient number of locals, are not available is critical to the competitiveness of the agribusiness, food and grocery manufacturing sector in Australia. (sub. 28, p. 9)

Farmers mainly hire working holiday makers (on Working Holiday (subclass 417) and Work and Holiday (subclass 462) visas), to fill their seasonal labour needs (box 11.2). In 2015-16, at least 34 000 working holiday makers (DIBP 2016i) worked in the agricultural, forestry and fishing industry.⁵²

In a recent survey of 74 Northern Territory horticultural farms, farmers estimated that working holiday makers filled 51 per cent of positions in a year on their farms (McGregor Tan Research 2016).

To a lesser extent, farmers also meet their seasonal labour needs through the Seasonal Worker Programme (visa subclass 416). The Government initially allocated 2600 seasonal worker places in 2014–2015 to the horticultural sector (the main agricultural industry to use the program) (DoE 2015a). However, in June 2015, the Government announced that it will remove annual limits on the number of seasonal workers that can participate (Bishop and Robb 2015). The Government also announced in February 2016 that it will expand the Seasonal Worker Programme to include cattle, sheep, grain and mixed enterprises (Cash and Joyce 2016).

Farmers sponsor temporary skilled workers (visa subclass 457) from overseas when domestic skilled or trained staff are unavailable. There were 2100 primary subclass 457 visa holders employed in the agricultural, forestry and fishing industry in June 2015, with about 700 new subclass 457 visa holders sponsored in 2015-16 (DIBP 2016d).

While representatives of farm businesses noted the importance of accessing overseas workers to address labour shortages in the agricultural sector, they also drew attention to compliance costs and features of the temporary migrant programs that, in their view, limit their access to overseas workers.

⁵² This estimate is based on the number of 417 visa holders who were granted a second working holiday visa by working at least 3 months in the agricultural, forestry and fishing industry.

Box 11.2 Temporary migration programs

The *Temporary Work (Skilled)* (subclass 457) visa allows skilled workers to come to Australia and work for an approved business for up to four years. A business can sponsor someone for this visa if they cannot find an Australian citizen or permanent resident to do the skilled work. Visa holders must have a satisfactory level of English-language proficiency (with some exceptions).

They generally must also work in a skilled occupation on the Consolidated Sponsored Occupations List. An exception is available through the use of a labour agreement, which allows an employer to negotiate with the Australian Government to recruit workers for occupations that are not on the Consolidated Sponsored Occupations List. In negotiating these agreements, the employer must identify the relevant skill shortage and demonstrate why Australian workers cannot fill these jobs.

The *Working Holiday Maker* program allows young adults (which currently includes those aged 18 to 30) from eligible partner countries to work in Australia for one year while having an extended holiday. Work in Australia must not be the main purpose of the visa holder's visit. The *Working Holiday Maker* program includes the *Working Holiday* (subclass 417) and *Work and Holiday* (subclass 462) visas. Working holiday makers can generally work with one employer for a maximum of six months; but as of late 2015, those working in particular industries in Northern Australia, including agriculture, can ask to stay at their job for an additional six months at most. Migrants on a Working Holiday (subclass 417) visa can apply for a second working holiday visa for another year if they work for at least three months in agriculture, fishing, mining or construction in regional Australia.

The *Seasonal Worker Programme* (Special Program visa subclass 416) provides approved employers with access to seasonal workers from participating countries (including: Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, East Timor, Tonga, Tuvalu and Vanuatu). These workers can stay in Australia generally for up to seven months in any 12 month period. Seasonal Workers may return in following seasons, providing employers with access to a returning, reliable and productive workforce. Intergovernmental memoranda of understanding were signed by the Australian Government and the governments of these participating countries to enable the citizens who are residents of these countries to participate in the programme.

Sources: DIBP (2016c, 2016d, 2016f, 2016h, 2016i).

Issues raised around accessing seasonal workers

Tax rates for 'backpackers'

A major concern for farm businesses was the proposed changes to tax rates for working holiday makers.

In the 2015-16 Federal Budget, the Australian Government announced plans to change the tax status of most temporary working holiday makers, from resident to non-resident commencing 1 July 2016 (Treasury 2015a). But the Australian Government delayed implementing the changes pending an interdepartmental review (O'Dwyer 2016), which was initiated following concerns raised about the impact of what has become known as the

‘backpacker tax’ (NFF 2016b) on the competitiveness of industries such as agriculture and tourism (O’Dwyer 2016).

Under the current arrangements, people temporarily in Australia for a working holiday can access resident tax treatment typically if they are visiting Australia for more than six months⁵³. Resident tax treatment includes: the tax-free threshold; the low income tax offset; and the lower tax rate of 19 per cent for income between \$18 200 and \$37 000 (ATO 2015b, 2016i; Treasury 2015a). This is in line with tax arrangements in the United Kingdom, Canada and New Zealand that generally treat working holiday makers as residents (Canada Revenue Agency 2016; Inland Revenue 2015; UK Government 2016). Under the proposed change, working holiday makers were to be taxed as non-residents at 32.5 per cent from their first dollar of income. For example, a working holiday maker who earned \$15 000 in a financial year would pay \$4875 in income tax.

Some suggested that taxing backpackers at a higher rate would act as a disincentive for backpackers to work in Australia (as they would choose countries with lower tax rates).⁵⁴ For example, West Australian Pork Producers Association said that:

Pork producers use itinerant labour from time to time. Currently people on working holiday visas who are here for more than six months pay no tax until they reach the \$18 000 threshold. A change to be implemented from July 1 [2016] will mean these workers will pay 32.5 cents in tax for every dollar of income up to \$80,000. This is a strong disincentive for backpackers to work in the regions undertaking work that is difficult to satisfy with local labour. A compromise should be found to address this issue. (sub. 24, p. 7)

The Chair of the NFF Workforce Productivity Committee also said that:

Taxing backpackers at a rate of 32.5 per cent will make work in Australian agriculture a highly unprofitable proposition ... Furthermore, it will lead to reduced agricultural productivity and will strip regional communities and businesses of much needed tourism spending ... Already we are seeing signs that the proposed tax rate of 32.5 per cent is scaring working holiday makers away from Australia. In nations like Canada and New Zealand, they are just as likely to be able to find farm work that attracts substantially lower amounts of taxation ... Any further decline will only exacerbate the current trend of 12 per cent fewer backpacker arrivals to Australia each year. (NFF 2016b)

One horticultural grower noted ‘that the tax paid by working holiday makers on a standard 38-hour week would increase [under the proposed change] from \$109 to \$256 and that while this might be acceptable working in a café on the Cairns Esplanade, labourers

⁵³ Currently, a person visiting Australia for more than six months who lives at the same place for most of that time, and either has or establishes ties in the local community is an Australian resident for tax purposes. However, a person visiting Australia for less than six months, or more than six months and is travelling and working in various locations around Australia for most of that time, is a foreign resident for tax purposes (ATO 2016i).

⁵⁴ In principle, a potential working holiday maker will choose the country with the highest after-tax wage adjusted for the cost of living, and also taking into account their preferences to live and work in the various countries.

picking fruit at 40⁰C in Katherine or Mareeba will not bear the change' (Voice of Horticulture, sub. 42, p. 40).

WAFarmers said that they 'would like to see the current system remain in situ; however if changes are required, a tax rate of 19 per cent and the removal of the tax free threshold would be accepted' (sub. DR226, p 29).

As part of its stakeholder engagement for the Australian Government's review, Deloitte noted that:

There was a split in the responses from industry [on the appropriate level of the tax], with some indicating a preference the current tax free threshold to be maintained, while others preferred a lower rate of tax closer to those observed overseas. Of the non-zero rates suggested, 19 per cent was the most common preference ... (2016, p. 6)

Following the review, the Australian Government proposed that from 1 January 2017, working holiday makers would be taxed at 19 per cent from their first dollar of income (Morrison 2016a). At this rate, a working holiday maker earning \$15 000 in a financial year would pay \$2850 in income tax.

While a taxation issue rather than a regulatory one (and therefore outside the scope of this inquiry), the merit of the proposed changes to the tax rates depends on several factors. These include backpackers' decisions to come to Australia and work, as well as effects of the changes on industry and the wider community.

With the proposed change, the Government also announced other related changes including:

- increasing the tax rate imposed on working holiday makers who claim their superannuation when leaving Australia (the Departing Australia Superannuation Payment) from 38 per cent to 95 per cent (discussed below) (Morrison 2016a)
- increasing the upper age limit eligibility for a working holiday maker visa from 30 to 35 years (Morrison 2016e)
- allowing an employer with premises in different regions to employ a working holiday maker for 12 months, with the working holiday maker working up to six months in a region (Morrison 2016a)
- aiming to reduce exploitation and improve data collection by requiring employers of working holiday makers to register with the Australian Taxation Office in order to withhold tax at the 19 per cent rate. Otherwise employers must withhold tax at the 32.5 per cent rate and may be subject to penalties (Morrison 2016a).

Parliament has not yet passed legislation to implement these changes. The Senate Economics Legislation Committee was reviewing these changes at the time this report was finalised (SSCE 2016).

High costs — a barrier to accessing the Seasonal Worker Programme?

Some participants highlighted high regulatory costs as a barrier to accessing the Seasonal Worker Programme and a reason for its limited uptake. The NFF noted the Programme's high upfront cost, which includes paying for workers' airfares (although employers can recoup any transportation costs above \$500 from workers' wages (DoE 2015b)):

The upfront cost to businesses to participate in the program are approximately \$2000 per worker – while much of this cost may be able to be recovered, it has a large cashflow impact (employing 100 workers requires an outlay of approximately \$200 000 before any work is done – or suitability for the work assessed). This requires a leap of faith from a price taking sector which is traditionally risk [averse] and cost conscious. (sub. DR216, p. 50)

Cotton Australia also raised concerns about:

- high administrative costs for farm businesses participating in the program who must provide significant levels of paperwork to the Department of Employment as a small business owner/operator
- under resourcing of the Department of Employment which is not supported in their assessment of broad public interest and individual farm level labour needs
- lack of support for pastoral care of seasonal workers and their initial participation in the program due to high upfront costs such as flight costs to Australia
- lack of support to drive uptake of the seasonal worker program; and
- the length of time it takes from application to actually getting a worker through the seasonal worker program. [This] is somewhat lengthy and does not always suit growers needs for workers on short notice. (sub. DR262, p. 17)

Some research suggests that while the high costs of the Seasonal Workers Programme are an issue, farmers' limited uptake of workers under the Programme is mainly because farmers can readily meet their labour needs in other ways. In 2014, Doyle and Howes (2015) surveyed horticultural employers who were aware of the Programme⁵⁵ but not using it and found that:

- the main reason (61 per cent of employers) for not participating in the Programme was because there was 'no need'
- 14 per cent said the Programme was 'too costly'
- 11 per cent said the Programme was 'too risky' because, for example, they were unsure whether they could guarantee a minimum period of work for Seasonal Workers.

Doyle and Howes concluded that 'the lack of an aggregate labour shortage due to the prevalence of illegal workers and backpackers in the horticulture industry remains the key

⁵⁵ 177 employers responded to the survey. Of those who had heard of the Programme (55 per cent of surveyed employers), 90 responded to the question asking for the main reason for not participating in the Seasonal Worker Programme (Doyle and Howes 2015).

constraint on employer demand for the [Seasonal Worker Programme]' (2015, p. 1). Participants in the Joint Standing Committee on Migration's inquiry into the Seasonal Worker Programme also supported this view (JSCM 2016).

Employers' decisions to hire working holiday makers over workers under the Programme are despite analysis by ABARES which suggested that Seasonal Workers pick more fruit per hour than working holiday makers (Leith and Davidson 2013). Hiring Seasonal Workers, who return each season, can also lead to lower training and recruitment costs when compared with employing working holiday makers. Prima facie, these results suggest that greater use of the Seasonal Workers Programme by farmers could be beneficial.

The Commission's Migrant Intake into Australia inquiry questioned whether the working holiday maker program is delivering the best outcomes for the community as a whole. On working holiday makers' ability to access a visa for a second year, the Commission noted that:

... the initiative is partly aimed at helping employers in regional Australia to meet persistent labour shortages ... However, this is not necessarily consistent with maximising community wellbeing. Directing working holiday makers into regional areas and selected industries, rather than allowing market forces (in particular, wages) to determine where they choose to work, can impose efficiency costs if their labour could be used more productively elsewhere ...

Further analysis is warranted to determine whether inducing working holiday makers to take up regional jobs remains sound policy from an economy-wide perspective. (2016a, p. 388)

And while working holiday makers are not necessarily the most productive type of labour for farmers, they appear to be used because they are readily available and there are fewer barriers to hiring them. Reducing barriers to hiring domestic workers (including the unemployed) and Seasonal Workers could benefit both Australian farmers and the broader community.

Barriers to employing temporary skilled workers

Reforms to reduce compliance costs for sponsors of subclass 457 visa holders

The West Australian Pork Producers Association (sub. 24) and a Queensland cotton farmer (box 11.3) noted the large amount of time they spend dealing with administration related to employing temporary migrant workers, particularly those on subclass 457 visas. They also mentioned the difficulties that they face trying to navigate the system.

There have been a number of recent reforms aimed at reducing the compliance costs of Temporary Work (Skilled) (subclass 457) visas. For example, in October 2014, the Government in its *Industry Innovation and Competitiveness Agenda* proposed streamlining the subclass 457 program to reduce the time and cost to business of getting subclass 457 workers into Australia (Australian Government 2014b).

Box 11.3 **Employing foreign workers — some experiences relayed**

An office manager of a large cotton farming business in southern Queensland recently set out to complete a nomination form to allow the business to employ a foreign worker whose skills could not be matched locally.

The manager told the Commission that she was unable to find the correct forms on the Department of Immigration and Border Protection's website, so she phoned the department's helpline. The manager reported waiting an hour and a half before speaking to someone (but was told that she had reached the wrong office). The manager was then transferred to the correct office. The call was answered after about 30 minutes of waiting on hold.

The manager reported that when she spoke to the correct office, she was given helpful advice about how to set up an account and access the correct forms. However, the manager found the form to be confusing and had difficulty working out which subclass of visa applied to the worker that she planned to employ. The manager again phoned the helpline, and said that she was put on hold for one hour. After being advised about which subclass of visa to apply for, the manager reported that the form took one and a half hours to fill in.

On submitting the form, the office manager received a confirmation email that asked for a series of complementary forms to be submitted in support of the visa application. Again, she noted that it was unclear which forms were required or where to get them from, so she called the helpline again and waited about an hour on hold. Once the call was answered, she was directed to the web page with the required forms.

At the time the Commission spoke to the office manager, the application was incomplete. The supporting documentation required input from the business' Chief Financial Officer to make a case for why no Australian worker was more suitable for the role. The reason for nominating the foreign worker was a lack of local candidates for the position.

The Western Australian Pork Producers Association made similar observations.

Whilst the assistance from individual officers within the Department of Immigration and Border Protection (DIBP) is a high standard, the extent to which they can help is hampered by caution about providing advice as opposed to information. ... the system itself is, at times, interpreted in an overly prescriptive manner ... The DIBP website is also difficult to navigate and accessing meaningful information is not easy. It is noted that DIBP is currently running a survey seeking feedback on making the site easier to use. (sub. 24, p. 7)

Source: Productivity Commission case study interview (appendix C).

The Independent Review into Integrity in the Subclass 457 Programme (Azarias review) (Azarias et al. 2014) was released in September 2014. In March 2015, the Australian Government announced that it would reform the subclass 457 visa program in accordance with the majority of the report's recommendations (DIBP 2015a, 2016a). The Review recommended streamlining the processing of sponsorship, nomination and visa applications, based on certain risk factors. In the Commission's view, there should also be scope for Department of Immigration and Border Protection (DIBP) to make the system easier to navigate and improve support services to reduce the burden on employers wishing to hire foreign workers.

Calls to expand the Consolidated Sponsored Occupations List

Another key area of concern for inquiry participants was the Consolidated Sponsored Occupations List (CSOL), which is used to determine eligibility for the subclass 457 program. Cotton Australia, for example, said that ‘the ability to update the CSOL to reflect new skilled occupations is vital and would remove the biggest single barrier to the 457 faced by the agriculture sector’ (sub. DR262, p. 15). It also noted that the ‘inflexibility of CSOL will place significant restrictions on agricultural productivity, with anticipated labour shortages’ (sub. DR262, p. 16).

The NFF stated that many skilled agricultural occupations are not on the CSOL, and that this means farm businesses are spending years negotiating labour agreements to access overseas workers.

The ability of farm businesses to fill skilled labour shortages with the use of overseas workers on the 457 visa program is limited by its reliance on the ANZSCO [Australian and New Zealand Standard Classification of Occupations] coding system, which was never intended to define current industry skills needs exhaustively. Many skilled agricultural occupations are simply not on the Consolidated Skilled Occupations List (CSOL) which [is] used to determine eligibility for [subclass] 457 visas. As a result, agricultural industries have dedicated years negotiating labour agreements to access workers they desperately need. (sub. 61, p. 38)

The dairy industry (Australian Dairy Farmers, sub. 63) and pork producers (West Australian Pork Producers Association, sub. 24; Australian Pork Limited, sub. 37) have used labour agreements to meet their labour demands. Australian Dairy Farmers (ADF) (sub. 63) reported that the dairy industry and the DIBP negotiated an industry-wide labour agreement in response to a need to fill senior farmhand roles. A labour agreement was sought because the CSOL does not acknowledge senior farmhands, so it is not possible to recruit people of this skill level on subclass 457 visas. ADF claimed that:

The need for suitably skilled and experienced employees is only going to grow as farms aggregate and more senior roles become available. Current immigration requirements hampering these efforts, such as unaligned ANZSCO codes and visa limitations are imposing significant barriers for the employment of overseas labour. ADF sees a number of inconsistencies in ANZSCO definitions and current practice, such as definitions used in the Pastoral Award 2010, and for a number of occupations that have their skill levels classified too low to enable employers access to the 457 visa scheme. (sub. 63, p. 10)

Skilled occupations on the CSOL are those included in skill levels 1, 2 and 3 of the ANZSCO list published by the Australian Bureau of Statistics (PC 2015d). The Azarias review (2014) recognised the imperfect nature of the translation of the ANZSCO occupation list into the CSOL, and recommended changes to accommodate the inclusion of emerging skilled occupations on the CSOL (box 11.4). This should make the process for updating CSOL more responsive.

However, the review recommended that the CSOL remains a list of occupations that are ANZSCO skill level 3 or above, and that semi-skilled occupations be addressed through the labour agreement system.

Box 11.4 Azarias review's recommendations — CSOL and identifying genuine labour shortages

Recommendation 1.1: That, in lieu of the existing Ministerial Advisory Council on Skilled Migration, a new tripartite ministerial advisory council, which is not necessarily prescribed in legislation, be established to report to government on skilled migration issues.

Recommendation 1.2: That the new ministerial advisory council be supported by a dedicated labour market analysis resource.

Recommendation 3.1: That the Consolidated Sponsored Occupations List (CSOL) be retained as a list of occupations which are at Skill Level 3 and above, and that the CSOL should be able to be amended by two means: first, the addition of skilled occupations which can be shown to exist in the community but which may not be on the Australian and New Zealand Standard Classification of Occupations (ANZSCO) list; and, second, the refinement of the CSOL in cases where there may be integrity or appropriateness concerns. Any occupations not on the list, which are usually referred to as semi-skilled, may be addressed as part of the Labour Agreement regime.

Recommendation 3.2: That the new ministerial advisory council provide advice on those occupations where some concerns exist and recommend additional requirements or limitations on occupations and/or regions.

Source: Azarias et al. (2014).

The Australian Government supported, or supported in principle, these recommendations from the review (DIBP 2015a), and reinstated the Ministerial Advisory Council on Skilled Migration in mid-2015 (DoF 2016). One of the Council's tasks is to review the effectiveness of the CSOL to ensure that the composition of the list better aligns to the needs of industry. The Council is currently undertaking this task in consultation with relevant government agencies including: the DIBP; Department of Employment; Department of Education; and state and territory governments (DIBP, pers. comm., 14 October 2016). The Council is expected to report to the Australian Government in early 2017.

The Commission's Migrant Intake into Australia inquiry supported recommendations from the Azarias review, on the basis that they should increase flexibility within the CSOL (PC 2016a).

Training requirements under the subclass 457 visa program

Sponsors of subclass 457 visa holders who have operated in Australia for at least 12 months are required to either pay at least 2 per cent of their payroll annually to an industry training fund, or spend at least 1 per cent of their payroll on training existing employees (*Migration Regulations 1994 — Specification of Training Benchmarks and Training Requirements* (Cwlth)).

Australian Pork Limited considered the training requirements to be:

... onerous and inflexible by industry and inhibit an employers' ability to effectively train migrant workers who are yet to qualify for permanent residency status. (sub. 37, p. 3)

Subclass 457 visa holders and training requirements can have conflicting effects on domestic workers' skill development. Migrant workers can promote domestic workers' skill development by helping to train them. For example, Australian Pork Limited said that:

We actually think there are significant benefits for the 457 visa worker back to the Australian workers and that is because the people that are coming in on our 457s are either vets or a step below that, which are much higher qualified in their home country than what they are here. And so we think there is a transfer of knowledge and expertise from the 457 visa to the Australian worker. (trans., p. 364)

But ready access to temporary skilled migrant labour can reduce employers' incentives to hire and train domestic workers. In addition, the absence of skills shortages reduces upward pressure on wages for skilled workers, which can reduce domestic workers' incentive to acquire skills.

Training requirements can be justified when domestic workers' skill development is hampered by temporary skilled migration. Domestic workers with limited skills are more likely to struggle to find and keep jobs, which can also have broader impacts on the Australian community. Employers do not account for these costs to the community when they decide whether to hire temporary skilled migrants, and training requirements can correct for this.

A number of inquiries have concluded that training requirements on employers should remain. The Azarias review (2014) noted that there was strong stakeholder support in principle for training requirements. However, stakeholders to that review, as well as those to the Senate Education and Employment References Committee's (SEERC's) inquiry into migrant exploitation (SEERC 2016), highlighted problems with the current requirements. SEERC said that 'the evidence to the inquiry makes it clear that the current training requirements are ineffective and in need of complete overhaul' (2016, p. 138). Some issues raised were that an employer of one subclass 457 visa holder must meet the same training requirement as an employer of many subclass 457 visa holders, and that training funds are not necessarily allocated to remedying specific skills shortages.

The Azarias review (2014) recommended replacing current training requirements with an annual training fund contribution, which would be scaled according to business size. It suggested the contribution could be \$400 per visa holder per year, with higher contributions in the first year for larger businesses. The Government supported these recommendations subject to further consultation (DIBP 2015a).

SEERC also supported the recommendations, but recommended a higher contribution of \$4000 per visa holder, to be in line with the incentive payment that employers receive for engaging an apprentice. SEERC (2016) also recommended that:

- sponsors be required to hire an Australian tertiary graduate in their enterprise for each professional subclass 457 visa holder that they take on
- sponsors hiring subclass 457 workers for trade professions must demonstrate that 25 per cent of their trade workforce are apprentices when their total workforce consists of four or more tradespersons.

The Government should carefully examine all options after taking into account the broader costs to the community. The incentive payment currently given to employers of apprentices is not necessarily a good benchmark for the requirement, as it is designed to encourage employers to take on apprentices by offsetting some of their training costs, rather than reflecting the broader costs on the community.

Also, the proposed requirements on employers can significantly increase employers' hiring costs. This is likely to deter employers from hiring temporary skilled migrants, and not all of these employers will hire domestic workers instead, particularly those that need skilled labour immediately and for a short period only.

Labour market testing — a further area of concern

Labour market testing was another area of contention. Employers looking to hire subclass 457 visa holders (and access the Seasonal Worker Programme) must first test the local labour market to ensure that there is no suitable Australian citizen, permanent resident or eligible temporary visa holder readily available to fill the position.

A number of participants claimed that labour market testing is unnecessary and therefore imposes an unnecessary cost on businesses. The NFF (sub. 61), for example, said that labour market shortages are nothing new in the agricultural sector, but that the labour market testing regime does not acknowledge existing shortages, and applies across the board to all sectors and industries seeking to access overseas workers.

The NFF also noted problems with the requirement to advertise and offer work to Australian jobseekers before recruiting overseas workers.

Farmers are required to advertise jobs broadly, eliciting numerous responses from foreign workers and only very few from Australian workers. Each job application must be reviewed and responded to, requiring allocation of significant time and resources, when the reality is that most Australians are not looking for jobs that involve hard, physical work in rural, regional and remote areas. In some cases, our members tell us that Australian workers who have applied and been offered a job have refused the offer, advising the application was only made to meet their job application quota for the month. (sub. 61, p. 39)

Some stakeholders (NFF, sub. 61; GrainGrowers, sub. 73) called to remove labour market testing requirements in regions and/or industries where there is a demonstrated labour shortage (for example, regions eligible for the Seasonal Worker Programme).

On labour market testing before hiring 457 visa holders, the Azarias review said that:

On the evidence presented to us we have concluded that the labour market testing provisions introduced in 2013 are easily circumvented and do not prevent employers from engaging overseas workers in place of Australians. In addition, recruitment practices are highly diverse across occupations and industries: to design a system that encompasses this diversity is impractical. (2014, p. 45)

While the Azarias review recommended that labour market testing be abolished, this recommendation was ‘noted’ (rather than ‘supported’, ‘supported in principle’ or ‘not supported’) by the Australian Government (DIBP 2015a).

The Commission’s Migrant Intake into Australia inquiry concluded that ‘despite the shortcomings in the current labour market testing arrangements identified in the Azarias report, the Commission considers that the current labour market testing provisions should be retained for the moment’ (PC 2016a, p. 399). However, the Commission recommended that ‘the Australian Government should commission (by 2020) an independent review of the effectiveness of changes implemented as a result of the recommendations made by the [Azarias Review]’ (PC 2016a, p. 399).

Broader issues

Superannuation payments for temporary residents

A number of concerns were raised about paying superannuation guarantee contributions, particularly in relation to foreign workers with temporary residency. Under the guarantee, an employer generally must contribute at least 9.5 per cent of an employee’s before-tax income to the employee’s superannuation fund when they earn \$450 or more in a month, regardless of their residency status (ATO 2015f).

Reducing compliance costs from administering superannuation

Voice of Horticulture (sub. 42) and Cotton Australia (sub. 23) noted the disproportionately high compliance costs associated with making small superannuation contributions, mainly for workers (both domestic and temporary residents) who are employed for a short period, such as during harvesting.

An option that was previously recommended by the Regulation Taskforce (2006) and the Commission’s Annual Review of Regulatory Burdens on Business: Primary Sector (PC 2007) is to increase the minimum income threshold (\$450 per month) after which employers must start paying superannuation.

The current threshold has not changed since it was introduced in 1992 (PC 2007) and is set at the tax-free income threshold at the time of \$5400 per financial year (ATO 2015a). Over the same period, the minimum wage has doubled.⁵⁶ This means an employer in 1992 was required to pay superannuation to a minimum wage worker after they worked 53 hours in a month. Today, an employer must pay superannuation after an employee has worked 25 hours per month (or less than 7 hours a week).

Increasing the threshold would reduce employers' labour costs, but also reduce the retirement savings of employees earning below the threshold (unless offset by a corresponding increase to workers' base pay equal to the fall in superannuation). The Government noted that the fall in some employees' retirement savings when it rejected the Regulation Taskforce's recommendation to increase the threshold to \$800 per month (or \$9600 per year) would be in line with the growth in average wages since 1992 (Australian Government 2006; Regulation Taskforce 2006).

The Commission's previous regulatory review of the primary sector agreed with a higher threshold, but did not specify a level. It suggested that it be increased through an appropriate process and that Treasury periodically review it (PC 2007). At the time, the Commission judged the benefit to businesses from lower compliance costs would likely offset any negative impact on workers' retirement savings, and would take into account regulatory creep caused by wage inflation.

There are also other solutions for reducing business compliance costs without broader economic effects. The Australian Taxation Office's Small Business Superannuation Clearing House, for example, allows small businesses to combine their superannuation guarantee contributions into one electronic payment to the clearing house, which then distributes the payment to employees' superannuation accounts (ATO 2016g).

More generally, the tax rates on superannuation contributions are higher than income tax rates for those on low-incomes, with the current tax free income threshold of \$18 200 (ATO 2015b). An employee earning \$15 000 before tax (excluding superannuation) in a year would avoid taxes of about \$210 on their superannuation contribution if, for example, they receive their superannuation with their take-home wages, rather than into a superannuation fund.

Superannuation for temporary residents does not align with objectives

Voice of Horticulture (sub. 42) also questioned the need for superannuation payments for working holiday makers who, like overseas workers temporarily in Australia, can claim it when they depart Australia (the Departing Australia Superannuation Payment (DASP))

⁵⁶ The minimum wage in 1992 is based on the full-time wage in the Metal Workers Award which was \$325.40 (Bray 2013). The national minimum wage at November 2016 was \$672.70 (FWO 2016c). A full-time work week consists of 38 ordinary hours.

(ATO 2015e). Commenting on superannuation contributions for temporary overseas workers in their submission to the Commission's Migrant Intake into Australia inquiry, the NFF said that:

... this policy measure is worth reconsidering at the right time, given the underlying purposes of superannuation to provide an adequate level of retirement income, relieve pressure on the Age Pension and increase national savings. Each of these objectives can be achieved without the need to extend the benefit to temporary, overseas workers. (2015b, p. 14)

Paying superannuation to temporary residents does not appear to be in line with the objectives of superannuation. A Charter Group established by the Australian Government in 2013 assessed the core high-level objectives of the superannuation system are to:

- provide an adequate level of retirement income
- relieve pressure on the Age Pension; and
- increase national savings, creating a pool of patient capital to be invested as decided by fiduciary trustees. (Cooper et al. 2013, p. 29)

These objectives relate to Australians' superannuation, taxation and pension. Consistent with this, temporary residents are able to claim their accumulated superannuation contributions when they leave Australia. This suggests that requiring temporary foreign workers to have superannuation accounts, and Australian employers to make contributions and to administer these arrangements, is an unnecessary regulatory burden on both employers and temporary residents.

Superannuation collected from temporary residents is a source of revenue for government, as temporary workers' superannuation contributions are taxed at 15 per cent and then again at 38 per cent when they claim their DASP (ATO 2015d, 2016a). From 1 July 2017, nearly all of working holiday makers' superannuation could be collected by the Australian Government, with the Government proposing to increase the tax rate on working holiday makers' DASP claims to 95 per cent. The Government expects the higher DASP tax rate to increase tax revenue by \$35 million each financial year (Morrison 2016c).

But a sizable share of working holiday makers' superannuation appears to be collected by superannuation funds, which charge fees for managing superannuation. Data on the number of working holiday makers with superannuation accounts are limited. However, if, for example, half of the 137 000 working holiday makers in Australia (DIBP 2016g) held an account for a year, then superannuation funds would collect about \$5 million just from administration fees.⁵⁷ And superannuation funds often charge other fees.

Funds' fees are generally offset by funds' investment returns, but this is of little benefit to the Australian Government. Unlike workers with limited investment expertise, the Government could earn an equivalent return from managing working holiday makers' superannuation.

⁵⁷ Estimates based on an average annual administration fee of \$70.

One option is for the Australian Government to collect working holiday makers' superannuation directly from employers. For example, employers could pay working holiday makers' superannuation directly to the Australian Taxation Office, which could then hold it until working holiday makers lodge a claim (as they already do for unclaimed superannuation).

However, such a change would require amending legislation. It would also need to be done in a way that does not bias employers' decisions about who to employ by making working holiday makers relatively more or less expensive to employ than domestic workers.

Alternatives to paying superannuation to temporary residents

The above option could be more broadly applied to temporary residents' superannuation if the Australian Government decides that paying them superannuation is inconsistent with the objectives of the superannuation system.

Other options could involve changing the taxation arrangements for temporary residents. For example, the Government could impose an income tax rate on foreign workers that captures all of their superannuation, while ensuring the costs of employing temporary residents and domestic workers remain the same for employers. Another option is to allow temporary residents to be paid their superannuation guarantee with their take-home wage.

However, these options need to be carefully examined as they raise broader questions about the taxation and superannuation systems, and can affect the demand and supply of temporary migrant labour in Australia. These broader issues are beyond the scope of this inquiry and have not been examined in detail.

Checking migrants' visas

The DIBP requires employers to take reasonable steps to ensure that their workers are legally able to work in Australia (DIBP 2016b). This requirement helps avoid instances where migrants work without a valid visa or an entitlement to work, which could undermine Australia's migration policies and labour market conditions. Checking migrants' visas can also help reduce instances of exploitation by employers. Migrants may be susceptible to exploitation because of characteristics such as limited English language skills and knowledge of workplace entitlements. In 2015-16, 76 per cent of litigation filed by the Fair Work Ombudsman and more than one third of its enforcement activities involved visa holders (FWO 2016b, p. 2). In addition, the Fair Work Ombudsman's inquiry into the wages and conditions of 417 visa holders found that:

- almost a third did not receive payment for some or all of the work they did ...
- 14 per cent had to pay to secure regional work ...
- more than a third claimed they were paid less than minimum wage. (2016b, p. 4)

Migrants that work in breach of their visa are particularly susceptible to exploitation as they can face large penalties such as deportation, and may therefore be less willing to report exploitation (PC 2015e).

The Voice of Horticulture said that:

... the imposition of visa checking responsibilities is another concern for growers. Farmers are required to check visa entitlements within 48 hours of an employee commencing work to avoid penalties ... during harvest time when up to 300 new casual labour is on site the administrative burden can be immense. (sub. 42, p. 41).

The DIBP previously specified that employers who did not have immediate access to the internet or fax had 48 hours to check a job applicant's work entitlements (DIAC 2009). But the DIBP (2016b) currently does not specify a grace period for when a farmer must check an employee's work entitlement, but expects 'employers to take reasonable steps, at reasonable times, to confirm that a non-citizen is allowed to work' and prefers employers to check a worker's visa details using the Department's Visa Entitlement Verification Online service (VEVO). The DIBP recommends that employers conduct checks before a migrant commences work.

Limited information is available to assess whether checking migrants' work entitlements is burdensome on businesses, but VEVO provides a fast response (which was acknowledged by Voice of Horticulture (sub. 42)), so the compliance burden per worker appears to be low (DIBP 2016e).

There can be other barriers to accessing VEVO such as inadequate internet access (chapter 6); and other aspects of the checking process may be time-consuming, such as collecting workers' visa details. These barriers can delay an employer from checking the work entitlements of all their temporary migrant employees before they commence work. However, employers can avoid penalties as long as they can show that, given the circumstances, they have taken reasonable steps to confirm that a migrant can work legally.

The Commission notes that there are benefits from employer visa checks in limiting the prevalence of illegal work, which can help reduce instances of migrant exploitation. The DIBP should continue to examine ways to improve the ease and speed of access to visa checks by employers, and ensure that businesses clearly understand their responsibilities.

Labour hire companies

Farmers often use labour hire companies to source labour, particularly during harvest time. However, there have been instances of these companies underpaying and more generally exploiting migrant workers. The Victorian inquiry into the Labour Hire Industry and Insecure Work noted that:

The evidence provided to the Inquiry shows that there is a problem with the presence of 'rogue' labour hire operators in Victoria. While it is difficult to be precise about the extent of this

problem, rogue operators are particularly evident in the horticultural industry (including the picking and packing of fresh fruit and vegetables), and the meat and cleaning industries. In many instances, the activities of rogue operators have led to exploitation of vulnerable workers including underpayment of award wages, non-payment of superannuation, provision of sub-standard accommodation and non-observance of statutory health and safety requirements. (VDEDJTR 2016b, p. 25)

Case study participants to this inquiry also expressed some concerns about the practices of labour hire companies. Labour hire companies can be difficult to pursue as they may avoid paying unpaid wages by declaring insolvency and then rebirthing their operations elsewhere (known as ‘phoenixing’) (appendix C). Some labour hire companies also directly source workers from their country of origin, which weakens regulators’ education and enforcement activities (SEERC 2016).

The Queensland and South Australian Parliaments and the Victorian Government recently reviewed the labour hire industry, and labour hire was also examined by SEERC’s inquiry into migrant exploitation (Parliament of South Australia Economic and Finance Committee 2015; Queensland Finance and Administration Committee 2016; SEERC 2016; VDEDJTR 2016b).

One of the recommendations put forward by these reviews (except for Queensland) was to establish a national licensing regime for labour hire companies, and to require businesses to use a licensed labour hire company to procure labour. In the absence of a national regime, the South Australian and Victorian reviews recommended implementing state-based systems.

The Queensland and Victorian reviews also recommended doing more to limit labour hire companies’ practice of avoiding their employer obligations through ‘sham contracting’, where they hire workers with Australian Business Numbers. The Victorian inquiry advocated for the Productivity Commission’s Workplace Relations Framework inquiry’s recommendation that it should be unlawful for an employer to misrepresent an employment relationship as an independent contracting arrangement where the employer could be *reasonably* expected to know otherwise (recommendation 25.1 (PC 2015e)).

Voice of Horticulture (sub. 42, p. 43) warned that ‘imposing red tape obligations on growers is not the answer’ to improving oversight of labour hire firms. The Commission agrees that any regulations on labour hire companies should not place an unnecessary burden on businesses (or on labour hire companies). However, the costs of regulation need to be balanced against the need to deal with exploitation.

The Commission has not assessed the merits of a licensing regime. However, in its Business Set-up, Transfer and Closure inquiry, the Commission recommended tracking company directors through a Director Identity Number and requiring additional details about them. These recommendations should help regulators pursue exploitative employers who may try to avoid paying unpaid wages by liquidating their company (recommendation 15.6) (PC 2015b).

Cotton Australia (sub. DR262) and the NFF (sub. DR216) agreed that this recommendation is worth considering. In addition, adopting other recommendations from the Business Set-up, Transfer and Closure inquiry will facilitate hiring workers which could reduce farmers' reliance on labour hire companies.

11.3 Workplace relations

Australia's workplace relations framework comprises a complex array of labour laws, regulations and institutions, and specifies the minimum wages and conditions that businesses must provide their employees.

Wages and conditions in the pastoral and agricultural sectors have evolved from the 19th century. The foundations of the minimum wage are based on the 1907 Harvester Case that was initiated by a manufacturer of harvesters (box 11.5).

Box 11.5 Some notable industrial decisions in agriculture

Harvester Case establishes the minimum wage

In a case brought forward by Hugh Victor McKay to the Arbitration Court in 1907, Justice Higgins (President of the Arbitration Court) decided a 'fair and reasonable' wage to be 7 shillings a day, which he deemed would allow an unskilled labourer to support a wife and three children.⁵⁸ McKay owned Sunshine Harvester Works which built stripper harvesters. The Harvester Case became the basis for the national minimum wage in Australia (FWC 2014).

Wide comb dispute in the Pastoral Industry Award

In 1984, sheep shearers and farmers disputed the use of shearing combs wider than 2.5 inches (which had been the standard) (O'Malley 2009; Sullivan 2013). Shearers argued that the change would attract cheaper labour from New Zealand, who already used the wider combs, and were paid less in New Zealand largely because of Australia's stronger currency at the time. Farmers, however, claimed that the wider combs would improve productivity. Shearers went on strike for six weeks, but the Australian Conciliation and Arbitration Commission ruled to allow the use of wide combs.

Most farm businesses (except some in Western Australia) are covered by the *Fair Work Act 2009* (Cwlth) (PC 2015e). The Fair Work Act has a diverse set of objectives, including to deliver outcomes that are fair, flexible, co-operative, productive, relevant, enforceable, non-discriminatory, accessible, simple and clear.

In 2015, the Commission held an inquiry into the workplace relations framework (PC 2015e), which assessed all aspects of the framework and addressed many of the concerns raised in this inquiry about provisions in the Fair Work Act. For example, the

⁵⁸ *Ex parte HV McKay (Harvester Case)* (1907) 2 CAR 1 [8 November 1907]

NFF (sub. 61, pp. 33–36) identified a number of ‘red tape’ concerns in the Fair Work Act that the Commission made recommendations on. The NFF said that:

- the requirement to review all awards every four years was ‘excessive’ — the Commission’s workplace relations inquiry recommended removing this requirement (recommendation 8.1)
- the notice of representational rights was an ‘unnecessarily strict approach with severe consequences for employers — the Commission recommended allowing the Fair Work Commission wider discretion to overlook minor procedural or technical errors when approving an agreement, and extending the scope of this discretion to include minor errors or defects relating to the issuing or content of a notice of employee representational rights (recommendation 20.1)
- the drafting of the protections provision was ‘opaque’ and ‘its effect not clear for most users’ — the Commission recommended that amendments be made to section 341 of the Fair Work Act to more clearly define the meaning and application of workplace rights (recommendation 18.2).

Other concerns raised by participants to this inquiry related to overtime and penalty rates, and the prescribed minimum length of shifts.

Overtime and penalty rates

Like many other modern awards, the Pastoral Award 2010 and Horticulture Award 2010 pay overtime and penalty rates for work outside any ordinary hours on weekdays. The rates are generally one and a half times the regular hourly wage for work after hours or on Saturday, and double the regular wage for Sunday work (although these rates can vary depending on the particular occupation covered under the award).

A number of participants (for example, Tasmanian Farmers and Graziers Association, sub. 16, and Voice of Horticulture, sub. 42) claimed that overtime and penalty rates significantly increased the costs of production to farms that hire workers. They noted that rates based on a Monday to Friday working week do not reflect the seasonal nature of agricultural work. Also, many agricultural activities occur early in the morning or at night, and continue to be carried out on weekends — all of which are subject to penalty rates. AgForce, for example, said that:

The appropriateness of set mandatory penalty rates, given the timing requirements of many farms where many activities cannot be done between the more urban-relevant 9am to 5pm period eg, night spraying when wind and temperature are appropriate to make best use of applied chemical and 24-hour crop planting practices during the time-limited, more effective window. Such non-standard conditions can be offset by providing employees with other rurally-relevant options to maintain equitable employment conditions. (sub. 17, p. 10)

Both Tropical Pines (sub. 39) and the Tasmanian Farmers and Graziers Association (sub. 16) acknowledged that the Pastoral and Horticulture Awards contain provisions that

accommodate some of the nuances of agricultural work. For instance, both awards consider ordinary hours of work to be between 6am and 6pm from Monday to Friday for some occupations. The Horticulture Award also does not pay casual workers penalty rates for weekend work.

NFF acknowledged that the Pastoral Award ‘has more flexible provisions than many awards around hours of work’, but noted that:

... you have different arrangements for different parts of the pastoral industry [under the Pastoral Award], and we don’t know that that’s the best outcome ... (trans., p. 405)

The Fair Work Commission sets penalty rates in modern awards and, in doing so, should consider the effects of penalty rates on the wider community (including those who are not in work). This was recommended by the Commission’s Workplace Relations inquiry through revising the modern awards objective in the Fair Work Act (recommendation 8.3) (PC 2015e).

The Commission’s Workplace Relations Framework inquiry also advocated for greater use of quantitative and qualitative data analysis when setting penalty rates. An example of this type of analysis underpins the inquiry’s recommendation to reduce Sunday penalty rates for permanent employees in the hospitality, entertainment, retail, restaurant, and café industries (recommendation 15.1). Such analysis could be used as a template for assessing the penalty rates in the Pastoral and Horticulture Awards.

Minimum shift length in the Pastoral Award and Horticulture Award

A number of participants (for example Tasmanian Farmers and Graziers Association, sub. 16, and ADF, sub. 63) raised concerns about provisions in the Pastoral Award 2010 that stipulate that part-time and casual employees must be engaged for at least three hours every shift. The Horticulture Award 2010 also specifies that employers pay workers a minimum of three hours of wages for working on Sundays.

ADF claimed that this stipulation ‘does not meet the modern requirements of a dairy farm’ (sub. 63, p. 11), and that the time it takes to milk depends on the season, the size of the herd and the technology used on-farm. This can mean that some farms take less than three hours to milk their entire herd.

The requirement to pay a staff member for 3 hours’ work, rather than the hours actually worked, creates unnecessary costs to farmers, and also acts as a barrier to employment for employees who seek flexible working arrangements. (sub 63, p. 11)

ADF’s submission to the Commission Workplace Relations Framework inquiry also stated that the three hour minimum engagement ‘removes any incentive for staff to milk in a time-efficient manner, thus lowering productivity’ (2015, p. 1).

The Fair Work Commission is currently reviewing all modern awards and provides an opportunity for concerns to be raised about flexibility constraints affecting the

competitiveness of farm businesses (FWC 2015). The Fair Work Commission has sought feedback on the minimum shift length for a casual employee (which other awards also include), and is exploring whether parties should be able to agree to a shorter minimum length if it suits their circumstances (FWC 2016).

The Commission's Workplace Relations Framework inquiry's recommendations to revise the modern award objective, and amend the Fair Work Act to ensure modern awards can be varied if necessary to achieve or improve outcomes according to the revised modern awards objective, would help the Fair Work Commission better assess farm businesses' concerns about awards (PC 2015e).

11.4 Work health and safety

The objective of work health and safety (WHS) regulations is to help prevent workplace injuries and diseases by encouraging employers, employees and regulators to work together to provide safe and healthy workplaces. WHS is regulated by the states and territories, but most jurisdictions (except Victoria and Western Australia)⁵⁹ and the Commonwealth have implemented model regulations, with changes in some instances (SWA 2016a).

Agricultural work involves a range of hazards, including handling animals and using chemicals, agricultural vehicles and machinery. Safe Work Australia (SWA) described agriculture as 'unique' from a WHS perspective and noted that:

While other industries share some of the hazards of farming such as plant, chemicals, noise, dust, sun exposure or working with animals, the combination of hazards found in agriculture, make it one of the most dangerous industries in which to work. (sub. 10, p. 1)

Many farmers are self-employed and live and work on their property, which blurs the line between workplace and household hazards. SWA said that:

Self-employed farmers face the demands and stress of running a business as well as undertaking the hard physical labour involved in farm work ... In addition to being places of work, farms are unique in that they are also homes, often with children. (2013, p. iii)

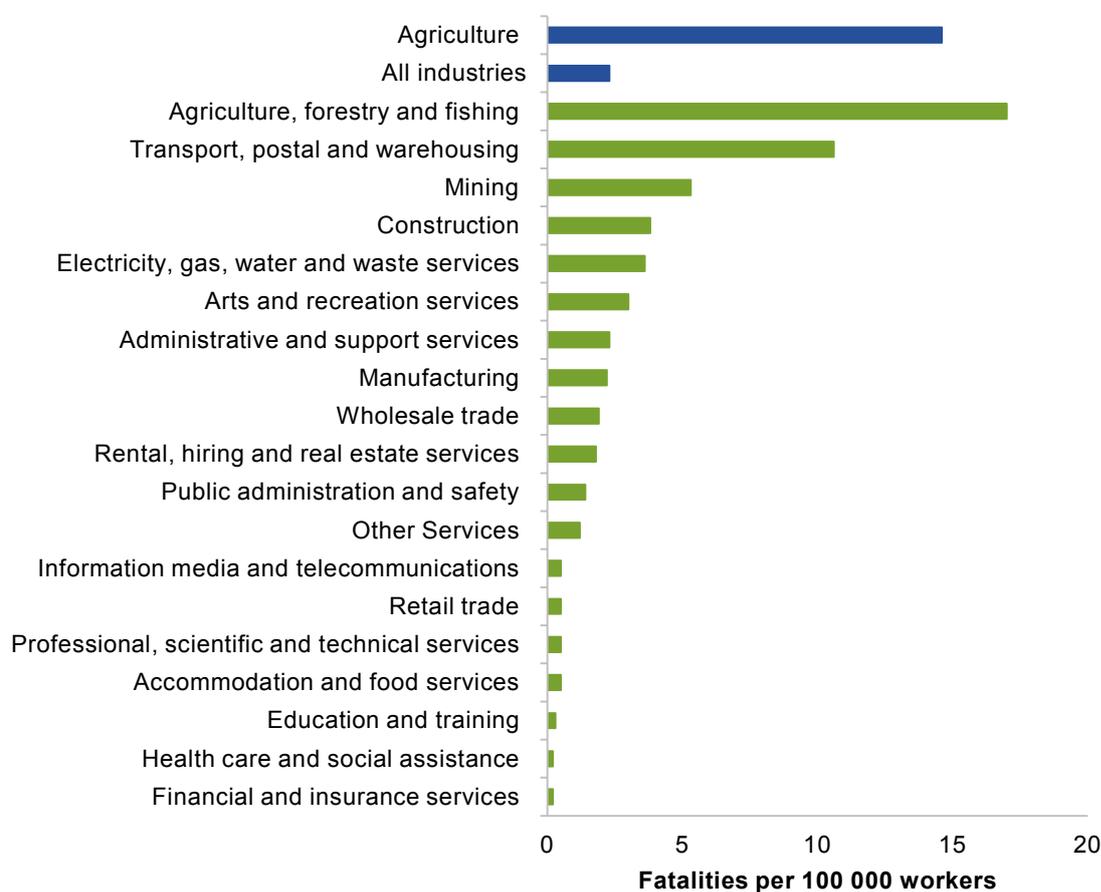
Farmers also often work on their own (which means they may not have anyone to assist them if they are injured on the job) and can work at a distance from any help (SWA 2013). Some evidence suggests that farmers are relatively tolerant of a high level of risk and perceive a low threat from injury (ASCC 2006).

⁵⁹ Western Australia is currently consulting on the draft legislation that incorporates the model (Western Australian Department of Commerce 2016). Victoria is reviewing some of its legislation, but the Victorian Government has stated that it will not adopt the model regulations in their current form (Work Safe Victoria 2016a, 2016b).

A dangerous industry to work in

Agricultural workers have one of the highest rates of fatalities and serious workers' compensation claims across industries. Between the period 2003 and 2015, the fatality rate for agricultural workers was 14.6 fatalities per 100 000 workers (figure 11.1). This fatality rate is more than six times higher than the rate for all industries (2.3) (SWA 2016e). The agricultural industry accounted for 17 per cent (555) of worker fatalities, despite only representing 3 per cent of the Australian workforce (ABS 2016h).

Figure 11.1 **Fatality rates across industries^a**
2003-2015



^a Data on sub industries (as shown for agriculture) are not available for all industry groupings.

Sources: SWA (2016e, sub 10).

Fatality rates vary considerably across farm types. For example, no fatalities were recorded in poultry farming from 2010 to 2014. However, fatality rates in livestock farming and agricultural support services were about 20 per 100 000 workers in the same period, accounting for nearly three-quarters of farm deaths (SWA 2016d).

Vehicles are the main cause of fatalities on farms. Between 2010 and 2014, incidents involving vehicles accounted for 76 per cent of all fatalities on farms, with most of these involving tractors, quad bikes or aircraft (SWA 2016d). Of the incidences not involving a vehicle, the common causes of fatalities involved being hit or bitten by an animal; falling from a horse and other falls; and electrocution (SWA 2013, 2016d).

Serious workers compensation claims are also disproportionately high in the agricultural sector. Over the five-year period between 2009-10 and 2013-14, the rate for agricultural workers was 11 serious claims per million hours worked. This rate was 59 per cent higher than the rate for all industries (6.9 serious claims per million hours worked) (SWA 2016d).

SWA (2015) estimated that the cost to the Australian economy of work-related injuries and fatalities in the Agriculture, Forestry and Fishing industry to be \$2.35 billion in 2012-13. Most of the costs were borne by workers through reduced earning capacity following their injury.

Agriculture is one of seven priority industries identified under the Australian Work Health and Safety Strategy 2012–2022. The priority industries are the focus of activities by regulators, employer and employee groups to identify the common causes of injury and fatality and to find and implement solutions (SWA, sub. 10).

A role for government

While employers and employees have incentives to maintain WHS in the workplace (including on farms), they do not always have adequate information about workplace risks and consequences. As a result, employers and employees will not always adequately protect themselves. Also, risks and people's ability to avoid them are not uniform. For example, driving a tractor is more risky when it is raining or if the driver is inexperienced. Accounting for these differences may not be straightforward.

WHS incidents also often have broader effects on the community — such as the distress experienced by an injured worker's family. Individual employers and employees are unlikely to adequately consider these effects when carrying out their actions.

These market failures point to a role for government to ensure that the optimal level of WHS is achieved. Regulations place a duty of care primarily on those who have control over the workplace (mainly the employer), although employees and others also have a duty to follow instructions and act responsibly. The duty on employers creates a strong incentive for them to maintain good WHS standards, which extends to the broader workplace as employers control most of the work environment and can implement appropriate WHS standards and management practices that ensure employees take responsibility.

While workers' compensation insurance (which is mandatory for most employers in Australia and covers the cost of compensating employees for workplace injuries and

diseases) can create moral hazard as employers do not bear the cost of workplace injuries, employers pay a premium that typically increases when businesses claim more (so provides an incentive for employers to maintain WHS standards).

Development of model WHS regulations

In 2004, the Commission looked at possible models to establish a national WHS framework. While noting that there were ‘no compelling arguments against a single national [WHS] regime’ (2004b, p. XXIII), the Commission considered that this should be a medium term reform objective as ‘it would be unlikely that a single national [WHS] regime to replace those operated by the States and Territories, whatever its merits, could be achieved in any realistic timeframe’ (2004b, p. 75).

In the short-term, the Commission proposed strengthening the national institutional structure at the time, with a key recommendation being agreement across governments to adopt, without modification, the regulations developed by the National Occupational Health and Safety Commission (PC 2004b).

In 2008, the Workplace Relations Ministers across jurisdictions agreed to use model regulations to harmonise WHS (SWA 2016a); and the Council of Australian Governments signed the Intergovernmental Agreement for Regulatory and Operational Reform in Occupational Health and Safety, which sets out principles and processes to harmonise regulations and enforcement activities across jurisdictions (COAG 2008).

SWA developed model regulations from 2009 to 2012. All jurisdictions except Victoria and Western Australia have adopted the model WHS laws. Queensland, South Australia and the ACT have made a number of substantive amendments to their WHS laws, but core provisions remain the same in all jurisdictions that have adopted the model WHS laws. Western Australia is developing legislation that would adopt key provisions of the model WHS laws (SWA, sub. 10).

The model WHS regulations consist of laws and Codes of Practice. The laws include the WHS Act, which governs the WHS framework in a jurisdiction and contains general duties of care; and the WHS Regulations, which set out how to meet obligations in specific areas where there are significant risks to health and safety, such as hazardous chemicals (SWA, sub. 10).

Non-mandatory Codes of Practice provide further practical guidance to employers on how to manage risks, and the minimum level of safety that employers must provide in the workplace. Employers are not required to adhere to the Codes and can manage risks in other ways as long as they are at least as safe.

There are no specific regulations under the model WHS laws that are targeted at agriculture, and therefore farm businesses are subject to the same WHS requirements as other workplaces (SWA, sub. 10).

Regulatory issues

While farm businesses and their representatives supported the policy objectives underlying WHS regulations, inquiry participants raised concerns about the:

- regulatory burden of WHS requirements
- duty of care falling disproportionately on employers
- high penalties for non-compliance
- prescriptiveness of the WHS regulations.

Regulatory burden of WHS requirements

Participants raised several concerns about the burden of WHS regulation. However, SWA (sub. DR264), responding to concerns raised by participants, argued that employers' burden may be more perceived rather than actual.

Some participants said that the system is difficult to navigate and that it is not easy to stay up to date with WHS requirements. GrainGrowers, for example, said:

Navigating the regulations around Workplace Health and Safety (WH&S) is a difficult endeavour for many Australian grain farming businesses. To ensure proper compliance, farmers must be familiar with the *Work Health and Safety Act 2011* and all associated material, including 23 Codes of Practice, 46 pieces of Guidance Material and 29 fact/information sheets. The sheer quantity of information can be overwhelming for small farming businesses, and farmers often struggle to maintain up-to-date knowledge of all WH&S requirements. (sub. 73, p. 21)

SWA, however, stated that 'in general, less than 100 pages of the model WHS Regulations will apply to most businesses, as a significant portion of the model WHS Regulations only applies to a specific industry or type of work' (sub. DR264, p. 4).

Responsibility of WHS falling disproportionately on employers

The Commission's case study participants raised concerns about the duty of care for WHS falling disproportionately on employers. They said that they experienced difficulties when trying to meet WHS regulations, and that the imbalanced duty of care dissuaded them from hiring employees (box 11.6). Beef, sheepmeat and goat producers also highlighted the disproportionate duty of care as an issue (Sheepmeat Council of Australia and Cattle Council of Australia, sub. 88, att. 1).

Cotton Australia, however, said that their industry is 'comfortable with the level of responsibility allocated to employers and employees following harmonisation of WHS laws' (trans., p. 283). SWA (sub. DR264) suggested that case study participants appeared to perceive that the model regulations require employers to eliminate work health and safety risks, which is not the case.

Box 11.6 Farmers' perspective – duty of care is imbalanced

A manager of a cotton farm in southern Queensland said that the work health and safety (WHS) regulations disproportionately placed a duty of care on farm businesses (rather than the employees). He said employers and employees need to share the risks, and that farm owners cannot control all the circumstances that employees find themselves in. He said employees are often best placed to manage their own risks and noted that 'currently the business has to take responsibility for everybody's momentary lapses of judgement'.

The co-owner of a large vegetable processing business also told the Commission that WHS should be a shared responsibility between employers and employees. He said that he respects his workers as responsible adults, and recognises that they are often best placed to manage WHS risks.

However, he told the Commission that the enforcement of WHS regulations in Australia has evolved to place far too much responsibility on employers, and not enough on employees and visitors to the facility. As a result, he and the other co-owners of the business had concerns that a major WHS incident could unexpectedly cost them \$100 000 or more, and threaten the financial viability of the business. He said that 'it doesn't matter what we do, it's never enough'.

The co-owner also told the Commission that the primary productivity cost of implementing WHS regulations in this way is the disincentive that it creates to hire workers. He said that it 'pushes' the business to use machinery to complete tasks that could otherwise be done more efficiently by workers.

Source: Productivity Commission case study interviews (appendix C).

SWA said that WHS is a 'shared responsibility' between employers and workers. The WHS Act places a duty on employers and persons with management or control of a workplace to do what is 'reasonably practicable' to eliminate or minimise the risk of a WHS incident occurring. SWA noted that:

... in determining what is reasonably practicable, after taking into account all other factors, a duty holder can weigh the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk. (sub. DR264, p. 6)

Workers (and also farm visitors) have a duty to take care of their health and safety (wherever reasonable), to ensure their actions do not affect the health and safety of others, and to comply with instructions from those in management or control.

Despite this, an employee's conduct under the model Act is generally, but not always, attributed to those in management or control of the workplace. But this rule depends on whether workers are meeting their responsibilities under the Act. For example, a recent case in NSW found that an employee's actions were not attributed to his employer because the employee acted contrary to his training and employer's safety procedures.⁶⁰

⁶⁰ *Safe Work NSW v Wollongong Glass P/L* [2016] NSWDC 58.

More generally, while the regulations aim to share WHS duties of care between employers and workers, the impact on employers (and workers) also relates to the enforcement of WHS regulations by regulators and courts.

Disproportionate penalties?

The NFF argued that unclear regulations and disproportionate penalties dissuaded farmers from hiring workers.

Many farm businesses are not clear on their obligations under the WHS Act but fear the financial implications of a safety incident and subsequent prosecution. Rather than risk it, they choose not to employ any labour at all. This is a clear barrier to growth and productivity in the agriculture sector. (sub. 61, p. 37)

The NFF provided examples of penalties in the WHS Act that it considered were disproportionate. For instance:

... the penalty for engaging in discriminatory conduct for a prohibited reason is a maximum of \$100 000 for an individual and \$500 000 for a body corporate. The penalty for a comparable offence under the *Fair Work Act 2009* (Cwlth) is \$10 200. (sub. 61, p. 37)

The NFF called for a comprehensive review of the level of penalties and how the Criminal Code is applied to breaches of WHS laws.

SWA (sub. DR264) highlighted that the penalties in the WHS regulations are maximums, and that maximum penalties are almost never fully levied. Also, the Explanatory Memorandum to the model WHS Bill stated that ‘the maximum penalties reflect the level of seriousness of the offences and have been set at levels high enough to cover the most egregious examples of offence’ (sub. DR264, p. 4). Laws are also enforced through infringement notices, and penalties in these notices are likely to be significantly less than the maximum penalties that could be imposed by a court.

Will better information help?

A perceived (or real) burden can dissuade employers from implementing measures to adequately protect against WHS risks. Better information to employers about their obligations can reduce the perceived burden of regulation.

Regulators have taken some steps to improve their information dissemination. For example, SafeWork NSW publishes several instruction videos for employers on how to meet their duties (SafeWork NSW 2016).

Industry can also play a role. As Cotton Australia said:

The cotton industry has developed templates which were formulated using information developed by the Agriculture Health and Safety Unit, which makes it easier for growers to make a start and have the foundations of having something to work with. We recognise that

there are challenges in the WHS space but we believe growers have put systems in place to deliver a safe workplace. (trans., p. 283)

The right level of prescription of WHS regulations

A number of participants called for WHS regulations to be less prescriptive. The NFF, for example, argued that many of the WHS regulations are ‘unworkable or too hard to comply with’ (sub. 61, p. 37). AgForce (sub. 17) and Voice of Horticulture (sub. 42) noted that farm businesses spend significant amounts of time complying with WHS regulations.

Equestrian Australia said the draft code of practice being developed in NSW on managing workplace risks related to horses was ‘complex (nearly 30 pages), legalistic and very difficult to understand’ (sub. DR299, p. 1). It also argued that the code ‘cannot be achieved in practice’ and ‘will therefore not advance safety in horse handling [in] any significant way’ (DR299, p. 1).

Cotton Australia also said that ‘reducing the level of prescription in many cases will have no negative effect on health and safety of workers but will make complying with the WHS Act easier’ (sub. 23, pp. 18–19). Using the example of licences for forklift drivers, Cotton Australia said that while they might be justified in high risk environments (such as warehouses), employers should not need to ensure forklift drivers on a farm obtain licences when operators of other machines like a front-end loader do not need one.

On licensing, SWA said that:

Decisions on which items of plant or type of work require a licence are based on evidence of the frequency and severity of injuries involving the plant or work and the potential for catastrophic injury to occur. For example, in 2014 SafeWork NSW reported that, in New South Wales alone, 1360 workers had been injured in the two years to July 2014 and eight had been killed in the previous three years as a result of forklift incidents. (sub. DR264, pp. 3–4)

More generally, SWA said on the level of prescription of WHS regulations that:

Finding the right balance between risk management and prescription can be difficult ... Some businesses prefer to be provided clear instruction on exactly what they need to do to keep their workers safe and comply with WHS laws. Others have the resources to develop sophisticated systems for managing risks and prefer to have the flexibility to determine the best methods of keeping their workers safe. (sub. DR264, p. 3)

Finding the right balance appears to be a longstanding issue. For example, some participants in the Industry Commission’s Work, Health and Safety inquiry (1995) noted that the Codes of Conduct at the time were, in contrast, too general to provide practical assistance. In general, not all employers are likely to be satisfied even if the right balance is achieved.

Jurisdictional differences

Others questioned whether the model laws had made WHS simpler. The Tasmanian Farmers and Graziers Association, for example, said:

The new system sought to make WHS simpler and more streamlined however for many employers it has added more grey to the plethora of regulation that control them daily. (sub. 16, p. 5)

And others expressed concerns about different rules in different jurisdictions despite model laws being implemented (Consolidated Pastoral Company, sub. 71).

In the Commission's previous *Review of Regulatory Burdens on Business: Primary Sector*, many more submissions than in this inquiry raised the issue of different rules across jurisdictions, which suggests that the model regulations have addressed (at least to some extent) concerns in this area.

Work health and safety issues relating to migrant workers

SWA (sub. DR264) noted that some migrant workers may have a higher WHS risk than Australian-born workers due to factors such as poor English language skills and a poor understanding of rights at work.

WHS risks related to migrant workers were discussed by Safe Work Australia members in December 2015. Since then, Safe Work Australia has developed a work program to reduce those risks by:

- developing targeted information for workers about WHS, and task-based guidance on the most high-risk tasks
- improving the integration of government information sources
- working with national community organisations which supports migrants to disseminate WHS information widely
- supporting employers to understand their role and to improve communication with migrant workers in their business, including by developing workplace resources for employers. (sub. DR264, p. 2)

Additional labelling requirements on manufacturers of agvet chemicals

From 1 January 2017, WHS regulations will require manufacturers of agricultural and veterinary chemicals to comply with the Globally Harmonized System of Classification and Labelling of Chemicals (SWA 2016b).

Several inquiry participants argued that these requirements overlapped with those of the Australian Pesticides and Veterinary Medicines Authority. This issue is examined in chapter 7.

WHS regulations are scheduled to be reviewed

In 2014, the Council of Australian Governments (COAG) initiated a review that considered whether the model WHS laws were simple, appropriate for the risks that they address, and facilitated businesses to adopt flexible approaches to manage risks (SWA 2014). The review recommended changes to:

- make health and safety representative training more effective
- bring right of entry provisions in line with the Fair Work Act
- make model Codes of Practice clearer and easier to use.

In addition, COAG tasked WHS Ministers with reviewing the WHS Regulations to identify and address any areas that are overly prescriptive, unnecessary, duplicative and create enforcement difficulties (SWA, pers. comm., 31 May 2016). SWA is currently conducting this review.

The model WHS laws are scheduled to be comprehensively reviewed at the beginning of 2017. Upon agreeing that model laws be developed, the former COAG Workplace Relations Ministerial Council agreed in principle to a review within five years of the model regulations commencing (WRMC 2009). Most jurisdictions enacted the model laws in 2012 (SWA, sub. DR264). However, at the time of writing, WHS Ministers were considering deferring the review of the model WHS laws until 2018 on the basis that:

- there are no fundamental issues with the laws as they stand
- the model WHS laws have not been in place for the full five years in some jurisdictions, so it is likely that there will be insufficient data and evidence available to fully examine the implementation of the model WHS laws, and
- amendments made to the model WHS laws in March 2016 have not yet been implemented within jurisdictions and their impact has not been realised. (SWA, sub. DR264, p. 8)

The review should build on the findings from earlier reviews, assess the compliance burden on businesses and address any misperceptions by employers. It should also explore ways to improve information dissemination to employers, particularly so that employers do not feel compelled to pay for advice on compliance with WHS laws — the Commission heard that many employers engage consultants to ensure they are complying with the laws. In addition, the review should evaluate jurisdictions' progress towards harmonising WHS regulations.

12 Competition regulation

Key points

- Competition is a key driver of innovation and productivity in agriculture.
- Widespread regulation of agricultural markets via statutory marketing up until the 1990s imposed costs on consumers, domestic user industries and the regulated industries. The arrangements constrained both competition and productivity.
- Just one statutory marketing arrangement remains — the New South Wales Rice Marketing Board (RMB). The RMB maintains single-desk exporting by issuing an exclusive export licence to SunRice. One of the objectives of the RMB is to secure the best possible price for Australian rice in export markets. However, the costs of single-desk marketing are not required for the Australian rice industry to achieve price premiums in international markets.
- Deregulation of potato marketing in Western Australia (which took place in September 2016) should improve the responsiveness of the industry to changing consumer preferences and reduce the price of potatoes to consumers.
- There is no market failure (or other reasonable objective) to justify the re-regulation of the Queensland sugar industry. Legislation to re-regulate the Queensland sugar industry is constraining structural adjustment and investment.
- Queensland Sugar Limited's (QSL) charity status provides it with tax concessions that benefit a small number of commercial milling and farming businesses (and affects the competitive neutrality of the market). It also reduces the transparency of QSL's financial performance and has the potential to further impede structural adjustment in the sugar industry.
- Collective bargaining is only likely to be attractive to small groups of farm businesses with similar production characteristics. This is because larger and more efficient farm businesses have strong economic incentives to negotiate more competitive terms. Consequently, government efforts aimed at increasing the use of collective bargaining under the *Competition and Consumer Act 2010* (CCA) are unlikely to significantly increase adoption.
- The perception that the introduction of an 'effects' test to section 46 of the CCA is likely to shield farm businesses from intense competition in retail food markets is ill-founded. In any event, shielding farm businesses from competition would not be in the interests of consumers.
- The current focus on misuse of market power by wholesale merchants and supermarkets overlooks the critical co-dependence of businesses along agricultural value chains. It also risks overlooking potential new commercial arrangements for farm businesses to participate in globalised chains.
- Industry codes of conduct can provide flexible regulatory frameworks to influence behaviour in agricultural markets and improve transparency and clarity of transactions.

Competition is not an end in itself, but plays a crucial role in promoting economic efficiency and enhanced community welfare. Competition provides a strong incentive for firms to innovate, reduce costs and meet the preferences of consumers. It also helps society to generate the highest value from its scarce resources and, in doing so, generates higher real incomes and living standards.

Competition is a dynamic process. Commercial success in competitive markets requires the ability to reallocate resources to new products and processes to meet changing market conditions. To remain competitive, Australian farmers need to innovate and improve productivity at a faster rate than their competitors in domestic and international markets.

The competitive process drives efficiency improvements by encouraging existing businesses to innovate, new and more efficient businesses to enter markets, and less efficient businesses to decline and exit. In agriculture, larger farm businesses tend to be more efficient than smaller farm businesses, and competitive markets have driven the gradual consolidation of farms (Gray, Oss-Emer and Sheng 2014). Larger farms enable economies of scale in production and facilitate capital investment that allows more efficient use of labour (Hooper et al. 2002; Nossal and Gooday 2009).

The objective of competition policy is to improve community welfare by increasing economic efficiency. However, markets may not always result in efficient outcomes. This can be because of a lack of effective competition and inadequate information (examples of market failures), or because of government intervention in markets through regulations and policy arrangements.

The unconstrained operation of competitive markets (and the structural adjustment that results) has for more than a century raised concerns about the balance of power in arrangements between small farm businesses and larger wholesale merchants and supermarkets. Remoteness, isolation and lack of marketing expertise have historically been argued as factors that place farmers at a significant disadvantage in negotiating sales with larger and better informed input suppliers and purchasers of agricultural produce (Sapiro 1923). The potential concentration of market power into the hands of a relatively small number of well-organised traders continues to be seen as disadvantaging diverse, dispersed and less-organised farmers in terms of price and the conditions written into supply agreements.

The National Farmers' Federation (NFF), for example, argued that the agricultural sector has specific and unique characteristics that mean that ineffective competition legislation can have a more detrimental bearing on farm businesses than on other businesses:

The farming sector is fragmented, made up largely of small to medium sized businesses in remote areas with limited access to market information and opportunities for collective organisation. Fluctuations in input costs, the impact of climatic variations, limitations in infrastructure and the perishable nature of produce leave some farmers in an economically vulnerable position operating under extremely tight margins. This inequality of market and or bargaining power means that farmers are largely price-takers in the market and susceptible to at times questionable business practices. Farmers may be forced to accept standard form contracts

on a ‘take it or leave it’ basis or to operate under arrangements without the benefit of contractual security. (sub. 61, p. 28)

Concerns about market power have led to continued calls for regulation to protect small farm businesses from larger businesses. Governments have used two main forms of regulation to address these concerns — statutory marketing arrangements (appendix B) and competition law.

This chapter looks at statutory marketing arrangements (section 12.1) and competition law (section 12.2), including industry codes of conduct (section 12.3).

12.1 Statutory marketing

Statutory marketing arrangements are a package of inter-related regulations that compel farmers to sell to a single marketing agent (Watson and Parish 1982). In Australia, the term ‘single-desk marketing’ was widely used to describe the monopoly selling powers held by statutory marketing authorities (Gropp, Hallam and Manion 2000). In some cases, the powers extended to both domestic and export sales of commodities, in others, the monopoly extended to export sales only.

For most of the 20th century, statutory marketing shielded many of Australia’s agricultural industries from competition (appendix B). In 1982, at the height of statutory marketing, Australia had 11 marketing boards operating under Commonwealth legislation and more than 50 operating under state legislation (Vinning 1980; Watson and Parish 1982).

Over the years, numerous arguments for statutory marketing arrangements have been put forward, including:

- *unstable world markets* — volatile food prices (partly attributed to high levels of protection in world markets and fixed exchange rate policies) were perceived as working against industry development and rural welfare objectives
- *market power* — for some agricultural products, the concentration of market power among a relatively small number of wholesale merchants and/or supermarkets was thought to disadvantage farmers on price and terms of supply agreements
- *information failures* — remoteness and lack of marketing expertise (especially in the pre-digital age) were perceived as placing farmers at a significant disadvantage in negotiating supply agreements
- *distorted input markets* — high farm input costs arising from trade and other forms of protection on input-supplying industries were used to justify ‘countervailing’ protection to compensate agricultural industries.

While producers perceived there were benefits for them from restricting competition, it became increasingly clear during the late 1980s and early 1990s that restricting competition in the interest of one industry imposed significant costs on taxpayers,

consumers and downstream industries. Statutory marketing was becoming less effective at raising domestic prices as improvements in transport and communication increased competition in domestic and global markets. Improvements in communications technology also reduced the information disadvantages of remoteness. It was also recognised internationally that attempts to insulate agricultural markets via trade protection increased price volatility on world markets (Anderson 2014). In the end, statutory marketing failed in its own objectives and exposed protected industries to higher risk.⁶¹

A series of reviews and inquiries from the 1990s onwards found that statutory marketing arrangements were impairing agricultural industry performance in several ways:

- limited recognition of product quality or other valued product characteristics in pooled producer returns tended to reward lower-valued products at the expense of higher-value products, discouraging more efficient and innovative producers
- compulsory pooling of returns meant that price risk was averaged across growers, and did not accommodate the risk preferences of producers
- pooling of transport and distribution costs encouraged inefficient distribution and production, resulting in higher costs
- lack of competition and choice of service provider promoted over-servicing and cost-padding by the statutory marketing authorities
- payment of an average price for products distorted production levels (Gropp, Hallam and Manion 2000).

In 1995, recognising the benefits of removing unnecessary restrictions to competition, Australian governments committed to a series of agreements to increase competition under National Competition Policy. The Competition Policy Agreement required that any legislation which restricted competition be reviewed by the end of 2000. The review was sought to ensure that legislation did not restrict competition unless it could be shown that the benefits to the community outweighed the costs, and that the objectives of the legislation could only be achieved by restricting competition. The legislative review provided renewed impetus to the reform of statutory marketing arrangements (appendix B).

Only one marketing board with statutory powers will remain in operation beyond 2016 — the Rice Marketing Board (RMB) in New South Wales. Statutory marketing arrangements for potatoes in Western Australia were repealed in September 2016, and will cease to operate by the end of 2016. However, in December 2015, the Queensland Parliament re-regulated the sugar industry by passing legislation that enables sugarcane growers to direct how millers market sugar internationally.

⁶¹ This was illustrated by the failure of the wool reserve price scheme, a scheme which was thought to assist wool growers but ultimately harmed them (appendix B).

Rice marketing in New South Wales

The RMB was the first commodity marketing board in New South Wales. It was initially established under the *Marketing of Primary Products Act 1927* (NSW). The domestic marketing of rice in New South Wales was deregulated in 2006, but the RMB maintains single-desk exporting by issuing an exclusive export licence to SunRice.

Under the *Rice Marketing Act 1983*, all rice produced in New South Wales is vested in the Board (that is, the Board is its legal owner). The objectives of the RMB are to:

- encourage the development of a competitive domestic market for rice
- ensure the best possible returns from rice sold outside Australia based on the quality differentials or attributes of the Australian grown rice
- liaise with and represent the interests of all New South Wales rice growers in relation to the Board's functions and objects (RMB 2016).

The RMB has previously pointed to price premiums⁶² as evidence that statutory marketing arrangements are working and should be maintained (RMB 2015).

Australia is a small, price-taking exporter that is unable to exert monopoly power in rice export markets. Australia contributes less than 1.5 per cent of total world exports of rice (ABARES 2015a) and 3.5 per cent of japonica exports (FAO 2016a). Any price premiums generated in rice export markets are likely to reflect quality and branding advantages rather than market power.

Evidence of price premiums?

Dating back to the mid-1990s, there have been a number of reviews of the single-desk export selling arrangements for the New South Wales rice industry:

- according to the NSW Government (2012) a National Competition Policy review in 1995-96 concluded that the single-desk export selling arrangements of the New South Wales rice industry generated market premiums for the rice industry and a net benefit to the community; a further review in 2004-05 came to a similar conclusion
- a 2009-10 review did not conclusively argue that the single-desk export marketing arrangements were delivering price premiums to growers and broader community benefits. The review called for stronger accountability arrangements and for initiatives and performance information to form a key consideration in any decision to continue the arrangements beyond 2013 (NSW Government 2012).

⁶² The term 'price premium' is used to describe the difference between the prices that growers receive as a result of the activities of the RMB, relative to the price that would be received under alternative (non-statutory) marketing arrangements.

Nonetheless, the 2012 review by the New South Wales Government recommended the continuation of single-desk marketing for rice:

... there is evidence to support a finding that the single desk enabled by vesting is delivering price premiums in export markets relative to SunRice competitors selling into those markets. (NSW Government 2012, p. 14)

The review recommended that vesting be renewed until 30 June 2017, with further extension subject to a review to determine whether export price premiums, relative to those received by other international competitors on export markets, continue to be achieved.

The New South Wales Department of Primary Industries is currently reviewing whether single-desk exporting of rice should be extended beyond 30 June 2017 (NSW DPI 2016c).

The evidence presented to the 2012 review on price premiums was contested. Economic analysis undertaken by Deloitte Access Economics found no evidence of price premiums in export markets (Deloitte Access Economics 2012). In contrast, analysis by SunRice claimed price premiums ranged from 5 to 20 per cent in diverse export markets (Deloitte Access Economics 2012).

SunRice (Ricegrowers Limited, sub. DR197) and the Ricegrowers' Association of Australia (sub. DR162) pointed to analysis undertaken by Grant Thornton to suggest that the value of price premiums to rice growers was \$82.4 million for the year ended 30 April 2015 (RMB 2015).

No independently verified evidence has been made public by the RMB or SunRice to show that statutory marketing results in price premiums, or whether these price premiums are paid back to Australian rice growers. Price data for Australian rice exports by country of destination are not published by the Australian Bureau of Statistics, which makes it difficult to assess claims of product differentiation across diverse markets.

Grant Thornton calculated premiums for Australian rice as the difference between the average in-country price for Australian rice relative to local competing brands of rice in Australia's five major export regions (RMB 2015). However, these domestic prices in countries that Australia exports to show the price premium accruing to foreign supermarkets. Unless the premium is also reflected in border prices this type of analysis does not provide evidence that a premium is being passed back to Australian rice growers.

To assess the price premiums for Australian rice exports, the Commission updated the work of Deloitte Access Economics (2012) (appendix D) and also looked at price data based on individual country data.

SunRice is the only exporter of rice from Australia, and the Australian Bureau of Statistics maintains commercial confidentiality by not publishing export data for each destination country. To update the Deloitte Access Economics analysis, the Commission compared the unit value of Australian exports (aggregated across all destination countries) to the price of Californian rice exports (where there is no statutory rice marketing) for the periods

1989-90 to 2012-13 and 2003-04 to 2012-13. Based on this analysis, the Commission did not find evidence of a price premium for Australian rice exports (appendix D).

A criticism of this type of analysis is that it relies on average unit export values from Australia, rather than individual country data (NSW Government 2012). However, if price premiums are not apparent in aggregate data, it means that premiums generated in one export market are dissipated in others.

Notwithstanding the lack of evidence in aggregate data, the Commission recalculated price premiums using data for rice imported from Australia into 123 countries between 1986 and 2013 (appendix D) (FAO 2016a). The analysis was repeated for 25 countries in the Middle East and North Africa and for New Zealand.

Premiums were found to be limited to the New Zealand market where Australia has a significant advantage in terms of transport costs, but there were also significant price detriments⁶³ in other markets. Overall, premiums in some markets are offset by detriments in other markets. This analysis is sensitive to the adjustments made to account for freight costs and package value-adding, which may partly explain the more favourable results of previous analyses compared to those of the Commission. The Commission used sensitivity analysis to ensure that these findings were robust and concludes that the claims of price premiums are overstated.

Arguments for retaining statutory marketing

Price premiums are not in themselves evidence that single-desk marketing is desirable or necessary. Rather, improved performance through higher returns or lower costs should be an outcome of commercial innovation. Price premiums can also be achieved by producing a product with quality and service characteristics that consumers are prepared to pay more for relative to commodity-grade alternatives.

The Ricegrowers' Association of Australia (Ricegrowers) claimed that Australian grown rice delivers a premium to global competitors for two reasons:

Australian grown rice has very favourable perceptions amongst consumers in several key markets. This is due to the favourable perceptions of Australia as a good country for growing food as well as the quality of Australian rice, driven by our varietal development, processing infrastructure and total supply chain quality assurance.

Branding of New South Wales rice by SunRice has added considerable value to the exports. SunRice's brands have very strong recognition in key markets and can achieve a premium over competitor product. This has allowed SunRice to maintain some premium in markets over the last few years despite competing with traded rice from competitor countries. (2012, p. 8)

⁶³ The term detriment is used to describe a price premium that is negative (lower prices than would otherwise have been achieved).

Previous Commission inquiries have questioned whether regulated single-desk marketing is necessary to generate this type of price premium, and argued that competition was more likely to drive innovation and higher premiums (Gropp, Hallam and Manion 2000; IC 1991).

In some situations, collective bargaining can prevent quality and service premiums from being competed away by multiple small suppliers. However, the experience in other grain industries is that deregulation leads to innovation and reduces inefficiencies associated with single-desk marketing, which improves industry performance (PC 2010d).

Another argument in support of maintaining single-desk marketing was the need to maintain a critical mass of rice production to support milling and marketing activities in the southern Riverina of New South Wales. SunRice, for example, argued that:

... because of the relatively small tonnages involved, only with vesting and the consequent certainty that it would be handling all the southern NSW rice crop could it, or any competitor, maintain the requisite storage and milling facilities in the southern Riverina. (NSW Government 2012, p. 13)

However, the industry's strategy for maintaining the viability of mills during periods of low on-farm rice production (such as droughts) is to import unprocessed rice, and this strategy does not rely on statutory marketing of exports.

Ricegrowers (sub. DR162) also told the Commission that rice vesting was essential to the viability of the rice industry, and that competition between rice and other crops for inputs such as irrigation water provided sufficient incentives to minimise costs and drive innovation.

Rice is a relatively low value use of water (figure 4.3, chapter 4), and between 2006-07 and 2013-14, rice farms that were net sellers of water made a higher annual rate of return than those that bought water to grow rice (Ashton, Oliver and Norrie 2016). This means that rice vesting is likely to lead to an inefficient allocation of water if it favours rice at the expense of more valuable crops.

Ricegrowers also put forward the argument that deregulation would be harmful for less profitable growers:

While a small minority of growers may establish successful niche export markets, the benefits of these opportunities are unlikely to extend to the majority of growers who collectively do not have the ability to establish and maintain export markets that would be more profitable than those established and maintained by SunRice. (sub. DR162, p. 4)

Similarly, SunRice noted that deregulation could have 'far reaching consequences for the Australian rice industry and regional communities' (Ricegrowers Limited, sub. DR197, p. 5).

Deregulation does not translate into individual farm businesses needing to find and service their own export markets. Rather, the activities of SunRice (or new entrants to rice

marketing) could continue unencumbered by the constraints and costs of statutory marketing. That said, structural adjustment is likely to result in resources being reallocated from smaller and less efficient farms to larger, more efficient and innovative farm businesses.

It is also important to note that rice is not critical to the viability of most rice-growing farms. Most farms that grow rice do so opportunistically when irrigation water is available. An ABARES survey in 2016 found that rice growing farms are diversified and adaptive, and consistently generated less than 25 per cent of their income from rice during the drought of 2006-07 to 2010-11 (Ashton, Oliver and Norrie 2016).

The direct costs incurred by single-desk marketing of rice are relatively small, but unnecessary nonetheless. The expenses of the RMB were \$564 000 in 2014-15, with a planned budget of \$626 000 for 2015-16 (RMB 2015). While Ricegrowers has argued that the 2014-15 cost of RMB came to 68 cents per tonne which was a ‘small price to pay to receive a price premium of \$116.65 per tonne’ (sub. DR162, p. 3), this is an expense that does not need to be incurred.

The bottom line

Statutory marketing of Australian rice exports is unnecessary. In a deregulated market, competing marketing companies would have an incentive to retain grower loyalty by maximising price premiums and minimising costs, without incurring the costs of statutory marketing. This incentive to innovate in marketing and reduce costs is likely to result in higher profits for farms that grow rice.

Statutory marketing has become an inefficient means of requiring the diversified farms that produce rice to sell to a single processor and exporter. The single-desk export selling arrangements for rice in New South Wales are an anachronism and should be repealed.

RECOMMENDATION 12.1

The New South Wales Government should repeal the *Rice Marketing Act 1983*.

Potato marketing in Western Australia

It was illegal to sell fresh ‘table’ potatoes grown in Western Australia for human consumption without a licence from the Potato Marketing Corporation until September 2016. The Potato Marketing Corporation undertook a number of functions under the *Marketing of Potatoes Act 1946* (WA), including:

- determining the quantity and the colour of potatoes produced

-
- issuing licences (a domestic market entitlement) to grow potatoes
 - setting the price that growers will receive
 - licensing wash packers (wholesalers that receive, wash and pack potatoes)
 - acting as the monopoly seller of potatoes to the wholesale market (ERAWA 2014).

The Potato Marketing Corporation was funded by a levy on growers.

The Marketing of Potatoes Act was created to ensure that consumers in Western Australia had a reliable supply of potatoes following the disruption to agricultural markets caused by World War II. The Potato Marketing Corporation was the last statutory marketing authority left in Australia to control domestic production by registering growers and licensing areas of land where potatoes can be planted.

While the Potato Marketing Corporation had for some time reported that it no longer used its powers to search for and seize unlicensed potatoes, legal action was used as recently as December 2015 to restrict the quantity of potatoes that farmers can grow (Wahlquist 2015). The Economic Regulation Authority of Western Australia (ERAWA) (2014) found that long term increases in consumer prices caused by restricting competition had become capitalised into the value of entitlements that sold for between \$350 and \$600 per tonne.

The Western Australian Government announced in May 2016 that it intended to deregulate the potato industry (Nalder and Redman 2016), and the *Marketing of Potatoes Amendment and Repeal Act 2016* (WA) commenced on 12 September 2016. It provides for the Potato Marketing Corporation to be abolished from 31 December 2016. The Western Australian Government told the Commission that:

[the Department of Agriculture and Food Western Australia] is progressing the deregulation of the potato industry and the Department of Finance is providing some advice on transitional assistance, particularly in respect of a set of principles that can be broadly applied across government to guide decision making on transitional assistance. (sub. DR285, p. 2)

It is reported that the majority of Western Australian potato growers support deregulation (Thompson 2015).

The public policy objectives of maintaining the statutory marketing of potatoes in Western Australia for so long are difficult to identify. The Potato Marketing Corporation's annual report states that it exists to fulfil the functions of the Marketing of Potatoes Act (PMC 2015). The broad purpose of the Corporation was to ensure the supply of the quantities, kinds and qualities preferred by consumers following the disruptions to agricultural markets caused by World War II.

Clearly, the market conditions under which potato marketing in Western Australia were originally regulated are no longer in place. In recent years, the Potato Marketing Corporation interpreted its role as restricting the supply of potatoes to match a level of demand consistent with maintaining a constant price of potatoes, and therefore income for potato growers (PMC 2015). It is not uncommon for regulators who have seen their

original purpose come to an end to use revised and creeping mandate as a reason to continue operating.

In response to a review by the ERAWA, the Potato Marketing Corporation also argued that its activities counteract the market power of major supermarkets (ERAWA 2014). Combatting the market power of supermarkets is not one of the functions given to the Potato Marketing Corporation under the Act. The ERAWA found that major supermarkets purchased 42 per cent of potatoes marketed by the Corporation, and that there was substantial competition amongst buyers of potatoes.

After extensive consultation and review, the ERAWA concluded that:

... the existing regulations on the potato market are holding back the industry and are not serving the Western Australian public well. As such, the ERA recommends that the *Marketing of Potatoes Act 1946* and *Marketing of Potatoes Regulations 1987* be repealed. (ERAWA 2014, p. 317)

The statutory marketing arrangements for potatoes in Western Australia were also ineffective — they did not supply the quantities, kinds and qualities preferred by consumers. The ERAWA (2014) found that Western Australian consumers had a limited choice of potato varieties compared to consumers in eastern Australia. In the rest of Australia, where potato markets have long been unregulated, consumer preferences have shifted since the 1990s from white to yellow varieties. Statutory marketing arrangements appear to have impeded the response of Western Australian potato production to this major change in consumer preferences.

The marketing arrangements also appear to have had an impact on the productivity of potato production in Western Australia. South Australia, for example, has a similar number of potato growers but produces more than five times the volume of potatoes. The regulation of ‘table’ potato marketing in Western Australia has hampered the development of a seed potato export industry in that state (ERAWA 2014).

The ERAWA found that statutory marketing of potatoes provided monopoly rents for 78 farm businesses at the expense of 2.6 million consumers in Western Australia:

... restrictions on potato marketing have raised the incomes of potato growers in Western Australia. However, this has been at the expense of Western Australian consumers, who have paid higher prices than would otherwise have been the case, have had limited choice of potato varieties and have endured poor product quality. The restrictions have also limited productivity growth in the industry. (ERAWA 2014, p. 316)

The ERAWA estimated that if the industry was deregulated, consumers would benefit by about \$43 million per year from lower prices (this equates to about \$16.50 per person per year) (ERAWA 2014).

The statutory marketing of potatoes in Western Australia has for some time not served the interests of consumers and has reduced the ability of the industry to respond to changes in

consumer preferences. The Marketing of Potatoes Act has served the interests of a small number of potato growers at the expense of a much greater number of consumers.

Deregulation of the potato industry in Western Australia is well overdue. An unrestricted market will provide a much more effective and efficient way to meet the changing preferences of potato consumers in Western Australia than the previous statutory marketing arrangements.

FINDING 12.1

Statutory marketing of potatoes in Western Australia reduced consumer choice and increased the price of potatoes in Western Australia. Deregulation of the industry will allow potato production in that state to better respond to changing consumer preferences and reduce the cost of potatoes for consumers.

Re-regulation of the Queensland sugar industry

History of sugar marketing

In 1902, Australia's sugar industry became the first industry in Australia to receive tariff protection as a precursor to the later development of a full system of statutory marketing. Prior to federation, the sugar industry had employed Melanesian labourers at wages lower than those received by labourers of European descent (Lloyd 1982). Tariff protection raised domestic prices above export prices, and was designed to compensate the industry for the higher costs of employing European labour.

In 1912, a Commonwealth Royal Commission into the sugar industry concluded that the dominant sugar refiner at the time (Colonial Sugar Refining Company) did not face any effective competition. There was discontent by millers over the prices for raw sugar, and by growers over cane prices fixed by millers (Craigie 2014).

The Royal Commission led to the development of a 'cane price formula' (SRRATRC 2015a). The cane price formula calculated how the returns of the raw sugar would be allocated between growers and millers. At that time it was estimated that grower's total investment in the production of sugar cane, and ultimately raw sugar, was two-thirds of the total industry's investment, while millers' investment was estimated to be one-third. A modified version of this formula continues to be used today.

The sugar industry in Queensland was highly regulated up until the early 2000s. Government regulation controlled virtually every aspect of the industry — from the allocation of cane production areas between farms to the acquisition, marketing and sale of raw sugar (QPC 2015). As Craigie said:

Over a 100 year timeframe, the sugar industry in Queensland has been highly regulated by both Commonwealth and State governments. Government regulation originated in 1915 with compulsory acquisition of sugar and controls on raw sugar and sugar cane pricing implemented to regulate returns to growers and millers and encourage further settlement along the coast of Queensland. (2014, p. 1)

Between 1982 and 2006 there were more than 30 inquiries into the sugar industry (Australian Sugar Milling Council, sub. 68). The inquiries revealed significant global changes in the operating environment facing the sugar industry and brought into question the efficiency and effectiveness of statutory marketing (Craigie 2014). There was increasing concern that regulation had constrained investment and innovation, and that low adoption of new technologies had held back productivity and competitiveness (QPC 2015). Commenting on reviews of the Queensland sugar industry in the early 2000s, a Senate inquiry into current and future arrangements for marketing of Australian sugar said:

The consistent message coming from the reviews was that the regulatory system ‘created a set of formal and informal rules — called the principle of adverse effects — which have the effect of blocking productivity gains’. It was also found that the system created antagonism between growers and mill operators and fostered a resistance to change, which together hindered productivity and diminished innovation (SRRATRC 2015, p. 10).

The need to improve the productivity and competitiveness of the industry became even more critical in the 2000s as Brazil increased its production of sugarcane and exports of sugar (ABARES 2015a).

In 2006, the sugar industry was *nominally* deregulated with the repeal of sections of the *Sugar Industry Act 1999* (Qld). Vesting of raw sugar to Queensland Sugar Limited (QSL) was removed and control of raw sugar was consequently returned to millers.

However, prior to deregulation in 2005, growers and millers signed a memorandum of understanding (MOU) with the Queensland Government which included retaining single-desk marketing via QSL (Queensland Government et al. 2005). This agreement effectively locked in contractual arrangements for the 10-year term of existing Raw Sugar Supply Agreements (RSSAs) (to 2016). Under the RSSAs the seven Queensland mill owners supplied all raw sugar production, intended for bulk export, to QSL.

In 2014, three of Queensland’s larger mills (Wilmar, MSF Sugar Limited and Tully Sugar Limited) announced that they would cease contracting QSL to market raw sugar exports from 1 July 2017, and would instead market export raw sugar through their own arrangements (QPC 2015). Canegrowers and grower organisations sought government intervention because they were concerned that a move away from marketing via QSL would alter the way risks and rewards were shared across the industry.

Growers were concerned that the decision by some millers to market raw sugar would strip them (the growers) of their rights to continue using QSL, and that millers removing their right to choose QSL to market sugar was a form of market failure (Canegrowers Burdekin sub. DR271). Growers advocated for the right to choose which marketer marketed the two-thirds ‘economic interest’ in raw sugar that they claimed under the cane price formula.

In December 2015, the Queensland Parliament passed the *Sugar Industry (Real Choice in Marketing) Amendment Act 2015* (Qld) (the Real Choice Act) to protect the interests of Queensland’s canegrowers.⁶⁴ The Real Choice Act re-regulates the international marketing of Queensland sugar.

The Queensland Productivity Commission (QPC) prepared a decision regulatory impact statement (RIS) on the Bill (the Bill had already been tabled in the Queensland Parliament) (QPC 2015). The RIS was informed by the consultations and findings of a report by the Agriculture and Environmental Committee of the Queensland Parliament and a Senate inquiry into current and future arrangements for the marketing of Australian sugar (QAEC 2015; SRRATRC 2015a). The Senate inquiry coincided with the development of a sugar marketing code of conduct by an informal taskforce of senators and members from Queensland and New South Wales with an interest in the sugar industry (Joyce 2014a).

Confusing and contested objectives

The stated objectives of the Real Choice Act are to ensure that sugarcane growers can nominate who markets a significant proportion of the sugar milled from the cane that they grow, and to provide mechanisms for dispute resolution.

The objectives of reregulating the Queensland sugar industry are both confused and contested. According to the Canegrowers the Act protects competition by allowing choice:

The Act establishes a macroeconomic framework that protects growers’ and millers’ rights to deal with their respective economic interest sugar, enabling them to independently choose who provides the marketing services that best suit their needs. In doing so it provides for competition in the provision of those marketing services. (sub. DR169, p. 3)

However, the millers perspective is different. Wilmar, for example, said that:

We suspected from the outset that this legislation was never about addressing concerns about market failure. Rather, it was always about advancing generation-old claims for grower ownership of the raw sugar that mill owners manufacture from cane that they purchase from growers, and about reintroducing a form of quasi-statutory bargaining in cane supply negotiations that was in fact abandoned in 2004. (trans., p. 499)

The QPC argued that the stated objectives of the Real Choice Act (then Bill) read more like policy responses rather than policy objectives. Through extensive consultation, the

⁶⁴ This legislation was a private members Bill and not supported by the Government of Queensland.

QPC sought to clarify the underlying goals of reregulating sugar marketing, and concluded that they were:

- to ensure a pricing framework where there is an appropriate balance of risk and reward between growers and millers
- to ensure that there are appropriate protections for growers and millers to prevent against the abuse of market power
- to ensure a regulatory framework that supports investment and innovation in the sugar industry and supports the long-term economic sustainability of the sugar industry. (QPC 2015, p. 36)

The idea that the Real Choice Act re-regulates sugar marketing is also contested — many organisations representing sugarcane growers said that the Act should not be described as ‘re-regulating’ the marketing of sugar (SISL, sub. DR117; Canegrowers Isis, sub. DR230). Canegrowers, for example, said:

The *Sugar Industry (Real Choice in Marketing) Amendment Act 2015* does not provide for either the actual or potential introduction of new statutory marketing arrangements in Australia’s sugar industry in Queensland ... nor do they re-regulate the international marketing of Australian sugar. (sub. DR169, p. 2)

... this isn’t a case of reregulating sugar marketing at all. It is simply correcting the imbalances that have always been there but came to the fore when certain parties who had signed off on a memorandum of understanding and a heads of agreement about the transition to voluntary marketing arrangements, back in 2004 and 2005, actually reneged on those understandings and undertakings. (Canegrowers Herbert River, trans. p. 620)

The argument that the legislation does not ‘re-regulate’ seems partly based on the idea that the term re-regulation can only be applied to a full return to single-desk statutory marketing (SISL, sub. DR117; Canegrowers Isis, sub. DR230).

The Real Choice Act is legislation that restricts the marketing choices of sugar millers, and hence the term ‘regulation’ is appropriate. Because the legislation follows earlier amendments to the *Sugar Industry Act 1999* (Qld) designed to abolish most previous legislative controls on marketing, the term ‘re’-regulation is also appropriate.

The Queensland Government said it was ‘concerned that the amendments signal a return to a highly regulated industry structure, which cuts against the basis of thirty years of micro economic reforms in Australia’ (sub. DR154, p. 2).

Lack of transparency in miller marketing?

Submissions to this inquiry (including by Canegrowers, sub. 22), as well as to the QPC (2015) and a Senate inquiry (SRRATRC 2015a), said that sugarcane growers expect the Real Choice Act to maintain transparent pricing mechanisms that lead to an equitable distribution of market premiums between themselves and millers.

Transparent pricing is seen as a means of preventing transfer pricing if vertically integrated international agribusinesses dominate future marketing arrangements (QPC 2015). Grower confidence in the pricing practices of industry-owned QSL has meant that the goals of maintaining transparent and equitable pricing are often conflated with the goal of maintaining existing single-desk marketing via QSL (for example, Canegrowers Burdekin, trans., p 683).

While there may be a case for government intervention where there is evidence of insufficient information or information asymmetry, the QPC concluded that the information that millers were proposing to provide sugarcane growers under the new marketing arrangements from 2017 onwards:

... appears to be comprehensive and would appear to provide the information that growers would need to form a view on whether the premiums that should be being paid to growers, is in fact being paid. It would also allow comparison of the premium and cost performance from year to year. (QPC 2015, p. 53)

Also, sugar is a commodity traded on world markets with readily reported and standardised price and quality characteristics. This makes transfer pricing easy to monitor and detect by the Australian Taxation Office.

Re-regulation of sugar marketing is not needed to meet the growers' objective of preventing transfer pricing.

Imbalance of bargaining power?

Consistent with the historical arguments for statutory marketing (discussed earlier for other industries and in appendix B), a key concern of sugarcane growers is the potential for mills to exercise monopsony power when negotiating future agreements. Canegrowers, for example, said:

In each of the sugarcane producing regions, the local cane growing community must deal commercially with a highly concentrated raw sugar miller. In most regions, a single company owns all mills in the district; there is no feasible alternative market for cane; and there are few if any worthwhile alternatives to sugarcane production within the farming system. With one exception, the mill owner is either a large multinational or linked to a large multinational in which Australian sugar accounts for a small part of their total business activities. There is a clear imbalance in economic strength favouring the milling company. (sub. 22, p. 8)

Sentiments similar to the view that 'growers are captive to the mill they supply' (Canegrowers, sub. DR169, p. 4) were repeated in submissions and at hearings from organisations representing sugarcane growers — including Pioneer Cane Growers Organisation (sub. DR144) and Canegrowers Burdekin (sub. DR271). Canegrowers Herbert River, for example, said:

The issue is that all the grower has is his cane in the field. The balance of power rests with the processor, so it's going to be a Mexican standoff. Who's going to look each other in the eye

and who's going to back down first? The grower, who has a perishable product in the field feels like he is under absolute duress. (trans, p. 630)

Others have made even stronger claims — on 12 October 2016, Mr George Christensen MP reportedly wrote to the ACCC requesting an investigation into alleged 'unconscionable' and 'extremely anti-competitive' conduct by sugar millers (Boyd 2016). This investigation could address some of the misconceptions surrounding sugar marketing put to this inquiry (box 12.1).

Box 12.1 Myths about sugar marketing and the need for regulation

During the inquiry, the Commission heard a number of claims about sugar and the need for regulation that appear to be misplaced.

- *Regulation is required because sugarcane is transformed by crushing into crystallised sugar.*
 - All agricultural products are transformed in some way before consumption, even if this transformation is minimal (milling grain for animal feed) or limited to transporting it to consumers (fresh fruit).
- *Regulation is required because the commercial sugar content falls rapidly after cutting.*
 - The value of most fresh commodities such as fresh milk, vegetables and fish falls rapidly after harvesting, and supply chains optimising their value do not require regulation to select a marketer.
- *Regulation is required because the value of sugarcane is not derived from the cane itself, but from the value of final products.*
 - The value of all agricultural commodities is determined by the value of final products, and the share of this value to growers and processors and other participants along the supply chain is usually resolved by market processes.
- *Cane growers retain economic rights to two thirds of the sugar crushed from cane.*
 - Legal title to agricultural produce normally passes from grower to processor at the point of delivery. The cane price formula does not convey legal title for sugar to growers beyond its delivery to mills.
- *The cane pricing formula is the only acceptable basis for commercial arrangements between growers and millers.*
 - The cane pricing formula is one possible method for sharing the economic returns from sugar between millers and growers. Industry participants should be free to develop their own innovative methods.
- *Economies of scale mean that milling is a natural monopoly, often resulting in only one economically viable mill per region.*
 - Economies of scale are an inherent attribute of Australian and global food processing and retailing, and deregulation has assisted the evolution of more efficient value chains that benefit consumers.

(Continued next page)

Box 12.1 (Continued)

- *Sugarcane growers are disadvantaged because there is usually only one economically viable mill in each region.*
 - Sugar mills are unable to exercise market power because Australia is a small, price-taking exporter of raw sugar, and sugar mills are dependent on farmers in their catchment to supply sugarcane. Sugar growers and millers are mutually dependent.
- *The Memorandum of Understanding (MOU) signed by the Queensland Government, Canegrowers and the Australian Sugar Milling Council in 2005 retains past sugar marketing arrangements indefinitely into the future.*
 - The MOU was a transitional arrangement that recognised that ‘the future cannot simply be an extension of the past’ and committed all parties in the industry to the ‘transformational change required to achieve sustainability’ (Queensland Government et al. 2005, p. 1).
- *Sugar mills marketing sugar internationally will use transfer pricing to accrue profits in other countries, to the disadvantage of Australian sugarcane growers.*
 - Sugar is a commodity traded on world markets with readily reported and standardised price and quality characteristics. This means that transfer pricing is easily detected and monitored by agencies such as the Australian Taxation Office.
- *An industry-owned, not-for-profit company is the corporate structure that best serves the interests of sugarcane growers for market sugar internationally.*
 - Corporate structures that are subject to takeover in capital markets provide incentives for managers to innovate to improve markets and reduce costs.
- *Recourse to political processes to resolve disputes is in the interests of the sugar industry.*
 - Recourse to political processes to resolve industry disputes undermines trust between growers and millers, and prevents the development of industry leadership or the evolution of conflict resolution processes with genuinely independent arbitrators.

Sugar cane needs to be processed within 16 hours after harvest (due to falling sugar content) and the location of mills (due to transport costs) means the mills available to growers are limited. As QPC said:

Due to the 16 hour crushing window, harvested cane must be delivered to mills soon after harvest and growers generally use the services of a miller located close to their farms. In many cases, growers have no alternative mill to supply their cane crop. Millers also require harvested cane to be delivered quickly to their mill as it is not economically feasible to source cane from distant locations. (p. 14)

Mill consolidation and limitations on the distance that sugarcane can be transported before crushing suggest that there are economies of scale in sugar milling that could mean that a single mill in each region is the economically most efficient industry structure (QPC 2015). However, this does not mean that mills exclusively servicing a region can exercise market power.

Mills can only exercise monopsony (exclusive buying) power if there are alternative suppliers of sugarcane, or monopoly (exclusive selling) power if they can influence prices in world sugar markets. Because neither of these conditions exist in sugar markets, it is in the commercial interests of millers to maintain a viable sugarcane growing industry that maximises mill efficiency and productivity.

In recent years, Australia has exported only six per cent of total world raw sugar exports into a globally competitive market dominated by Brazil (44 per cent) (ABARES 2015a). This means that international buyers of Australian sugar have many alternative sources of supply and there is no scope for Australia to use monopoly market power to influence price.

The QPC concluded that while some millers may have a degree of market power, the potential to exercise this power in price negotiations is counteracted by the co-dependency of millers and sugarcane growers in local supply areas. This co-dependency gives sugar growers an opportunity to organise and bargain collectively with millers for mutual benefit (QPC 2015).

Collective bargaining is used widely in the sugar industry to negotiate the terms of cane supply and related agreements (Canegrowers, sub. 22). Collective bargaining in the sugar industry is a recognised exception to the *Competition and Consumer Act 2010* (CCA) (Cwlth) under section 51(1).

Are property rights appropriately assigned?

As noted earlier, a further concern of growers when the industry was deregulated was the level of influence and control they had in how raw sugar was marketed which raised questions around the extent to which growers have ownership of the raw sugar produced by mills.

Typically, legal title of agricultural produce passes from grower to processor at the point of delivery, and control over how the produce is managed is usually attached to ownership. However, Canegrowers argued that it is different for sugar.

The sugar industry is fairly unique. Cane has no real market, commercial value on its own, except for the products that can be produced from processing it. We are in a partnership, and it should be a genuine partnership, with a processor. The partnership is two-thirds to the growers. You'd think that it was 100 to nothing, the way that some processors talk.

... We seek no more than what is fair and reasonable for the marketing of the growers' share, the grower economic interest, sugar, from the cane that they produce ... the grower carries 100 per cent of the economic risk associated with the storage, logistics, marketing, sale and shipping of their grower economic interest, sugar. 100 per cent risk ... we want to be able to control the process by which the value of our cane in the field is determined for its value. That is only fair and reasonable. I don't think we're asking too much. It's been fair and reasonable for many, many years. (trans., pp. 624–7)

However, all agricultural products are transformed in some way before consumption, even if this transformation is minimal (milling grain for animal feed) or limited to transporting it to consumers (fresh fruit). And the value of most fresh commodities such as fresh milk, vegetables and fish falls rapidly after harvesting, and supply chains optimising their value have evolved without regulation to vest property rights in growers or to select a marketer.

The QPC concluded that there was no evidence that the cane price formula or the concept of grower economic interest (GEI) provides any form of legal title in the growers. Rather, that the arrangements simply recognise that the price the growers obtain for cane is dependent on the price obtained for the sale of manufactured raw sugar. The QPC said:

We cannot conclude there is a market failure in the Queensland sugar industry because millers are not offering growers choice to determine the marketing arrangements for something they do not own. Nor do we consider that this is inhibiting competition in the market, because the 'market' is the market for the export of raw sugar, which is contestable. (p. ix)

Also, that millers should have the right to choose who markets the sugar that they purchase from growers:

... the growers are effectively asking to be given property type rights in a product which they do not own. A refusal by the owner of a product to give away property type rights in that product, does not constitute a misuse of market power as it is not of itself inherently unreasonable. (QPC 2015, p. 51)

The Commission agrees with the QPC's assessment that millers have exclusive property rights over the sugar that they crush. Millers have no obligation to provide growers with a choice of marketer. This is not a market failure that needs to be regulated.

Claims of property rights by growers over the products produced by millers are not confined to sugar. Wilmar told the Commission that:

On 5 May 2016, a collective representing growers supplying Wilmar mills lodged a claim for 66% of profits obtained by Wilmar from bagasse products, molasses and any new non-raw sugar products. It seems that the collective is arguing that grower economic interest creates entitlement to a 2/3rds share of profits from the sale of all products derived from cane during or in association with the manufacturing of raw sugar. (sub. DR139, p. 12)

In September 2016, Canegrowers applied to the ACCC for a collective bargaining exemption that included 'capturing the value of the by-products and related products from the sugarcane' (ACCC 2016e). The application seeks to expand existing exemptions allowing collective bargaining to 'include the right to have marketing agreements imposed on all mill owners' (Boyd 2016).

Cangrowers do not seem to recognise the normal transmission of value from the benefits and co-benefits associated with agricultural commodities through supply chains via prices negotiations. Canegrowers Burdekin said:

We point out that the investment in innovation in areas such as co-generation and biofuel has been to the sole financial benefit of the milling companies. To our knowledge growers have

received no benefit from these innovations and our lack of bargaining power has stopped us from obtaining a flow through of this benefit to growers. (sub. DR271, p. 5)

The arbitrary appropriation of miller's property rights through the Real Choice Act is likely to discourage investment in milling, resulting in inefficiencies in mill capacity which will in turn lead to reduced productivity of sugar cane growing. Wilmar argued that:

The Act has created uncertainty for investors in the Queensland sugar industry. The impact has been profound and immediate. Within a week of the Act becoming law, media reported an announcement by a foreign-owned milling company that it had put future capital investment 'on hold'. It is Wilmar's view that while the Act remains in force, more such decisions will be forced by investor uncertainty and new risks introduced under the Act and this will be to the financial disadvantage of growers, millers and the economy. Wilmar has also put a hold on future investment because of the Act. (sub. DR139, p. 11).

The QPC concluded that the legislation increases risk for millers, and this was likely to 'make Queensland a less desirable investment destination, compared with other jurisdictions' (QPC 2015, p. 75). This risk will be compounded by regional variability and changes over time in the cane price formula.

Dispute resolution and self-reliance

Another objective of the Real Choice Act is to provide mechanisms for dispute resolution. The Act provides an avenue for grower collectives to 'use binding pre-contract arbitration proceedings to have a 2/3rds share of non-sugar profits included in new cane supply agreements' (Wilmar, sub. DR139, p. 4).

The QPC (2015) found that while a degree of distrust between growers and millers has made price negotiations difficult, this lack of trust is not in itself an indication of the misuse of market power, and does not justify additional regulation. The Chair of the Queensland Parliament Agriculture and Environment Committee also said:

I acknowledge the view of many within the industry that the impasse over marketing arrangements could only be resolved through government intervention. ... The committee encourages growers and mill owners to continue to negotiate in good faith and to fully utilise the federal-government-led mediation process to resolve the current impasse. It is the committee's opinion that, where possible, commercial negotiated outcomes can produce better outcomes for all those involved in the Queensland sugar industry. (QAEC 2015, p. v)

Arbitration is costly and can impede investment and innovation. As Hildebrand said:

It is not desirable that arbitration becomes a customary way to avoid the responsibility that should accompany local leadership in genuine negotiation at the mill area level, for the good of participants in that mill area. (2002, p. 14)

Hildebrand saw 'time spent in aggressive conflict between co-dependent parties as sheer waste', and suggested 'facilitation as a practice worth substituting [for conflict]' (2002, p. 14).

Implicit in the objective of providing dispute resolution is the idea that there are imbalances in market power that need to be regulated. There are protections through the CCA that prevent the misuse of market power (section 12.2), and the concentrated nature of the industry provides sugarcane growers with an opportunity to take advantage of the collective bargaining provisions in the CCA.

Mediation provided under codes of conduct is used in other industries (section 12.3) as a low cost mechanism for resolving disputes. However, a code of conduct is only likely to be effective if it is developed and administered in a manner considered to be independent and impartial by all parties. A draft code of conduct was developed during 2015 by a non-parliamentary taskforce of National Party senators and members from Queensland and New South Wales with an interest in the sugar industry (Entsch 2015; Joyce 2014a). Milling companies expressed dissatisfaction with the degree to which they were consulted during its development (Sparkes 2015), and are reported as rejecting the draft, saying that:

... the work of the taskforce, and the threat of government intervention, had proved a disincentive for millers and growers to reach a commercial agreement for future marketing arrangements. (Zonca 2015)

There is no reason why government should intervene to expropriate assets from one private organisation (millers) to give to another (growers). Both growers and millers are mutually dependent and have shared responsibility for reaching an amicable agreement. As in other sectors, differences should be resolved by negotiation (or if necessary by the judicial system). Recourse to political processes to resolve industry disputes can undermine trust between growers and millers, and prevent the development of industry leadership and/or conflict resolution processes.

FINDING 12.2

There is no market failure or other reasonable objective to justify the re-regulation of the Queensland sugar industry.

Re-regulation increases vulnerability

Re-regulating the sugar industry also risks entrenching a backward looking perspective that reduces the ability of the industry to anticipate and adapt to future change and external shocks. Modelling by the Economic Research Service of the United States Department of Agriculture (ERS) highlighted that world sugar markets will continue to experience shocks from unexpected policy changes in Brazil, India, China and Pakistan into the long term future (Haley 2015). Demand is also expected to grow for alternative sweeteners such as corn syrup that compete with sugar in world markets (OECD 2015b).

Some organisations representing growers equate market failure with the disruption to marketing arrangements established in 1915, and see the object of re-regulation as

continuing these past marketing arrangements. For example, Canegrowers Burdekin told the Commission that:

We are surprised and disappointed that anybody could conclude that there has not been a case of Market Failure. Australia has had a market process in place that has benefited millers and growers for over 100 years. We understand this marketing process is the envy of other countries throughout the world. Wilmar International, fresh to Australia, came to growers and said they want to completely smash this process. Growers clearly SHOUT OUT NO and our region and others vote unanimously to condemn Wilmar's proposal. (sub. DR271, p. 3)

Organisations representing millers dispute that they have any intention of moving away from past revenue sharing mechanisms. The Australian Sugar Milling Council stated that 'mills have not proposed to change the existing revenue sharing cane payment formulas ...' (trans., p. 560).

Looking beyond the claims and counter claims, a worrying aspect of the debate is that it assumes that marketing arrangements developed in 1915 (when Australian and New Zealand diggers landed on the Gallipoli peninsula) should continue to be adhered to in 2016 (Canegrowers, sub. DR169; Canegrowers Burdekin, sub. DR271; Canegrowers Innisfail, sub. DR119). What seems to be missing is a vision for the future of the sugar industry that projects likely changes in technology and patterns of future demand, and ways for growers, millers and marketers to work cooperatively to adapt to these challenges.

The cane price formula developed in 1915 is ingenious in that it has the potential to provide incentives for both sugarcane growers and millers to improve productivity (Dixon and Johnson 1988). However, growers and millers should be free to mutually agree to continue using this formula if it is in the interests of both parties. Its use should not be mandated by regulation. Existing and new industry participants should be able to develop new and innovative marketing arrangements.

Grower organisations claim that the approximate one-third (miller) and two-third (grower) 'economic interest' in sugar is derived from past capital investments in the industry (Canegrowers Burdekin, trans., p. 679). More appropriate mechanisms would apportion revenue based on current and future commercial contributions to productivity and profitability.

Historic investments are 'sunk costs' in that they cannot be recovered, and are therefore a poor measure of current or future productivity and profitability, and their backward-looking nature provides no incentive to innovate. Retaining a backward looking perspective and out-of-date practices risks reducing the ability of the sugar industry to adapt to rapid or unexpected future changes in world sugar markets.

Grower representatives may also be underestimating the ability of milling companies to exit and relocate mills in other countries, which would leave the cane farms as stranded assets. During hearings the Commission asked several grower representatives to address

this possibility, and was told that it was not considered possible, so no contingency arrangements were being prepared (Pioneer Canegrowers trans., p. 669).

As noted earlier, sugar millers are concerned about the impact the Real Choice Act will have on the industry. Wilmar, for example, said:

... while the Act remains in force, the Australian industry will not grow and will not improve its competitiveness in the global raw sugar market. This will be to the financial disadvantage of growers, millers, communities and the economy. (sub. DR139, p. 3)

The QPC also concluded that the legislation:

- by interfering with the property rights of millers creates a significant form of sovereign risk for millers and is likely to ‘reduce the profitability of future sugar mill investment and dampen longer term innovation and productivity compared to no additional regulation’ (2015, p. 84)
- could reduce overall returns to the sugar industry and add extra costs (for example, marketers need to compete for the business of cane producers with costs to attract and retain customers and additional transaction costs; also pre-contract arbitration can result in additional costs that may not be outweighed by benefits).

The vulnerability of the sugar industry is highlighted by the degree to which the industry has been reliant on structural adjustment funding programs. This includes: \$100 million structural adjustment and support assistance in 1986–1989; \$40 million in 1993–1997; \$16 million in 1998; up to \$86 million in 2000; and up to \$444 million in 2004 (Craigie 2014).

The Commission estimates that the sugar industry has received almost \$2 billion (in 2013-14 terms) in tariff, marketing and budgetary assistance from the Australian Government since 1990-91. This equates to a public subsidy of over \$400 000 per farm for each of the 4000 farms that remained in the industry in 2014-15.

Growers assuming that millers will not exit the Australian market, and that structural adjustment funding will continue into the future (particularly given changing demographics and voting affinities), is a high risk strategy. Without self-reliance or contingency plans, growers are effectively playing a high stakes game where they have bet ‘all in’.

Regulation is constraining the productivity of sugarcane growing

Past inquiries noted a long history of the Australian sugar industry not taking advantage of scale economies (IC 1996). In the past, this was partly due to regulations limiting the area of sugarcane that new farms could establish (IC 1992). However, the evidence suggests that not much has changed since the nominal deregulation of Queensland sugar in 2006. In fact, the evidence suggests that productivity and profitability growth of the sugar industry has stalled, and that this has coincided with slow rates of structural adjustment (box 12.2).

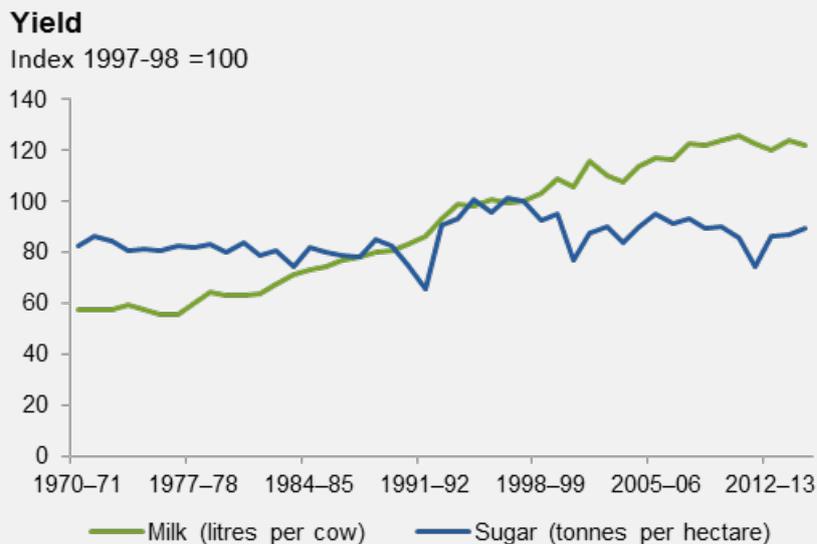
The average size of sugarcane farms in Australia increased from around 80 hectares in 1997-98 to 110 hectares in 2014-15 (ABS 2016b). In 2014-15 there were just over 440 sugarcane farms in New South Wales with an average size of 53 hectares, and nearly 3600 farms in Queensland with an average size of 116 hectares. This compares to an average sugarcane farm size in the United States of 415 hectares in 2002 and 495 hectares in 2007 (USDA 2009). This larger scale of sugarcane production is possible in Australia — in 2014-15, 23 farms in the northern gulf region of far north Queensland crushed an average area of 435 hectares each, producing an average of 82 tonnes of cane per hectare (ABS 2016b).

Box 12.2 Structural adjustment in the sugar and dairy industries

The sugar and dairy industries have similar structural characteristics. Both are regionally concentrated, highly intensive agricultural land uses and both have had a long history of market regulation. The dairy industry was deregulated in 2000, and the industry worked closely with Australian governments on a program of structural adjustment. In contrast, the sugar industry was deregulated in 2006, but the majority of Queensland mills continue to market their raw sugar exports through the single-desk marketing arrangements.

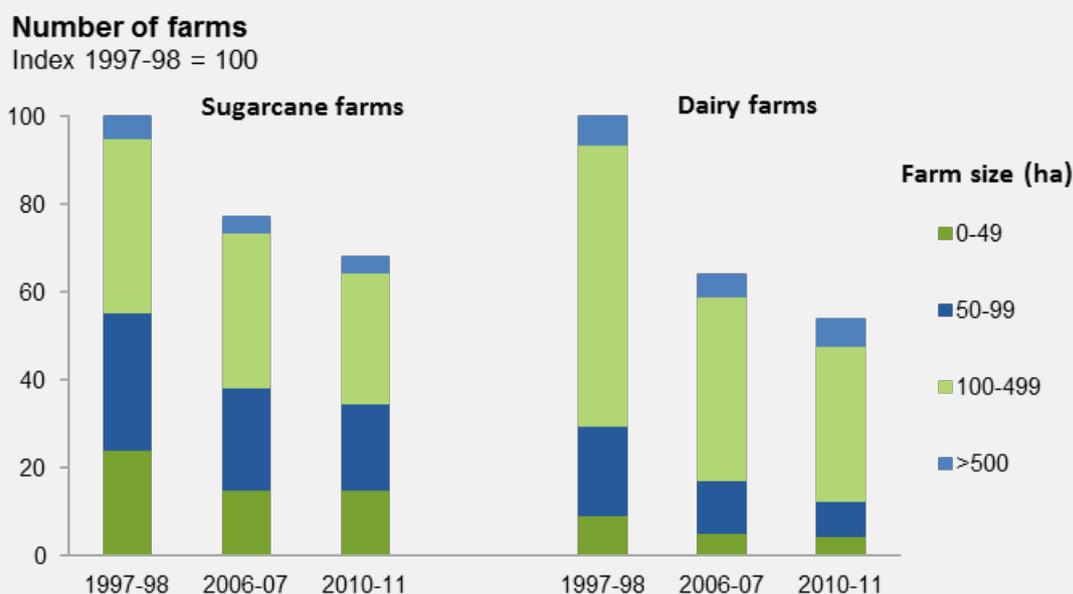
In the dairy industry, milk yields per cow have increased by 25 per cent since 1997-98, while yields of sugar have fallen by 10 to 15 per cent over the same period.

Productivity growth in the Australian dairy industry has been highest in regions that have undergone the most structural adjustment (Ashton et al. 2014, p. i). The total number of dairy farms fell by 46 per cent between 1997-98 and 2010-11 compared to 32 per cent for sugarcane farms. The decline in the number of dairy farm was accompanied by much greater consolidation of farm sizes, with the number of farms with an area of less than 99 hectares falling by 58 per cent compared with 38 per cent in the sugar industry.



(Continued next page)

Box 12.2 (continued)



Sources: ABARES (2015a); ABS (2016b).

As far back as the early 1990s, the Industry Commission (1992) cited research indicating cost savings of around 30 per cent from expanding farm area from 100 to 300 hectares. More recently Valle and Martin (2015) found that most Australian sugarcane farms with an area of less than 125 hectares generated a negative rate of return on capital while sugarcane farms with more than 250 hectares generated a rate of return comparable to farms in the grains industry with similar total capital investment. Nearly half of Australia’s sugarcane growers plan to exit the industry or diversify over the period 2015–2020. Valle and Martin (2015) reported that:

- 40 per cent of sugarcane growers intend to maintain the current size of their farm
- around 12 per cent expect to expand their sugarcane area — this was higher for larger farmers (28 per cent) and for farmers in the more productive regions of north Queensland (13 to 16 per cent)
- around 22 per cent of farmers planned to either retire or sell their farm
- 11 per cent of farmers planned to reduce their sugarcane area.

Another study found that the age profile of sugarcane farmers has a disproportionately larger percentage of its workforce in the older age brackets (> 60 years) than the overall Queensland workforce (Thompson et al. 2010). Also that:

The low numbers of young people participating in the sugar cane industry compared with the total Queensland workforce indicates that there are existing factors that already make the

industry less attractive than other areas for younger participants, or that present barriers to their participation. (Thompson et al. 2010, p. 33)

Peak bodies representing sugarcane growers dispute that farm size is related to productivity, arguing that larger farm sizes in the United States are sustained by subsidies.

CANEGROWERS suggests that the difference in sugarcane farm size between Australia and the United States can be explained in large part by the differences in support structures received by the two industries. (Canegrowers, sub. DR169, p. 6)

However, higher levels of protection in agricultural industries are usually associated with the maintenance of smaller and less efficient farm sizes. For example, in 2015 the average dairy herd in the United States was 183 cows (McBride 2016) in an industry receiving the equivalent of 15 per cent of its farm-gate milk price in public subsidies (OECD 2016b). In contrast, the average Australian dairy herd was 233 cows in 2014-15 (ABS 2016b), in an industry receiving no direct public subsidies (OECD 2016b).

Significant levels of government support are also likely to partly explain the persistence of small inefficient farm sizes in the Australian sugar industry. Thompson et al. (2010) showed that the Sugar Industry Reform Program 2004 to 2008 provided Queensland sugarcane farms with average payments of \$3361 per farm for income support, and an additional \$27 820 per farm to undertake reforms including business planning, restructuring and exiting the industry. For payments amounting to \$334 million, 3 mills were closed and 624 growers (approximately 12 per cent) exited the industry for a minimum of five years. It appears that the result is a relatively poor return on the government's investment in terms of productivity gains relative to similar programs in other comparable industries (box 12.2).

Real choice in marketing?

While the Act passed by the Queensland Parliament is titled 'Real Choice in Marketing', its actual effect is to restrict the marketing options of sugar millers and appropriate their right to market the sugar that they produce (QPC 2015). Commenting on the passing of the Bill, the Queensland Government Department of Agriculture and Fisheries said:

It was not supported by the Queensland Government due to likely negative impacts, which were identified in a regulatory impact assessment undertaken by the Queensland Productivity Commission ... the amendments to the *Sugar Industry Act 1999* which commenced on 17 December 2015 authorise potential anticompetitive behaviour (in the form of enabling growers to force sugar mills to enter contracts with a sugar marketer of the grower's choice). (sub. 58, p. 7)

There is already some evidence that re-regulation of the sugar industry is constraining sugar marketing (Webster and Zonca 2016). Re-regulation forced milling company Wilmar into a complex redrafting process that delayed the drafting of contracts with growers for the 2017 season (Webster 2016). This meant that in mid-2016 neither Wilmar nor growers

were able to use forward selling to take advantage of the highest world sugar prices since 2012.

Grower organisations attribute contracting delays to Wilmar (Webster 2016). Canegrowers Burdekin, for example, said:

Wilmar make regular comments in regard to the resources and costs they are incurring to draft contracts for 2017. Little thought has been given to the resources and costs incurred by growers and their representatives since 2013 when Wilmar initiated this nightmare. ... growers have been unable to take advantage of very attractive forward prices for 2017 as they are unable to forward price due to Wilmar's actions. (sub. DR271, p. 3)

Current proposals by sugar millers to seek higher premiums for growers through alternative marketing options are consistent with the goals of deregulation and competition policy (QPC 2015). There are limits to market premiums in competitive global commodity markets. The QPC found that 'between 95-99 per cent of the price of the sugar is determined by the international market' (2015, p. 58).

However, reform in agriculture shows that innovation in marketing has the potential to attract small additional premiums by providing products and marketing services tailored to new and emerging markets in which each marketer has a competitive advantage (PC 2010d). Improved integration of milling and marketing operations may create opportunities to increase efficiency and reduce costs.

By appropriating the rights of millers to market sugar, the Real Choice Act is anticompetitive in a number of ways that could contravene the CCA. The QPC found that:

- growers forcing millers to sell sugar to a third party looks like a form of 'third-line forcing' prohibited under subsections 47(6) and 47(7)
- collusion among growers to nominate the same alternative marketer (such as QSL) looks like a form of exclusionary contract provision prohibited under section 45
- agreement between competing sugarcane growers to limit the supply of goods or services to a third party could be a criminal offence under section 44ZZRF
- contracts, arrangements or understandings between sugarcane growers which have the purpose or effect of substantially lessening competition are prohibited under section 45 (QPC 2015, pp. 72–73).

The Real Choice Marketing Act has not been investigated by the ACCC because it is an exception to the CCA under section 51(1). Section 51(1b) of the CCA allows exceptions for:

anything done in a State, if the thing is specified in, or specifically authorised by:

- (i) an Act passed by the Parliament of that State; or
- (ii) regulations made under such an Act.

That said, under clause 2(2) of the Competition Code Agreement, the Commonwealth Treasurer can only table amendments to the CCA granting exemptions under section 51 if supported by evidence that there is a clear public benefit and that there are no other ways the policy objective can be achieved.

The QPC found that ‘a public benefit assessment of the net benefits of authorising the proposed anti-competitive conduct was not undertaken prior to introduction of the Bill’ (2015, p. 73). Under these circumstances, the Commission understands that the Treasurer can refer the state legislation to the National Competition Council to assess whether it is in the public interest. This review would be conducted by the secretariat for the National Competition Council, which is the ACCC.

The Queensland Government told the Commission that:

Given the significant and wide-ranging impacts of the amendments for the Queensland sugar industry and the economy more broadly, the Queensland Government raised its concerns with the Australian Government both before and after the passing of the legislation. In particular, given conduct authorised under the Act potentially breaches various sections of the *Competition and Consumer Act 2010* (CCA), the Queensland Government requested that the Australian Government refer the matter to the National Competition Council for investigation. (sub. DR154, p. 3)

To date the legislation has not been referred to the National Competition Council. This is another missed opportunity to test whether the legislation is in the interest of the broader Australian community.

The Real Choice Act should be repealed

The Sugar Industry (Real Choice in Marketing) Amendment Act should be repealed on the basis that:

- there is no market failure or other reasonable objective to justify re-regulation
- the benefits of the Act do not outweigh the costs.

Repealing the Act could enable consolidation and productivity gains which would enhance the international competitiveness of the sugar industry.

RECOMMENDATION 12.2

The Queensland Government should repeal the amendments made by the *Sugar Industry (Real Choice in Marketing) Amendment Act 2015*.

The role of Queensland Sugar Limited

Sugar growers' confidence in QSL is untested

Based on submissions and evidence provided at hearings, growers' confidence in QSL is based on long term association rather than commercial performance. For example, Canegrowers Burdekin said:

On 3 April 2014, Wilmar attempted to take control of the marketing of all of the raw sugar without growers' agreement. Wilmar put forward their NO CHOICE — NO QSL marketing proposal and gave notice to exit QSL and subsequently gave notice to cancel the long standing CSA. CBL growers' voted unanimously that they condemn Wilmar's NO CHOICE — NO QSL proposal as it takes away their rights to utilise QSL, the successful Australian, not for profit, non-taxable, industry owned, marketing company. Many of our growers are well over the age of 55 and QSL has faithfully served their needs for many many many decades. Wilmar's action lead to over 18 months of dispute and impasse which was only resolved in December 2015 by the Sugar Industry (Real Choice in Marketing) Amendment Act 2015. (sub. DR271, p. 2)

Grower organisations cite transparency over pricing as one reason for wanting to retain QSL as the dominant marketer of sugar, and for rejecting alternative marketing arrangements proposed by new entrants such as Wilmar (Canegrowers, sub. 22; Canegrowers Herbert River, sub. DR269 and Canegrowers Burdekin, sub. DR271). As Canegrowers Herbert River said:

We actually prefer the current situation because QSL is actually owned by the growers and the mills and it is at arms' length from both parties. It delivers real transparency, that's the whole point of having QSL in there. (Canegrowers Herbert River trans., p. 628)

However, growers confidence in QSL has never been tested by the kinds of long-term competitive pressures that have driven innovation and cost savings in other industries. Competition would test claims by millers that they can generate higher premiums for growers through alternative marketing arrangements.

It also appears that grower perceptions of QSL⁶⁵ affect their perceptions of milling companies participating in sugar marketing:

... the mill actually has no interest in the growers economic interest sugar ... They get their share through the cane price formula, it's theirs to do with as they wish, even though I personally believe that, as an industry, we would be better off staying with the single desk marketer, which was QSL, which served the industry. (Canegrowers Burdekin, trans., p. 683)

⁶⁵ At the Townsville hearings, the Commission heard from a number of canegrowers who were universally supportive of retaining QSL as a marketer of raw sugar.

QSL is a registered charity

QSL is a registered charity (ACNC 2016e). Its broader and longer-standing status as a not-for-profit public company limited by guarantee is an unresolved legacy from its previous status as a statutory marketing authority (CIE 2005; QSL 2016). However, QSL's charity status is a much more recent development. QSL was granted charity status in late 2015, and began reporting to the Australian Charities and Not-for-profits Commission (ACNC) in 2016 (ACNC 2016a, 2016e).

The *Charities Act 2013* (Cwlth) was introduced to provide a statutory definition of charity to overcome considerable confusion and uncertainty that had built up from over 400 years of common law (Treasury 2016c). The ACNC uses the definition of charity set out in the Charities Act when making decisions on registration applications. To be registered as a charity, a not-for profit must have charitable purposes that 'is for the public benefit'.

The Charities Act lists 12 charitable purposes that can be used by institutions to apply for charity status (including, for example, advancing health, education, religion and culture) (ACNC 2016g). The last category is a general one covering 'any other purpose beneficial to the general public'. This provision was to ensure legislative flexibility for worthy charitable organisations to be able to obtain charitable status with reasonable transaction costs (Treasury 2016c).

QSL's stated charitable purpose (under the general purpose category) is to 'promote the development of the Australian sugar industry' and support its 'long term prosperity and sustainability' for the benefit of the 'general community in Australia' (ACNC 2016a). However, charity status appears to be inconsistent with QSL's main activity of exporting raw sugar for the commercial benefit of 14 sugar mills and 3600 sugarcane farming businesses in a geographically confined region of coastal Queensland.

It is highly unlikely that QSL being granted charitable status is in the interests of the wider Australian community. QSL generates revenue for a select group of commercial businesses in an industry that has cost Australian taxpayers almost \$2 billion since 1990. The tax concessions from charity status adds to this taxpayer assistance.

Other agricultural commodity trading companies also have charity status. The Co-operative Bulk Handling (CBH) Group — a bulk wheat exporter — was endorsed as a charitable institution by the Australian Taxation Office (ATO) on 21 March 2014 with effect from 1 July 2000 (CBH Group 2014). In NSW, the Supreme Court ruled in July 2015 that GrainGrowers' agricultural activities constitute a charitable purpose⁶⁶.

The charity status of QSL, CBH and GrainGrowers was also backdated to 3 December 2012 — the day that the ACNC was established (ACNC 2016a, 2016b, 2016d), which

⁶⁶ Grain Growers Limited v Chief Commissioner of State Revenue (2015) NSWSC 925; 14 July 2015, 2014/305291

means they are entitled to charity tax concessions from the date from which they were retrospectively endorsed as charities by the ATO (ATO 2016e, 2016f). According to the Australian Business Register, the tax concessions that QSL has received include income tax exemptions from 1 July 2000, as well as Fringe-Benefit Tax (FBT) rebates and GST concessions from 1 July 2005 (ABR 2014).

Registered charities receive the highest level of tax concessions, including concessions on income tax, fringe benefit tax, goods and services tax and franking credits⁶⁷ (ATO 2016h). The main alternative to charity status for commodity trading organisations is a lesser not-profit-status as ‘resource development organisations’ (ATO 2015c). However, a commodity trading organisation like QSL may not be eligible for income tax exemptions under this lesser category if its ‘main purpose is merely to provide services to its members’ (ATO 2015c).⁶⁸

The granting of charity status to commodity trading businesses is in part due to legal interpretations of charitable purposes that serve the public interest. In 2008, the Federal Commissioner of Taxation attempted to remove CBH’s tax-exempt status on the basis that CBH’s activities were carried out for the profit or gain of its members. CBH appealed against this decision, and in 2010 the Federal Court ruled in CBH’s favour. The court ruling was largely due to the interpretation of CBH’s stated purpose as one which serves the industry as a whole.

... [the judge] rejected the [Federal Commissioner of Taxation’s] submission that the ‘development of agricultural resources’ is confined to the farm side of the ‘farm gate’ and concluded that the term ‘agricultural resources’ has a broader meaning than the word ‘agriculture’ ... His Honour concluded that CBH was and continues to be established primarily for the purpose of promoting the development of the grain growing industry of Western Australia. (ATO 2014)

Similarly, the New South Wales Supreme Court ruled that GrainGrowers served a purpose beneficial to the community based on a generous interpretation of the ancillary public benefits resulting from agricultural activities.

It seems to me that I can, without specific proof, infer that agricultural activity benefits society generally, and Australian agricultural activity benefits Australian society generally, and no evidence was led to suggest that the benefit that has previously existed in such activity has ceased to exist. (Grain Growers Limited v Chief Commissioner of State Revenue [2015] NSWSC 925)

The claim that there is a general benefit to Australia from an industry can apply to all industries in Australia (all industries produce goods and services which are traded and can

⁶⁷ The legislation which allows agricultural commodity trading companies to receive tax benefits is the *Income Tax Assessment Act 1997* (Cwlth).

⁶⁸ The ATO uses the example of a not-for-profit organisation set up by a group of horticultural businesses to buy supplies and undertake joint marketing as a business that does not qualify for income tax exemption under the resource development category.

benefit Australian consumers). Such a claim would seem to be inconsistent with the common view of a charity held by many in the community. Conferring charitable status on organisations that trade agricultural commodities for the commercial benefit of farm businesses risks damaging the credibility of charities as a respected societal institution.

QSL's charity structure limits its commercial potential

QSL's not-for-profit status reduces the transparency of its performance, in part because it prevents it from issuing shares or paying dividends (ASIC 2016). Members receive value through the services provided by QSL rather than benefiting from increases in share price or dividends (SRRATRC 2015a). Returns provided through services vary for each member and are difficult to quantify or compare with the performance of competitors. This reduces transparency and the motivation that closer financial scrutiny would bring for QSL to innovate and minimise costs.

The decision by QSL's directors to retain its not-for-profit structure and charity status has a number of limitations.

- It dispossesses sugarcane growers and millers of QSL's assets. According to the ACNC:

In the event of the organisation being dissolved, the amount that remains after such dissolution and the satisfaction of all debts and liabilities shall be transferred to another charitable organisation with similar purposes which is not carried on for the profit or gain of its individual members. (ACNC 2016h)

- It can impede structural adjustment because farm businesses wanting to expand or exit the industry are unable to use their equity in QSL as collateral, or sell it to other investors. It can also impede innovation by preventing entrepreneurs from buying into QSL and benefitting from their innovation through dividends and increases in the share price.
- It restricts QSL's capital raising options. The Centre for International Economics (2005) highlighted the benefits of changing QSL's corporate structure to one limited by shares rather than by guarantee, including the ability to raise capital which would open greater commercial opportunities.

If [QSL] were to become a company limited by shares, stakeholders would be able to own and trade its shares and transfer the benefits into their own balance sheets. This would give them an incentive to ensure that QSL's Board performs well commercially. An ultimate discipline in this regard would be the threat of takeover that currently does not exist. (CIE 2005, p. 17)

The future structure of QSL could be informed by the experiences of other farmer-owned commodity-based companies, who have identified the commercial benefits of adopting a for-profit corporate structure. For example, CBH is reviewing its tax-exempt company structure in favour of a for-profit structure so it can capture greater commercial opportunities and increase returns to its owners. SunRice — the single-desk rice exporter

— regards its restructuring for listing on the stock exchange as a key to ‘achieving long-term strategic value and sustainable investment’ (SunRice 2016, p. 68).

Tax concessions and competitive neutrality

QSL’s charity status also has implications for competitive neutrality in the sugar industry. The tax concessions conferred on QSL give it an advantage over the for-profit firms it competes with in providing sugar marketing services.

The backdating of charity status and tax exemptions can mean that commodity trading companies are eligible for tax refunds that can amount to windfall gains of tens of millions of dollars. The not-for-profit status of these companies mean that any windfall gains can only be dissipated as costs or distributed back to members via the pool price of raw commodity exports. These are dividends by another name and amount to a further taxpayer subsidy to sugar growers.

The tax concessions provided to agricultural trading companies (especially payroll tax and fringe benefits tax concessions) also confer a significant advantage to the directors and staff of these companies relative to workers providing the same services in their for-profit competitors (PC 2010b).

QSL reports that its payroll tax exemption alone is worth \$1 million per year:

As a not-for-profit entity whose purpose is to operate for the benefit of the entire industry, QSL has successfully been granted an exemption from state Payroll Tax. This will equate to an ongoing saving of \$1 million per annum and will benefit both RSSA and domestic storage and handling (S&H) users. This exemption was backdated to 30 June 2010 and the associated refund was flowed through the 2014 Pool prices for RSSA users and directly to S&H users. (QSL 2015, p. 13)

The tax concessions and refunds that QSL is eligible for as a charity mean that comparisons of its pool price with those of competitors cannot be used to assess commercial innovation on equal terms. QSL is also not subject to the same risks of capital market takeover that motivate publicly-listed companies to innovate and minimise costs.

To the extent that these advantages are passed on through pool prices, these advantages shield both millers and farm businesses from the market forces that drive innovation and productivity. This is likely to constrain the reallocation of resources from smaller and less efficient mills and sugarcane farms, to larger and more efficient mills and farms.

RECOMMENDATION 12.3

The Australian Government should legislate to exclude agricultural commodity trading companies from being granted charity status and receiving the associated tax concessions.

12.2 Competition law

Statutory marketing sought to counter market power that farm businesses were thought to be subject to by providing them with ‘countervailing’ market power. An alternative policy strategy, relied on more heavily for the agricultural sector since the competition policy reforms of the 1990s, is the use of competition law to regulate the misuse of market power. Australia’s core competition law provisions are contained in the CCA. The objective of the CCA is to ‘enhance the welfare of Australians through the promotion of competition and fair trading and provision for consumer protection’. The ACCC is responsible for ensuring compliance with the CCA.

Competition law can increase economic efficiency by discouraging firms from interfering with the competitive process. It can also provide a degree of certainty about whether certain types of practices are acceptable. A difficulty that regulators can face is distinguishing between intense commercial bargaining which is desirable for the operation of competitive markets (and may lead to some exiting the market), and behaviour that is damaging the competitive process (to the detriment of consumers).

As discussed earlier, farm businesses continue to be concerned about an imbalance in bargaining power and inefficient or unfair commercial outcomes. For example, the NSW Farmers’ Association said that:

In the case of agriculture, there is an existing imbalance between participants in the supply chain. (sub. 72, p. 39)

The NSW Farmers’ Association also indicated that the consolidation of the red meat processing, grain transport and horticultural industries has made farm businesses in these markets particularly susceptible to the misuse of market power.

Australian Dairy Farmers expressed similar concerns in the context of dairy farm businesses.

Fluctuations in input costs, the impact of climatic variations, limitations in infrastructure and the perishable nature of produce leave some farmers in an economically vulnerable position operating under extremely tight margins. These market factors result in imbalances between participants in the supply chain. (sub. 63, p. 9)

Farm businesses can experience intense commercial pressure through the normal functioning of competitive markets. Poor trading terms can reflect a lack of demand, and can have much the same effect as the alleged exercise of market power by wholesale merchants, traders or supermarkets — that is, the exit of less efficient farm businesses from the industry.

For example, in a recent study of cattle and beef markets, the ACCC found that:

There is ... a cyclical element to many of the concerns about the competitiveness of market structures in the Australian industry. For instance, there were particularly strong concerns about market concentration and buyer power during the peak of the recent drought in 2013 and 2014.

In 2014 the industry was characterised by high rates of cattle turn-off, strong overseas demand for Australian beef in export markets. These conditions would have been favourable to the profitability of cattle buyers, especially export processors and placed them in a stronger than usual bargaining position relative to producers. During this period, producers' profits suffered due to high costs of supplementary feed and the low cattle prices.

Since 2015 and the end of drought conditions ... producers have entered markets to purchase re-stocker cattle, resulting in greater numbers of buyers in cattle acquisition markets and upward pressure on prices. The reduction in the supply of cattle is also reflected in the under-utilisation of processing facilities, with processors reporting significant excess capacity this year. (ACCC 2016b, pp. 3–4)

This section looks at the role that the collective bargaining and misuse of market power provisions within the CCA play in addressing farm businesses' concerns about imbalances in market power.

Collective bargaining and boycotts

In general, section 45 of the CCA prohibits commercial arrangements that substantially lessen competition. However, it also authorises exemptions that allow small businesses to bargain collectively with larger businesses and to strategically use boycotts as part of these negotiations (box 12.3).

In its submission to this inquiry, the NFF suggested that agriculture has some unique characteristics that add to the imbalance in bargaining power with larger businesses:

The farming sector is fragmented, made up largely of small to medium sized businesses in remote areas with limited access to market information and opportunities for collective organisation. Fluctuations in input costs, the impact of climatic variations, limitations in infrastructure and the perishable nature of produce leave some farmers in an economically vulnerable position operating under extremely tight margins. These market factors result in imbalances between participants in the supply chain. (sub. 61, p. 28)

To address imbalances in bargaining power, exemptions granted under the CCA allow small businesses (including farm businesses) to enter into collective bargaining arrangements when dealing with large businesses. Allowing small businesses to bargain collectively can redress imbalances in power and result in more efficient outcomes.

Box 12.3 **Collective bargaining and boycotts**

Collective bargaining is an agreement by two or more competitors to negotiate with a supplier or a customer over terms, conditions and prices. A group of businesses may sometimes appoint a representative, such as an industry association, to act on its behalf in the negotiations.

A *collective boycott* occurs when a group of competitors agree not to acquire goods or services from, or not to supply goods or services to, a business with whom the group is negotiating, unless the business accepts the terms and conditions offered by the group.

Exemptions — in some circumstances, allowing collective arrangements may be in the public interest. The Act allows protection from legal action to be granted to parties to engage in anticompetitive conduct, including collective bargaining and boycotts, when there are public benefits that would outweigh the detriments to competition.

There are two ways that businesses can obtain an exemption from the competition provisions of the Act for collective arrangements — authorisation and notification:

- *authorisation* — following public consultation, the ACCC may ‘authorise’ businesses to engage in anticompetitive conduct when it is satisfied that the public benefit outweighs the detriment
- *notification* — streamlines the approval process for small businesses by enabling one business within a collective bargaining group to lodge a notification on behalf of the other businesses in the group.

Source: ACCC (2011).

The ACCC has recognised that:

... small businesses are often more likely to be heard on terms and conditions if they join with other small businesses to collectively negotiate with a larger business, rather than one-on-one. However, negotiating collectively may breach the Act [the CCA]. (ACCC 2011, p. 6)

Collective bargaining can reduce the costs of negotiating agreements. The ACCC (2014b) notes that collective bargaining can overcome information asymmetries, reduce the time and transaction costs associated with establishing supply agreements, and strengthen bargaining power.

To take advantage of these opportunities, small businesses can apply to the ACCC for an exemption to engage in collective bargaining and/or collective boycotts through the authorisation or notification provisions of the CCA (box 12.3). For most sectors, applications for collective bargaining notifications can be lodged if the annual value of transactions affected is less than \$3 million (\$5 million for primary producers). There is no threshold for lodging an application for authorisation of collective bargaining (ACCC, sub. DR121).

Adoption is low

A number of participants said that collective bargaining is an important tool for addressing power imbalances in bargaining (Australian Dairy Farmers, sub. 63; AgForce, sub. 17;

NFF, sub. 61). Canegrowers (sub. 22), for example, reported that collective bargaining is used in the sugar industry to negotiate the terms of cane supply agreements with mills.

The ACCC also told the Commission that:

Since 2007 when the collective bargaining notification process was introduced in the CCA, the ACCC has approved notifications from nine collective bargaining groups in the agriculture sector (the citrus, chicken and dairy industries). Over the same period, the ACCC has approved 18 applications for authorisation (excluding minor variations) of collective bargaining arrangements involving groups in the agriculture sector. The collective bargaining authorisations cover groups of farmers in the chicken, dairy, potato, tomato, vegetable, wine grape and dried vine fruit industries. (sub. DR121, pp. 8–9)

The low adoption of exemption provisions is not surprising. This is because collective bargaining is only likely to be attractive to small groups of farm businesses with similar production characteristics. In diverse groups of farm businesses, the benefits to larger and more efficient farms of bargaining individually are likely to outweigh the costs of bargaining collectively. Australia's experience with statutory marketing shows that preventing more efficient farms from bargaining individually raises the cost, and reduces the quality and choice of foods available to consumers (appendix B).

However, some participants argued that amendments could be made to the CCA to improve competition. The NFF, for example, said that:

... there are opportunities to amend certain regulations placed on collective bargaining, which in doing so will enhance competition within the market place. (sub. 61, p. 28)

The Australian Chicken Growers' Council (sub. 51) noted that under the current arrangements there is no requirement for either party to engage in the negotiation process, and a group of growers cannot compel a processor to enter into negotiations. The Council recommended a provision in the authorisation process that requires all parties to participate in collective negotiation.

Calls for the CCA to be amended, based on the low adoption of collective bargaining by small businesses are not new. In 2007, the Australian Government increased the notifications threshold for the primary producers to \$5 million (ACCC 2011).

In its submission to the Competition Policy Review (the Harper Review), the ACCC said that 'deficiencies in the current collective boycott notification provisions may be deterring bargaining groups from seeking an exemption for efficiency-enhancing conduct' (2014b, p. 109). It recommended amendments that would provide the ACCC with more flexibility in the way it assesses proposals for boycotts, and that would provide bargaining groups with more flexibility in submitting notifications for collective bargaining.

The ACCC told the Commission that its proposed amendments to the notification provisions in the CCA will also 'increase the flexibility and attractiveness of the notification process for small business applicants relative to the authorisation process' (sub. DR121, p. 8).

Why is adoption low?

Low adoption has been partly attributed to a lack of awareness by small businesses of the CCA's collective bargaining provisions and how to use them. The Harper Review recommended that the notification process for collective bargaining be enhanced to improve awareness, and that the CCA be reformed to introduce greater flexibility in the notification process. The Harper Review also recommended that the thresholds for collective bargaining be reviewed to ensure that they are high enough to include typical small business transactions (Harper et al. 2015).

The Agricultural Competitiveness White Paper also partly attributed low adoption to low levels of awareness of the collective bargaining provisions among small businesses (Australian Government 2015a). As a result, the Australian Government committed \$13.8 million to a two-year pilot program to provide farmers with knowledge and materials on collective bargaining, cooperatives and innovative business models. The Agricultural Competitiveness White Paper stated that the 'information will help to counter-balance retailer and processor market power and achieve fairer farm gate prices' (Australian Government 2015a, p. 31).

The ACCC has commenced work to highlight the benefits of collective bargaining and the approval process to farmers and small businesses generally (sub. DR121).

A challenge for all industries, including agriculture, is that larger, more efficient businesses have an incentive to negotiate more favourable terms than the 'pooled' average returns achieved by collective bargaining (Lewis 1967). Low adoption of collective bargaining provisions may not mean that there are barriers to the adoption of exemption provisions. It could simply reflect that the economic incentives for collective bargaining are more than offset by incentives for larger and more efficient businesses to negotiate their own terms. Dealing with fewer, larger farm businesses also improves the ability of wholesale merchants and retailers to meet consumer preferences for consistent and timely supply, resulting in benefits to consumers (Baker and Graber-Lützhøf 2007).

The adoption of collective bargaining in the agricultural sector also depends on the predisposition of Australian farmers to participate in cooperatives and other commercial corporate entities. Keogh (2013), the ACCC Agricultural Commissioner, noted that one of the interesting features of Australian agriculture is the limited presence of farmer-owned cooperatives in the agribusiness environment in Australia compared to other countries. Keogh discussed a number of reasons that could explain this, including:

- Australian farm businesses bear more financial risk due to lower levels of government subsidies and are therefore less willing to share profits through cooperatives
- Australian farm businesses require more capital to bear the high risk associated with exposure to export markets, and therefore are less willing to contribute capital to cooperatives

-
- Australian farmers tend to live on large and sometimes remote farms, rather than living in villages and travelling to their farm each day (attracting more self-sufficient people who are less comfortable in a cooperative structure)
 - a long history of statutory marketing arrangements makes Australian farmers less willing to participate in cooperatives.

Regardless of the merit of each theory, there appears to be a cultural aversion in Australia to participating in cooperatives, and this may reduce the adoption of collective bargaining in the agricultural sector.

Overall, the evidence suggests that awareness raising and changes to the CCA to make collective bargaining easier are only likely to benefit small groups of farm businesses with similar production characteristics. The past use of these exemptions by small groups of farm businesses in the horticulture, poultry, and dairy industries may therefore indicate that these provisions are working reasonable well.

FINDING 12.3

Collective bargaining arrangements are only likely to be attractive to small groups of farm businesses with similar production characteristics. Government efforts to encourage collective bargaining under the *Competition and Consumer Act 2010* (Cwlth) are unlikely to result in a significant increase in adoption among farm businesses.

Competitive pressures and an effects test

Section 46 of the CCA prohibits corporations that have a substantial degree of market power from taking advantage of that power for the purpose of eliminating or substantially damaging a competitor, preventing the entry of a person into a market, or deterring or preventing a person from engaging in competitive conduct.

The Harper Review recommended that section 46 of the CCA be amended to target anticompetitive conduct that has the *effect* of damaging competitive processes. A key recommendation was to amend the CCA to include an effects test to:

... prohibit a corporation that has a substantial degree of power in a market from engaging in conduct if the proposed conduct has the purpose, or would have or be likely to have the effect, of substantially lessening competition in that or any other market. (Harper et al. 2015, p. 348)

In March 2016 the Australian Government announced its intention to amend section 46 by replacing the ‘purpose’ test with an ‘effects’ test (Turnbull, Morrison and O’Dwyer 2016). In September 2016 the government released an exposure draft of the *Competition and Consumer Amendment (Competition Policy Review) Bill 2016* (Cwlth). The exposure draft replaced the purpose test (s. 46(1)) with:

A corporation that has a substantial degree of power in a market must not engage in conduct that has the purpose, or has or is likely to have the effect, of substantially lessening competition in that or any other market.

Perceptions of what an effects test will do

There is a pervasive belief in the agricultural sector that introducing an effects test to section 46 of the CCA will protect farm businesses from intense competition passed on by traders and supermarkets.

A number of participants indicated that they supported replacing the existing purpose test with an effects test. The NFF said it would ‘shift the onus of consideration from what a company’s purpose of conduct was, to what effect that conduct had on any given marketplace’ (sub. 61, p. 29). Similarly, Canegrowers supported an effects test for section 46 on the basis that it shifts the burden of evidence from proving the intended purpose of anticompetitive behaviour to its impact on markets. Canegrowers suggested that giving the ACCC greater power to regulate anticompetitive behaviour would:

... shift the decisions framework from the judicial system to a regulatory system, making it more accessible to small producers facing large multinational adversaries. (sub. 22, p. 9)

Canegrowers comments were directed at the relationship between sugarcane farms and sugar mills, and the potential for mills to take advantage of their monopsony power to ‘substantially damage or eliminate QSL as a competitor’.

... the provisions of section 46 do not adequately deal with cases where there are significant imbalances in market power between different segments of a supply chain as occurs between sugarcane growers and the mill they supply and where the use of that market power has the likely effect of substantially lessening competition. (sub. 22, pp. 9–10)

Canegrowers also said that there is a:

... role for government ... to restore balance in the market for sugarcane and to establish a regulatory structure that prevents the misuse of market power, addresses market failure, and ensures cane growers are not disadvantaged by the mills they supply. (sub. 22, p. 10)

The NSW Farmers’ Association supported the introduction of an effects test to address an imbalance of market power between participants in the supply chain.

In the case of agriculture, there is an existing imbalance between participants in the supply chain. When parties with market power engage in unilateral conduct that discriminates against their competitors, the discrimination may be subtle and difficult to clearly distinguish from

legitimate business conduct; however, due to the structure of the market, the conduct would still have a substantial impact on competition. (sub. 72, p. 39)

In contrast, the Pastoralists and Graziers Association of WA noted that:

... markets can be tough, unpleasant and difficult places in which to operate. Competition should be judged on the bases of efficiencies and capacity, and a failure to compete should not be protected by legislation. ... Legislative protection should only be invoked when companies (or individuals) are using their market power to engage in malicious activities that are anti-competitive. (sub. 70, p. 10)

CBH suggested that the proposed changes to section 46 could increase uncertainty and the cost of operating cooperative bulk handling of grain in Western Australia.

There is a risk that CBH's efficiency enhancing behaviours, for the benefit of increasing growers' export capacity and competitiveness in the global market, are likely to be captured as unintended consequences. (sub. 36, p. 11)

As a result, it contended that:

... there are existing measures that could be utilised before there is a requirement for change in section 46. However, if changes are required to be implemented then care must be taken to ensure efficiency driven behaviours such as those implemented by CBH in the best interest of growers in Australia are not penalised as an unintended consequence. (sub. 36, p. 11)

The debate about imbalances in bargaining power overlooks the co-dependence of businesses along agricultural value chains. There are potential benefits from shifting the focus of the debate from the potential misuse of market power by wholesale merchants and supermarkets to innovations that develop new commercial arrangements and enable farm businesses to participate profitably in globalised value chains.

Competition is for the benefit of consumers

The Harper Review (2015) stated that regulations that deal with anticompetitive conduct are a necessary part of competition law, particularly given that the small size of the Australian economy often leads to concentrated markets. The purpose of section 46 is to protect against conduct that damages competitive processes in markets, rather than to protect competitors from the effects of competition:

... competition law is not concerned with harm to individual competitors. Indeed, harm to competitors is an expected outcome of vigorous competition. Competition law is concerned with harm to competition itself — that is, the competitive process ... It would not be sound policy to prohibit unilateral conduct that had the effect of damaging individual competitors. (Harper et al. 2015, p. 339)

The ACCC also stated that section 46 of the CCA 'is a crucial component of Australia's competition law', noting that the High Court of Australia 'has described the object of section 46 as being to protect the interests of consumers and that competition is a means to that end' (ACCC 2014b, p. 76).

The NFF also acknowledged that the provisions should not be about protecting individual competitors:

Reforming misuse of market power provisions should be about protecting the competitive process, rather than protecting individual competitors. A truly competitive market, where companies succeed and fail as a result of merit, not as a consequence of dominant companies misusing market power, will best foster innovation and growth. Such innovation and growth will ultimately best serve the interests of the community. (sub. 61, p. 29)

In agricultural markets, consumer interests are served by competitive forces that lower the cost of food and improve its quality. An inquiry by the ACCC (2008) found that there was intense competition between supermarkets in retail grocery markets. The Harper Review (2015) found that this competition had intensified in recent years.

Farm businesses are largely input suppliers to wholesale merchants and supermarkets, rather than competitors in retail grocery markets. Intense competition in retail markets makes the productivity and profitability of wholesale merchants and supermarkets critically co-dependent on the productivity and profitability of input suppliers throughout the value chain, especially farm businesses. This co-dependence means that the competitiveness of wholesale merchants and supermarkets depends on their ability to pass on the competitive pressures that drive innovation, productivity and cost savings to farm businesses.

Some competition law experts argue that pressure to amend section 46 is based partly on wanting to shield small businesses from competition. For example:

Section 46 is designed to ensure those with market power don't use it to insulate themselves from competitive pressure; but s46 shouldn't be used to insulate small business ... (Trindade, Merrett and Smith 2013, p. 6)

This inquiry has not looked at the merits (or otherwise) of the Australian Government's decision to amend section 46 of the CCA by replacing the 'purpose' test with an 'effects' test.

However, perceptions in the agricultural sector that the introduction of an effects test will shield farm businesses from intense competition are not well supported by the evidence. Also, because competition serves the interests of consumers — by creating incentives for innovation that improves the quality and lowers the cost of food — shielding farm businesses from competition is not in the interest of consumers.

FINDING 12.4

The perception in the agricultural sector that introducing an 'effects' test to section 46 of the *Competition and Consumer Act 2010* (Cwlth) is likely to shield farm businesses from intense competition in retail grocery markets is ill-founded. In any event, doing so would not be in the interest of consumers.

12.3 Industry codes of conduct

An ongoing concern for the growers of perishable food products is the ability of supermarkets, traders and wholesalers to exercise undue market power through arbitrary changes in supply agreements that transfer risk to farm businesses (NFF, sub. 61).

Industry codes of conduct can provide a flexible regulatory framework for identifying and sanctioning unacceptable forms of behaviour, and improving the transparency of transactions. These can be used to improve the allocation of the risks involved in marketing perishable fresh produce to the participants along agricultural value chains according to their ability to manage these risks.

In 1999, a Joint Select Committee on the Retailing Sector recommended a mandatory code of conduct to deal with systemic and ongoing problems in business dealings between major supermarket chains, small retailers and farm businesses (JSCRS 1999). Part of the Australian Government's response to the 1999 inquiry was a voluntary Retail Grocery Industry Code of Conduct. This was renamed in 2005 to become the Produce and Grocery Industry Code of Conduct to better reflect its scope within the industry (Napper and Wein 2015).

Industry dissatisfaction with the voluntary operation of the code led to calls to make it mandatory.

Calls for a mandatory code were based on the fact that the [Produce and Grocery Industry Code of Conduct] did not require signatories to enter written contracts to evidence terms and conditions of supply, and did not enable one party to require another to participate in the mediation of a dispute. (Napper and Wein 2015, p. 63)

Calls to improve the Produce and Grocery Industry Code led to the joint development of the Food and Grocery Code of Conduct in consultation with the major supermarkets and other stakeholders (Treasury 2014b). In horticulture, concerns about transaction costs potentially faced by small fruit growers led to the development of a mandatory code of conduct in 2007.

Food and Grocery Code of Conduct

The Food and Grocery Code of Conduct is administered by the ACCC under the CCA (ACCC 2015e). The Code addresses ongoing concerns in the agricultural sector that the concentration of the grocery retail sector may lead to anticompetitive conduct by supermarkets and wholesalers in the supply agreements they negotiate with farm businesses. The Code also provides a mechanism for raising and resolving disputes, but as discussed below, this mechanism is different to other codes in operation.

Voluntary codes prescribed under the CCA have the same enforcement provisions as mandatory codes (ACCC 2014b). The code is legally enforceable for wholesalers and retailers who elect to participate, which currently includes Woolworths, Coles, Aldi and

About Life. Although there are no financial penalties for a breach of the code, other forms of redress are available including court-ordered injunctions, and compensation for loss or damage caused by conduct in setting and varying supply agreements (ACCC 2015c). Conduct that breaches the Code may also breach the unconscionable conduct provisions of the Australian Consumer Law, which imposes financial penalties.

The Code in its current form is relatively new. Australia's three major supermarkets opted into it in mid-2015. Its establishment coincided with an expansion of the ACCC's activities relating to agricultural marketing. In mid-2015 the Australian Government announced \$11.4 million for the ACCC to set up an Agricultural Enforcement and Engagement Unit (ACCC 2016a; Australian Government 2015a). A Commissioner dedicated to agricultural markets was appointed in February 2016.

The Food and Grocery Code of Conduct has only been in operation for a short period of time, and by late-2016 there had been few formal applications of the Code. This is consistent with a much longer term lack of documented evidence of unconscionable conduct by supermarkets, or evidence that this conduct is a result of the systemic misuse of market power.

A comprehensive grocery sector inquiry by the ACCC found that even though the sector is concentrated, grocery retailing was 'workably competitive', and that there was nothing 'fundamentally wrong with the grocery supply chain' (2008, p. xiv). It also found no systemic evidence of market power being exercised as unconscionable conduct in supply agreements for fresh food.⁶⁹ No new evidence was received in this inquiry showing exercise of market power through anticompetitive conduct by supermarkets, and no specific evidence was cited in the Agricultural Competitiveness White Paper.

A consultation paper by Treasury indicated that this lack of evidence may be partly due to a fear of retribution:

... some suppliers may have little choice but to accept particular terms for fear of losing contracts, and may similarly be unwilling to complain to the supermarkets, or other bodies to resolve issues or enforce their legal rights during the life of the agreement for fear of retribution. (Treasury 2014b, p. 4)

⁶⁹ In December 2014, the Federal Court found that Coles Supermarkets Australia Pty Ltd had engaged in unconscionable conduct with some suppliers in 2011 (ACCC 2014d). In November 2016, the ACCC brought an action against Woolworths in the Federal Court alleging that the supermarket had engaged in unconscionable conduct by demanding \$60 million from 821 suppliers to reduce a profit shortfall in 2014 (ACCC 2015b; Locke 2016b).

Without clear evidence showing the exercise of market power, and its costs to consumers, the Commission agrees with Treasury that the goal of Government intervention should not be to:

... prevent hard bargaining and vigorous competition, but rather, to ensure that market distortions do not compound and have a longer-term detrimental impact on consumers or the grocery sector more broadly. (Treasury 2014b, p. 7)

The NFF (sub. 61) supported the goal of the Code in seeking to provide a more formal, open and transparent process for supermarkets to negotiate supply agreements. The Voice of Horticulture (sub. 42) supported the appointment of an ACCC Commissioner dedicated to agriculture, and recommended that the focus be on improving transparency in supply agreements.

Can the code be improved?

The benefits of the code are likely to come from achieving a balance between reduced transaction costs for farm businesses supplying fresh produce, and maintaining the commercial flexibility of major supermarkets to choose the lowest cost suppliers, both of which affect the cost of food to consumers. Over-regulation has the potential to raise the cost of food to consumers by reducing the flexibility of supermarkets to choose lower cost suppliers, and by protecting inefficient suppliers from market signals.

In October 2015, the ACCC raised concerns that some supermarkets were presenting grocery supply agreements in ways that might suggest that they were non-negotiable. The ACCC also questioned whether existing supply agreements provided suppliers with sufficient detail about terms and conditions. Following the ACCC raising these issues, the supermarkets concerned wrote to their suppliers to make clear that the agreements are negotiable, and to clarify their terms (ACCC 2015g).

The NFF (sub. 61) suggested that the Code has a number of shortcomings. These include concerns about the voluntary opt-in nature of the Code, and whether it should apply to a broader set of retailers. The NFF had also previously raised the potential for an independent Commissioner to assist in dispute resolution and to help overcome any under reporting due to the fear of retribution (NFF 2014b).

The future costs of dispute resolution under the Food and Grocery Code of Conduct are difficult to predict and will depend on the number and nature of disputes that arise. However, the code may involve higher mediation costs than other similar industry codes. This is because similar codes in the horticulture, oil and franchising industries are serviced by a mediator (the Accord Group) centrally contracted by the Australian Government.

The benefits of the Code will come from achieving a balance between reduced transaction costs for small input suppliers, and maintaining the commercial flexibility of major supermarkets to choose the lowest cost suppliers. As Treasury (2014b) said, voluntary

codes of conduct promote desirable conduct while not unduly restricting the commercial flexibility of retailers.

It is too early to tell whether the Food and Grocery Code of Conduct is working as intended.

Horticulture Code of Conduct

The Horticulture Code of Conduct is a prescribed, mandatory industry Code under section 51AE of the CCA. It differs from the Food and Grocery Code in that its focus is on the relationship between farm businesses and traders/merchants in the wholesale market, rather than farm businesses and retail supermarkets. The code also includes funding for independent mediation that provides low cost dispute resolution for participants.

The objectives of the Code are to:

- regulate trade in horticultural produce between growers and traders, to ensure transparency and clarity of transactions
- provide a fair and equitable dispute resolution procedure for disputes arising under the Code or a horticultural produce agreement.

The Code seeks to ensure transparency and clarity of transactions by requiring:

- parties to trade under written agreements (horticulture produce agreements)
- that traders (who may be agents or merchants) publish their terms of trade and only trade as either an agent or a merchant under one horticulture produce agreement
- particular minimum terms to be included in a horticulture produce agreement.

Is the Code used?

A recent review of the Horticulture Code of Conduct by Napper and Wein (2015) found that the Horticulture Code of Conduct is rarely used by industry to resolve disputes:

... the Horticulture Code's current dispute resolution mechanism is irrelevant, inappropriate and largely not adopted by parties in the horticulture sector. In general, growers believe that the low uptake of the code's dispute resolution mechanism is due to a fear of retribution, whereas central markets contend that the reason for low uptake is that there are few disputes. Further, it is widely believed that the dispute resolution mechanism prescribed by the code does not address the majority of disputes that arise in the course of what appears to be acceptable market practice in the horticulture sector. Most disputes are related to the issues of the quality and timing of the delivery of produce, payments to growers, and the transparency of prices. (2015, p. 2)

The Accord Group receives 15 to 20 enquires and complaints each year under the Horticulture Code of Conduct. Most of these relate to late payment by wholesale

merchants to farmers, or diminished payments based on contended quality assessments. In contrast, the Accord Group receives around 650 enquiries and complaints per year (that result in around 150 mediation appointments) under the Franchising Code of Conduct that addresses similar long term commercial relationships (The Accord Group, pers. comm., 14 October 2016).

Workshops conducted by the ACCC in six regional centres around Australia confirmed that late payment remains a significant issue for small horticultural businesses. The ACCC noted that ‘failure to make payment within a specified time frame’ can be a breach of the CCA (2016d, p. 6). The ACCC acknowledged that ‘imbalances in bargaining power exist in horticulture and viticulture supply chains’ and that this underpins many of the concerns raised in the horticulture and viticulture sector (ACCC 2016d, p. 8). However, the ACCC also found that there continues to be a lack of evidence brought forward to support (and potentially prosecute) specific allegations, partly due to a fear of retribution.

Why is the Code not used?

The review by Napper and Wein (2015) found that neither growers nor traders considered the Horticulture Code to be achieving its aims, but for different reasons:

- growers reported that the code ‘fails to address the issue of transparency’ in market transactions
- traders reported that the code is ‘inflexible and does not reflect the way the wholesale horticulture sector operates’ (Napper and Wein 2015, pp. 47–48).

The Accord Group, which provides mediation services for the Code, attributed low use to a strong preference to rely on traditional industry pathways for dispute resolution. It claimed that the Code has attempted to ‘push the industry too far too soon’, and suggested that a voluntary code may be more compatible with commercial relationships in the industry (The Accord Group, pers. comm., 14 October 2016). Feedback provided by industry participants at workshops conducted by the ACCC also indicated that ‘wholesale markets transactions are commonly taking place without a written agreement’ (ACCC 2016d, p. 10).

A regulatory design issue is that, although the Horticulture Code of Conduct became operational in 2007, it did not apply retrospectively to supply agreements that were already in place (Napper and Wein 2015). The ACCC told the Commission that:

The Code only applies to transactions between growers and horticulture traders made under Horticulture Produce Agreements made after 15 December 2006. This results in over 80% of transactions not being covered by the Code. There are no financial penalties available for a breach of the Horticulture Code. This means that the ACCC is unable to provide a strong deterrent incentive for compliance. Grandfathering and lack of penalties result in low compliance ... (sub. DR121, p. 9)

Can the Code be improved?

The NFF told the Commission that the code ‘has failed to adequately address the key issue of transparency across the supply chain’ and recommended strengthening the code ‘through its enforcement and dispute resolution provisions, ensuring all contracts are covered by the Code, and harmonising provisions with the Food and Grocery Code of Conduct’ (sub. 61, p. 29).

The Voice of Horticulture (sub. 42) restated the growers’ perspective that the Code is ineffective in improving transparency, and supported strengthening the Code generally, and making it more binding by merging it into the Food and Grocery Code of Conduct.

The review by Napper and Wein (2015) recommended a number of amendments to the Horticulture Code, including:

- the introduction of an obligation on growers and traders covered by the Code to act in good faith
- the removal of the distinction between agents and merchants
- the introduction of civil penalties and infringement notices
- improved dispute resolution services.

Napper and Wein (2015) also found that a lack of understanding of how the Code operates has limited its effectiveness and caused industry stakeholders to disengage. To address this issue, the review report recommended that the amended Horticulture Code should be accompanied by an education campaign to assist in its implementation. The ACCC has committed to undertaking ‘widespread education and compliance activities to provide industry with information’ should a revised Horticultural Code be adopted (ACCC 2016d, p. 5).

Many aspects of the horticultural industry’s trading arrangements have changed since the Code commenced in 2007 (Napper and Wein 2015). Growers are increasingly trading directly with supermarkets and other retailers, and technological changes have allowed for greater transparency, improved communication on quality issues and the opportunity to improve price reporting.

Following its workshops throughout regional Australia in 2016, the ACCC concluded that the Horticulture Code had potential to be effective if its coverage was expanded to pre-December 2006 contracts, and if compliance was enforced through penalties and infringement notices.

The Australian Government is currently considering the recommendations of the review of the Horticulture Code of Conduct.

13 Foreign investment in agriculture

Key points

- Foreign investment has been, and will continue to be, critical to the competitiveness and productivity of the Australian agricultural sector.
- Despite the benefits of foreign investment to agriculture (and the economy), it has attracted considerable negative public attention over recent years. Public surveys show that many Australians are concerned about foreign investment in agriculture. Many of the concerns are misplaced and appear to have arisen partly due to a lack of information and informed debate.
- Changes in 2015 to Australia's foreign investment review framework (which aims to balance the benefits of foreign investment against any risks to Australia's national interest) significantly lowered the screening thresholds for agriculture that trigger review of foreign investment proposals by the Foreign Investment Review Board.
- The lower screening thresholds (combined with different thresholds depending on the investor's country of origin) increase the cost and complexity of investing in Australian agriculture — and ultimately risk deterring foreign investment in the sector — without offsetting public benefits. Lower screening thresholds are the incorrect policy tool to address community concerns about foreign investment in agriculture — they are not in the long-term interests of farmers or the broader community.
- The Australian Government should increase the screening thresholds for foreign investment in agricultural land and agribusiness to \$252 million — in line with the thresholds that applied to agriculture prior to the changes in 2015, and those that currently apply to business acquisitions and developed commercial land.
- The Register of Foreign Ownership of Agricultural Land, by providing facts, increases transparency and helps dispel some myths about foreign investment in agriculture. But facts alone can only go so far in addressing public concerns about foreign investment (and if misinterpreted, the data can reinforce public concerns).
- To facilitate a more informed public debate about foreign investment, the Productivity Commission could analyse and report on the trends, drivers and effects of foreign investment in agriculture and other sectors in its annual Trade and Assistance Review.
- Application fees for foreign investment proposals should be based on the Foreign Investment Review Board's cost of processing applications (and no higher). Fees should be closely monitored to ensure no over- or under-recovery of costs.
- The Treasurer's decisions on foreign investment proposals should be transparent (to the extent that it is consistent with national interest considerations) as it provides information to the public about foreign investment.

Australia has a long history of openness to foreign investment because of the important and beneficial role it plays in the Australian economy. As the Treasurer, the Hon. Scott Morrison MP, said recently:

To ensure we continue on our growth path, we must keep the door of our economy open to investment. Australia's economic success has been built on capital from overseas — from Britain, China, Japan and ... the United States. It was imported capital that created wealth and jobs. It helped develop Australian farms and businesses. It helped build our houses, factories and shops. Australia knows how important this investment is to our future ... it is unquestionably in our national interest to welcome foreign investment. (Morrison 2016b)

And back in 2009, the former Treasurer, the Hon. Wayne Swan MP, said that:

We want to ensure Australia's regulatory framework promotes our competitiveness and attractiveness as a destination for international capital. Our mission is to compete globally more effectively — to take a larger slice of a currently smaller pie ... (Swan 2009)

Foreign investment has been critical to Australia's economic development throughout its history; domestic investment opportunities have consistently exceeded domestic savings. As the Reserve Bank of Australia Deputy Governor, Guy Debelle, said:

The Australian economy has been a net recipient of capital inflows from the rest of the world for almost all of its history ... Put differently, investment in the Australian economy has consistently exceeded domestic saving and this gap has been funded from offshore ... In Australia's case, foreign investment ... has helped to expand our domestic productive capacity. (Debelle 2014)

This view was recently reiterated by the former Reserve Bank of Australia Governor, Glenn Stevens.

In this country, for 200 plus years, we've imported other people's capital and we've grown rich by doing that. We want to keep doing it and you need to maintain confidence and credibility in order to do that. (Stevens 2016)

However, foreign ownership of Australian agricultural land and businesses continues to attract substantial negative public attention. Increased global interest in Australian agriculture and a number of high-profile agricultural investments have renewed public debate about the role and regulation of foreign investment in Australian agriculture. Examples include the proposed sale of the S. Kidman and Company Limited group of properties to a Chinese-led consortium⁷⁰, and the sale of Australia's biggest dairy farm, Tasmania's Van Diemen's Land Company (which has never been Australian-owned) to a Chinese company (Moon Lake Investments).

In May 2015, the Australian Government announced a package of measures aimed at 'strengthening' Australia's foreign investment review framework (Hockey and Abbott 2015).

⁷⁰ The sale was twice blocked by the Treasurer on national interest grounds (Morrison 2015, 2016d).

The package included measures to:

- increase scrutiny of agricultural investment — by lowering screening thresholds (that triggers an examination of foreign investment proposals by the Foreign Investment Review Board (FIRB))
- improve transparency — by establishing a national register of foreign-held agricultural land.

Concerns were raised in this inquiry about the new arrangements and the potential effects of the changes on foreign investment in the sector.

This chapter looks at the regulation of inward foreign investment in Australia, with a focus on agriculture (section 13.1), and the importance of foreign investment to the Australian economy and the agricultural sector (section 13.2). It also examines the new arrangements for agriculture in terms of what they seek to achieve, how effective they are, and what costs they impose (section 13.3). Community concerns about foreign investment in agriculture (and what lies behind them) are also discussed.

13.1 About Australia's foreign investment framework

Australia's foreign investment review framework⁷¹ primarily consists of the *Foreign Acquisitions and Takeovers Act 1975* (Cwlth) (FATA) and Australia's Foreign Investment Policy (the Policy), which guides the Australian Government's decision-making process for foreign investment proposals. The framework allows the Treasurer to review foreign investment proposals on a case-by-case basis to ensure they are not contrary to Australia's national interest. The Treasurer can make an order to prohibit a proposed foreign investment that is contrary to the national interest, or impose conditions on an investment on national interest grounds.

FIRB is a non-statutory body in the Treasury portfolio responsible for examining foreign investment proposals that fall within the foreign investment framework, and for advising the Treasurer and the Government on the Policy and its administration. FIRB only provides advice. The Treasurer (or delegate) has final responsibility for decisions regarding foreign investment proposals.

Commenting on its role, FIRB stated that:

The Board recognises that foreign investment is integral to Australia's economy and takes seriously the need to ensure that foreign investment proposals are consistent with Australia's national interest. The Board reviews foreign investment proposals against the national interest on a case-by-case basis and seeks to strike an appropriate balance between maintaining

⁷¹ The framework is supported by the *Foreign Acquisitions and Takeovers Fees Imposition Act 2015* (Cwlth), the *Register of Foreign Ownership of Agricultural Land Act 2015* (Cwlth), associated regulations and Guidance Notes (on the specific application of the law).

community confidence in foreign investment, protecting the national interest and ensuring that Australia remains an attractive destination for foreign investment by providing certainty for investors. (2015b, p. 1)

Australia's foreign investment review framework aims to balance the benefits of foreign investment against any risks to the national interest (Treasurer 2016). 'National interest' is not defined in the FATA or its associated regulations; however, the FATA confers upon the Treasurer the power to decide whether a given investment would be contrary to the national interest. The Policy guides the interpretation and application of Australia's 'national interest' by outlining the factors typically considered by FIRB and the Treasurer when assessing foreign investment proposals (Treasurer 2016). They are:

- national security
- competition
- other Australian government policies, including taxation
- the impact on the economy and the community
- the character of the investor.

For foreign investment proposals in agriculture, the following factors are also typically considered:

- the quality and availability of Australia's agricultural resources, including water
- land access and use
- agricultural production and productivity
- Australia's capacity to remain a reliable supplier of agricultural production, both to the Australian community and its trading partners
- biodiversity
- employment and prosperity in Australia's local and regional communities.

The screening thresholds for private (non-government) foreign investors in the agricultural sector are \$15 million for agricultural land (which is cumulative and not indexed) and \$55 million for agribusiness⁷² (which is not cumulative and is indexed).

⁷² Section 4 of the FATA and Regulation 12 of the Foreign Acquisitions and Takeover Regulations 2015 (Cwlth) define an 'agribusiness' as an Australian business, entity or a subsidiary of the entity that derives earnings (or uses assets) in carrying on a business in agriculture, forestry, fishing (including food product manufacturing), and the value of its earnings (or assets) exceeds 25 per cent of the entity's total earnings (or assets). The agribusiness threshold of \$55 million refers to the value of the investment in the agribusiness, regardless of the value of that agribusiness (Treasurer 2016).

These thresholds do not apply where special arrangements have been negotiated under preferential trade agreements, which include higher or otherwise more liberal screening thresholds (table 13.1).

- The threshold of \$1094 million for both agricultural land and agribusiness (which is not cumulative and is indexed) applies to investors from the United States, New Zealand and Chile.⁷³
- The agricultural land threshold for investors from Thailand and Singapore is \$50 million (which is not cumulative and not indexed).
- In more recent preferential trade agreements with South Korea (which came into force in December 2014), Japan (January 2015) and China (December 2015), the Australian Government reserved the right to screen proposals at the lower agricultural screening thresholds (DFAT 2015, 2016a, 2016b).

Table 13.1 Foreign investment review thresholds for agriculture
As at 1 December 2015

	<i>US, NZ and Chile (not cumulative)</i>	<i>Other countries</i>
	\$m	\$m
Agribusiness	1 094	55 (252) ^a
Agricultural land ^b (including leases)	1 094	15 ^c (252)
Foreign government investors	0	0

^aPrevious thresholds in parentheses. ^b The agricultural land threshold for Singapore and Thailand is \$50 million (which is not cumulative), where land is used wholly and exclusively for a primary production business. ^c Cumulative.

Sources: Treasurer (2016); Treasury (2015d).

Screening thresholds in agriculture are different from other sectors. For example, the threshold for foreign investment proposals in residential land, vacant commercial land, media, and mining and production tenements is \$0 (that is, all proposals are subject to screening by FIRB, for investors not from Chile, New Zealand or the United States). Foreign government investors (in all sectors) are also subject to a \$0 threshold and additional national interest factors (Treasurer 2016). In contrast, the thresholds for (non-agricultural) business acquisitions are either \$252 million or \$1094 million, depending on whether the private investor is from a country with which Australia has a

⁷³ The agribusiness threshold of \$1094 million is triggered for acquisitions of a ‘substantial interest’ (20 per cent or more, or \$218.8 million) in an agribusiness valued above \$1094 million (Australian Government 2015c).

preferential trade agreement, and if so, whether it is a ‘sensitive’ business.⁷⁴ These thresholds are indexed and are not cumulative.

Historically, most foreign investment applications considered under the foreign investment review framework (including those in agriculture) have been approved (table 13.2). In 2014-15, FIRB received 37 953 applications and all were approved — 77 proposals (valued at \$5.3 billion) were approved in the agricultural, forestry and fishing sector. Conditions were attached to about 40 per cent of all approved foreign investment and 799 applications were withdrawn (FIRB 2016b).

However, some applications may not be submitted because of concerns about delay, rejection or uncertainty. This may imply a higher implicit rejection rate (and cost of capital), but the number of foreign investment applications deterred by the application process is unknown.

Table 13.2 FIRB foreign investment applications^a and rejections^b
1979-80 to 2014–15

<i>Financial year</i>	<i>Rejection rate (% of applications)</i>	<i>Rejections</i>	<i>Applications</i>
1979–1984	2.89	255	8 829
1985–1990	1.90	332	17 449
1991–1996	1.79	470	26 279
1997–2002	1.87	524	27 966
2003–2008	0.57	212	37 095
2009–2014	0.06	62	104 238

^a Total number of applications considered consists of applications that were approved, rejected, withdrawn and exempt by FIRB. ^b Most rejections related to the real estate sector. According to FIRB’s annual reports, there have only been 15 rejections of foreign investment proposals in the agricultural, fisheries and forestry sector: 13 were rejected in 1983-84, and one each in 1984-85 and 2013-14. In 2014-15, there were no proposals rejected in this sector.

Sources: FIRB annual reports (various years).

Agriculture-specific arrangements are relatively new

The current foreign investment framework reflects changes made by the Australian Government in 2015 to foreign investment arrangements in agriculture. The changes included:

- the lowering of thresholds for agribusiness from \$252 million to \$55 million (which

⁷⁴ Sensitive businesses include: media; telecommunications; transport; defence- and military-related industries and activities; encryption and securities technologies and communications systems; and the extraction of uranium or plutonium; or the operation of nuclear facilities (Treasurer 2016, p. 14).

took effect on 1 December 2015), and for agricultural land from \$252 million to \$15 million (cumulative and not indexed) for investors not from the United States, New Zealand, Singapore, Thailand and Chile (from 1 March 2015). This represents a departure from the long-term trend in liberalisation of thresholds (box 13.1).

- the establishment of the Register of Foreign Ownership of Agricultural Land (from 1 December 2015)
- the introduction of application fees for all foreign investment proposals (from 1 December 2015).

Prior to the changes in 2015, foreign investment proposals in agriculture were assessed as general business acquisitions and not subject to agriculture-specific thresholds.⁷⁵ In January 2012, the Australian Government released a policy statement outlining the additional national interest factors typically considered in foreign investment applications in agriculture (FIRB 2012).

Box 13.1 Reversing the trend in screening thresholds for agriculture

Screening thresholds for agricultural land and businesses were progressively increased between 1975 and 2014 (from \$1 million to \$252 million for agricultural land, and from \$2 million to \$252 million for agribusiness). The changes in 2015 reversed that trend. The Australian Government increased the thresholds over time for a number of reasons, including:

- concerns that the \$1 million agricultural land threshold would dampen demand from foreign buyers and therefore disadvantage Australian vendors (in 1986)
- to lower and remove unnecessary compliance costs for businesses, particularly for proposals that are routinely approved (in 1999, 2006 and 2009)
- to ensure that thresholds keep pace with inflation by indexation to the GDP implicit price deflator (from 1 January 2010).

Sources: FIRB (2013, 2014, 2015a, 2016b); Treasury (2011a).

13.2 The importance of foreign investment to Australia

Foreign investment contributes to higher Australian living standards

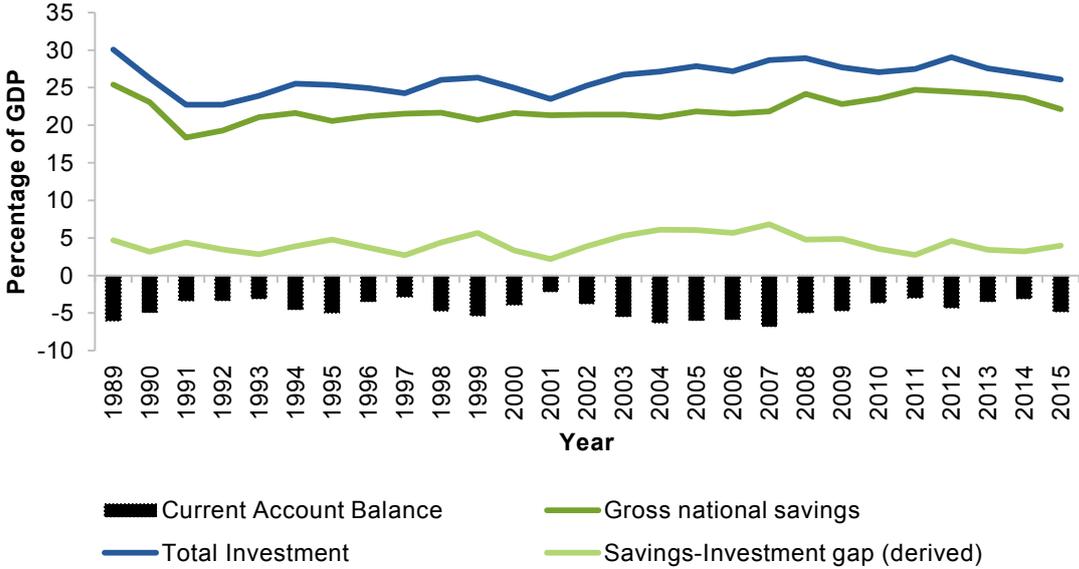
As a small⁷⁶ open economy, Australia relies (and has historically relied) on foreign investment to bridge the gap between national savings and national investment (McKissack

⁷⁵ There was a rural land threshold from 1975-1999, but this was harmonised with the general business threshold at \$50 million in September 1999 (Treasury 2011a).

⁷⁶ Although Australia was ranked 12th highest in gross national income per capita (in current US dollars) and 30th largest (in PPP current international dollars) out of 217 economies in 2015 (World Bank Group 2016b), Australia is still regarded as a small open economy for two main reasons. First, Australia

and Xu 2016; Saynal 2014). For the past few decades, the investment-savings gap has averaged about 4 per cent of GDP (figure 13.1).

Figure 13.1 Australia’s savings and investment gap^a
September 1988–December 2015



^a There may be statistical discrepancies due to net errors and omissions in the investment data. The savings-investment gap is derived by total investment less gross savings. Total investment refers to investment financed by Australia and the rest of the world. Investment consists of capital formation (non-produced, non-financial assets) and financial investment (direct investment, portfolio investment, financial derivatives, other investment and reserve assets). The current account balance measures exports and imports of goods and services, primary income and secondary income in the Balance of Payments.

Sources: Productivity Commission estimates based on ABS (2015a, 2015b, 2016c, 2016e).

Foreign ownership of Australian assets falls broadly into two categories: foreign direct investment (FDI) and portfolio investment.

- FDI refers to investment in an enterprise where the foreign investor has control or a significant degree of influence over the management of the enterprise. Direct investment occurs when the foreign investor has an equity interest in an enterprise of 10 per cent or more of the voting power (of ordinary shares or voting stock) and tends to involve a lasting relationship with the enterprise (ABS 1998; IMF 2009).

is considered to be a price taker in many of its export and import markets, and has little influence over prices. Prices are exogenously determined by global factors such as world output. Second, the macroeconomic outcomes and policy in Australia are unlikely to have any significant effect on world output, inflation and interest rates (Nimark 2007).

-
- Portfolio investment refers to the purchase of equity and debt securities (apart from direct investment and reserve assets), where the foreign investor has an equity interest in an enterprise of less than 10 per cent of the voting power (of ordinary shares or voting stock). It does not result in managerial control or influence in the operation of the enterprise. Portfolio investment can be more transient, passive and speculative than FDI because negotiable securities can be bought and sold within a short period of time (ABS 1998; IMF 2009).

The majority of foreign investment in Australia is portfolio investment. In 2015, the level (or stock) of total foreign investment in Australia was about \$3024 billion. Portfolio investment accounted for approximately 54 per cent, direct investment 24 per cent, other investment 16 per cent and financial derivatives 6 per cent.

In 2015, the level of FDI in the agricultural, forestry and fishing sector was about \$1.6 billion (or 0.05 per cent of total foreign investment). This does not include agricultural-related investment in the food product manufacturing sector — total investment in the manufacturing sector was \$85.9 billion (ABS 2006, 2016g).

Net inflows of foreign capital support higher rates of economic growth and employment, as well as higher living standards in Australia (box 13.2). Capital inflows increase investment and capital stocks. As a result, employment and real wages are higher, along with terms of trade, production, consumption and allocative efficiency.

Box 13.2 Evidence that foreign investment benefits Australia

Empirical research quantifying the contribution of foreign investment to Australia's economic growth, while limited, show that foreign investment increases Australia's income and living standards.

- Layton and Makin (1993) estimated that between 1984 and 1989, foreign capital raised Australia's real national income by 15 per cent more than would have occurred in the absence of foreign capital inflow.
- Iyer, Rambaldi and Tang (2009) found that foreign direct investment increased Australia's economic growth in both the short and long term over the period 1988 to 2003.
- Access Economics estimated that a 10 per cent increase in foreign direct investment inflows over the period 2010–2020 would increase real GDP by 1.2 per cent (\$16.5 billion) (BCA 2010).
- Economic modelling by Treasury estimated that a reduction of foreign capital inflow and investment of 1 per cent of nominal GDP would reduce Australia's gross national income by about 0.5 per cent each year over a ten-year period (relative to the baseline) — that is, other things being equal, restrictions on capital inflow would reduce the wellbeing of Australians (Gali and Taplin 2012).

FDI is an important source of new technology and management practices for Australian businesses, which in turn encourages innovation and helps drive productivity growth.

Foreign investment can also open up access to global supply chains and markets, and provide additional export opportunities. The productivity gains from FDI are likely to have positive spillover effects to other industries and the wider economy (PC 2015a). As a Treasury working paper said:

FDI can also help deliver improved competitiveness and productivity performance over time, including by: providing much needed infrastructure; allowing access to global supply chains and markets; and enhancing Australia's skill base — through greater knowledge transfer from foreign enterprises to domestic firms by exposure to more innovative work practices. (McKissack and Xu 2016, p. 11)

The importance of foreign investment to Australian agriculture

Foreign investment has been critical to Australia's agricultural sector for almost two centuries. It was crucial in the early stages of development of the sector when large-scale land improvements (for example, clearing and fencing), machinery, livestock and irrigation were required (Hooke 1967; Shaw 1967). Two of Australia's oldest operating agricultural businesses — the Australian Agricultural Company (established in 1824) and Van Diemen's Land Company (1825) — were established as a result of British investment (AACo 2016; VDL 2014). British investment also contributed to the expansion of S. Kidman and Company Limited, one of Australia's largest beef producers and Australia's largest private landholder (Bowen 1987; Morrison 2015; S. Kidman & Co Ltd 2016).

Foreign investment has also led to the introduction of new technology in Australian agriculture. For example:

- American cotton growers who purchased agricultural land in Australia in the 1960s brought with them the technology and expertise to produce cotton on a large scale, which increased the scale and intensification of cotton growing in Australia (Moir 2011; Myers 2010). Australia is now a major world producer of cotton — in 2014-15, it was the third largest exporter of cotton in the world (ABARES 2015a).
- Australia's beef industry has a long history of foreign investment, with the British—Argentinian family Vestey (a significant investor in the beef industry in the Northern Territory) pioneering a number of innovations (Moir 2011). The Cattle Council of Australia (2015, p. 1) noted that 'Australian cattle properties have previously received foreign investment from England, the United States, China, Japan and Brazil, amongst others.'

Given Australia's geographic isolation and the relatively small size of many farm operations (ABS 2012, 2016b), the transfer of foreign technology, skills and knowledge, and access to global supply chains, is particularly important to agriculture.

Foreign investment can also promote competition, which in turn can improve the competitiveness of Australian agriculture (PC 2014f). This can benefit both consumers (through lower prices and greater product variety) and producers.

Foreign investment is necessary to improve the productivity of Australian agriculture, and expand food production to meet increased global demand. According to the Australia and New Zealand Banking Group Limited (ANZ Bank), Australia's agricultural sector will require high levels of capital investment (including foreign investment) to support growth in the sector (Port Jackson Partners 2012). In a report prepared for the ANZ Bank, Port Jackson Partners estimated that by 2050, the total capital requirement for agriculture could be up to \$1.6 trillion, and the shortfall between capital requirements and available domestic capital could reach \$850 billion (Port Jackson Partners 2012).

Referring to the \$1.6 trillion capital requirement for agriculture, the Voice of Horticulture acknowledged that:

... there is not this volume of money in our economy and in our ag[ricultural] sector to enable us to become more efficient and productive to be able to assist the world in its quest for safe quality food to feed the growing population. (sub. DR232, p. 5)

Similarly, Agribusiness Australia noted that:

Australian investment alone is not sufficient for agribusiness to grow and develop ... In a world where capital with a long-term focus is in huge demand, agriculture needs to find innovative ways of attracting domestic and foreign investment, particularly given strong domestic competition from sectors such as mining. This analysis does not account for all parts of the supply chain, and improved estimates will be required to understand the full picture. (2016, pp. 2–3)

The Australian Government recently identified the food and agribusiness sector in the Northern Territory as a potential area of high growth that will require substantial foreign investment (Australian Government 2015e). Preparing extensive tracts of land for cropping, including the infrastructure required to support cropping, will involve a significant amount of capital. The Western Australian Government (sub. 54) also noted that foreign investment is needed for investment in the state's irrigation infrastructure.

The importance of foreign investment to Australian agriculture was widely acknowledged by a number of participants to this inquiry (box 13.3). For example, the National Farmers' Federation (NFF) said that:

The NFF supports foreign investment in Australian agriculture and recognises the important role it has and will continue to play in a vibrant agricultural supply chain. To date, foreign investment has proven to be overwhelmingly positive for Australian farmers and regional communities. It has delivered significant amounts of capital into our production systems at a time when finance from the banks has been harder to access. This capital has improved our efficiency and ensured that our farmers can continue to compete in a highly distorted global marketplace for agricultural commodities. (sub. 61, p. 31)

The Cattle Council of Australia also noted that foreign investment can facilitate access to export markets.

As an industry that exports over 65% of our product to over one hundred markets around the world, foreign investment only strengthens relationships between Australia and these markets. (2015, p. 1)

Box 13.3 Participants point to the importance of foreign investment to Australian agriculture

Primary Producers SA said that:

Australian agriculture and the food industry needs significant investment to achieve what it can do for the Australian economy ... Unfortunately we are aware the major source of funds in Australia (superannuation funds) have no vision for food and wine, so foreign investment is needed. (sub. 41, p. 5)

Voice of Horticulture said that it:

... recognises that foreign investment provides greater availability of capital to invest in the upgrade of on-farm and supply chain facilities. Foreign companies operating in Australia can often form better direct links between growers in Australia and the import/retailers from their home country. A better understanding of the overseas customer also enables them to focus on delivering product that will meet consumer needs. Additionally, foreign investment also has the potential to improve export market access and the commercial viability of protocols through links between the foreign investor and officials or key influencers in the home country. (sub. 42, p. 30)

GrainGrowers said that:

Overall, foreign investment has had a positive impact on the Australian grains industry, providing significant capital injections across the supply chain and assisting some farmers to sell their assets and retire. (sub. 73, p. 20)

Australian Pork Limited said that it:

... supports foreign investment in Australian agriculture and recognises the important role it has and will continue to play ... The Australian pork industry has significant foreign ownership, with three of the seven export abattoirs owned by foreign entities. (sub. DR282, p. 12)

Australian Sugar Milling Council said that:

Around 75% of the milling capacity in Queensland is owned by foreign parent companies. Regardless of whether the capital has been from Australian-based or internationally based parent companies, the milling sector in Australia has seen much-needed substantial investment and upgrade of assets and processing facilities. Australian agriculture must continue to attract capital investment, including from internationally based companies. (sub. DR234, p. 4)

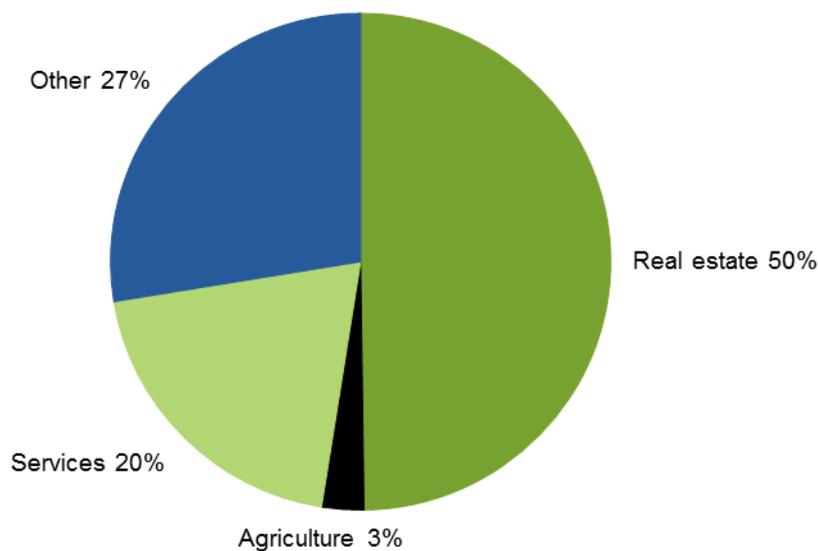
The Tasmanian Government said that:

Foreign investment in Tasmanian agriculture has been historically significant since colonisation with one of Australia's oldest farms, Van Diemen's Land Company, being established in 1825 by virtue of British investment. In 2013, the Tamar Valley Dairy was sold to New Zealand agribusiness Fonterra, which secured 122 jobs and preserved existing milk supply arrangements. Mitsubishi recently invested in Murray Goulburn's new milk dryer in Tasmania. More recently, in March 2016, Moon Lake Investments Pty Ltd, 100 per cent owned by a Chinese national, acquired the substantial land and assets of Tasmanian Land Company Ltd (TLD) including the Van Diemen's Land Company; Australia's biggest dairy business. The proponents have publicly made strong commitments about future investment in expansion, growth and innovation in the future operations of the business, including productivity, new dairy farms and value-adding. (sub. DR287, p. 20)

Trends in FDI in agriculture

Approved FDI in the Australian agricultural, forestry and fishing sector was \$5.3 billion in 2014-15, or about 3 per cent of the total value of approved foreign investment (FIRB 2016b) (figure 13.2), compared to \$3.4 billion in 2013-14 (or about 2 per cent of the total value of approved foreign investment) (FIRB 2015a).

Figure 13.2 **Agriculture's share of total approved foreign investment^a**
2014-15



^a 'Agriculture' includes forestry and fishing industries. 'Services' excludes tourism. 'Other' refers to the finance, insurance, tourism (4 per cent), manufacturing (10 per cent), mineral exploration and development (14 per cent) industries. Approved investment in real estate includes off-the-plan approvals given to real estate developers and approvals for annual programs. Totals may not add due to rounding errors. There is potential double-counting as one proposal that operates in multiple sectors was recorded as one approval per sector. Corporate reorganisations are excluded (85 in 2014-15).

Source: FIRB (2016b).

Over the past five years, the average level of approved foreign investment in the sector was just over \$3.3 billion (FIRB 2016b). In 2014-15, about 2 per cent of approved foreign investment (valued at \$3.8 billion) was in the food, beverages and tobacco industry (FIRB 2016b).

While information on FDI in Australian agriculture is limited (and subject to limitations), the available data show that the majority of Australian agricultural land and businesses are Australian-owned (box 13.4). And the top ten largest foreign investors in agricultural land (by land area) are the United Kingdom, the United States, the Netherlands, Singapore, China, Philippines, Switzerland, Jersey, Indonesia and Japan (box 13.4).

Box 13.4 What do we know about foreign investment in agriculture?

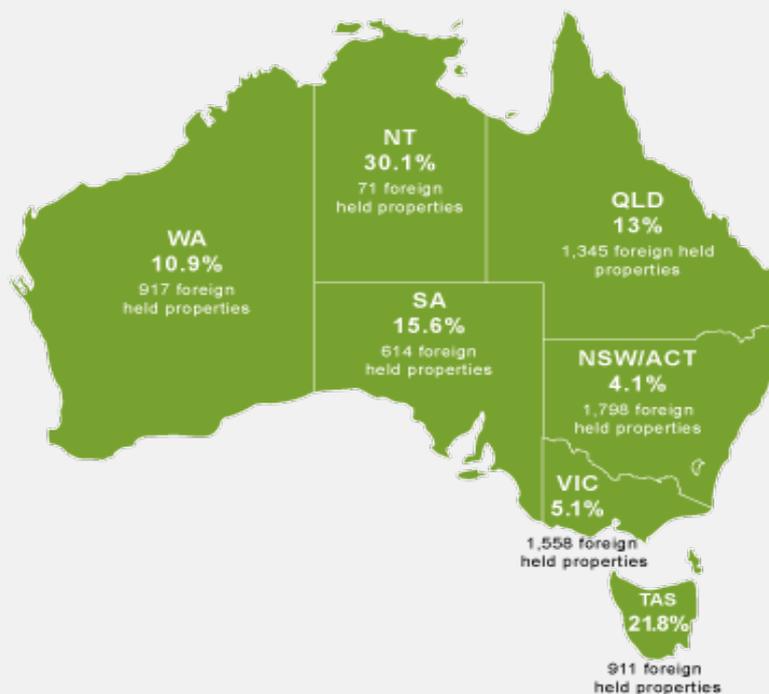
Almost all (98.9 per cent in 2013) agricultural businesses are Australian-owned (compared to 98.5 per cent in 2010) (ABS 2011, 2014b).

The majority of Australian agricultural land is Australian-owned. The highest proportion of foreign holdings are in the Northern Territory (30.1 per cent) and Tasmania (21.8 per cent) (ATO 2016d). The proportion of foreign holdings in agricultural land has increased marginally from 2010 — from 11.4 per cent to 13.6 per cent in 2016 (ABS 2011; ATO 2016d).

Most foreign holdings of agricultural land are leasehold interests (82.2 per cent) and are concentrated in the hands of a few businesses (ABS 2011, 2014b; ATO 2016d).

Foreign-held agricultural land is mostly used for livestock production (87.8 per cent), and is highest in the sheep, beef cattle and grain farming subsector (ABS 2011, 2014b; ATO 2016d).

Proportion of agricultural land that is foreign-held in each state and territory, June 2016

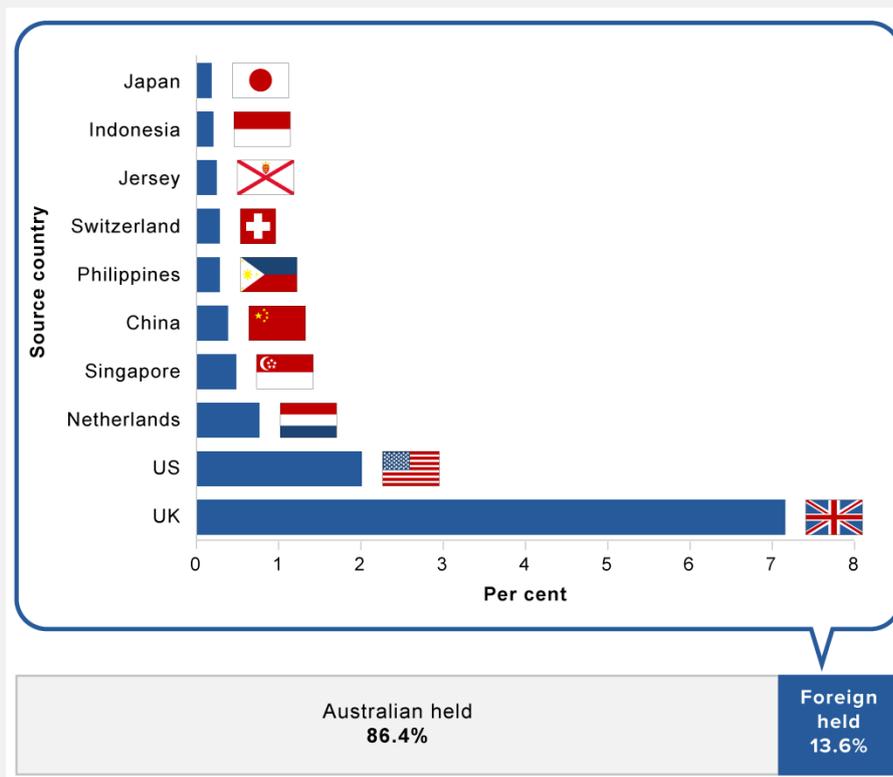


(Continued next page)

Box 13.4 (continued)

The largest proportion of agricultural land is held by investors from the United Kingdom, followed by the United States, the Netherlands, Singapore and China (ATO 2016d).

Top ten source countries for foreign investment in agricultural land, June 2016^a



^a There may be measurement errors as entities and trusts are required to provide their country of incorporation, but this does not necessarily reflect the source country of the foreign investor or ultimate beneficial owner. The top ten source countries collectively make up about 12 per cent of total agricultural land in Australia and 88 per cent of foreign-held agricultural land.

Investment patterns from source countries have changed over time. In 2014-15, China became, for the first time, the largest source of approved foreign investment in the agricultural, forestry and fishing sector. Approved investment from China increased from \$32 million (about 1 per cent) in 2013-14 to \$2.5 billion (47 per cent) in 2014-15 (FIRB 2015a, 2016b).

It is important to distinguish between the stock and flow of foreign capital in agriculture. For example, while China has recently dominated approved foreign investment *flows* into the sector over a given period (as shown by FIRB data), its existing (accumulated) *stock* or level of investment at a single point in time is still relatively low, and therefore primarily⁷⁷

⁷⁷ The stock of Australia's foreign assets or liabilities is affected by capital flows, asset prices and the exchange rate (RBA 2006).

reflects growth from a low base (as reflected in the ABS and ATO data) (McKissack and Xu 2016).

13.3 A closer look at the new arrangements

Community concerns underpin the shift to lower screening thresholds

Community concerns about foreign ownership of Australian agricultural assets, while not new, have gained prominence in recent years. A number of public surveys (including the ABC's Vote Compass surveys, Essential Media polls and annual polls conducted by the Lowy Institute for International Policy) consistently show that many Australians do not support foreign investment in agriculture (box 13.5).

Some community concerns appear misplaced, and may be partly due to a lack of information and informed debate about foreign investment in Australian agriculture. The Financial Services Institute of Australia pointed out that Australians seem to have puzzling attitudes to foreign investment.

The Australian public display paradoxical attitudes to foreign investment. Polls show that Australians recognise the benefits of globalisation and free trade but also strongly oppose foreign ownership of Australian assets. (2014, p. 14)

A number of government inquiries and information collection projects have sought to gain a better understanding of the extent of foreign investment in agriculture.

- In 2010, an inquiry on food production in Australia by the Senate Committee on Agricultural and Related Industries concluded that screening thresholds in agriculture (then \$231 million) provided limited public scrutiny of foreign investment proposals (for national interest concerns). The Committee recommended that:

... an audit be undertaken to establish the extent of foreign ownership of commercial agricultural and pastoral land, and ownership of water, in Australia, with particular emphasis on ownership by sovereign and part-sovereign-owned companies. (SSCARI 2010, p. 21)

- An information gathering process was subsequently undertaken to address emerging community concerns about foreign ownership of agricultural land and food production in Australia.⁷⁸ The ABS was directed by the Australian Government to collect

⁷⁸ This process commenced following the introduction of the Foreign Acquisitions Amendment (Agricultural Land) Bill 2010 into the Senate by Senators Nick Xenophon and Christine Milne on 24 November 2010. The main provisions of the Bill proposed to increase the scrutiny of foreign investment in agricultural land through the introduction of a spatial screening threshold of five hectares (which is the approach currently used in New Zealand) for foreign investment in agricultural land, create a 'national interest' test for proposed acquisitions of agricultural land, and require the Treasurer to publish on the Treasury website information about agricultural land applications. The proposed definition of 'interest in Australian agricultural land' included agricultural businesses. The Bill ultimately failed to pass the Senate.

Box 13.5 **Many Australians are concerned about foreign investment in agriculture**

Various public surveys consistently show that many Australians are concerned about (and do not support) foreign investment in agriculture.

- A 2012 Lowy Institute Poll of public attitudes to foreign investment found that 81 per cent of those surveyed (1005 respondents) were against the Australian Government allowing foreign companies to buy Australian farmland to grow crops and farm livestock (and 63 per cent of those surveyed were strongly against). Of the respondents who said that the Australian Government was allowing too much investment from China, 54 per cent cited concerns that 'China is seeking to buy Australian mining and agricultural companies and these need to be kept in Australian hands' (Hanson 2012). And the 2016 poll found that 87 per cent of those surveyed (1202 respondents) were against the Australian Government allowing foreign companies to buy Australian farmland (an increase of 6 percentage points from 2012), with 69 per cent strongly against foreign investment in Australian farmland (Oliver 2016). Those in favour fell from 18 per cent to 11 per cent.
- The 2013 Lowy Institute Poll found that 57 per cent of those surveyed (1002 respondents) considered that the Australian Government is allowing too much investment from China (Oliver 2013). And the 2014 poll found that 60 per cent of those surveyed (1150 respondents) were against foreign investment in agriculture (equal opposition to ports and airports). This was the lowest level of support across all sectors, and in contrast with 58 per cent of respondents in favour of foreign investment in manufacturing and 55 per cent for the financial sector (Oliver 2014).
- A 2016 ABC survey (Vote Compass) found that 80 per cent of those surveyed (212 170 respondents) agreed that the Australian Government should further restrict foreign ownership of agricultural land, compared to almost 84 per cent of those surveyed (1.4 million respondents) who were in favour of more restrictions in the 2013 survey (ABC 2013; Jasper, Felton-Taylor and Vidot 2016). A 2013 Essential Media Poll found that 55 per cent (1075 respondents) disagreed that foreign investment in Australian agriculture is good for Australia's economy (EMC 2013).

Another study (based on a sample of 1523 respondents) undertaken by Laurenceson, Burke and Wei (2015) looked at how the Australian public's preferences over foreign investment in agriculture are determined, and found that the attributes of foreign investment that are of greatest concern to Australians are (in order of their significance):

- the share of foreign ownership in Australian agriculture — foreign investment is preferred more the lower the total share of foreign ownership
- the financial status of the Australian agricultural business — foreign investment is preferred more when the business is not in financial distress
- local management and control — foreign investment is preferred more when Australian citizens occupy a majority of senior management and board positions
- the country of origin of the foreign investor — investment from the United Kingdom and the United States is preferred more than investment from China and Japan
- the dollar value of foreign investment — foreign investment is preferred more the higher the value of the investment.

The authors also noted that the attributes that are of greatest concern to the public (according to the study) are not the same as those attributes used (or used less often) to flag agricultural investment proposals for scrutiny in Australia's foreign investment review regime.

information about the level of foreign ownership of agricultural businesses, land and water entitlements in a farm survey (ABS 2011).

- The Rural Industries Research and Development Corporation in 2010 also commissioned ABARES to examine ‘the role and history of foreign investment in the development of agriculture, the extent of foreign ownership of Australian agricultural land and the factors driving foreign investment in Australian agriculture’ (Moir 2011, p. iii). The report observed that:

Information on foreign investment in agriculture and agribusiness is limited ... there is no systematic source of data on foreign ownership of agribusiness companies. Nor is there regular information on the nationality of foreign investors or about the type of entity involved. The extent of investment by foreign government entities is also unknown. (Moir 2011, p. 1).

To increase transparency and facilitate better informed policy making, ABARES proposed the regular collection of information on foreign investment in agricultural land, either by periodic collection of data by the ABS, or a land register of foreign ownership.

A Coalition policy discussion paper on foreign investment in Australian agricultural land and agribusiness in 2012 also observed that there was:

... growing community and industry concern that some types of acquisitions may be contrary to the national interest and that a strengthening of the regime may be advantageous to the long-term prosperity and food security of Australia. (Liberal Party of Australia 2012, p. 3)

The paper identified several areas for public discussion, including:

- establishing a national register of foreign ownership of agricultural land
- lowering the screening threshold for agricultural land where the investment exceeds \$15 million and making it cumulative
- lowering the screening threshold for agribusiness where the investment exceeds 15 per cent in an agribusiness valued at \$244 million (indexed annually), which is equivalent to about \$53 million.

The discussion paper also stated that there was:

... a common perception that the thresholds for the FIRB to assess foreign acquisitions are too high for the agricultural sector and do not adequately reflect the average value of agricultural assets or land holdings ... The result is that many purchases of agribusinesses, and virtually all sales of agricultural land, are never reviewed by the FIRB against the national interest. (Liberal Party of Australia 2012, p. 8)

And like ABARES, it also noted that there were concerns that the extent of foreign ownership was insufficiently documented and that the lack of data ‘undoubtedly stirred rather than dampened concerns about the extent of foreign land ownership that may (or may not) be occurring throughout Australia’ (Liberal Party of Australia 2012, p. 3).

In June 2013, a report by the Senate Rural and Regional Affairs and Transport References Committee identified two key issues with the size of the foreign investment threshold for agricultural land and businesses (which at the time was \$248 million and not cumulative):

- the potential for cumulative purchases of agricultural land by foreign companies to avoid FIRB review
- the lack of review of major agricultural purchases that could impact local economies (SRRATRC 2013).

The Committee also pointed to concerns raised by participants that foreign investment arrangements were making it difficult for local producers to gain access to farm assets in the region (in that local farmers were being priced out of the market).

Very few Australian farm purchases trigger a FIRB review yet the impact of foreign investments below the \$248 million threshold on local economies could be significant. The committee is concerned that many and perhaps virtually all private foreign acquisitions of agricultural land and business are proceeding without any consideration of whether it is in Australia's national interest. In the committee's view this is largely out of step with contemporary community expectations. (SRRATRC 2013, p. 74)

The Committee recommended that the screening threshold for private foreign investment in agricultural land be lowered to \$15 million (and be made cumulative). It also recommended that any proposed foreign investment in an agribusiness should be reviewed by FIRB where the investment exceeds 15 per cent or more of an agribusiness valued at \$248 million, or exceeds \$54 million.

In February 2015, the Australian Government announced that it would reduce the screening threshold for agricultural land to \$15 million (cumulative) and to \$55 million for agribusinesses to increase public scrutiny of foreign investment proposals in the agricultural sector. These changes were implemented later in 2015.

Mixed views on the lower screening thresholds for agriculture

The new screening thresholds were considered too low by some inquiry participants.⁷⁹ For example, the Australian Forest Products Association said that:

The recent lowering of the FIRB thresholds ... represents a significant hurdle for overseas investors in rural land. (sub. 11, p. 5)

The Australian Lot Feeders' Association agreed and said that:

A large proportion of feedlots in Australia would be valued above \$15 million ... Feedlots (particularly large ones) are high value investments with foreign companies often the only

⁷⁹ Participants who commented that the thresholds were too low included: Australian Forest Products Association (sub. 11); Australia Pacific LNG (sub. DR206); Australian Sugar Milling Council (sub. DR234); Institute of Public Affairs (sub. DR164) and Voice of Horticulture (sub. DR232).

potential purchasers who have the necessary funding capacity to acquire such businesses. Decreasing the threshold to \$15 million has potentially deterred a significant proportion of buyers for such assets. This is not in the interest of the sector, nor the many others that rely on the sector for employment and a market for their products. (sub. DR294, pp. 17–18)

WAFarmers, while supportive in principle of the reduction in the agricultural land threshold from \$252 million, suggested that:

... there is scope to increase the threshold from \$15 million to \$55 million as this is more in line with purchases purchased through foreign investment. (sub. DR226, p. 32)

The Western Australian Government supported a return of the agricultural land threshold to \$252 million because it was concerned that the lower threshold:

... is seen by foreign investors as a potential impost to investment. DRD [The Department of Regional Development] is concerned that investment opportunities will be missed as mixed messages are being sent to investors by the change in policy, which in turn disadvantages Australian agriculture. (sub. DR285, p. 5)

The Business Council of Australia, in its submission to the Treasury options paper on strengthening Australia's foreign investment framework, expressed concern about the negative message that the lower thresholds send to foreign investors.

Over 99 per cent of applications to the FIRB are approved. The introduction of new lower thresholds for foreign investors in Australian agribusiness and for Australian rural land introduces an additional hurdle for potential investors. It sends a strong negative message about Australia's attitude towards foreign investors. This risks having a chilling effect on future investment. (2015, pp. 8–9)

Australia Pacific LNG (sub. DR206) also said that the reduced agricultural land threshold creates additional regulatory hurdles that must be overcome by foreign investor resource developers seeking to purchase agricultural land, such as for natural gas production.

However, other participants supported the lower screening thresholds for agriculture.⁸⁰ For example, AgForce argued that the lower thresholds increase transparency of foreign investment in agriculture.

A \$15M threshold for land purchases is more relevant to Queensland broadacre agriculture than the recommended \$252M ... which would trigger very few proposed purchases ... More evidence is also needed that these lower thresholds will actually be a disincentive for further foreign investment and gathering this evidence may require a review after a couple of years of operation. (sub. DR246, p. 6)

⁸⁰ Participants who supported the lower screening threshold included: AgForce (sub. DR246); Annette Prehn (sub. DR173); Cattle Council of Australia (sub. DR290); Environmental Farmers Network (sub. DR174); Grain Growers Limited (sub. DR247); Katherine Snoswell (sub. DR297); NSW Farmers' Association (sub. DR161); Stuart Chignell (sub. DR208); Tasmanian Farmers and Graziers Association (sub. DR281); Victorian Farmers Federation (sub. DR189) and WAFarmers (sub. DR226).

According to GrainGrowers Limited, the lower thresholds provide transparency that is otherwise lacking in FIRB's review process.

... [Increasing the threshold] would not be appropriate ... when there is still a significant issue with transparency in the way decisions are made following the FIRB review process. (sub. DR247, p. 12)

The Victorian Farmers' Federation argued that the scrutiny afforded by lower thresholds help maintain community confidence in the foreign investment system.

... current screening thresholds for foreign investment in agricultural land must remain ... it is important that there is a comprehensive review undertaken by the Foreign Investment Review Board, to provide confidence to the community about their operation of foreign owned businesses going forward. The National Interest Test process is one measure which is in place to provide additional transparency and confidence to both government and the community about the ongoing business intentions of the investor. (sub. DR189, p. 33)

The NFF expressed a similar view.

... safeguards enacted by the amendments, including the \$15 million cumulative screening threshold for agricultural land and \$55 million for agribusiness, help to ensure that due consideration is given to foreign ownership coming into the sector. (2016c, p. 1)

However, it also cautioned that:

... the thresholds should be monitored and supported by evidence. Consideration needs to be given to whether potential foreign investors are being dissuaded by the sector-specific thresholds. (sub. DR216, p. 61)

The lower thresholds for foreign investment in agricultural land and agribusinesses result in more foreign investment proposals being subject to FIRB review and application fees. This not only creates a wedge between the price faced by buyers and sellers, but also delays any sale and may prevent foreign investors from bidding at auctions.

Unnecessarily restrictive foreign investment review arrangements in agriculture can reduce foreign investment, which can have negative effects on the Australian economy both in the short and long term.

- In the short term, lower foreign investment can lead to lower employment in agriculture (Gali and Taplin 2012).
- In the long term, effects can include a lower net capital stock, lower agricultural land and agribusiness prices, and consequential adverse effects on production, productivity and income (Gali and Taplin 2012; ITS Global 2008).

The distortions associated with foreign investment restrictions may also be larger in the medium to long term than in the short term — when the supply of agribusinesses and to a lesser extent, agricultural land, is more responsive to changes in price (Hertel 2011).

At the margin, the lower thresholds act to deter potential foreign buyers by increasing the cost and uncertainty of investment in agricultural land and businesses valued above

\$15 million and \$55 million respectively. In 2014-15, the average value of a farm in Australia was about \$3.5 million (ABARES 2016a; Treasury 2015c). During public hearings, the Commission was told that many members of WAFarmers held properties valued below the \$15 million threshold for agricultural land (trans., p. 97). However, land prices can vary considerably by region and sub-industry (ABARES 2016a; Treasury 2015c).

The regulation impact statement (RIS) supporting the changes to the foreign investment framework for agriculture estimated that as a result of the lower thresholds, FIRB will need to screen an additional 120 agricultural land and five agribusiness applications each year at a cost of \$1.2 million per year (Treasury 2015d). In the four months between 1 March 2015 and 30 June 2015, 17 proposals were screened and approved for agricultural land which would not have been captured by the previous thresholds (FIRB 2016b). In 2014-15, no applications in agriculture were rejected, although some approvals were subject to conditions (FIRB 2016b).

The new lower thresholds, by requiring more proposals to be reviewed, increase public scrutiny of foreign investment proposals in agriculture, but also imposes additional costs to foreign investors, industry and the Australian community.

And the lower thresholds could deter investment (that is, they do not get to the approval stage). As the Financial Services Institute of Australasia said:

Lost FDI can deny Australia access to much needed capital, employment opportunities, new technologies, international managerial networks, and global supply chains. (2014, p. 7)

The Commission questions whether the benefits of greater scrutiny outweigh the costs, particularly given that the Register of Foreign Ownership of Agricultural Land improves transparency of foreign investment in agricultural land.

The lower cumulative threshold could also deter investment

The cumulative threshold for agricultural land was strongly criticised by some participants. The Consolidated Pastoral Company (CPC) argued that it represented excessive regulatory coverage.

A threshold of a cumulative value of \$15 million for agricultural land as a trigger for FIRB approval means that very small investment above \$15 million can trigger a full FIRB assessment process. This is an extreme example of regulation with excessive cover[age]. (sub. 71, p. 17)

AgForce, while supportive of the lower threshold for agricultural land, also expressed reservations about its cumulative nature.

... further justification for making this land purchase threshold cumulative and not indexed is needed. (sub. DR246, p. 6)

Warakirri Asset Management said that the threshold means approval is required for ‘add on’ transactions such as the purchase of neighbouring properties, paddocks and road closures.

... the current FIRB rules are inefficient, costly and act as a disincentive to invest in Australian Agriculture. Australian agricultural land ownership is fragmented and often multiple transactions are required to consolidate land holdings to achieve the desired economies of scale and deliver acceptable investment returns. Introducing the cumulative trigger for FIRB approval ... may lead to one investor submitting many requests for FIRB approval over a 1 to 3 year time frame. (sub. DR310, p. 4)

Wellard Group Holdings Limited (Australia’s largest livestock exporter) said that the cumulative threshold can create disincentives for foreign investors to make ongoing productivity improvements to their property.

... the time and cost associated with preparing and submitting a FIRB approval and obtaining consent are significant, particularly in the context of small and multiple rural land acquisitions and having regard to current values ... the new threshold will disproportionately impact on the possible acquisition of small parcels of rural land by companies like us. For example, under the proposed changes, if Wellard was offered the purchase on a single paddock worth let’s say \$10,000, next door to our existing farming operations, we would be required to seek FIRB approval. Given this is a relatively immaterial acquisition, the requirement for FIRB approval would require a disproportionate expense of time and money, and associated delay, in completing what should be a relatively straightforward transaction between a willing vendor and purchaser. (2015, p. 3)

The cumulative threshold change means that every purchase of agricultural land by a foreign investor with current holdings valued above the threshold, no matter how small the investment, will require FIRB approval (except where an exemption certificate has been granted by FIRB, in most cases for a fee of \$25 300 (box 13.6)). This raises the cost of investment, which adversely affects existing foreign investors in Australian agriculture who wish to increase the scale of their agricultural landholdings or business operations.

The NSW Farmers’ Association suggested that exemption certificates may undermine the public scrutiny afforded by the agricultural land threshold.

It is clear that the farming community is completely aligned with the vast majority of the Australian population in seeking greater scrutiny of the levels and spread of foreign investment in agricultural land. Given the small number of applications rejected, it is not clear that keeping the threshold is providing an appropriate screen of potential investors, especially given the existence of exemption certificates. (sub. DR161, p. 30)

Interim FIRB data show that three applications for exemption certificates for agricultural land have been granted from 1 December 2015 (FIRB, pers. comm., 6 June 2016). While exemption certificates may reduce the regulatory burden of the cumulative threshold for agricultural land, this is only likely to be the case where the total value and expected net return from the proposed investment exceeds the \$25 300 application fee. It is unlikely to address the type of situation outlined by Wellard, and may have the effect of adding further

cost and complexity to the system, with potentially limited benefit in terms of assessment of national interest concerns.

It is the Commission's view that the exemption certificate is very much a band-aid approach to address a policy that has the potential to dampen productivity-enhancing investment and prevent efficient structural adjustment in the agricultural sector.

Box 13.6 Exemption certificates for agricultural land

From 1 December 2015, all foreign investors can apply for an exemption certificate, which provides FIRB pre-approval for multiple investments in agricultural land for a fee (\$25 300 if the acquisition is valued at \$1 billion or less, and \$101 500 if the value exceeds \$1 billion), without the need to seek separate approvals. Applications must be decided within 30 days, but this period can be voluntarily extended by the applicant's written consent. Exemption certificates are generally granted if the Treasurer is satisfied that the following conditions are met:

- the acquisitions would not be contrary to the national interest
- the total proposed value of multiple acquisitions (where a single acquisition cannot exceed \$10 million) over a three-year period does not exceed \$100 million (or \$30 million if the land is being acquired for use for another activity)
- periodic reporting on acquisitions made during the three-year period
- the regions or localities for the proposed acquisitions of agricultural land are clearly defined.

Sources: FIRB (2016c); Treasurer (2016).

Lower screening thresholds could contribute to processing delays

A related concern is that an increase in the volume of foreign investment applications due to the lower thresholds could cause processing delays. Under the FATA, the Treasurer must make a decision regarding the application within 30 days, although the Treasurer can extend this period to 90 days by publishing an interim order in the Gazette. The CPC noted that it has:

... been advised that since the introduction of the new rules there have been significant delays in the processing of applications. CPC notes that ... the problem lies with the policy not the personnel. It is clear that FIRB has not been adequately resourced to managing the flood of applications triggered by the new system ... CPC understands that nearly all applications have been given extensions; CPC's [sic] has an application before FIRB that has received 2 extensions. (sub. 71, p. 21)

Australia Pacific LNG also reported delays in processing applications for exemption certificates for agricultural land.

APLNG [Australia Pacific LNG] also recently experienced a significant delay (of nearly 7 months) in receiving an annual program/exemption certificate, impacting relationships with counterparties and resulting in additional costs. (sub. DR206, p. 2)

The large size of some financial transactions involved can mean that delays will impose a significant economic cost on both foreign investors and domestic vendors. As explained by the NZ Treasury, foreign investors may incur higher costs from investing in forward contracts to mitigate the foreign exchange risk associated with delays in processing foreign investment applications.

... the cost of delay to business activity can be high. For example one potential cost would be if the investor hedges their investment capital while seeking consent. Hedging a NZ\$100m investment (the minimum business investment that would be screened) for two months would cost around \$650,000, increasing to \$2 million for six months. The longer the time taken to seek consent, the greater the cost of hedging, and this cost exceeds the fees paid by the investor. (2009, pp. 4–5)

A lengthy approval process increases the time and cost of lodging applications, and therefore uncertainty, which could ultimately deter foreign investors. Delays may also encourage speculation of the relative acceptability of bidders (PC 2014d).

Additional funds, including from the new application fees, were provided to FIRB to administer the foreign investment review system (Treasury 2015a). To the extent that there have been some delays, this may only be a temporary issue while FIRB establishes and adjusts to the new system. Although the exact numbers for investment applications in the agricultural sector are unknown, in 2014-15, over 99 per cent of proposals were processed by FIRB within the statutory period of 30 days (FIRB 2016b).

Do the benefits of increased scrutiny exceed the costs?

As noted earlier, Australian agriculture requires significant investment, which it must compete for in global capital markets (and with other sectors in the Australian economy). Australia is estimated to account for less than 5 per cent of global institutional investment in agriculture, and increasingly competes for foreign capital with other countries, including those in Asia, South America and Africa, that seek investment to develop their economies (Makunike 2009; Montemayor 2009; Valoral Advisers 2015). As the Australian Food and Grocery Council said:

The sense that Australia deserves foreign investment as of right, and that investors will queue up to invest here, reflects a dangerous confidence in matters that can rapidly change. Global capital is flexible, mobile, at times impatient and hungry for return. Australia is a high costs market compared to our regional neighbours ... every Government intervention needs to be evaluated against these two market realities lest the investment instead be directed to a less problematic, higher return market. Government ... has a role in actively promoting Australia as a destination for foreign investment where the global market for capital is so competitive. (sub. DR251, pp. 4–5)

Foreign capital flows are generally mobile internationally and there are many competing investment destinations for foreign capital in agriculture (HRSCE 2014). The discretionary nature of FDI also means that foreign investors can choose the associated regulatory burden.

Factors influencing inward FDI decisions include: the restrictiveness of foreign ownership; the general business environment (such as market size, domestic interest rates and taxation policy); exchange rates; cost, availability and quality of labour; the presence of industry clusters or agglomeration; and infrastructure and its accessibility (OECD 2007). While many of these factors are beyond the control of the Australian Government, it can control the restrictiveness of foreign ownership arrangements. It is important that Australia's foreign investment review framework does not unnecessarily restrict investment for agriculture (or any other sector).

Australia's foreign investment policy arrangements in agriculture are considered to be relatively restrictive compared with other developed countries (which have different restrictions, box 13.7) mainly due to its screening processes (OECD 2015a) (box 13.8). Australia's foreign investment rules for agriculture have become more restrictive as a result of the changes in 2015, resulting in a deterioration in Australia's ranking in agriculture (OECD 2015a).

While *specific* estimates of the cost of regulating foreign investment in agriculture are not available, the *total* cost of regulating foreign investment (across all sectors) is likely to be significant. For example, the economic cost of delays and withdrawn investment as a result of mandatory FIRB screening and approval requirements is estimated to be a minimum of \$5.5 billion a year, equivalent to 0.6 per cent of nominal GDP (ITS Global 2008). More generally, an OECD study estimated that if Australia reduced FDI restrictions to the level in the United Kingdom (the most open OECD country at that time according to the indicators used in the study), it could increase the stock of FDI by about 45 per cent over the long term (based on bilateral FDI relationships between 28 OECD countries over the 1980–2000 period) (Nicoletti et al. 2003).

Box 13.7 International comparisons of foreign investment screening thresholds in agriculture

In the United States, there are no specific restrictions on foreign investment in agriculture at the federal government level (and no monetary screening thresholds). However, under the Code of Federal Regulations, screening is required for transactions that could result in control of a US business by a foreign person. There are also some restrictions (including prohibitions) on the foreign ownership of agricultural land in about half of the states (Moir 2011; OECD 2013; USDT 2008).

The current screening threshold for foreign investment in agricultural businesses in Canada under the *Investment Canada Act 1985* is Can\$600 million (approximately A\$595 million). However, it will be progressively increased over time, to Can\$800 million (A\$794 million) from April 2017, and to Can\$1 billion (A\$992 million) from April 2019 (Industry Canada 2013). Additional restrictions on the size of foreign-owned agricultural landholdings also exist in some provinces (Bowler and Ackhurst 2015; Moir 2011).

In New Zealand, the screening threshold for agricultural land is five hectares and for agricultural businesses, it is NZ\$100 million (approximately A\$95 million) under the *Overseas Investment Act 2005*.

Box 13.8 Restrictiveness of Australia's FDI rules in agriculture

The OECD foreign direct investment (FDI) regulatory restrictiveness index gauges the restrictiveness of a country's FDI rules by looking at four main types of statutory restrictions on inward FDI:

- foreign equity limitations
- screening or approval mechanisms
- restrictions on the employment of foreigners as key personnel
- other operational restrictions. For example, restrictions on expansion on branching and capital repatriation, or on land holdings by foreign-owned enterprises.

Index scores range from 0 to 1, where 0 indicates that a country's agricultural sector has no barriers to FDI, and 1 indicates that it is completely closed to FDI (OECD 2015a). While the index does not provide a complete measure of a country's investment climate because of data and methodological limitations (for example, it only captures foreign investment restrictions at the national level (Moir 2011), does not measure the actual enforcement of statutory restrictions on foreign investment (Kalinova, Palerm and Thomsen 2010) and multiple countries can have the same ranking), it nonetheless provides some insight into the restrictiveness of foreign investment rules.

In 2015, Australia was ranked as the 4th most restrictive out of 35 OECD countries (7th in 2014) based on all four restrictions in agriculture — equal in restrictiveness to New Zealand, but more restrictive than the United Kingdom (10th most restrictive), Canada (11th) and the United States (one of the least restrictive countries) (OECD 2015a).

Australia was also ranked the most restrictive out of 35 OECD countries and 59 OECD and non-OECD countries in 2015, based on its screening and approval restrictions for foreign investment in agriculture. The restrictiveness of Australia's screening arrangements for agriculture is equal to New Zealand and Myanmar, but higher than China, Mexico, Brazil, Malaysia and Ukraine (OECD 2015a). In 2014, Australia was 3rd most restrictive among the OECD countries, and 5th most restrictive among all countries examined — including Canada, New Zealand and the United States.

It is also difficult to objectively demonstrate that national interest considerations are different for foreign investors proposing to invest in agriculture compared with other sectors of the economy that have retained a higher screening threshold of \$252 million (such as private acquisitions in sensitive businesses, including telecommunications, transport, defence and military related industries). As noted earlier, few foreign investment proposals in agriculture have been rejected by the Treasurer on national interest grounds. Interim FIRB data show that from 1 July 2015 to 6 June 2016, 173 agricultural proposals were approved. Of these, only two proposals were above the agricultural land threshold that applied prior to 1 March 2015, and a further 72 were applications from foreign government investors (FIRB, pers. comm., 6 June 2016). Therefore, it is unclear that national interest considerations justify the significantly lower thresholds — or indeed, whether there are additional national interest issues (if any) associated with lower valued agricultural land and businesses that were not being captured by the previous threshold of \$252 million.

Also, under the cumulative threshold for agricultural land, there could be proposed investments that are of such low value that it would be highly unlikely that they would be contrary to Australia's national interest. The cumulative threshold, combined with the new application fees, could have the unintended consequence of deterring low-value but important foreign investment aimed at increasing the scale and efficiency of existing agricultural operations.

The lower agricultural thresholds, combined with the different thresholds for other sectors and for investors from different countries, increases the complexity of the system. The CPC raised concerns about the inconsistency in the value and cumulative nature of thresholds for agricultural land.

This new foreign investment regime is inconsistent with the existing rules. Investors from Chile, the United States and New Zealand have a threshold of \$1 094 million before the FIRB approval is triggered. If an investor comes from Singapore or Thailand, the threshold is \$50 million. The thresholds in these two categories [are] not cumulative. However, if an investor comes from China, South Korea or Japan, or indeed even Ireland or the United Kingdom, the threshold is just \$15 million and cumulative. (sub. 71, p. 17)

Investors are also subject to different definitions of 'agribusiness' and 'agricultural land' as a result of preferential trade agreements, which affect the scope of the thresholds.

Whether national interest considerations are materially different for investors from countries who have been afforded higher and different thresholds, compared with those who have not, is unclear. Lower foreign investment screening thresholds should not be maintained solely for use as a bargaining chip in trade and investment negotiations (PC 2015a). The different thresholds affect the relative restrictiveness of Australia's foreign investment framework for each country, and may therefore distort foreign investment flows in agriculture (and in other sectors of the economy) by encouraging some investment over others (Hanratty 1995; Kirchner 2008). Different thresholds can also send mixed signals to foreign investors (that investment from some countries is welcome while others are not). The Western Australian Government (sub. 54) suggested that a more consistent approach to foreign investment in agriculture would provide greater confidence and certainty for investors.

In the Commission's view, the lower thresholds (combined with different thresholds depending on the country of origin of the investor) increase the cost and complexity of investing in Australian agriculture and ultimately risk deterring foreign investment in the sector without offsetting public benefits.

It is unclear what additional public benefits will be derived from the lower thresholds, particularly given that other measures (such as the Register of Foreign Ownership of Agricultural Land) are in place to increase transparency and public confidence of foreign investment in Australian agriculture.

Lowering the screening thresholds is not the most effective or efficient way of addressing community concerns about foreign investment in agriculture, particularly as some concerns

appear to be misplaced and based on a misunderstanding of the effects of foreign investment (box 13.9). As acknowledged by the Treasury, increased screening is an ‘awkward way’ to address information gaps.

More active screening of rural land proposals would indeed generate a flow of new data to FIRB, but it would take time for this data to be useful ... regulation of the kind proposed [an agricultural land threshold of 5 hectares] would appear to be an awkward way to tackle data gaps. An alternative approach would be to build greater regulatory insight through improved research, analysis and information about how foreign investment is actually impacting on the agricultural sector; the extent to which foreign investment in rural land is occurring and what national interest issues arise from this investment. (2011b, p. 8)

Concerns about the effects of foreign investment were apparent in the sale of Cubbie Station (box 13.10). However, the perceived negative effects of the sale did not appear to eventuate following the sale. If anything, the available evidence suggests that foreign investment had positive effects.

The Commission’s view is that the Australian Government should increase the screening thresholds for foreign investment in agriculture to \$252 million (indexed annually and not cumulative) — the level that they were prior to the changes in 2015. This would bring the arrangements for agriculture back in line with the thresholds that currently apply to (non-agricultural) business acquisitions and developed commercial land (for investors from non-preferential trade countries), while maintaining the additional transparency provided by the Register of Foreign Ownership of Agricultural Land.

RECOMMENDATION 13.1

The Australian Government should increase the screening thresholds for examination of foreign investment in agricultural land and agribusinesses by the Foreign Investment Review Board to their previous level of \$252 million (indexed annually and not cumulative).

Box 13.9 Public concerns about foreign investment in agriculture

Public attitudes towards foreign investment in agriculture appear to stem from a variety of concerns, including that:

- *foreign investment will reduce Australia's food security.* This assumes that food produced using agricultural land will be diverted overseas, resulting in lower food supply, product choice and higher prices for Australian consumers. However, as noted by ABARES:

Australia has a high level of food security. Food is abundant, and Australia is highly self-sufficient as well as food secure, producing more than twice the amount of food it consumes ... Although items that cannot readily be produced in Australia are purchased freely on world markets, imports amount to a relatively small proportion of food requirements. Australians have a high level of prosperity than most of the world's population and, with only a very small number of exceptions amongst disadvantaged groups, consumers can easily afford their food requirements. (Moir 2011, p. 13)

Further, global markets for agricultural products mean that price pressures (upwards or downwards) are likely to arise irrespective of whether Australian agricultural land is held by domestic or foreign interests, as producers will generally seek to sell their output in the market that provides the highest economic return.

- *foreign investment may result in a 'land grab' and loss of control over (prime) agricultural land,* which is a scarce non-renewable resource. At all times, the Australian Government retains sovereign control over all land and business activities that take place on Australian soil. Foreign investors operating in Australia are no exception. Also, land use activities are regulated (including for the purposes of addressing environmental impacts and effects on residents) in the same way regardless of ownership (chapters 2 and 3).
- *foreign investment makes it difficult for local producers to gain access to farm assets in the region* (in that local farmers who wish to purchase agricultural property are being priced out of the market by foreign buyers) (SRRATRC 2013). However, property owners will generally seek to sell their property to the highest bidder — with the bid reflecting the expected net return on the asset — hence domestic vendors benefit from higher prices and increased ability to exit the industry when necessary. Government intervention that limits such market transactions distorts the efficient allocation of land in the economy (and prevents structural adjustment), resulting in adverse effects on the incumbent land owner and the wider Australian community.
- *foreign investment in agriculture will reduce employment in local and rural communities,* as foreign labour may displace Australian jobs (CEDA 2008; SRRATRC 2013; Alison Walpole, sub. 46). However, many farm businesses rely on overseas temporary workers to fill gaps in the local workforce, especially due to seasonal demand and lack of suitably skilled staff (chapter 11). Some high-profile cases of foreign investment in agriculture suggest that foreign investment can *increase* employment opportunities for locals in rural communities (Jasper, Felton-Taylor and Vidot 2016; Locke 2013). Foreign companies have an incentive to employ local workers as they are likely to have the necessary skills, knowledge and experience to help run their farm businesses (ABARES 2015c; Schwartz and McCarthy 2016).
- *Australian agricultural companies (particularly iconic companies) should be kept in Australian hands.* Australia has a long history of foreign investment in agriculture, including major agricultural businesses and food brands (Spencer and Kneebone 2012). Many Australian agricultural companies were initially established as a result of foreign investment, which has generated significant benefits, including bringing in new technology and business practices. Foreign investment is also particularly important in maintaining the continued existence of major Australian agricultural businesses that are in financial distress (Locke 2013). Without foreign investment, these companies may have collapsed.

Box 13.10 Cubbie Station and RuYi / Lempriere

In August 2012, the Treasurer approved the sale of Cubbie Group Limited, Australia's largest cotton farm located in Dirranbandi, Queensland, to a Chinese-led consortium — Shandong RuYi Scientific & Technological Group Company Limited (RuYi) and Lempriere Proprietary Limited (Swan 2012). The station had been in voluntary administration from 2009 (Swan 2012). There was initial public concern about the sale, particularly from locals in Dirranbandi, including:

- loss of employment (and economic activity) in Dirranbandi and surrounding towns, such as St George (Jasper, Felton-Taylor and Vidot 2016; Swan 2012)
- mismanagement of water and land (Jasper, Felton-Taylor and Vidot 2016)
- non-commercial management of the enterprise (SRRATRC 2013).

As part of its proposal, RuYi gave voluntary undertakings to sell down its interest in the Cubbie Group from 80 per cent to 51 per cent and to reduce its board representation within three years from completion of the acquisition (SRRATRC 2013; Swan 2012). The Treasurer also sought and received undertakings from the consortium relating to employment, ownership, board composition, management and water use as part of the approval process. This included undertakings to:

- make offers of employment to all existing employees and maintain existing arrangements
- comply with all Australian laws, including those in relation to water management
- investigate ways to improve water use efficiency and sell any surplus water allocations through the water market
- have Cubbie Group managed and operated by a wholly owned subsidiary of Lempriere (an Australian family-owned group of companies) (Swan 2012).

Many of the initial concerns about the sale did not materialise once the property changed hands. The new owners retained and expanded the workforce, and kept the local manager (Jasper 2016a). And there has been major reinvestment in the property, including upgrades of water-saving infrastructure (such as new engines and irrigation pumps) and doubling the capacity of a cotton gin (a machine that processes cotton bales) it purchased at Dirranbandi (Jasper 2016b; Locke 2013). Some local cotton farmers supported the sale. In 2013, Dirranbandi cotton farmer Frank Deshon said:

Cubbie is operating as they have in the past. Cubbie is investing on the farm, and a lot more infrastructure is going on ... I think it's all great for the local area. (Locke 2013)

And in 2016, a local woman in Dirranbandi interviewed by the ABC said:

I talk to the businesspeople in Dirranbandi and they all say that without Cubbie operating as it is today, that they would have to close their doors. They're very much dependent on Cubbie and the business that it brings and I know that that also applies to St George as well. (Jasper 2016a)

Then-mayor of Balonne Shire, Donna Stewart, who described herself as initially 'very strongly opposed' to the sale, subsequently changed her views.

... I have changed my view to strongly support the foreign ownership of Cubbie. Shandong RuYi and Lempriere, the Australian interests, have done an amazing job with Cubbie. They've further developed it, they've doubled the capacity of the cotton gin that has enabled them to make bigger profits. (Felton-Taylor and Jasper 2016)

On 21 June 2016, the Treasurer, consistent with FIRB advice, granted RuYi a three-year extension to meet its voluntary undertaking to sell down its interest. It was also noted that RuYi had met all other undertakings (Jasper 2016b).

Lack of data and ineffective communication may be contributing to community concerns

Knowledge gaps on the extent of foreign investment in Australian agriculture could be contributing to public concerns. The Coalition's 2012 policy discussion paper on foreign investment in Australian agriculture claimed that the:

... knowledge gap is feeding public and industry concern about whether all approved foreign investment in the agricultural sector is not contrary to the national interest, especially set against the global and highly publicised phenomenon of significant pools of investment funds targeting the agriculture sector worldwide in recent years. (Liberal Party of Australia 2012, p. 10)

Media discussion about foreign investment in agriculture can exacerbate public concerns. The Northern Territory Department of Primary Industry and Fisheries (sub. 67) argued that there needs to be a further national conversation about foreign investment. It expressed concern that a poor understanding of foreign investment could have a negative effect on investment and expansion opportunities in agriculture. Indeed, public concerns could create uncertainty for foreign investors (as to whether their investment is welcome), which may reduce the international competitiveness of Australian agriculture in attracting foreign investment.

The Australian Government has a role in providing information, and fostering public awareness and understanding about foreign investment in Australian agriculture. Indeed, one of the roles of FIRB is to 'foster an awareness and understanding, both in Australia and abroad, of the Policy and the ... [FATA]' (FIRB 2016a). That said, the benefits to the public from such information must be carefully balanced against the added administrative burden (and cost) of any additional reporting requirements imposed on foreign investors.

The Register of Foreign Ownership of Agricultural Land seeks to provide greater public information on foreign investment in Australian agricultural land.

Foreign investors must give the ATO notice of their holdings of agricultural land (regardless of the value of the land) within 30 days of the transaction. In October 2016, the Australian Government introduced a Bill to amend the Agricultural Land Register to include foreign ownership of water entitlements.

While the Register is based on self-reported information provided by foreign investors (ATO 2016d), land title data from the states and territories are being used for compliance and verification purposes (ATO, pers. comm., 18 October 2016).

Some inquiry participants said that the introduction of the register will help address public concerns about foreign investment in agriculture and inform policy making. For example, the NFF stated that:

Collecting this data will aid policy development with regards to foreign investment into the sector by presenting a facts based picture of the investment ownership landscape. Additionally,

such a register will assist in addressing community concerns around investment in Australian agriculture, where misconception is commonplace. (sub. 61, p. 31)

Similarly, Primary Producers SA commented that:

... a register of overseas owned assets would be helpful from both a policy point of view, and also managing criticisms. There is an uninformed and loud view of the level of overseas ownership, and the profile therein. (sub. 41, p. 5)

It is unclear why foreign-owned agribusinesses are not required to be on the national register, given that the register's stated purpose is to increase transparency of foreign investment in agriculture. Public concern appears to be directed at foreign ownership of both agricultural land and agribusinesses (as partly reflected by the recent lowering of screening thresholds for both types of acquisitions). Indeed, the value of the first ABS Agricultural Land and Water Ownership Survey was questioned because of the small number of agricultural businesses it covered (less than one in ten) and because some small businesses were included (earning at least \$5 000 per year) (Liberal Party of Australia 2012). While it is likely that most foreign-held agricultural land is accompanied by the operation of an agribusiness on the land, this is not necessarily the case as agribusinesses can be run without land ownership through new ownership and operational structures (Agribusiness Australia 2016).

The Commissioner of Taxation must provide the Treasurer with an annual report on statistics derived from the register as soon as practicable after 30 June each year, which is to be tabled in Parliament and published on a website (currently FIRB's website). However, the register itself is not publicly available (SERC 2016).

Unrestricted public access to the register would achieve maximum transparency on the extent of foreign ownership in agricultural land. This was supported by a number of participants (University of Southern Queensland, sub. DR184; Victorian Farmers Federation, sub. DR189; WAFarmers, sub. DR226).

For example, the NSW Farmers' Association said that:

A register increases transparency in the administration of the FIRB approval regime and allows the public and the industry to map any investment that increases consolidation in the agricultural sector. It is therefore vital that the register is regularly updated and publicly available. Without this there cannot be an informed public discussion and industry discussion on foreign investment. (sub. DR161, pp. 30–31)

However, complete and open public access to the register is likely to raise privacy issues and commercial sensitivities (and could therefore discourage foreign investment) if full access identifies the details of individual owners or taxpayers (Treasury 2012). As a result, the ATO's report only provides aggregated statistics.

The information provided in the ATO's report needs to be sufficient to improve public understanding of the nature, extent and distribution of foreign ownership in Australian

agricultural land. Agribusiness Australia emphasised that the report should meet the information needs of the public and said that:

... public concerns about foreign investment in agribusiness remain ... It is becoming apparent that the national register introduced recently will also fail to provide sufficient information to address both industry needs and public concerns. (2016, p. 2)

Australian Pork Limited was also critical of the effectiveness of the register in allaying public concerns.

The foreign investment land and water registers have failed to deliver information to the broader Australian public on foreign ownership, and how this changes over time. (sub. DR282, p. 12)

To increase transparency and address public concerns, there have been calls for additional information from the register to be released, including:

- the level of foreign interests in agricultural land held by type of investor (private or government) (Barbour and Gribbin 2016; Moore 2016)
- the proportion of foreign interests in agricultural land (for example, 10 per cent) and business structure (for example, partnership) (Moore 2016)
- the level of foreign interests by land value. There are concerns that size data can be skewed by large areas of land in Northern Australia owned by a few foreign investors (Moore 2016; Varischetti 2016) and may not reflect the recent trend of foreign interests buying smaller but higher value farms (Neales 2016)
- the level of foreign interests in agricultural land by region (Moore 2016) or local government area (NAB 2013; AgForce, sub. DR246)
- the level of foreign interests in agricultural land by commodity (NAB 2013; Neales 2016; NFF 2011).

However, it is not clear that data from the register (or from other sources) by itself can adequately address underlying public concerns about foreign investment in agriculture. There may be a mismatch between the nature of public concerns and what information can be conveyed by data. For example, data alone cannot address public concerns that reflect values such as food security, national sovereignty and nationalism, whereas data may be more effective in alleviating concerns about the level of employment and type of land use. Public concerns (and any misunderstanding) should be addressed directly through targeted analysis and information, supplemented by data.

The Australian Government currently provides some information on foreign investment.

- Both the Department of Foreign Affairs and Trade and FIRB publish information on the benefits of foreign investment (Australian Government 2015c; DFAT 2016a). The Treasurer also highlights the importance of foreign investment to the Australian economy in foreign investment decisions, public speeches and media interviews.

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- In 2014, the Commonwealth Parliamentary Library published a one-off research paper on foreign investment in Australian agriculture, which provided some wider context for the public debate on foreign investment in agriculture (Saynal 2014).
 - The Treasury has published research on the macroeconomic effects of lower capital inflow (Gali and Taplin 2012), as well as a working paper which examined the trends, sources, data and positive effects of foreign investment into Australia (McKissack and Xu 2016). Similarly, the US Government has produced a number of reports on foreign investment in the US that review the trends, drivers and benefits of foreign investment (Nickerson et al. 2012; Telles Jr. 2016; USDC and CEA 2013).

Current communication approaches appear to either be ad hoc or only discuss the benefits of foreign investment in a general and abstract manner (which may not be easily understood or accessible to the public). This has limited their effectiveness in addressing public concerns and increasing public understanding about foreign investment.

The benefits and costs (including any risks to Australia's national interest) of foreign investment in agriculture (and other sectors) should be clearly communicated to the community. Effective and timely communication of this information would help reduce the risk of factual information being misinterpreted (which can reinforce concerns) and help alleviate community concerns. It could also reduce the need for governments to resort to regulation such as screening thresholds (which impose costs on the community and have questionable benefits) to address public concerns about foreign investment.

The need for more effective communication was acknowledged by the Senate Economics References Committee in their inquiry on foreign investment by state-owned entities.

The committee believes that a higher degree of public education would arrest some community anxiety about foreign investment. (SERC 2009, p. 14)

A more effective communication strategy (rather than merely providing data from the register) is to publish an annual report on foreign investment. Ideally, the release of this report would coincide with the public release of the ATO's report on the register. The report on foreign investment should go beyond merely providing descriptive information — it should provide specific analysis and commentary on issues that concern the community, such as the effect of foreign investment on local or regional employment and food security. It should analyse the trends, drivers and effects (costs and benefits) of foreign investment, and be presented in a manner that can be easily understood by the public — this could include input from farmers and communities about their personal views and experiences with foreign investment.

While the report alone is unlikely to address all public concerns about foreign investment, it would help provide a more balanced and informed context for public debate about the implications of foreign investment in Australia (including national interest issues).

Given the complex, wide-ranging and dynamic nature of public concerns, all relevant data and information (not just from the register) should be used in the preparation of the reports. For example, information could be drawn from other government agencies such as the

ABS, ATO, ACCC and FIRB (Saynal 2014). Coordination and sharing of data between these agencies will be necessary.

The Treasury could publish annual reports on foreign investment — regulation of foreign investment falls within the Treasury portfolio and the Treasury has the resources and expertise necessary to provide analysis and commentary on foreign investment issues. The Productivity Commission is also well placed to analyse and comment on foreign investment regulation, and could do this through its annual Trade and Assistance Review. Under its Act, the Commission is required to report annually on assistance and regulations affecting industry, and the effect of these on industry and the economy. Foreign investment rules fall within the scope of this requirement because they affect domestic firms and the wider economy, including by restricting competition and access to foreign capital.

The key advantage of the Commission undertaking this task is that it is at arm's length from foreign investment policy. This would help to enhance the credibility of the analysis.

RECOMMENDATION 13.2

The Australian Government should request that the Productivity Commission, in its annual Trade and Assistance Review, analyse and report on the trends, drivers and effects of foreign investment.

Application fees should be based on cost recovery

New fees for foreign investment applications (indexed to the CPI) were introduced on 1 December 2015. Previously, there were no fees and the cost of administering the foreign investment review framework was funded by general taxation revenue. The application fee must be paid before an application will be processed, subject to the Treasurer's statutory power to waive and remit fees. Although the fees are capped and payable per application, they vary by the type of acquisition and the value of agricultural land or agribusiness under consideration (table 13.3).

Table 13.3 Application fees for foreign investment proposals in agriculture
2016-17

<i>Agricultural Land</i>	<i>Fee</i>
\$	\$
1 million or less	5 000
More than 1 million and less than 2 million	10 100
2 million and less than 3 million	20 300
3 million and less than 4 million	30 400
4 million and less than 5 million	40 600
5 million and less than 6 million	50 700
6 million and less than 7 million	60 900
7 million and less than 8 million	71 000
8 million and less than 9 million	81 200
9 million and less than 10 million	91 300
10 million or more	101 500
<i>Agribusinesses</i>	<i>Fee</i>
\$	\$
1 billion or less	25 300
More than 1 billion	101 500

Source: Treasurer (2016).

The fees are intended to recover the cost of administering the foreign investment system by FIRB and the ATO, including the cost of processing applications, data collection, monitoring, compliance and enforcement activities. The fees are also expected to provide FIRB with additional resources to reduce assessment timeframes. The Treasury stated that:

The revenue from application fees would be used to improve service delivery to foreign investors and would help offset the direct and indirect costs of managing the foreign investment regime. This includes the enhanced compliance and enforcement regime for the foreign investment in residential real estate and the establishment of a national register. The ATO will be funded to conduct more detailed audits and ensure proper compliance with the law. (Treasury 2015d, p. 54)

Charging a fee-for-service is consistent with the Australian Government Cost Recovery Guidelines for government services as it can improve economic efficiency in the allocation of resources and promote equity (DoF 2014; PC 2001a). Cost recovery may enhance government efficiency as FIRB is the monopoly provider of foreign investment review services and self-funding may promote greater administrative efficiency in processing applications. Investors who are charged for the cost of processing their application may also have more incentive to ensure the screening process is as efficient as possible (such as avoiding delays by providing sufficient information to FIRB) to minimise their compliance costs (FIRB 2016b).

However, broader activities associated with administering the foreign investment framework for agriculture, such as data collection and dissemination, primarily benefit the Australian public in addressing their concerns about foreign ownership in agriculture and protecting Australia's national interest. The cost of these activities is unrelated to processing applications for foreign investment in agriculture and arguably falls outside the scope of full cost recovery. As the Australian Financial Markets Association said:

The government has noted that the proposed fees are also intended to cover the cost of broader regulatory functions, including data collection, compliance and enforcement activities, in addition to the application and approval process. Given that these activities are undertaken for the public benefit and not the direct benefit of foreign investors or resident vendors, it is more appropriate that these activities are funded through general tax revenue. (2015, p. 4)

The Treasury (2015c, p. 11) also acknowledged that there is 'limited evidence to suggest non-compliance in these areas [business, commercial real estate and agricultural investment applications]'.⁸¹

Participants to this inquiry generally accepted the need for fees to be based on full cost recovery, but raised concerns that the current fees are higher than full cost recovery and are more like a tax on foreign investment in agriculture. For example, the CPC said that:

The new charges imposed by the Government are not linked to the cost of administering the scheme. Rather they are a financial penalty, or a tax, that only applies to foreign investors. This direct cost or tax is in addition to the range of administrative and other costs incurred by applicants seeking to navigate through the FIRB approval process. (sub. 71, p. 20)

The Tasmanian Government (sub. DR287, p. 21) described the application fee as 'an artificial tax on foreign investment'. Other participants supported application fees only if they were based on cost recovery.⁸¹

This assessment was also shared by participants in the Treasury consultation process on changes to the foreign investment review framework. The RIS supporting the changes to the foreign investment framework for agriculture acknowledged these concerns, but justified the fees on the basis that they will have little effect on foreign investment and cost foreign investors \$116 720 per year (Treasury 2015d).

As the proposed fees are greater than the costs of administering the system, they could be viewed as potentially reducing Australia's attractiveness as an investment destination. However, the decision to invest in a particular country is based on a wide range of factors. Treasury considers that an application fee of less than 1 per cent of the value of the investment is unlikely to result in a material behavioural impact on foreign investment decisions. (Treasury 2015d, p. 53)

⁸¹ Participants included: Australia Pacific LNG (sub. DR206); Australian Lot Feeders' Association (sub. DR294); Australian Pork Limited (sub. DR282); Cattle Council of Australia (sub. DR290); Environmental Farmers Network (sub. DR174); National Farmers' Federation (sub. DR216); NSW Farmers' Association (sub. DR161); Tasmanian Farmers and Graziers Association (sub. DR281); Victorian Farmers Federation (sub. DR189) and WAFarmers (sub. DR226).

The burden of the fees depends on the fee and the value of the proposed investment. The fees (as a proportion of the value of the investment) are likely to be higher for proposals relating to agricultural land (particularly for small investment in agricultural land) compared with agribusinesses. For example:

- for a relatively small investment in agricultural land valued at \$15 million (which triggers FIRB review), the fee is \$101 500 or 0.68 per cent of the value of the investment
- for a relatively small agribusiness valued at \$55 million (which triggers FIRB review), the fee is \$25 300 or 0.05 per cent of the value of the investment.

As a result, the current fees may lead to some applicants cross-subsidising others, which could distort the composition of foreign capital inflows in favour of agribusiness rather than agricultural land, as well as between agriculture and other sectors of the economy.

Fees above cost recovery act as a de facto tax and may therefore lead to ‘deadweight’ or efficiency costs of tax-related distortions to investment decisions (PC 2001a). High fees may deter foreign investment by increasing the transaction cost of investing in Australian agriculture (ITS Global 2008). Because of the economy-wide benefits of foreign investment, this will impose a cost on the agricultural sector and the broader economy. These effects were not considered in the RIS.

The level of fees that would only recover overhead and administrative costs of processing applications is difficult to determine, as data on the cost of administering the foreign investment framework are not publicly available. The only comparable figures were produced by the Parliamentary Budget Office (PBO) for the House of Representatives Standing Committee on Economics report on foreign investment in residential real estate, which estimated departmental expenses based on amounts allocated to the Australian Securities and Investments Commission and the ATO for measures with similar administrative complexity (HRSCE 2014). The PBO recommended that:

The level of the fee should be such that it does not significantly deter future foreign property investment. It could be determined based on the value of the transaction, such as 0.1 per cent of the property investment value, but this would be difficult to administer. A simpler administrative arrangement would be a flat fee for every application. A fee of between \$500 and \$1500 could be considered. (2014, p. 38)

The PBO assumed that there would be no behavioural impact given the small cost of the fee relative to the cost of purchasing residential real estate (HRSCE 2014).

While not directly comparable to residential real estate applications, current agricultural land and agribusiness application fees range from \$5000 to \$101 500 per application, well in excess of the maximum \$1500 suggested by the Office for residential real estate applications.

The NZ Overseas Investment Office (OIO), the counterpart to FIRB in Australia, charges application fees for foreign investment proposals based on a full cost recovery framework

(LINZ 2016b, 2016c). The objective of the fees is to provide sufficient revenue to recover the OIO's operating costs so that investment applications are assessed with minimal delay. The fees for agricultural land and agribusiness applications range from NZ\$22 500 (approximately A\$21 400) and NZ\$54 000 (approximately A\$51 300), depending on the value and type of the proposed investment, and whether the investment is considered by the OIO or the Minister for Finance (LINZ 2016d). The fees were increased in July 2016 to correct for under-recovery of costs and to address inequity, as some applicants were cross-subsidising others (LINZ 2016c).

The Commission's view is that application fees should be set at the level that recovers FIRB's costs of processing foreign investment applications, and should be closely monitored to ensure no under- or over-recovery of costs (like any Australian Government entity). Fees that exceed cost recovery may deter foreign investment and impede productivity growth in the agricultural sector.

RECOMMENDATION 13.3

The Australian Government should set application fees for foreign investment proposals at the level that recovers the costs incurred by the Foreign Investment Review Board in reviewing proposals, and should closely monitor the fees to ensure no over- or under-recovery of costs.

Transparency of FIRB's review process

FIRB's recommendations and advice to the Treasurer are not publicly available. However, the Treasurer's decisions and brief reasons are generally published on the Treasury website, particularly for large proposals that are already in the public domain. The Treasurer also generally indicates whether the decision was in accordance with FIRB's recommendation, which has been the approach in recent decisions (see for example, Hockey 2013a, 2013b, 2015, Morrison 2015, 2016a).

Some participants to this inquiry raised concerns about the lack of transparency, particularly with regard to the application of the 'national interest' test by FIRB and the Treasurer. For example, Australian Pork Limited said that it supported:

... improved transparency, on both the FIRB advice and the Government's decision, particularly when the Government's determination differs from the advice of the FIRB. (sub. DR282, p. 12)

And the NFF said that:

... what constitutes the National Interest Test must be publicised to the greatest extent possible to ensure both the sector and investors clearly understand the criteria their applications will be assessed against. (sub. 61, p. 31)

The NFF (subs. 61 and DR216) further argued that FIRB and/or the Treasurer should publish more detailed reasons for decisions, including the weights given to each factor with the exception of national security criteria (in a manner similar to court judgments), where this does not breach privacy and commercial confidentiality requirements.

The Senate Economics References Committee, in its inquiry into the foreign investment framework, concluded that lack of transparency in the foreign investment review process and its outcomes (combined with the inconsistent thresholds for agricultural land and agribusiness) could ‘serve as a disincentive to foreign investors and continue to undermine public confidence in foreign investment in Australia’ (SERC 2016, p. 51). It suggested that, in addition to establishing a publicly available register for foreign-held agricultural land, transparency of the review process could be improved by:

- the Treasurer publishing guidance on the foreign investment review assessment process, including information on some of the steps and key features of the process
- the Treasury publishing the Treasurer’s reasons for all its decisions regarding foreign investment, in order to inform the public, and to instil public and investor confidence in the review process (SERC 2016).

Transparency is important because it can promote investor certainty and community confidence that Australia’s national interest is being adequately protected. It may also make it easier for the Treasurer to ascertain public preferences, which may be important in deciding whether a foreign investment proposal in agriculture is contrary to Australia’s national interest (SERC 2016). However, full transparency of FIRB’s review process is unlikely to be possible. A foreign investment application could involve sensitive information relating to Australia’s national security or strategic interests (Treasury 2012). It also typically includes foreign investors’ confidential personal or commercial information, which is protected by law (FIRB 2016b).

There appears to be greater transparency of foreign investment decisions in New Zealand. The NZ OIO publicly releases short summaries of all decisions online, including the factors that were taken into account, in accordance with the *Official Information Act 1982* (NZ) (LINZ 2016a).

In contrast, there is less transparency in North America. The Committee on Foreign Investment in the United States does not publish its advice to the President (Jackson 2016). Industry Canada (when providing advice to the Minister of Industry) also only lists details of the foreign investor and its Canadian business (Industry Canada 2016).

Although full transparency of foreign investment decisions is unlikely to be possible, greater transparency (to the extent that it is consistent with national interest considerations) is important to help inform the public about foreign investment. To this end, the introduction of the Register of Foreign Ownership of Agricultural Land, combined with more effective public communication of the benefits and risks of foreign investment, will go some way towards increasing transparency and alleviating public concerns about foreign investment in agriculture.

14 Export regulation

Key points

- Australia's agricultural sector has historically been, and continues to be, highly dependent on, and exposed to, international trade. The sector benefits from open markets with minimal entry requirements into other countries.
- Australian agricultural producers are price takers in global markets. This limits their capacity to pass on costs to consumers and means that unnecessary regulatory burdens, and other trade restrictions on exports, can significantly reduce their international competitiveness.
- The Australian Government has a role to play in export certification — to assure importing countries that their requirements have been met, which helps protect Australia's reputation as a reliable and safe supplier of agricultural exports.
- Participants' concerns about export certification related to: user charges; processing delays; duplication between Australian and importing country requirements; and excessively strict domestic requirements (relative to importing country requirements).
- Australia's agricultural exporters could benefit from greater private sector involvement in export certification, as well as harmonisation and mutual recognition of Australian and importing country requirements.
- Concerns about the efficiency of export certification can be addressed by:
 - the Australian Government continuing to implement full user cost recovery to ensure export certification services are provided at minimum cost and delay
 - ongoing review, reform and negotiations on importing country requirements with foreign governments.

International trade can benefit Australia's agricultural exporters as it leads to increased efficiency and productivity (due to comparative advantage, specialisation, intra-industry trade, economies of scale and increased competition). It also contributes to higher economic growth and living standards, and expands consumption possibilities (consumers can purchase a wider variety of products at lower prices) (Krugman, Obstfeld and Melitz 2015).

Australia's agricultural sector is highly dependent on, and exposed to, international trade. The sector has exported the majority of its produce for almost two centuries (Australian Government 2015b). About two-thirds of Australia's agricultural production is exported, generating export revenue of about \$44 billion in 2014-15, or 14 per cent of Australia's export revenue (ABARES 2015a; ABS 2015b; DAWR 2016i). Major agricultural exports include meat, livestock, grains, oilseeds and wool. The sector's top five trading partners are China, the United States, Japan, Indonesia and South Korea (ABARES 2015a).

Australian agricultural producers are price takers in global markets as Australia is a relatively small exporter by world standards. In 2014, the value of Australian agricultural exports accounted for about three per cent of world food exports (12th in the world) (FAO 2015). As a result, Australian agricultural producers (including exporters and processors) have limited capacity to pass on costs to consumers. This means that unnecessary regulatory burdens and trade restrictions on agricultural exports can significantly reduce their international competitiveness.

This chapter examines the regulation of agricultural exports and its effect on the international competitiveness of Australian agriculture.

14.1 Regulation of agricultural exports

Australian agricultural exports are affected by trade protection and technical barriers to trade imposed by other countries.

- Trade protection includes tariffs, export subsidies, import quotas, export taxes, local content requirements, export credit subsidies, national procurement and voluntary export restraints (Krugman, Obstfeld and Melitz 2015; Vousden 1990).
- Technical barriers to trade (such as importing country requirements) are directed at achieving domestic policy objectives such as biosecurity, animal welfare, environmental protection and food safety (DoA 2015a; WTO 2014).

The distinction between importing country requirements and trade protection is not always clear (AFGC 2015; Krugman, Obstfeld and Melitz 2015). Although the objective of a policy may not be to restrict international trade, it can have the unintended consequence of protecting local agricultural producers from international competition.

While participants raised concerns about the cost of exporting agricultural produce, many of these concerns related to costs resulting from technical barriers to trade. For example, the Australian Meat Industry Council stated that technical barriers to trade are significant.

Poor trade outcomes in market access ... [have] been issues. We applaud the government negotiation of free trade agreements (FTA's) ... FTA's however only address import tariffs. The meat industry, as a producer of a time and temperature sensitive product, has a high exposure to technical barriers to trade. These technical barriers can undermine any tariff benefits. Unless they are addressed with the same priority as tariff reductions, technical barriers to trade can add huge cost, reduce productivity and limit overall market access. (sub. 77, pp. 3-4)

The Australian Food and Grocery Council estimated technical barriers to trade result in an annual loss of \$1.3 billion for the red meat export industry (AFGC 2015), and argued that non-tariff barriers had the potential to impede and constrain Australia's export growth in the food and grocery manufacturing sector (sub. DR251).

Similarly, Australian Dairy Farmers claimed that the annual loss to the dairy export industry as a result of technical barriers to trade is \$1.6 billion.

... when aggregated, the impact of TBTs [technical barriers to trade] on the Australian dairy industry is staggering. In many instances addressing these TBTs in key markets could produce gains even more beneficial to the industry than just tariff reductions. The Australian dairy industry is presently unable to seize major competitive advantages (like strong food safety, credible domestic regulators and reliable cold storage supply chains) because of international standards and requirements that are incoherent with those of Australia. There is even consistent feedback from Australian dairy exporters about “losing interest” in doing business in foreign markets as a response to frustrating TBTs. (sub. 63, p. 8)

The challenge is that these barriers relate to legislation and policy frameworks in the export destination country, both at and behind the border. As such, the removal of barriers to export requires ongoing commitment, coordination and action from both Australian and foreign governments. The Australian Food and Grocery Council pointed out that importing country requirements can also depend on equivalent requirements imposed by Australia.

It is one thing to make the Australian systems cost- and time efficient, but the effort may be better spent in addressing the need for certification in the first place ... Australian regulators may not be aware, when introducing requirements that apply to imports, of the potential for retaliatory or even simply equivalent measures to be placed on Australia’s exports. (sub. DR251, p. 5)

International negotiations and trade agreements can play an important role in reducing trade barriers to Australian agricultural exports. The greatest benefits of trade liberalisation (including improving market access for Australian agricultural exporters) would be realised from multilateral trade agreements on a non-discriminatory basis (PC 2010a, 2014f). While bilateral, regional or plurilateral trade agreements can also provide market access benefits, they can result in offsetting economy-wide costs due to complex rules of origin and ‘trade diversion’ (where goods originally imported from lower-cost countries are displaced by goods from higher-cost countries due to lower trade barriers, such as reduced tariffs, faced by the latter group) (PC 2010a, 2014f).

The Australian Government recently negotiated a number of agreements to reduce barriers to trade for agriculture, which included importing country requirements. For example, as a result of government-to-government market access agreements:

- in January 2016, the first exports of goat meat were sent to India, and eggs were sent to Taiwan
- from May 2016, Australian pumpkins and a range of melons can be exported to Japan. Market access was also gained for nectarines to China (DAWR 2016o, 2016q).

International negotiations will continue to be important to further reduce barriers for Australian agricultural exporters. But difficulties securing trade agreements should not be used as a reason to delay reducing Australia’s own trade barriers. It is in Australia’s interest to unilaterally reduce trade barriers. Unilateral reform should not be delayed to retain a bargaining chip in international trade negotiations (PC 2010a).

It should also be noted that importing country requirements are also affected by Australia's national biosecurity system (chapter 8).

The role of government in export certification

The Australian Government's Department of Agriculture and Water Resources (DAWR), commenting on agricultural export legislation, said that it:

... enables the department to oversee the export supply chain and provide assurance to Australia's trading partners that their specific requirements for exported goods have been met. This underpins Australia's reputation as a reliable supplier of quality products and has helped us capture and maintain overseas markets. (DAWR, sub 50, p. 8)

Under the current export regulation framework, there are 21 Acts — including the *Export Control Act 1982* (Cwlth) and the *Australian Meat and Live-stock Industry Act 1997* (Cwlth) — and over 40 pieces of delegated legislation (DAWR, sub. 50). The legislation sets out the requirements, conditions and controls that govern the export of agricultural goods from Australia. It also provides for the enforcement of regulations, as well as offences and penalties for non-compliance. For example, officials are given legal authority to carry out inspections and certification activities, including audit and verification, along the export supply chain (DoA 2015a).

Government export certification was widely accepted by participants to this inquiry as necessary for access to export markets — by meeting importing country requirements and Australia's obligations under international agreements.

The Australian Meat Industry Council, for example, acknowledged the government's role in assuring importing countries that their requirements have been met.

In formulating the proposed changes to the inspection, certification and verification system for meat exports we should recognise that: certification and system verification remains a function of the central competent authority (DAWR). The delivery of the inspection service is dependent on what the markets will accept ... (sub. 77, p. 10)

Similarly, the Sheepmeat Council of Australia and the Cattle Council of Australia pointed out that:

... export registered [beef and sheepmeat processing] plants must meet additional regulations set by the Commonwealth which relate to importing country requirements and observance of these bilateral agreements underpins Australia's premium market access worldwide. (sub. 88, att. 1, p. 67)

The Voice of Horticulture also noted that it:

... understands that the Australian Government imposes export regulations on horticulture to reassure trading partners that Australian agricultural products meet import requirements and are fit for purpose. (sub. 42, p. 46)

Australian Government export certification is effective in facilitating market access. In 2014-15, less than 1 per cent of government certified export consignments were rejected by importing countries for failure to meet their requirements (DoA 2015b). This compliance rate has been maintained from 2012-13, when a target (a rejection rate of less than 1 per cent) was introduced by DAWR (DAFF 2013; DoA 2015b).

14.2 The regulatory burden of export certification

Export certificates in paper form are usually provided to importers and are required for import clearance in the destination country. An Australian government export certificate is signed by either a veterinary officer or an ‘authorised officer’ (AO) depending on importing country requirements (DoA 2016). Certificates generally relate to food safety, animal health, human health, plant health and product integrity conditions, and may include details to meet specific importing country requirements, such as the date and specific boning room of an abattoir where meat was slaughtered (DoA 2015a; PC 2009). For example:

- Horticultural and grain exports will usually require a phytosanitary (plant health) certificate to assure that the goods are free from pests, soil, weed seeds and extraneous material. Meat and meat products (including live animals) may need organic or halal certificates, and health certificates that certify that the goods are free from specific diseases and fit for human consumption (DoA 2015a).
- Separate export certificates may also be issued to meet any specific and additional declaration, or importing country endorsement requirements (DAWR 2015q; DoA 2015a). Of the 160 countries that receive Australian meat exports, 138 countries require measures additional to certification by DAWR, and compliance with Australian meat standards for hygiene and safety for human consumption (ANZFRMC 2007; PC 2009).

Farm businesses and other businesses along the export supply chain incur both direct and indirect costs from export certification, often before export transactions are finalised.

- Direct costs include government user charges, time, financial and administrative costs of compliance.
- Indirect costs could include forgone export opportunities resulting from costs or delays in certification, or use of alternative (less efficient) measures to reduce the costs of compliance. For example, instead of having their produce directly certified for export, agricultural producers can send their produce to a bulk exporter, where the goods are subject to bulk inspection. While bulk export reduces the costs of complying with export certification, it also leads to double-handling and product damage, ultimately reducing the price importers are willing to pay. This was the experience of one large horticultural business that the Commission interviewed (appendix C).

Australian Pork Limited said that the audit costs of export certification are particularly high and that it:

... supports any initiatives that reduce the costs to the pork industry and its supply chain and which reflect the actual cost of the export certification process. Pork export establishments have advised APL [Australian Pork Limited] that one of the most significant cost impacts they face is that of audit fees ... pork establishments are reporting increased time to undertake individual audits. (sub. 37, p. 5)

Australia's agricultural export regulations are the subject of review and reform by DAWR (box 14.1).

User charges

DAWR conducts export certification on a full cost-recovery basis. Export certification fees recover the costs of assessment, inspections and audit, incident management (including investigation support and corrective action), program management and other administration activities (DoA 2015b). A proportion of the fees is also levied to recoup expenses for marketing and foreign market access arrangements (PC 2009; Whittle et al. 2015). In 2014-15, DAWR collected about \$121.4 million in user charges for its export certification and supporting services, which represents about 0.3 per cent of the value of agricultural exports (ABARES 2015a; DoA 2015b).

Some participants expressed dissatisfaction with current cost recovery arrangements. For example, the Australian Meat Industry Council said that:

The return ... to full cost recovery for government inspection services and export certification has meant the [meat] industry is now faced with an annual bill exceeding A\$85 million a year and rising in order to raise a health certificate for each shipment. These are not costs faced by our major competitors such as the United States and Brazil ... (sub. 77, p. 4)

Similarly, the Sheepmeat Council of Australia and Cattle Council of Australia asserted that for sheepmeat and beef processors:

... export certification is one of [the] 3 largest costs for their operations and has become unwieldy and inflexible [which] may put them at a financial disadvantage against competitors. Government should absorb more of the cost ... (sub. 88, p. 65)

Grain Producers Australia also said that:

The return to full cost recovery has substantially increased the costs to the export industries. Ultimately increasing the charges paid by farmers. (sub. DR201, p. 6)

Ausveg, in its submission to DAWR's agricultural export regulation review, raised concerns about certification costs.

In regard to regulatory burden, the cost of certification, registering as a Registered Establishment and training staff as Authorised Officers for the volume of exports that are undertaken by smaller growers are entirely cost prohibitive. (2015a, p. 8)

Box 14.1 **Australia's agricultural export regulations are under review**

Agricultural export legislation is currently under review by the Department of Agriculture and Water Resources (DAWR). The review will assess whether current export legislation:

- meets the needs of industry and government today and into the future
- is flexible and enables industry and government to respond to a range of situations and contemporary issues
- ensures that importing country requirements are met without imposing an unnecessary regulatory burden on users
- is clear, transparent and easy to understand (DAWR 2016b).

Stage 1 of the review (conducted during July-September 2015) found that while the legislation had served agricultural exporters for more than 30 years, there was scope for improvement. On 3 December 2015, the Australian Government announced that it would 'make improvements to agricultural export legislation to better support farmers and exporters, and facilitate market access into the future' (DAWR, sub. 50, p. 8). Stage 2 of the review, which will take place over the next few years (before 1 April 2020, when the legislation will 'sunset', or cease to be law), will involve reforms to the legislation to reduce the regulatory burden on farm businesses, including:

- a simpler legislative structure that is easy to understand and administer. For example, creating a single set of requirements relating to audit and establishment registration
- a more effective set of enforcement tools to deal with breaches or non-compliance
- clearer provisions for the performance of verification activities (such as audits and inspections) across the supply chain
- clearer requirements relating to the appointment and duties of departmental and third-party authorised officers who perform functions and exercise powers under the legislation (DAWR 2016g)

Cost recovery arrangements (for import and export services) and livestock export certification are also currently the subject of separate reforms by DAWR (DAWR 2016m). The outcomes of these related reforms will be included in the revised agricultural export legislation (DAWR 2016b). The Department of the Environment is also currently reviewing and reforming the wildlife export system to address instances of what it considers to be excessively strict regulation of commercial wildlife export permits (such as kangaroo and emu products) (sub. 80).

Cost recovery charges can promote efficiency in the delivery and use of export certification services. They provide signals to exporters about the cost of the resources involved in providing certification services and may influence exporters' decisions about which export market to target (Beale et al. 2008; PC 2001a). To the extent that cost recovery reduces the government's need to draw on general taxation revenue, the 'deadweight' or efficiency losses of distortions arising from higher general taxation can be minimised (PC 2001a).

Provided there are no significant positive spillovers or public good characteristics, exporters who directly benefit from export certification and related services (such as DAWR's export programmes and market access arrangements) should incur the cost of the

service (PC 2001a; Whittle et al. 2015) Cost recovery means that ‘Australian exporters who earn income from overseas markets because of regulatory services provided by the Australian Government are not asking Australian taxpayers to fund the health and biosecurity protection of the citizens of other countries’ (Beale et al. 2008, p. 195). This is consistent with the Australian Government Cost Recovery Guidelines (DoF 2014).

Most participants to this inquiry supported full user cost recovery, but argued that user charges were unnecessarily high, and expressed concerns that certification is used as a source of revenue, or that the charges reflect inefficient service provision (Australian Meat Industry Council, sub. 77; Australian Livestock Exporters’ Council, sub. 78; Sheepmeat Council of Australia and Cattle Council of Australia, sub. 88). The Australian Livestock Exporters’ Council noted that:

Under the cost recovery arrangements for the live trade, all costs associated with certification and ESCAS [Exporter Supply Chain Assurance System] are 100% recovered from exporters, regardless of whether the services provided or the regulatory system on which those costs are assessed is efficient, effective or appropriate. (sub. 78, p. 34)

The Commission did not find any evidence to suggest that export certification charges are recovering more than the cost of providing certification services, although this does not mean that the efficiency of certification services cannot be improved. ABARES found that Australia’s export certification fees are roughly commensurate with those of our main competitors in agricultural export markets⁸² in 2013-14, but noted that comparisons may be difficult due to differences in cost recovery arrangements (Whittle et al. 2015).

Certification processing times

Participants also raised concerns about the time required to obtain export certification. The Export Council of Australia stated that export certification is a lengthy process.

There are many steps involved in getting agricultural products approved for export and multiple touchpoints with government along the way. While some processes have moved to an online, self-regulated system, other manual administrative steps remain a necessity, which can cause delays and additional costs. (sub. 74, p. 5)

Such delays may be particularly costly for farm businesses exporting perishable produce or live animals.

The Australian Food and Grocery Council said that:

... a number of companies report that government documents required by companies for exporting will only be sent by government through the mail. This results in unnecessary delays to export shipments and is a particularly important issue for fresh, perishable products. (sub. 28, p. 19)

⁸² For selected commodities in New Zealand, the United States, Canada, Chile, Thailand, the Netherlands, Germany, Ireland and Poland.

It also identified long and variable timeframes for approval as a ‘common challenge’ across the agri-food export sector (AFGC 2015, p. 10).

The Commission previously found that there is scope for improved communication methods to reduce delays, particularly through greater use of electronic processing (PC 2009). Australian Dairy Farmers also suggested that the shift to electronic certification should be expedited and, where possible, it should occur across a multi-commodity platform to deliver gains more broadly (sub. DR218) and to achieve economies of scale.

DAWR is gradually moving to electronic processing of certificates and is working with Australia’s trading partners to develop and refine an electronic government-to-government export certification system to replace manually issued paper-based certificates via ‘EXDOC’. Electronic export documentation is currently available for dairy, eggs, seafood, grains, horticulture, meat, inedible meat products, wool, skins and hides, subject to importing country requirements (DAWR 2016a). This is in addition to existing electronic systems maintained by DAWR, such as ‘eCert’ (for food and agricultural exports) and ‘TRACE’ (for livestock exports) (DoA 2015a).

Increased private sector involvement in export certification

Greater private sector involvement in export certification has the potential to increase efficiency, and reduce the cost and delay of certification. A number of participants to this inquiry (including Australian Dairy Farmers, sub. 63; Australian Livestock Exporters’ Council, sub. 78; Australian Meat Industry Council and Voice of Horticulture, sub. 42), and to DAWR’s review of agricultural export regulation, proposed a greater role for the private sector in export certification. For example, the Voice of Horticulture recommended that:

... co-regulatory approaches between industry and government be adopted where these offer similar outcomes at lower cost (e.g. use of ‘in-house’ export inspection processes instead of defaulting to government monopoly priced inspection, legislation and formal regulation). (sub. 42, p. 4)

Private sector involvement could include the agricultural export industry conducting its own certification or engaging third-party providers. The use of third-party providers of inspection, verification, testing and certification, such as Société Générale de Surveillance and Bureau Veritas (Bureau Veritas Australia & New Zealand 2016; SGS Australia 2016), may increase efficiency and reduce costs for industry (and government) (World Bank Group 2016a).

There are already some options for private sector involvement in export certification. Under the Export Control Act, eligible agricultural exporters may apply to have risk-based ‘approved arrangements’ to streamline export certification (which may reduce the number of audits and inspections, and therefore costs), and to have non-departmental authorised officers carry out certain export certification functions (plant and meat exports only). Approved arrangements currently apply to all ‘prescribed goods’ under the Export Control

Act and related legislation (dairy, egg, fish, meat/meat products, organic/biodynamic products and livestock exports) (DAWR 2015b; Joyce 2016a). The use of AOs usually requires exporters to have the resources and capacity to have an employee act as an AO.

The Commission generally supports greater private sector involvement in export certification as it is likely to lead to increased efficiency and innovation, and promote competition among third-party certification providers. However, there are two potential hurdles that may need to be overcome to achieve greater private sector involvement.

- Importing countries may insist on government control of export certification functions for some goods (such as for meat and meat products, live animals, wine and some plant products) (DoA 2015a).
 - Only eight countries⁸³ have accepted external AOs for the inspection of plant exports (DAWR 2016n, 2016s), and importing countries generally only recognise a small number of third parties as authorised halal certifiers for meat exports (SERC 2015). The United States also requires DAWR to undertake audits of establishments that prepare or store meat for export, and issue health certificates for livestock exports (Austrade 2016; DAWR 2016d). Inspection of beef products by AOs may also not meet the requirements of Europe and Japan (Neales 2015).
 - Greater private sector involvement ultimately requires agreement by importing countries. Ongoing government efforts are being made in this regard (DoA 2015a) and there have been some recent successes. For example, the use of external AOs for plant exports commenced in October 2015 as a result of DAWR negotiating technical market access arrangements. In March 2016, the Australian Government announced plans to invest \$800 000 to increase the number of industry-based plant export AOs by more than one-third (DAWR 2015m, 2015n; Joyce 2015a; Joyce and Ruston 2016).
- Despite exporters having commercial incentives to comply with export certification requirements (to be able to export and to maintain their reputation), increased private sector responsibility for certification functions may increase non-compliance and failure rates.
 - There is a risk of (actual and perceived) conflict of interest associated with AOs drawn from industry (such as employees), as they may feel pressured not to give adverse assessments even in circumstances when they are required to do so under the legislation. This is notwithstanding a requirement of appointment that they have no unresolved conflicts of interest (DAWR 2015l, 2016k). The Community and Public Sector Union claimed that:

... the majority of these [AO] inspectors are directly employed by the companies that they are inspecting for ... There have also been reports of some AOs leaving one company because of undue pressure to do the wrong thing. (sub. 6, pp. 4–5)

⁸³ China, Japan, South Korea, New Zealand, Taiwan, Thailand, the United States and Vietnam.

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- Some participants to DAWR’s review of agricultural export regulation also raised concerns about the increased use of AOs and greater industry self-regulation. They felt that a strong compliance regime would be needed for importing countries to accept export activities being conducted by AOs (DAWR 2016b).

Any change that compromises the current system’s ability to maintain high rates of compliance with importing country requirements (and therefore Australia’s reputation) needs to be carefully balanced against the benefit of increased efficiency. That said, there are likely to be cases where these risks are less pronounced, particularly where industry standards (for example, the requirements of importing businesses or quality assurance systems) are equivalent to or exceed importing country requirements (DoA 2015a).

The Commission supports greater private sector involvement in export certification, but notes that this requires government-to-government negotiation for importing countries to recognise and accept private certification. DAWR will also need to evaluate this option on a case-by-case basis to ensure that risks of non-compliance and conflicts of interest are adequately addressed.

Duplication between Australian and importing country requirements

The terms of reference for this inquiry ask the Commission to consider ways of minimising duplication between domestic regulation and importing country requirements. Inquiry participants did not raise significant concerns about duplication, although in its submission to DAWR’s agricultural export regulation review, Ausveg suggested that:

... there is a degree of overlap between these two certificates [Certificate of Origin and Australian Phytosanitary Certificate] and ... a single certificate that satisfies all requirements could reduce the level of ‘red tape’ that exporters must comply with. (2015a, p. 8)

This type of duplication is being examined in DAWR’s current review and reform of agricultural export regulations (box 13.1). There are also ongoing diplomatic processes and efforts aimed at reducing duplication, through harmonisation and mutual recognition, as part of government-to-government and preferential trade agreements. For example, under the Trans-Tasman Mutual Recognition Arrangement between the governments of Australia and New Zealand, the food safety systems in both countries covering dairy products, seafood, uncooked pig meat, chicken meat, coconut, pepper, paprika, peanuts and pistachios were determined to be equivalent. This led to the removal of the requirement for border inspection for these agricultural goods (DAWR 2016l).

Australian standards set higher than importing country requirements

The high cost of complying with Australian standards for agricultural exports, where they go beyond importing country requirements, was raised by participants to this inquiry. For example, the Voice of Horticulture noted that:

The phytosanitary export requirements imposed upon Australian exporters appears to be much tougher than those imposed by some of Australia's competitors. For example, Australia requires that exporters apply a universal standard that consignments are free from pests, soil, weed seeds and extraneous material ... This minimum standard applies to all export destinations including those countries that do not possess individual phytosanitary importation requirements. (sub. 42, p. 50)

Similar concerns were expressed by the Pastoralists and Graziers Association of Western Australia in relation to organic certification of agricultural exports.

Third party organizations are accredited by the department to certify produce with organic, biodynamic, biological or ecological trade descriptions in compliance with the National Standard for Organic and Biodynamic Produce. The current 'organic' standard has a zero percent tolerance for genetically modified organisms, when the US standard is 5% and the EU standard is 0.9%. (sub. 70, p. 10)

Participants to DAWR's review of agricultural export regulations also provided examples of where Australia's agricultural export regulations exceed importing country requirements. For example, participants claimed that exports of grain for non-human consumption is regulated in the same way as grain for human consumption, even though importing countries do not require this. And plant products are regulated to require inspection, but importing countries often do not require it (DAWR 2016b).

This situation can also arise where only a proportion of production is exported to countries with higher standards (such as the European Union and the United States), and it is too costly or not possible for the business to segment their production for different markets (PC 2009).

The National Farmers' Federation suggested that Australia adopt international standards (such as those developed by the International Chamber of Commerce and the World Customs Organisation) to consolidate import and export requirements, but only where this does not compromise Australia's strict biosecurity standards (sub. DR216).

Under the current approach, Australian export standards are generally set at the level required by importing countries. In response to the National Competition Policy Review of the Export Control Act, the Australian Government agreed to use Australian standards as the basis for the underlying standard for all exports (Tier 1) (Australian Government 2000; Frawley et al. 1999). Standards set by overseas governments (Tier 2) and market-specific requirements in addition to domestic standards (Tier 3) would only apply to producers wishing to access those markets (Australian Government 2000).

There may be legitimate reasons why Australian standards are set higher than importing country requirements. Australian standards may be designed to meet domestic policy objectives relating to agricultural production and consumption, as well as to meet binding internationally agreed standards, such as the World Trade Organisation Agreement on the Application of Sanitary and Phytosanitary Measures (WTO SPS Agreement) (DoA 2015a; Guasch et al. 2007).

Australian standards may also be set to ensure agricultural exports meet importing country requirements across the board for all countries for administrative efficiency reasons. This means that all agricultural exporters would be required to meet the highest standard, regardless of the export destination country (DoA 2015a; Frawley et al. 1999). The certainty and simplicity of one standard may not only benefit consumers in the destination market, but also exporters, as there may be cost savings from not having to search for and comply with specific importing country requirements. Indeed, the costs of complying with Australian standards may also partly depend on the exporter's choice of overseas markets, which is a commercial decision (PC 2009).

Ongoing review of this issue by DAWR will help ensure that the additional benefits of having a single standard, including administrative efficiency gains for the Australian Government, outweigh the additional costs imposed on exporters from meeting higher standards in some cases, and therefore deliver a net benefit to the Australian community.

A Public consultation

In keeping with its standard practice, the Commission actively encouraged public participation in this inquiry.

- Following receipt of the terms of reference on 20 November 2015, an advertisement was placed in major and rural Australian newspapers in Australia and a circular was sent to identified interested parties.
- An issues paper was released in December 2015 to assist those wishing to make a written submission. Following consultation with stakeholders and receipt of submissions, a draft report was released in July 2016.
- In total, the Commission received 312 public submissions throughout the inquiry, as well as a large number of brief submissions from private individuals and organisations expressing opinions on the regulation of farm animal welfare in Australia (tables A.1, A.2 and A.3). Submissions are available on the inquiry website.
- The Commission also received a large number of personal responses and views from private individuals expressing opinions on the regulation of Australian agriculture, but in many cases there was insufficient information to confirm author disclosure. To aid transparency and ease of reading by others with an interest in this inquiry, the Commission placed the text of a selection of the personal responses and views on the inquiry website after removing any identifying material.
- As detailed in table A.4, consultations were held with representatives from the Australian, and state and territory government departments and agencies, academics, peak bodies, and Australian farm businesses.
- The Commission also had discussions with a number of government agencies, business groups, community organisations and academics in New Zealand (table A.4).
- Eight days of public hearings were held for this inquiry. Hearing participants are listed in table A.5 and transcripts are available on the inquiry website.

The Commission thanks all those who contributed to this inquiry.

Table A.1 Submissions^a

<i>Participant</i>	<i>Submission number</i>	
Accord	DR222	
Active Bio-Culture Pty Ltd	DR191	
Acton, Larry	55	
Adamson, Peter	DR175	
Aerial Application Association of Australia	12	
AgForce	17, DR246	
AgInstitute	DR182	
Alexander, Mick	DR288	
Allergy and Anaphylaxis Australia	DR134	
Animal Defenders Office	DR249	
Animal Health Australia	DR250	
Animal Justice Party Victoria	DR112, DR311	
Animal Law Institute, The	DR213	
Animal Liberation	DR143	
Animal Medicines Australia	52	
Animal Welfare League of Queensland (AWLQ)	DR238	
Animals Australia	53, DR268	#
Animals Tasmania	DR146	
AusBiotech Ltd	20, DR195	
Australasian Society of Clinical Immunology and Allergy (ASCIA)	DR203	
Australia Pacific LNG Pty Limited	DR206	
Australian Bureau of Statistics (ABS)	59	
Australian Cane Farmers Association	DR155	
Australian Centre for Agriculture and Law	2	*#
Australian Chicken Growers' Council	51, DR149	
Australian Chicken Meat Federation	40	
Australian Competition & Consumer Commission (ACCC)	DR121	
Australian Conservation Foundation	DR252	
Australian Dairy Farmers	63, DR218	
Australian Dairy Goats	DR120	
Australian Food and Grocery Council (AFGC)	28, DR251	#
Australian Food Sovereignty Alliance (AFSA)	27, DR211	
Australian Forest Products Association	11	
Australian Honey Bee Industry Council (AHBIC)	34	
Australian Industrial Hemp Alliance	69	
Australian Livestock and Rural Transporters Association (ALRTA)	47	
Australian Livestock Exporters' Council (ALEC)	78, DR305	
Australian Lot Feeders' Associations (ALFA)	DR294	
Australian Meat Industry Council (AMIC)	77	

(continued next page)

Table A.1 (continued)

<i>Participant</i>	<i>Submission number</i>	
Australian Meat Processor Corporation	DR283	#
Australian Meat Producers Group (AMPG)	DR293	
Australian Pesticides and Veterinary Medicines Authority (APVMA)	21, DR228	#
Australian Pork Limited	37, DR282	
Australian Property Institute	66	
Australian Sugar Milling Council	68, DR234	
Australian Veterinary Association	26	
Ausveg	DR193	
Baines, Karen	13	
Beal, James	DR275	#
Beer, Patricia	DR124	
Bennett, Christine	DR96, DR140	
Birds Queensland	DR108	
Bisshop, Gerard	DR110	
Bittar, Rosalie	DR116	
Blackburn, William	DR196	
Bongers, Anthony	DR301	
Burdekin Shire Council	35	
Burns, Michael	DR280	
Campbell, Dr Lindsay	DR205	
Canegrowers	22, DR169	
Canegrowers Burdekin Limited	DR271, DR272	#
Canegrowers Cairns Region	DR138	
Canegrowers Herbert River	DR269	
Canegrowers Innisfail	DR119	
Canegrowers Isis	DR230	
Canegrowers Mackay	DR225	
Cattle Council of Australia (CCA)	DR290	
Centre for Ecosystem Science, UNSW	DR200	
Chamarette, Steve and Joann	DR148	
Chignell, Stuart	DR208	
Choice	33	
Clinch, Margaret	DR150	
Community and Public Sector Union (CPSU)	6, DR204	
Consolidated Pastoral Company	71	
Cooke, Dr John	29, 30, DR263	
Co-operative Bulk Handling (CBH) Group	36	
Cordina Farms	64, 65	*#
Cotton Australia	23, DR262	
Coughran, Chris	DR93	

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<i>Participant</i>	<i>Submission number</i>	
CropLife Australia	14, DR156	*
Dairy Goat Society of Australia (DGS)	DR97	
Department of Agriculture and Water Resources (DAWR)	50, DR183	
Department of Environment and Energy	DR274	
Department of Foreign Affairs and Trade (DFAT)	56	
Department of Health	DR261	
Department of Industry, Innovation and Science	DR258	
Department of the Environment	80	#
Edgar's Mission	DR145	
Environmental Defenders Offices of Australia (EDOs of Australia)	60, DR241	
Environmental Farmers Network	DR174	
Environmental Justice Australia	DR221	
Equestrian Australia	DR299	#
Export Council of Australia	74	
Farmer from southern NSW (name withheld)	83	*#
Farmer Power	DR99	
Fitzpatrick, Duncan	DR304	
Flanagan, Peter	DR107	
Food Standards Australia New Zealand (FSANZ)	1, DR98	
Forrest-Smith, Cheryl	DR279	
Fox, Lucy	DR190	
Freight on Rail Group	DR266	
Friends of the Earth Australia	DR125	
Gardiner, Bruce	DR101	
GBP Qld Pty Ltd	DR312	
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Gibson, Maya	DR160	
Gingin Private Property Rights Group	DR194	
GM Cropwatch	DR113	
Goat Veterinary Consultancies	DR104	
Goulburn Broken Catchment Management Authority	DR198	
Grain Growers Limited (GrainGrowers)	73, DR247	#
Grain Producers	DR201	
Grand Ridge Organics – Richard Nankin & Rosemary Cousin	DR248	
Grazing BestPrac	DR296	
Greedy, Jill	DR212	#
Growcom	43	
Hall MLC, James and Armstrong, David	DR276	
Harmer, Ronda and Harmer, Allen	15	
Harvest Launceston Community Farmers Market	DR186	

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<i>Participant</i>	<i>Submission number</i>	
Hayes, Mary	DR185	
Hemsworth, Prof. Paul and Coleman, Prof. Grahame	87	
Horticulture Innovation Australia	DR165	#
Humane Society International	DR253	
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Jones, Prof. Michael	DR141, DR289	
Kendall, Jan	DR106	#
Klein, Herta	38	
Kovess, Charles	DR126	
Laurent, Nathan	DR133	
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Lawson, Prof. Charles	81	#
Lawyers for Animals	DR153	
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LiveCorp	75, DR300	#
Livestock & Rural Transport Associations of Western Australia (Inc)	DR172	
Livestock SA	DR303	
Madge Australia Inc.	91, 92, DR224	#
McKenzie, Alan	DR114	
McLaren, Michelle	DR256	
Medcalf, Kerry	DR132	
Minerals Council of Australia (MCA)	DR244	
Miriwinni Lime Pty Ltd	DR257	
Moore, Susan	DR168	
Murray-Darling Basin Authority (MDBA)	DR127	
Musgrove, Janine	DR129	
Nadolny, Chris	DR118	
Name withheld	DR291	
National Association of Sustainable Agriculture Australia (NASSAA WA)	DR242	
National Association of Sustainable Agriculture Australia (NASSAA)	DR259	
National Boer Goat Association	DR111	
National Farmers' Federation (NFF)	61, DR216	
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National Irrigators' Council	18	
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Network of Concerned Farmers	DR128	
Nichols, Negeen	DR94	
Nillumbik Proactive Landowners	DR159	
North Queensland Bio-Energy Corporation Limited	DR298	

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<i>Participant</i>	<i>Submission number</i>	
Northern Territory Department of Primary Industry and Fisheries (NTDPIF)	67	
NSW Department of Primary Industries	DR292	#
NSW Egg Farmers Association	7, DR95	
NSW Farmers' Association (NSWFA)	72, DR161	
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Paton-Boxall, Felicity	DR236	
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People for the Ethical Treatment of Animals (PETA)	DR109	
Peri Urban Group of Rural Councils	DR220	
Pez, Miguel	DR177	
Pioneer Cane Growers Organisation	DR144	
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Queensland Government	DR154	
Queensland Sugar Limited	DR188	
Rea, Andrew	9, DR309	
Regional Development Australia – South West	DR215	
Regional Development Australia Wheatbelt WA	DR176	
Ricegrowers' Association of Australia (Ricegrowers)	DR162	
Ricegrowers Limited	DR197	
Riedl, Maria	DR219	
Ristich, Roks	DR178	
Ross, Estelle	DR100	
RSPCA Australia	31, DR223	
RSPCA WA	DR306	
Safe Food Production Qld	DR135	
Safe Work Australia	10, DR264	

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<i>Participant</i>	<i>Submission number</i>	
Sullivan, Sydnee	DR103	
Sentient, The Veterinary Institute for Animal Ethics	DR188	
Sheepmeat Council of Australia	DR245	
Sheepmeat Council of Australia and Cattle Council of Australia	88	
Singleton, John	DR105	
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Slow Food Hobart	DR123	
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Snoswell, Katherine	DR297	
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Sri, Anna	DR122	
Tallentire, Chris	DR142	#
Targett, Stephen	5	
TasFoods Ltd	DR210	
Tasmanian Beekeepers Association (TBA)	DR131	
Tasmanian Department of Primary Industries, Parks, Water and Environment (TDPIPWE)	62	#
Tasmanian Farmers and Graziers Association (TFGA)	16	
Tasmanian Government	DR287	
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Taylor, Peter	DR157	
Thiriet, Dominique	DR136	
Tim Harding & Associates	DR255	
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Veterinary Manufacturers and Distributors Association	79	#
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Walpole, Alison	46	
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Ward, Ryan	DR235	
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West Wimmera Shire Council	49
Western Australian Government	54, DR285
Whiteley, Liam	DR179
Whyte, Lyndell	DR180
Wilderness Society, The	DR207
Wilmar Sugar Australia	DR139 #
Wilson, Meg and Paul	DR270
Wimmera Catchment Management Authority	DR147
Wimmera Development Association	19
WoolProducers Australia	DR237
World Animal Protection	DR137, DR260 #
WWF Australia	85 #

^a An asterisk (*) indicates that the submission contains confidential material NOT available to the public. A hash (#) indicates that the submission includes attachments.

Table A.2 Brief submissions

<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>
Abberton, S	Bailey, Jenny	Bertram, Laura	Bradshaw, Nicole
Adam, Jane	Baker, Alison	Best, Anne	Brand, Denise
Alberts, Nikki	Baker, Janet	Best, Helen	Brereton, Dorelle
Alderman, Tamara	Baker, Jessica	Bethune, Shirley	Brereton, Julie
Aldrick, Robyn	Ballan, Justine	Bettridge, Cheryl	Brett, Michael
Aldridge, Debra	Barber, Susan	Bettson, Julie	Brewer, Amanda
Alkins, Gloria	Barclay, Tony	Bhinda, Elsa	Brewer, Anna
Allan, Amelia	Barker, Michael	Bianco, Patty	Brieden, Cornelia
Allen, Donna	Barnett, Stephanie	Biber, Hana	Bright, Adrian
Allison, Jennifer	Barraclough, Katherine	Bibes-Taulelei, Dianne	Brittain, Susan
Al-Wahabi, Omar	Barrett, Gillian	Biggs, John	Broad, Aasha
Anagno, Anna	Barrett, Ruth	Bingham-Powell, Marion	Brokken, Corinne
Anandam, Anne	Barry, Carmel	Bisson, Elaine	Brooks, Patricia
Anders, Lindsey	Bartels, Prue	Bittar, Rosalie	Brooks, Rachel
Anderson, Felicia	Bartlett, Michael	Blachut, Joanne	Brough, Andrea
Anderson, Kellie	Bask, Tanya	Blair, Emma	Brown, Akosita
Anderson, Maree	Bateman, Jessica	Blakely, Angela	Brown, Candace
Anderson, Margaret	Batra, Nonie	Boll, Valerie	Brown, Elizabeth
Anderson, Rebecca	Battams, Kate	Bond, Kathryn	Brown, Josephine
Anderson, Samantha	Battye, Lee	Bondy, Sharon	Brown, Michelle
Andoni, Alexandra	Bay, Lisa-Maree	Bonich, Mary	Brown, Nicolette
Anthony, Andrew	Beard, Nakeshia	Booth, Melissa	Brown, Rachael
Antoniozzi, Marina	Beasley, Michael	Borda, Carolina	Brown, Roger
Antulov, Cynthia	Bechmann, Elisabeth	Bostock, Vic	Browne, Philip
Aretoulis, Spiro	Beck, Lynae	Bottrill, Susan	Bruce, Carolyn
Argropoulos, Salome	Bedford, Alan	Bourgeois, Helene	Brunskill, Caitlin
Argyle, Chris	Beer, Susan	Bowden, Jacqueline	Brunt, Emerald
Argyropoulos, Salome	Bell, Frances	Bowen, Vera	Brusen, John
Armstrong, Linda	Bell, Mary-Ann	Bowerman, Anne	Buckland, Susan
Arndt, John	Bell, Shanon	Bowers, Stephen	Buckman, James
Arrese, Catherine	Bellhouse, Sonia	Bowles, Lauren	Buckton Collins, Natalie
Asbury, Gordon	Bellman, Katherine	Bowra, Elizabeth	Buijs, Scott
Aschenbrenner, Helma	Benlow, Shirley	Box, Regina	Bulgarelli, Alana
Ashman, Joanne	Benz, Karen	Box, Tony	Burke, Gill
Atkins, Rosemary	Berens, Jo	Boyd, Bronwyn	Burke, Mike
Atkinson, Sarah	Berettieri, Maurice	Boyland, Susan	Burley, Anne
Atsidaftis, Tahila	Bergmann, Iris	Boyle, Meredith	Burnet, Maria
Audus, Harry	Bernal, Barb	Bracken, Mary	Burns, L
Avery, Sarah	Berns, Elizabeth	Bradfield, Kay	Burnup, Debbie
Bacon, Brenda	Berry, John	Bradley, Irina	Burrough, Carole

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<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>
Bury, Carolyn	Chase, Linda	Cordingley-Palmer, Magda	Czintos, Christine
Buslot, Chantal	Chauvin, Graham	Cork, Farrah	Da Silva, Eliana
Butke, Marcia	Chi, AniMae	Cossins, Kerry	Da Silva, Fernando
Butler, Sharron	Chimilar, Andrea	Costa, Chris	Da Silva, Nicole
Buttrose, Gayle	Chival, Jennie	Costello, Megan	Dadon, Debbie
Byrne, Kate	Church, Paul	Costigan, Jane	Dal Castello, Linda
Cabrera, Jose	Cigana, Rina	Cottee, Jennifer	Daly, Brian
Cabrera, Tracey	Clague, Denise	Coveney, Janine	Danaher, Skye
Caldwell, Andrea	Clark, Linda	Cowper, Salina	Dassanayake, Sajini
Caldwell, Malcolm	Clarkson, Michael	Cox, Brad	Davey, Genevieve
Callander, Meryn	Clayton, Danica	Cox, Eileen	Davey, Joe
Callard, Angela	Clayton, T	Craig, Antonia	Davies, Carolyn
Callow, Terence	Clifford, Jonathon	Craig-Jones, Ros	Davies, Jane
Cameron, Christina	Clifton, Christine	Crane, Rachel	Davis, Amanda
Cameron, Jane	Clunies-Ross, Tony	Cranney, Cathie	Davis, Charles
Cameron, Liv	Cochrane, Wayne	Crawley, Michael	Davis, Debbie
Camm, Ron	Coghlan, Madalin	Crees, Marina	Davis, Tania
Campbell, Annie	Colbert, Andrea	Croke, Gina	Davison, Andrew
Campbell, David	Collins, Carole	Croker, Evan	De Araugo, Samantha
Campbell, Fiona	Collins, Laura	Cromback, Felicity	De Blasio, Maico
Carberry, Nichola	Collis, Judith	Crook, Lorraine	De Groot, Judy
Carr, Donna	Colson, Clare	Cross, Dee	De Krester, Sean
Carroll, Stephanie	Condon, Bunty	Cross, Rosie	De Savigne, Faith
Carroll, Tracey	Connell, Joy	Cross, Tara	De Silva, Gerard
Carter, Christine	Connolly, Michelle	Cruz, G	Dean, Lee
Cartland, Vanessa	Conroy, Faith	Csenger, Adam	Dean, Pamela
Casely, Carmelina	Consedine, Anthony	Cuarnieri, Cindy	Debono, Marianna
Caust, Rosalind	Constance, Shannon	Cuarnieri, Tony	Debrincat, Lucy
Cecile, Nicola	Cook, Annette	Cudmore, Maureen	Deer, Peta
Chain, Kylie	Cook, Julie	Cullen, Miesha	DeGerolamo, Jennifer
Chalmers, Karen	Cook, Kaye	Cummins, Joanna	Deguchi, Junko
Chamberlain, Jenna	Cook, Marion	Cunningham, Debra	Deighton, Viv
Chambers, Andrea	Cooke, Adrian	Cunningham, Teresa	Demarche, Mary
Champion, Wendy	Coop, Lindy	Curran, Kerrie	DeMarchi, Robert
Chandler, Rosie	Cooper, Cathy	Curtin, Elizabeth	Demers, Christina
Chapman, Jeeva	Cooper, Jodie	Curtis, Dale	Denby, Richard
Chapman, Sarah Jane	Cooper, Sylvia	Curtis, Jackie	Dennis, Meredith
Chapman, SJ	Coorey, David	Curtis-Pryce, Debra	Desmond, Lynette
Chard, Deborah	Cordemans, Muriel	Cutler, H	Devlin, Donna
Chase, Dianna	Cordiner, Anne	Cutting, Sarah	Devlin, Susan

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<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>
Dewsbury, Katelyn	Eisner, Sara	Flann, Janet	Gleeson, Sarah
Dexter, Rob	Elberg, Joanne	Flitter, Jane	Glove, Margaret
Diaz, Amanda	Eldret, Kim	Flockhart, Eaine Joy	Glover, Marion
Dick, Antonia	Elek, Morika	Florence, Maryann	Gnanachandran, Lorrae
Dietrich, Allison	Ellem, Sharon	Fogarty, Olga	Goff, Anthony
DiGregorio, Jodi	Elliott, Katy	Foley, Stephanie	Golias, Kerrie
Dimech, Jacqueline	Ellison, Robert	Ford, Karen	Gollasch, Jennifer
Dixon, Suanne	Emmitt, Zoe	Ford, Lynda	Gones, Rhia
Donaldson, John	Endre Pattersen, Odd	Ford, Marilyn	Goodhue, Martha
Donnelly, Kathy	Eriksen, Liana	Ford, Nicole	Goudi, Andrea
Dorey, Monique	Erskin, Carol	Fornaro, Sally	Gowan, Donna
Dorn, Alison	Esposito, Nancy	Forsyte, Irene	Grace, Leonie
Douglas, Norm	Estep, Enid	Foster, Andrew	Grace, Marcia
Doull, Alison	Evans BVsc, Dr David	Foster, Anthony	Gradowski, Wanda
Dowell, Fiona	Evans, Bronwen	Foster, Sandra	Graham, Robert
Downer, Loran	Evans, David	Foy, Kathy	Gravolin, Michelle
Drage, Marian	Evans, Emily	Frank, Mitzi	Gray, Kristie
Drennan, Matthew	Ewing, Jack	Fraser, Glenys	Gray, Marion
Drew, Gerard	Fabian, Judith	Freeman, Joni	Green, Alex
Driessen, Danya	Fabian, Margaret	Freeman, Luke	Greenhalgh, Michelle
Drinkwater, Fabienne	Falcon, Cary	Freund, Kerrie	Gregory, Jennifer
Du Ross, Jean	Fallander, Kaii	Freyer, Melinda	Gregory, Max
Dubois, Raphael	Fanning, Susan	Gange, Mandy	Griffin, Charlie
Dueholm, Tina	Farkas, Lindsay	Garland, Megan	Grimes, Belinda
Duggan, Elizabeth	Farley-Higgins, Amanda	Garling, Lyn	Grinblat, Rebecca
Dugmore, Wendy	Faulkner, Alison	Garner, Megan	Grisdale, Maureen
Dunn, Kathy	Fee, Samantha	Gatmaitan, Melani	Grosse, Andrew
Dunn, Kelly	Fenstermacher, Lisa	Gauci, Jessika	Grosso, Rosanna
Dunstan, Philippa	Fernando, Dilan	Gay, Jenny	Grover, Matthew
Dunton, Lesley	Fernando, Shamali	Gentle, Andrew	Guilford, Deborah
Durlacher, Trish	Ferns, Sandra	Geoghegan, Fiona	Guilfoyle, Penelope
Durrant, Christine	Ferrante, Steven	George Mulgan, Aurelia	Guy, Natalie
Dwyer, Michael	Ferro, Jane Elise	George, Adrian	Haden, Andrew
Dyer, Louise	Filipczuk, Elizabeth	George, Natalie	Hadoulis, Apostolic
Dyer, Susan	Finnigan, Julie	Gercama, Robyn	Haeberlein, Monique
Ebbage, Glen	Fisher, Catherine	Gibson, Diane	Haggie, Esme
Edmonstone, Kerry	Fisher, Mark	Gilpin, Carolyn	Hall, Ryan
Edmunds, Hayley	Fisher, Sue	Gissing, Margaret	Hall, Sandra
Egger, Marion	Fisher-Smith, John	Glasencnik, Traudy	Hanafin, Adele
Eggleston, Lynette	Flanagan, Richard	Gledhill, Ruth	Hands, Gerarda

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<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>
Hannaford, Anita	Herrador, Jane	Horry, Janine	Johnson, Deborah
Hansen, Jesper	Heselwood, Stephen	Horton, Sandy	Johnson, Karen
Harding, Reuben	Hessing, Melissa	Hough, Porscha	Johnson, Nola
Harper, Roger	Hetherington, Iwona	Howcroft, Jill	Johnson, Vicki
Harrington, Helena	Hewitt, Anne-Marie	Howes, Anna	Johnston, Helen
Harris, Jeffrey	Hewstone, Michael	Hucker, Patricia	Johnstone, Patricia
Harris, Lesley	Hickman, Karin	Hughes, Bronwen	Jolley, Gwyn
Harrison, Damien	Hicks, Annie	Hughes, Cheryl	Jones, Christine
Harrison, Patricia	Higgins, Ian	Hughes, Michael	Jones, Danni
Harry, Jasmyn	Higgins, Kelsea	Hungerford, Judy	Jones, Felicity
Hart, Ani	Hii, Nicole	Hussar-Welton, Helen	Jones, John
Hartridge, Anita	Hilder, Margaret	Hutchinson, Darci	Jordan, Joyce
Hartwig, Dieter	Hill, F	Huynh, Sharon	Jordan, Neralyn
Harvey, Leanne	Hill, Ginger	Huynh, Trieu	Jordan, Sherie
Harvey, Mark	Hinton, Vivien	Hvasanov, Michael	Joseph, Emma
Harzmeyer, Elizabeth	Hintz, Linda	Hyslop, Debra	Jovicic, Vanessa
Hastings, Anne	Hird, Fiona	Ibrahim, Carol	Jubber, Rose
Hastings, Stevie	Hoare, Matthew	Ilic, Helen	Kahlau, Sara
Hatzievangelou, Belinda	Hoberg, Rosie	Innes, Dahle	Kajiuvee, Paul
Hauswirth, Susan	Hockley, Robyn	Inwood, Belinda	Kan, Angela
Hawes, Gina	Hodge, Lara	Ison, Pamela	Kastel, Diane
Hayes, Martina	Hodge, Raelene	Ison, Ray	Kavanagh, Caron
Hayes, Pamela	Hodges, Suzanne	Isseyegh, Letitia	Kazak, Lamis
Haynes-Lovell, Kerrie	Hodie, Jake	Jacobs, Elizabeth	Keeffe, Shirley
Hayward, Michelle	Hoendervoogt, Sabine	James, Bernice	Kehane, Melissa
Head, Peter	Hofmockel, Barbi	James, Diana	Kelly, Christine
Healand, Tracey	Hogg, Julie	James, Sarah	Kelly, Denise
Hedley, Carol	Hole, Jennifer	Jansson, Rae	Kelly, Jody
Hedley, Richard	Holland, James	Jarrett, Lorraine	Kelly, Karen
Height, Nathan	Holland, Lisa	Jarrett, Stephen	Kelly, Vanessa
Heijineman, Sungee	Holland, Lou	Jarvis, Trisha	Kelsey, Bart
Heiner, Conrad	Hollway, Diana	Jenkins, Jana	Kent, Deborah
Heinrich, Susan	Holman, Pamela	Jensen, Hayley	Keough, Lenore
Henderson, Emma	Holmes, Amanda	Jensen, Venissa	Kerr, Linda
Hendicott, Amy	Holmes, Tracey	Jensz, Michelle	Kerwell, Cherrie
Henley, Arlene	Holt, Olivia	Jesudhason, Ramona	Kevans, Sophia
Henley, Dru	Holy, Dominique	Jewell, Jacqui	King, Azucena
Henri, Lee	Hope, Kianna	John-Newton, Sarah	King, Jacqui
Henson, Rebecca	Hopkinson, David	Johns, Samantha	Kingsford-Smith, Nina
Hernandez, Mike	Horne, Patricia	Johns, Steve	Kirby, Annabella

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<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>
Kirk, Lynn	Ledden, Adam	Lupton, Benjamin	Martin, Theresa
Kitching, Lyn	Lee, Prudence	Lyall, Leonie	Martinovici, Andre
Kitschle, Mick	Leeson, Amanda	Lynch, Cindy	Martins, Elisabeth
Kittel, Lindy	Legg, Dallas	Lynch, Courtney	Martins, Roz
Klein, John	Leighton, Kim	Lynch, Dianne	Mason, Corrina
Klein, Luke	Leite, Fernanda	Lyons, Cynthia	Mason, Helen
Knight, Christine	Leitinger, Jane	Ma, Helen	Mason, Kim
Knights, Rhonda	Lemin, Tara	Maakassa, Sally	Mason, Kristy
Koeppel, Barbara	Leslie, Jean	Macdonald, Katherine	Masson, Anita
Kovic, Jenni	Lesmond, Sue	Mackenzie, Corinne	Masters, Sorell
Krause, Doug	Lesmond, Susan	MaClennan, Lynette	Materi, Sandra
Kucharska, Alex	Levine, Lisa	Macmillan, Brigitta	Mather, Nic
Kuiper, Ailsa	Lew, Nina	Mahoney, John	Matheson, Jodie
Kull, Peeter	Lewis, Anne	Malcolm, Phil	Matthews, Bradley
Kuruppu, Achini	Lincoln, Julie	Malloch, Daniela	Matthews, Dana
L, Cindy	Linforth-Barker, Christina	Malloy, Gayle	Matthews, Denise
Labo, Kay	Lipold, Teja	Maltby, Lisa	Matthews, Janet
Lal, Cyndy	Lipski, Terree	Malter, Ben	Max, Gregory
Lam, Rebekah	Littleton, Eliza	Manovski, Zlatko	Mayes, Leoni
Lamb, A	Ljusic, Dostana	Mansfield, Jill	Mays, Brendan
Lamb, Mark	Lloyd, Kathryn	Marchant, Robyn	McBurnie, Lisa
Lambert, Michael	Lockwood, Amanda	Mardiyants, Kristina	McCaffrey, Seamas
Landsberg, Lara	Logan, T	Margetts, Lisa	McCarthy, Margaret
Lane, Susan	Loh, Nicole	Mari-Dale, Melissa	McCarthy, Sue
Lange, Piotr	Long, Dallas	Marie, Tressa	McCartney, Kyle
Langer, Caroline	Long, Trish	Markiewicz, Christy	McCormick, Melody
Langton, Veena	Long, Ursula	Markley, Chyena	McCotter, Ruth
Larkins, Donna	Lorang, Margaret	Markwell, Holly	McCoy, Kelly
Larkins, Samantha	Lord, Heather	Marlow, Kerry	McCuaig, Fiona
Larson, Amelita	Lorrain Audley, Cathryn	Marris, Reisha	McDonagh, Maureen
Lasker, Katherine	Lorrigan, Bridgett	Marsanic, Tihomir	McDonald, Carol
Lauder, Sally	Loughton, Dorothy	Marshall, Jessica	McDonnell, Kevin
Laudrum, Mark	Lovering, Louise	Marshall, Sarah	McDonough, Brenda
Laudrum, Terry	Lovino, Teresa	Martens, Jasmine	McElligott, Robyn
Laurence, Marguerite	Lovric, Maryan	Martens, Lena	McFarland, Justine
Laval, Tammy	Lowe, Edna	Marti, Kathleen	McFarland, Sylvie
Lawson, Ronald	Lowe, Nikki	Martin, Amela	McGee, Sarah
Le, Vi	Lucas, Carel	Martin, Samuel	Mcginley, Lucy
Lea, Cora	Luke, Jessica	Martin, Shelley	McGregor, Tracie
Leavy, Carrie	Lukich, Dianne	Martin, Sylvie	McIntosh, Kaylene

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<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>
McIntyre, Glenda	Montoya, Percy	North, Lisa	Patterson, Catherine
McKay, Andrea	Moore, Leonie	Notaras, K	Paulissen, Trish
McKay, Ingrid	Moore, Pauline	Nuzum, Affie	Pavey, Brenna
Mckechnie, Tanya	Moore, Susanna	O'Brien, Lucy	Pavincich, Anna
McKenzie, Susan	Moran, Linda	O'Callaghan, Casey	Payne, Karen
McKeown, Maxwell	Moran, Sue	O'Carroll, Nadia	Pearce, Sara
McLaughlin, Trevor	Morgan, Starla	O'Driscoll, Maeve	Pearson, Simon
Mclean, Debi	Morris, Peter	O'Gorman, Tracy	Pepper, Marie
Mclean, Deborah	Morrison, Katrina	O'Keefe, Lucy	Perera, Ravin
McMartin, Kyle	Morton, M	O'Leary, Jan	Perera-Schulz, Dharani
McMurray, Patricia	Moss, Anita	O'Neill, Amanda	Perkins, Denise
McNally, Kyale	Moss, Deirdre	O'Neill, Tee	Perkins, Margy
McPharlin, Danielle	Mullen, Tim	O'Reilly-Briggs, Karen	Perks, Caroline
McVeigh, Christine	Mullins, Colleen	O'Sullivan, Brenda	Perks, Mark
Medway, Judy	Mulo, Michelle	O'Toole, Dawn	Perne, John
Meffan, Liv	Mulrooney, Vyonne	Obern, Paul	Persen, Maree
Meikle, Renee	Munday, Jill	Olive, Alicia	Peura, Anita
Meischke, Roger	Murphy, Paul	Ollerenshaw, Helen	Pfitzer, Karen
Menkarska, Anetta	Murphy, Tamara	Onrust, Judith	Phelan, Grainne
Mentis, Katrina	Murray, Lauren	Ornafa, Jolanta	Phelps, Wendy
Mercanti, Susanne	Musa, Nora	Orr, Marilyn	Phillips, Sheila
Mercer, Cassie	Mysakowec, Zenio	Ortega, Vivienne	Pickersgill, Katie
Merifield, Bretta	Neal, Jamie	Oseckas, Timothy	Pin, Marco
Merriman, Kel	Neal, Warwick	Oxley, Meron	Pinfold, Andrew
Merz, Stephanie	Nebel, Antje	P, Carolyn	Pirvu, Florian
Michael Ryan, Paul	Neckebroeck, Anne-Marie	Pacey, Malcolm	Plan, V
Michielsen, Serena	Nel, Melanie	Paget, Siobhan	Plato, Kim
Mihajilo, Sanja	Neven, Tracy	Paine, Annette	Polo, Asta
Mihelic, Mandy	Nevin, Jan	Palmer, Adrienne	Poole, Daniel
Miller, Caroline	Newman, Debra	Palmer, Diana	Poole, Martha
Miller, Sue	Newnham, Christine	Palmer, Robert	Poole, Roslyn
Miller, Wendy	Nibock, Karla	Pantle, Maree	Porcelli, Maureen
Miller-Gilich, Hayley	Nichol, Susan	Park, Cathy	Poropat, Paula
Mirenda, David	Nicholls, Donna	Parker, Barry	Porret, Martine
Miskec, Robert	Nicolle, Bernice	Parker, Judith	Potter, Joanne
Miskec, Robyn	Nielsen, Kate	Pask, Deborah	Potter, Kim
Mitchell, Elizabeth	Nigh, Justin	Paterson, Chris	Potter, Rachel
Mody, Jack	Nodlex, Alison	Paterson, Joanne	Pound, Sally
Moeller, Robert	Nolan, Alexandra	Paterson, Krista	Povey, Kirsten
Money, Catherine	Norris, Geraldine	Paterson, Norma	Powell, Melissa

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Table A.2 (continued)

<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>
Prasad, Noel	Robinson, Brenda	Scalon, Janis	Simon, Tam
Priest, Pamela	Robinson, Tony	Scanu, Louella	Simpson, Lorma
Prince, Karole	Roden, Kara	Schacht, Timothy	Simpson, Toni
Pugh, Kylie	Rodriguex, Carolina	Scheer, Robert	Sinclair, Natalie
Purdom, John	Roetman, Louise	Schloffer, Judith Lee	Singh, Jasdev
Quinlan, Louise	Roex-Hatijiema, Heleen	Schmidthall, Adela	Sircar, Sanjay
Quinn, Trish	Roggiero, Geri	Schofield, Sue	Sizer-Robertson, Layla
Radnor, Fran	Rohov, Gloria	Schou-Hansen, Bodil	Skiba, Zofia
Raine, Belle	Roll, Ron	Scott, Danielle	Skinner, Rowena
Ramos, Paul	Rose, Maggie	Scott, David J	Skovbo, Geert
Randhawa, San	Rose, Paula	Scott, Karen	Skubevska, Tracy
Rawling, Lisa	Rose, Ruth	Scott, Katrina	Sloan, Chris
Rawlings, Susan	Ross, Kim	Scott, Marion	Smit, Robyn
Raymond, Chris	Rowan, Stephanie	Scott, Rebecca	Smith, Bruce
Reading, Kay	Rowe, Rob	Searles, Frances	Smith, Celia
Ready, Mel	Rowlinson, Ben	Seetharam, Grama	Smith, Chloe
Ream, Sokunthea	Rowntree, Trevor	Sellers, Kim	Smith, Ken
Reay, Debby	Rudan, Jacqueline	Selmes, Christine	Smith, Lauren
Recio, Edna	Rugari, Emma	Settree, Joe	Smith, Marg
Redden, M	Ruggeri, Catherine	Shakespeare, Lisa	Smith, Tash
Redmond, Kim	Ruiz, Fleur	Shannon, Lara	Solomon, Stacey
Redwood, Jill	Rushton, Louise	Sharma, Devesh	Solyom, Hilton
Regal, David	Russell, Penny	Sharma-Wing, Kamala	Somerville, Toby
Reich, Caroline	Ruuska, Renee	Sharpe, Belinda	Soutter, Sammie
Reichstein, Elizabeth	Ryan, Deborah	Shaw, Robert	Spencer, Kathy
Reid, Julia	Ryan, Lisa	Shead, Merril	Spillane, Brenda
Reidy, Natalie	Sagar, Colin	Shearn, Ashleigh	Spiroski, Kate
Reynolds, Annette	Sakellis, Sophia	Shearn, Jessica	Splatt, Drew
Rhoden, Clare	Salerno, Antonietta	Shearn, Kimberley	Spooner, Mark
Rice, Nigel	Samp, Cecelia	Shearn, Robert	Spring, Julie
Richards, Michael	Samuel, Gerry	Shearn, Tracey	Squires, Simone
Riddle, Kylee	Sanderson, Luba	Sheikh, Shahzad	Stampfli, Michelle
Ridolfi, Kristine	Santomingo, Patricia	Shepherd, Annabel	Stan, Talila
Ringgaard, Line	Santoro, Loredana	Shering, Virginia	Starbuck, Sandie
Ristevski, Sonja	Santos, Orlita	Shingles, Bernadette	Steel, Jo-Anne
Rivkin, Jordan	Santrucek, Vanessa	Shlisselberg, Aviva	Stefanidis, Helen
Roberts, Anne	Sardelis, Helen	Siano, Nizza	Stein, Russell
Roberts, Ilona	Sargent, Richard	Siaw, Esthew	Stephens, Helen
Roberts, Jennifer	Saunders, Robin	Siebel, Jackie	Stephens, Lyndall
Robertson, Jessica	Scaife, Kirsty	Simeonova-Hopkins, Lyubka	Stephenson, Sally

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Table A.2 (continued)

<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>
Stetner, Nell	Thiele, Mari	Varga, Patricia	Welsh, Kyrrie
Stevenson, Leah	Thomas, Patrick	Vasilikakis, Moska	Welsh, Lara
Stewart, Darren	Thompson, Dekotah	Veverka, Charlene	Welsh, Terence
Stewart, Jan	Thompson, Lori	Vilas, Vic	Wheatley, Gillian
Stewart, Jennifer	Thomson, Bruce	Vincent, Kate	Whiley, Carlos
Stewart, Roger	Thomson, Christine	Vincent, Terri	Whitbread, Bijou
Stewart, Sasha	Thomson, Pip	Vinyl, Venus	Whitbread, Marilyn
Stockdill, Stephanie	Timothy, Maria	Vizard, Diana	White, Anna
Stones, Sheila	Timpano, Luigi	Vlahos, Pam	White, Glenda
Straney, Johanna	Tims, Tracey	Wads, Elizabeth	White, Karen
Strano, Timothy	Tobin, Meryl	Wahl, Nava	White, Veronica
Streiff, Meghan	Tod, Diana	Wakeman, Kellan	Whitemore, Paul
Strodl, Sue	Tomaszewski, Melissa	Wales, Debbie	Wichgers, Julie
Subramanian, Palaniappan	Tomkins, Diana	Walker, Debra	Wijsman, Suzanne
Suffredini, Linda	Topolnjak, Sue	Walker, Julie	Wilcox, Julian
Sullivan, Carol	Toppenberg, Jilly	Wallis, Hayley	Williams, Freddie
Sullivan, Rachel	Torrance, Angela	Walsh, Catherine	Williams, Jocelyn
Summerton, Niki	Toy, Deb	Walsh, David	Williams, Robyn
Surpless, Edward	Tremain, Charlotte	Walters, Corie	Williams, Rodney
Susskind, Anne	Trengove, Jane	Walton, Kate	Williams, Wendy
Sussman, Rachel	Trkulja, Snezana	Wanmar, Susan	Williamson, Carlie
Suthern, Kerry	Tsacalos, Katerina	Wanmer, Susan	Williamson, Rachel
Swiss, Sue	Tsoulia, Joanna	Wannell, Norma	Willis, Barbara
Sydenham, Karen	Turner, Paul	Ward, Caroline	Willson, Matt
Sykes, Frank	Turner, Tricia	Waring, Suzanne	Wilson, Anne
Symes, Jean	Twemlow, Brooke	Warrender, Blaze	Wilson, Elaine
Tabart, Melissa	Tyler, Mitchell	Watson, Ian	Wilson, Robert
Tampalini, Alisha	Udawela, Ishara	Watson, Lisa	Winslow, Kimberley
Tanner, Mark	Ustrnul, Rachel	Watson, Madison	Wisch, Anita
Tarrant, Kay	Valastro, Maria	Watson, Tahlia	Witt, Alice
Tate, Tara	Valentine, Alison	Watt, Carol	Wong, Ada
Tatton, Julie	Valentine, Sarah	Watterson, Linda	Wong, Houston
Taylor, Ellie	van der Kaay, Darrin	Watts, Matthew	Wood, Allan
Taylor, Lybnn	van der Kaay, Suzi	Weatherall, Yasmine	Wood, Becky
Taylor, Lynne	van der Kley, Kim	Webb, Ann	Wood, John
Taylor, Narelle	van der Poel, Renee	Webb, Karl	Wood, Matthew
Taylor, Sharyn	van der Wielen, Cynthia	Webster, Bernadette	Woodberry, Des
Tee, Richard	van der Wolk, Tanie	Weir, I	Woodberry, Julie
Tennent, Amanda	van Leeuwen, Henk	Weiss, George	Woodbury, Susan
Thambiratnam, Sherita	van Tol, Maud	Wells, Margaret	Wooldridge, Kellie

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Table A.2 (continued)

<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>	<i>Submitter Name</i>
Woolley, Sharron	Wright, Sally	Yardi, Teresa	Zeman, Belinda
Wray, Belinda	Wright, Wendy	Yeaman, Vicki	Zib, Martina
Wren, Pamela	Wyatt, Christopher	Young, Ann	Zin Wong, Wai
Wrench, Jessica	Wyers, Cathryn	Young, Lisa	Zusak, Mika
Wright, Elizabeth	Wyeth, Heidi	Young, Mikaela	Zuvela, Conchetta
Wright, Gordon	Y, Misa	Yuncken, Rebecca	Zylmans, Suzanne
Wright, Natalie	Yan, Edmond	Yusuf, Natasha	

Table A.3 Numbered brief submissions

<i>Participant</i>	<i>Submission number</i>	<i>Participant</i>	<i>Submission number</i>
Albrecht, Jane	1	Bretherton, Emily	41
Anderson, Mal	2	Brewer, Anna	42
Anderson, Melissa	3	Bridgman, Claire	43, 44
Andrews, Peter & Karen	4	Brittliiff, Rachel	45
Anrep, Cheree	5	Broadbent, Deborah	46
Anthony, Ann	6	Bronte, Joanne	47
Antoine, Sue	7	Brown, David	48
Archer, Paul	8	Brown, GRAEME	49
Arena, Carmel	9	Buchanan, Sienadune	50
Armstrong, Mike	10	Buckley, Robert	51
Ashworth, Linda	11	Buckman, James	52
Atkinson, Margaret	12	Bull-Collins, Sheryl	53
Avenell, Kerry	13	Burton, Nicole	54
Baker, Pamela	14	Buttrose, Gayle	55
Barnes, Angela	15	Calleia, Carole	56
Barnes, Stephen	16	Cannon, Ian	57
Bateson, Glenda	17	Cansdell, Lesley	58
Barron, Elizabeth	18	Caputo, Renee	59
Bavich, Maddison	19	Carolane, Sue	60
Bavich, Trish	20	Cavallaro, Margaret	61
Bell, Brian	21	Cavallaro, Michael	62
Bell, Jennifer	22	Chaiwan, Sahaphap	63
Bennett, Eliza	23	Chakos, Sue	64
Benson, Denise	24	Chambers, Fran	65
Bethune, Shirley	25	Chan, Sonya	66
Bignell, Nicola	26	Cheah, Kim	67
Bignell, Sharyn	27	Chynoweth, Jodie	68
Bilik, Michaela	28	Clark, Elizabeth	69
Blatchford, Trevor	29	Clark, Maddison	70
Boettcher, Denise	30	Clarke, Sharon	71
Bond, Graham	31	Coggin, Melanie	72
Bonner, David	32	Coleman, Robyn	73
Booth, Anne	33	Collins, Karen	74
Bourke, Elizabeth	34	Coman, Jenny	75
Bourke, Lyndell	35	Connelly, Elizabeth	76
Bowen, Amy	36	Connolly, Fiona	77
Boyle, Odette	37	Conroy, Lorraine	78
Bozicevic, Julie	38	Cooke, Robert	79
Bradbury, Susan	39	Cooper, Carolyn	80
Bradley, Irina	40	Cooper, Sylvia	81

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<i>Participant</i>	<i>Submission number</i>	<i>Participant</i>	<i>Submission number</i>
Copeland, Julie	82	Faerch, Niels	122
Corbett, Desley	83	Famlonga, Julia	123
Cosmas, Dallas	84	Farquharson, Margaret	124
Coutts, Jaymie	85	Field, Terri	125
Coward, Judith	86	Fiorita, Rocco	126
Crabbe, Mariea	87	Fleming, Sue	127
Creelman, Leslie	88	Flisar, Ales	128
Croft, Beryl	89	Foley, Ann	129
Crump, Acacia	90	Forbes, Louise	130
Dallwitz, Eileen	91	Ford, Patricia	131
Dalton, Rebecca	92	Foster, Jay	132
Dantas, Magda	93	Fox, Phill	133
Dartnell, Victoria	94	Fraser Phd., Barbara J.	134
Dassanayake, Anusha	95	Fraser, Todd	135
Dassanayake, Rasika	96	Friego, Gianni	136
Davies, Shelley	97	Fung, Cat	137
Daws, Fiona	98	Galanti, Max	138
De Valliere, Ann Michelle	99	Gamon, Shelley	139
Deacon, Andrew	100	Gay, Sheryl	140
Deguchi, Junko	101	Gerber, Perry	141
Dengate, Tracey	102	Gibberd, Alison	142
Devine, Gillian	103	Gibson-Smith, Liza	143
Diss, Michelle	104	Gibson, Johanna	144
Dolden, Helen	105	Gill, Inderpreet	145
Douglas, Joanne	106	Gillis, Robin	146
Douglass, Anne	107	Gits, Terri	147
Doyle, Aidan	108	Glasby, Elaine	148
Drake, Amanda	109	Glaum, Frederick	149
Dresser, Quentin	110	Goff, Jennifer	150
Du Preez, Tanya	111	Golding, Ken	151
Duigan, Virginia	112	Golding, Virginia	152
Dunstan, Karen	113	Gonapinuwala, Chris	153
Earnshaw, Patricia	114	Gordon-Lee, Amanda	154
Eastman, Eileen	115	Gossell, Elizabeth	155
Eberle Riedl, Regina	116	Gough, Lorraine	156
Edwards, Anne	117	Govito, Stacey	157
Ellims, Sandra	118	Grant, Jo	158
Ellis, Rhonda	119	Gray, Bianca	159
Ellis, Ross	120	Gray, Chris	160
Evenson, Marilyn	121	Gray, Kristie	161

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<i>Participant</i>	<i>Submission number</i>	<i>Participant</i>	<i>Submission number</i>
Green, Carole	162	Johnston, Michelle	204
Green, Rhonda	163	Jones, Melissa	205
Greenwood, Jennifer	164	Jonson, Lauren	206
Gregg, Vigi	165	Kakos, Joanne	207
Grinter, Cherie	166	Kasepuu, Jan	208
Grose, Kevin	167	Kavanagh, Bill	209
Groves, D	168	Kazas, Nicoletta	210
Gruessing, Lynda	169	Kazis, Anita	211
Haarsma, Vanessa	170	Kee, Brenda	212
Haggie, Esme	171	Keelan, Natalie	213
Hamilton, Dawn	172	Kelly, Michelle	214
Hamilton, Margaret-Ann	173	Kenyon-David, Dominic	215
Hamilton, Phillip	174	Khoury, Rhonda	216
Handolias, Despina	175	Knight, Christine	217
Harding, Rebecca	176	Kohler, William Lee	218
Hayler, Marigold	177	Kowald, Daniel	219
Haynes, Taryn	178, 179	Krahn, Uli	220
Haywood, Nicola	180	Kulka, Susan	221
Hedges, Louise	181	Kwasner, Martin	222
Hedley, Carol	182, 183	Lal, Nikilesh	223
Helali, Sepi	184	Langford, Jennifer	224
Herring, Tim	185	Lanyon, Vic	225
Hicks, Tracey	186	Lawson, Jeannie	226
Hierzer, Glenys	187	Leder, Peggy	227
Higginson, Roger	188	Lee, Chien Ju	228
Hill, Ginger	189	Lee, Jrsse	229
Hoffman, Val	190	Letho, Cara	230
Hogg, Jenny	191	Liebergreen, Christina	231
Holmes, Glen	192	Lilley, Evie	232
Homer, Steve	193	Litchfield, Sue	233
Hutley, Kevin	194	Longva, Trisha	234
Hynes, Granklin	195	Loughton, Dorothy	235
Itzstein, Penelope	196	Lowe, Charles	236
Jackson, Maureen	197	Luc, Dianne	237
Jackson, Reece	198	Lucas, Nicholas	238
Jackson, Rosie	199	Luitingh, Gail	239
Jacobs, Kelly	200	Lupton, Benjamin	240
Jacques, Karen	201	Luxford, Jeanette	241
Jeffries, Catherine	202	Mainiero, Joanne	242
Johansen, Nicole	203	Manos, Helen	243

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<i>Participant</i>	<i>Submission number</i>	<i>Participant</i>	<i>Submission number</i>
Mantellato, Ray	244	Murray, Phil	284
Marquette, Jill	245	Nair, Shoba	285
Mason, Helen	246	Nathanielsz, Jeni	286
Martin, Jade	247	Neller, Karen	287
Martinec, Kvetoslava	248	Neller, Kaye	288
Massey, Jennifer	249	Nelson, Kerry	289
Masters, Christopher	250	Newton, Jeanette	290
Mattocks, Julie	251	Nilsen, Angela	291
Maybury, Chris	252	Nilsson, Birgitta	292
Mccallum, Iain	253	Nitschke, Kasey	293
Mccormack, Daria	254	Nixon, Emily	294
Mcdonald, Patrick	255	Nolan, Nicole	295
Mcdonald, Tracey	256	Norman, Josephine	296
Mcdonnell, Rosemary	257	Norris, Christine	297
Mcdonnell, Rosie	258	O'brien, Sarah	298
Mcgregor, Jordan	259	Oelrichs, Claire	299
Mckay, Jennifer	260	Olding, Roz	300
Mckenzie, Fiona	261	Oliver, Jodie	301
Mcmahon, Jan	262	Onrust, Judith	302
Mcnamara, Pat	263	Orsos, Annetjie	303
Meecham, Jemma	264	Owen, Shirley	304
Meldrum, Barbara	265	Palmer Cordingley, Magda	305
Meli, Suzanne	266	Pankhurst, Linda	306
Mensinga, Dean	267	Paras, OLGA	307
Metcalfe, Jennette	268	Parsons, Alexandra	308, 309
Millanta, Dane	269	Parsons, Sita	310
Miller, Lee	270	Pasqua, John	311, 312
Miller, Vivienne	271	Paybe, Shree	313
Mirovics, Silva	272	Pearce, Briony	314
Mitchell, Annette	273	Peat, Nora	315
Mizan, Ash	274	Perkins, Geraldine	316
Money, Catherine	275	Peters, Annette	317
Montoya, Diane	276	Petherick, Vick	318
Morgan, Sonja	277	Pettifer, Dimity	319
Morris, Jim	278	Phillips, Adam	320
Morrison, Sue	279	Photios, Solon	321
Morton, Jules	280	Plano, Bart	322
Muffet, Deborah	281	Plano, Corinne	323
Murphy, Sandy	282	Plato, Laurent	324
Murray, Cristy	283	Plover, Sandra	325

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<i>Participant</i>	<i>Submission number</i>	<i>Participant</i>	<i>Submission number</i>
Poole, Aneta	326	Sharp, Leslee	366
Poros, Aleksandra	327	Sheens, Robert	367
Porter, Ray	328	Sheldrake, Beverley	368
Press, Kerry	329	Sheppard, Ainsley	369
Price, Lynn	330	Shinn, Sharon	370
Prince, Elizabeth	331	Shotwell, Andi	371
Prince, Libby	332	Simpson, Ross	372
Quinn, Clare	333	Slater, Hayley	373
Radisich, Jacqueline	334	Slight, Julie	374
Raffelt, Patricia	335	Smith, Jane	375
Rainbird, Carol	336	Smith, Victoria	376
Rajasekharuni, Ravi	337	Snell, Graham	377
Rangan, Marilyn	338	Sobey, Vicky	378
Rayner, Selwyn	339	Southern, Tara	379
Reed, Sandra	340	Stack, Josephine	380
Rhodes, Stephen	341	Steiner, Ulrich	381
Ring, Charlie	342	Sternfeld, George	382
Rippin, Phay	343	Stevens, Allison	383
Ristitisch, Donna	344	Stewart, Darren	384
Roberts, Dana	345	Stewart, Tracey	385
Roberts, James	346	Stickler, Jayne	386
Roberts, Michael	347	Stobbe, Eve	387
Robinson, Narelle	348	Stokeld, Elisabeth	388
Rohann, Kate	349	Svaton, Jakub	389
Ross, Barbara	350	Swift, Jacqueline	390
Rowe, Penny	351	Szwec, Jordan	391
Rudgley, Joan	352	Tapp, Barrie	392
Russell, Rupert	353	Taylor, Lenore	393
Ryan, Deborah	354	Tennant, Irina	394
Rzic, Marina	355	Theaker, Nigel	395
Sagarzazu, Maria	356	Thompson, Amanda	396
Sahin, Erdinc	357	Thompson, Paul & Victoria	397
Sanders, Emma	358	Thornton, Liz	398
Sands, Briony	359	Tolnay De Hagymassy, Ezequiel	399
Sargent, Sue	360	Torenbeek, Patricia	400
Sarjeant, Marie-Louise	361	Tuivailala, Christine	401
Schleen, Ursula	362	Tull, Nicola	402
Schneider, Vanessa	363	Turner, Susan	403
Schwark, Theresa	364	Urquhart, Cheryl	404
Seater, Jo-Anne	365	Vasilevskis, Heidi	405

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<i>Participant</i>	<i>Submission number</i>	<i>Participant</i>	<i>Submission number</i>
Vliek, Tracy	406	Williams, Caroline	427
Wallace, Kim	407	Williams, Marilyn	428
Wallace, SCOTT	408	Willis, Samantha	429
Walters, GRAEME	409	Wilson, James	430
Warne, Victoria	410	Wilson, Vivien	431
Warren, Kerrie	411	Wilson, Yvonne	432
Warrender, Pamela	412	Winter, Karsten	433
Watson, Lyn	413	Withington, Nicole	434
Watts, Martin	414	Wodzak, Mango	435
Waycott, Susan	415	Wong, George	436
Wessling, Graham	416	Wood, Caroline	437
Westerman, Bill	417	Wood, Jordan	438
Weston, Ronnie	418	Woodford, Dion	439
Whitby, Mark	419	Wright, Vern	440
White, Charlotte	420	Wyatt, Gail	441
White, Dorothy	421	Wynne, Mike	442
White, Necia	422	Yamashita, Misa	443
White, Susan	423	Zagar, Jennifer	444
Whitehead, David	424	Zahnow, Tanya	445
Whiteman, Wendy	425	Zarew, Stephanie	446
Whiteoak, David	426		

Table A.4 Visits

Participant

New South Wales

Accord Group
Australian Chicken Meat Federation (ACMF)
Australian Farm Institute
Australian Lot Feeders' Association (ALFA)
Choice Australia
Dubbo City Council
Environmental Defenders Office NSW (NSW EDO)
Fletcher, Roger
Gaeta, Guy
LiveCorp
McClymont, Daniel
Meat and Livestock Australia (MLA)
Munro, Scott
Murray Irrigation
Nestle
NSW Department of Planning & Environment
NSW Department of Primary Industries - Western Lands Office
NSW Department of Primary Industries
NSW Farmers Association
NSW Irrigators' Council
NSW Local Land Services, Central West
NSW Roads and Maritime Services
Pasqual, Trish
Reynolds, Bruce
West, Peter

Victoria

Animal Welfare Science Centre - University of Melbourne
Animals Australia
Australian Charities and Not-for-profit Commission (ACNC)
Australian Dairy Farmers
Citrus Australia
Cooke, Dr John
Dairy Australia
Gene Ethics
Graeme, Philip
Harmer, Ronda and Harmer, Allan
Lambert, Annette
Madge Australia
Mansell, Anne
Mildura Development Corporation
Mildura Fruit Company

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Table A.4 (continued)

Participant

Victoria (continued)

Mildura Rural City Council

Millar, Dr. Hugh

Natural Resource Management South

Safe Work Australia

Victorian Department of Environment, Land, Water and Planning (DELWP)

Victorian Department of Economic Development, Jobs, Transport and Resources (DEDJTR)

Victorian Department of Treasury and Finance (DTF)

Victorian Farmers Federation (VFF)

Victorian Red Tape Commissioner

Queensland

Acton, Jenny

Acton, Tory

AgForce Queensland

Atkins, Larry

Australian Cane Farmers Association (ACFA)

Australian Chicken Growers Council (ACGC)

Brosnan, Richard

Cotton Australia

Dunn, Matthew

Findlay, Melanie

Fitzroy Basin Association

Growcom

Kelly, Glen

Kime, Emma

Longworth, Prof. John

Norman, Kevin

National Heavy Vehicle Regulator (NHVR)

Nicholas, Ian

Palmer, Rick

Queensland Department of Agriculture and Fisheries

Queensland Department of Environment and Heritage Protection (EHP)

Queensland Department of Natural Resources and Mines (DNRM)

Queensland Department of the Premier and Cabinet

Queensland Department of Transport and Main Roads

Queensland Farmers Federation (QFF)

Queensland Productivity Commission

Smith, Ellen

Sunderland, Lee

Tropical Pines Pty Ltd

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Table A.4 (continued)

Participant

South Australia

Agricultural Bureau of South Australia
Bio Security
Food South Australia
Primary Producers SA (PPSA)
South Australian Department of Environment, Water and Natural Resources

Western Australia

Australian Industrial Hemp Alliance
Foodwatch WA
Network of Concerned Farmers
Pastoral Graziers Association of Western Australia (PGA)
Wellard
Western Australian Department of Agriculture and Food
Western Australian Department of Lands
Western Australian Department of Premier and Cabinet
Western Australian Farmers Federation (WAFarmers)
Western Australian Pork Producers Association

Tasmania

Fruit Growers Tasmania Inc. (FGT)
Primary Employers Tasmania (PET)
Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE)
Tasmanian Department of State Growth (DSG)
Tasmanian Farmers & Graziers Association (TFGA)
Tasmanian Institute of Agriculture (TIA)

ACT

Animal Health Australia
Animal Medicines Australia
Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES)
Australian Competition and Consumer Commission (ACCC)
Australian Livestock Exporters' Council (ALEC)
Australian Pesticides and Veterinary Medicines Authority (APVMA)
Australian Tax Office
Byron, Neil
Craik, Wendy
CropLife Australia
CSIRO
Department of Agriculture and Water Resources (DAWR)
Department of Industry, Innovation and Science (DIIS)
Department of the Environment
Food Standards Australia New Zealand

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Participant

ACT (continued)

Kerin, Hon John

Kompas, Prof. Tom

McNamara, Jason

Murray-Darling Basin Authority (MBDA)

National Farmers' Federation (NFF)

New Zealand High Commission

Office of Best Practice Regulation (OBPR)

Office of the Gene Technology Regulator (OGTR)

Office of the Chief Scientist

Safe Work Australia

Treasury

New Zealand

Australian High Commission, Wellington

Federated Farmers of New Zealand

Horticulture New Zealand

Land Information New Zealand (LINZ)

Ministry for the Environment

Ministry of Business, Innovation and Employment (MBIE)

Ministry for Primary Industries, Beef and Lamb New Zealand

Ministry of Transport

Motu

New Zealand Productivity Commission

The Treasury, New Zealand

Worksafe, New Zealand

Table A.5 Public hearings

<i>Individual or organisation</i>	<i>Transcript Page Nos</i>
Perth – 16 August 2016	
Chris Tallentire MLA	4-13
Prof. Mike Jones	14-20
Pastoralists and Graziers Association of WA	21-34
Australian Industrial Hemp Alliance/Industrial Hemp WA Association	34-48
Foodwatch WA	48-60
Meg Wilson	60-70
WA Pork Producers Association	70-84
WAFarmers	85-101
Network of Concerned Farmers	102-113
Steve Chamarette	113-115
Doug Hall	115-118
Melbourne – 17 August 2016	
Australian Industrial Hemp Alliance	122-133
Jan Kendall	133-144
Australian Property Institute	145-158
Craiglee Vineyard	158-169
Animal Justice Party Victoria	169-181
Farmer Power	181-198
Croplife Australia	199-201
Gene Ethics	202-221
Madge Inc	221-234
Dr Nina McCormick	235
Wagga Wagga – 18 August 2016	
RiceGrowers' Association of Australia	239-262
Sydney – 19 August 2016	
World Animal Protection	266-276
Cotton Australia	276-291
GM Cropwatch	291-301
Animals Australia	301-314
Friends of the Earth	315-336
Vegan Australia	336-346

(Continued next page)

Table A.5 (continued)

<i>Individual or organisation</i>	<i>Transcript Page Nos</i>
Canberra — 22 August 2016	
Australian Pork Limited	351-364
RSPCA Australia	364-378
Office of the Gene Technology Regulator	378-388
Australian Veterinary Association	389-401
National Farmers' Federation	401-413
Croplife Australia	413-423
Paul Fitzgerald	423-437
Tyran Jones	437-449
Prof. Jill Gready	449-464
Graingrowers Limited	464-479
Brisbane — 24 August 2016	
Property Rights Australia	482-495
Wilma Sugar	496-509
Australian Cane Farmers Association	510-525
Institute for Agriculture and Environment, University of Southern Queensland	525-532
Queensland Canegrowers	532-544
National Heavy Vehicle Regulator	545-557
Australian Food Sovereignty Alliance	572-580
Sandra Baxendel	581-591
Queensland Sugar Limited	592-605
Tully Sugar Limited	605-611
Queensland Regional NRM Group Collective	
Townsville — 25 August 2016	
Canegrowers Herbert River	618-631 631-637
Chris Canavan	
Frances O'Callaghan	637-650
Jonathan Pavetto	651-662
Pioneer Canegrowers	662-675
Canegrowers Burdekin	676-686
Cairns Regional Canegrowers	686-695
Pioneer Growers	695-697
Andrew Rea	697-707
Limestone Association of Australia	707-717
Tom Callow	717-720
Canegrowers Innisfail	720-734

(Continued next page)

Table A.5 (continued)

<i>Individual or organisation</i>	<i>Transcript Page Nos</i>
Hobart — 30 August 2016	
Macquarie Franklin	738-749
Dr Dan Norton AO	749-759
Poppy Growers Tasmania Incorporated	759-777
Tasmanian Greens	777-793
Tasmanian Farmers and Graziers Association	793-812
NRM South	813-820
Lindsay Bourke	821-833
Tasmanian Red Meat Industry Council	833-841

B A brief history of statutory marketing in Australian agriculture

The evolution of statutory marketing boards in Australia was comprehensively reviewed by Watson and Parish (1982) and Lloyd (1982), and later by the Industry Commission (IC 1991) and the Productivity Commission (Gropp, Hallam and Manion 2000). The first statutory marketing arrangements were imposed on sugar in 1902 and dried fruit in 1904 to compensate for the mandated use of costly European labour. Most statutory marketing boards in Australia evolved following World War I to raise and stabilise prices and farm incomes, protect producers from the market power of traders and compensate farmers for tariffs on inputs (Lloyd 1982; Watson and Parish 1982). Legislation enabling statutory marketing boards was first passed in Queensland in 1922, New South Wales in 1927, Victoria in 1935 and Tasmania in 1945, with the other states legislating on a commodity-by-commodity basis.

By 1939, most agricultural industries in Australia were protected by some form of statutory marketing (Lloyd 1982). In 1982 Australia had 11 marketing boards operating under Commonwealth legislation and more than 50 operating under state legislation (Watson and Parish 1982) (table B.1).

Statutory marketing is a package of inter-related regulations that compel farmers to sell to a single marketing agent, protect industries from international competition, and set domestic prices above export parity (Watson and Parish 1982). A degree of complexity made them costly to administer with the burden of these administrative costs being met by taxpayers and consumers. A raft of supporting legislation was required to establish and maintain statutory marketing boards including:

- procedures for setting up marketing boards
- tariffs, quotas and other restrictions on trade to protect marketing boards from international competition
- legislation to protect marketing boards from legal challenges
- exemptions for marketing boards from trade practices and consumer protection legislation
- subsidised finance for marketing boards (Watson and Parish 1982).

Table B.1 Statutory marketing authorities by commodity and state
1980

	<i>Cwth</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas</i>
Wool	•						
Meat/lamb	•					•	
Fish		•		•			
Dairy/milk	•	•	•	•	•	•	•
Butter				•			
Cheese				•			
Eggs	•	•	•	•	•	•	•
Honey	•						
Wheat/grains	•			•		•	
Barley		•	•	•	•		
Oats		•					
Maize		•		•			
Sorghum		•		•			
Rice		•		•			
Sugar				•			
Tobacco	•	•	•	•			
Cotton				•			
Peanuts				•			
Oilseeds		•					
Potatoes					•	•	•
Navy beans				•			
Ginger				•			
Canned/soft fruit	•						•
Fresh fruit				•			
Apples and pears	•						•
Bananas		•					
Citrus		•	•		•		
Lemons		•					
Wine/grapes	•	•					
Dried fruit	•	•	•		•	•	
Ryegrass							•

Source: Vinning (1980).

Statutory marketing boards were usually established after a referendum of producers, and performed the basic processing and trading functions of cooperatives (Watson and Parish 1982). These included consolidating production from multiple farms throughout the year into supply chains providing consistent quantities and quality to realise economies of scale in processing. Pooling production also enabled statutory marketing boards to average prices and stabilise farm incomes.

Stabilising prices and incomes were key objectives of statutory marketing boards partly as a result of production risk arising from Australia's variable climate, and partly as a response to the volatility of export markets. The volatility of export markets was exacerbated by the then fixed exchange rate policies (Atkin et al. 2014; IC 1991). A supply response to booming agricultural prices towards the end of World War I led to dramatic falls in export prices in the mid-1920s. Concerns that this experience would be repeated following World War II formed the basis of arguments put forward to expand statutory marketing (Lloyd 1982). These concerns were realised during the Korean War when a surge in demand for wool in the United States coincided with a drought-induced drop in sheep numbers (Atkin et al. 2014) and the selling off of a wool stockpile that had accumulated during World War II (Richardson 2001). The consequent spike in wool prices and a fixed exchange rate sent Australia's terms of trade to their highest level to date, with significant impacts throughout the economy (Atkin et al. 2014).

Statutory marketing boards were originally seen as providing a public good service to remote and isolated agricultural producers. Remoteness, isolation and lack of marketing expertise were seen as placing farmers at a significant disadvantage in negotiating sales (Sapiro 1923). Large numbers of diverse and widely distributed producers tended to work against the voluntary formation of marketing cooperatives in many of Australia's agricultural industries (Lewis 1961). This was addressed by compelling producer participation in these cooperatives by law, such that they became known as 'compulsory cooperatives' (Watson and Parish 1982).

A feature of Australia's statutory marketing boards was that their activities went beyond the basic functions of cooperative marketing. In industries where conditions were conducive, tariff protection and import controls were used to divide domestic and international markets, and raise prices in domestic markets where demand was less responsive to price (Watson and Parish 1982). These measures added the protective effect of raising prices to the insurance effect of income pooling and the equalisation effect of average pricing. Internationally, this overall package of statutory marketing activities became known as 'orderly' marketing (Sapiro 1923). The Tariff Board was set up to advise the government on the level of assistance that should be provided to industry (Emmery 1999). The Tariff Board later became the Industry Assistance Commission (1974), the Industry Commission (1989) and the Productivity Commission (1998).

Later schemes including those for wheat and wool used government funds to guarantee a minimum export price. An argument used to sustain statutory marketing boards for these and other commodities was an ability to generate price premia by acting as monopolies in international markets (Gropp, Hallam and Manion 2000). Such arguments had little merit, as Australia was rarely a price maker in international markets.

Economic impacts of statutory marketing

The distortionary effects of statutory marketing by misallocating resources have long been recognised. According to Lewis (1967, p. 313) ‘price support and stabilisation policies have consistently tended to transfer resources to industries in which Australia’s competitive position is weakest’. To meet rural development goals such as increasing employment, statutory marketing tended to favour intensive dairy and cropping industries rather than the extensive industries for which Australia’s land resources provided a natural comparative advantage.

Rates of assistance varied considerably from little or no assistance for most broadacre crops (excluding wheat) to substantial assistance for tobacco, milk production, eggs, citrus, wine grapes and dried vine fruits (Gray, Oss-Emer and Sheng 2014; Lewis 1967). This encouraged resources to move from lightly assisted and more efficient industries to supported industries based on the returns that could be earned from assistance schemes rather than price signals in world markets (Gray, Oss-Emer and Sheng 2014; Wonder, Beynon and Hunt 1995).

The attraction to growers of stable prices and incomes was offset by a loss of autonomy over marketing and disincentives for innovation and entrepreneurship (Lewis 1961; Watson and Parish 1982). Compulsory statutory marketing provided a disincentive for farmers to seek new markets that would yield more than average returns (Gropp, Hallam and Manion 2000). Averaging meant that the price received by farmers did not reflect their individual managerial skill or effort (Watson and Parish 1982), creating a disincentive to innovate (PC 2000). Averaging and price support also undermined incentives for farmers to find better ways of managing production and price risk (Gray, Oss-Emer and Sheng 2014).

Attempts to stabilise commodity prices (and farm incomes) resulted in some perverse effects with irreversible consequences for Australia’s agricultural industries. A floor price scheme for wool introduced in 1973 initially appeared to help stabilise prices and incomes (Richardson 2001). However, during the 1980s the scheme shifted from a conservative floor price to a reserve price scheme. Purchases by the Australian Wool Corporation to maintain the reserve price and a significant decline in the global consumption of wool led to the rapid accumulation of 4.7 million bales by the early 1990s, which were not sold off until 2001 (ABS 2003). The subsequent collapse of world wool prices reduced the profitability of wool farming, and resulted in Australian sheep numbers falling from 177 million in 1989 to less than 70 million in the early 2000s, fundamentally altering Australia’s agricultural landscape (Nelson and Lawrance 2004).

The ability of marketing boards to raise domestic prices was limited by their control over production which, for example, could require marketing boards in several states to agree on production quotas (Lewis 1967; Watson and Parish 1982). In industries that were geographically concentrated, marketing boards could operate effectively as monopolies. In more diffuse industries there was a degree of competition between boards in different

states. As early as 1961, Lewis (1961, p. 2) observed that: ‘because of the large number of widely dispersed producers, voluntary organisation in the form of cooperative societies has failed to achieve the necessary conditions for effective implementation of two-price schemes’. Discriminatory pricing also meant that farmers received an average price that was higher than export prices, but lower than domestic prices. This created an incentive for individual growers to sell directly to domestic consumers at the higher domestic price, a strategy that inevitably drove domestic prices down towards export parity (Lewis 1961; Watson and Parish 1982).

Raising domestic prices to subsidise production increased the cost of food to consumers and created inequity between consumers and producers. The Industry Commission (1991) estimated that in 1988-89 statutory marketing arrangements for milk, sugar and rice raised consumer prices by 0.3 per cent, and taxed user industries and consumers of food by about \$550 million. This inequity could persist partly because the voice of consumers was diffuse and less well organised than the concentrated and well organised voice of statutory marketing boards (Watson and Parish 1982). Statutory marketing was also established in an era when there was ‘widespread acceptance of restrictionist economic philosophy and distrust of free markets ... ’ (Watson and Parish 1982, p. 328).

A more modern argument for maintaining statutory marketing boards as ‘single-desk’ exporters was the potential for monopoly selling to achieve higher export prices. However, the Commission (2000) found that maintaining a single desk exporter is not sufficient to guarantee monopoly power in export markets, due to competition from other exporters and an ability of consumers to substitute to other products. Higher export returns from the provision of specialised marketing services do not require monopoly power to realise.

There were also always questions about whether statutory marketing boards could perform the storage and marketing functions as efficiently as private businesses (Watson and Parish 1982). Pooling of transport and distribution costs encourages inefficient distribution and production which incurs relatively high costs. A lack of competition and choice of marketer can promote inefficient practices such as over-servicing and cost-padding by statutory marketing boards (Gropp, Hallam and Manion 2000).

Statutory marketing had a range of significant negative impacts on agricultural productivity, including on:

- innovation — average pricing undermines incentives for farmers to seek new and higher value markets
- risk management — income pooling and price support undermines incentives to manage risk
- resource allocation — resources flowed from less protected to heavily protected industries.
- effectiveness — statutory marketing boards had a limited ability to raise prices

-
- cost of administration — statutory marketing boards were administratively complex to establish and maintain
 - consumers — raising prices increases the cost of food to consumers
 - inefficient marketing — statutory power undermines incentives for innovative and efficient marketing (Gray, Oss-Emer and Sheng 2014; PC 2000).

Deregulation of Australian agriculture

Over time changes in production, technology and patterns of demand can significantly alter the structure of markets and reduce the need for regulation (Weimer and Vining 2015).

The economic and policy environment within which farm businesses operate has changed dramatically over the last 30 years (Gray, Oss-Emer and Sheng 2014). The Australian economy has been transformed by a series of economic reforms that exposed Australian industries to greater international and domestic competition. These reforms have increased the flexibility and productivity of the economy by enabling resources to flow to their highest value uses, resulting in significant improvements in agricultural productivity.

From the 1970s onwards, economic conditions began to change significantly from those in which statutory marketing arrangements were conceived. Examples of some of the economic changes that affected agricultural marketing included:

- deregulation and international linking of financial markets which lowered the cost of capital
- floating exchange rates which reduced price volatility
- lower levels of protection in general and on farm inputs
- improvements in the strength and coverage of trade practices legislation
- increased review and accountability of statutory business enterprises
- expansion of the agribusiness sector to fulfil roles previously performed by statutory authorities
- increased education and skill in the rural sector
- development of communication technologies and networks (Gropp, Hallam and Manion 2000; IC 1991).

From the 1990s onwards, multiple government reviews analysed the continued appropriateness, effectiveness and efficiency of statutory marketing arrangement (table B.2). This led to questions about whether the objectives of statutory marketing arrangements in terms of overcoming market failures remained valid, and whether other policy options could achieve residual objectives at lower cost.

- It was increasingly recognised that insulation of agricultural markets via trade protection increases price volatility on world markets (Anderson 2014). Reductions in

trade protection and industry assistance enabled farmers to respond more quickly to changing market signals, enabling supply to respond to demand and greatly reducing this source of price volatility. This was assisted by floating exchange rates that reduced the impact of price changes in other sectors of the economy on agricultural prices. Advances in transport and communication facilitated trade, enabling substitution between sources that reduced price volatility.

- The use of market power to raise domestic and export prices was increasingly ineffective as improvements in transport and communication increased competition in domestic and global markets.
- The consolidation of farms into larger commercial businesses and vertical integration of agricultural markets led to more direct marketing channels in domestic markets between farmers and retailers.
- The development of communication technologies combined with increasing skills levels and business orientation of commercial farms reduced the need for third party knowledge brokers.
- General reductions in tariffs and industry assistance removed the need for countervailing protection, underpinned by improvements in antidumping legislation.
- The use of market power to raise export prices was increasingly at odds with global negotiations under the World Trade Organization to reduce tariff and non-tariff barriers to trade.

Table B.2 Notable reviews of statutory marketing in Australia

<i>Year</i>	<i>Author</i>	<i>Title</i>
1990	Davis, L. (Chair) Department of Primary Industries and Energy	Review of the commonwealth primary industry statutory marketing authorities: Report to the Minister for Primary Industries and Energy
1991	Industry Commission	Statutory marketing arrangements for primary products
1998	Industry Commission	Microeconomic reforms in Australia: A compendium from the 1970s to 1997
1999	Productivity Commission	Impact of competition policy reforms on rural and regional Australia
2000	Productivity Commission	Single-desk marketing: Assessing the economic arguments
2005	Productivity Commission	Review of national competition policy reforms
2007	Productivity Commission	Annual review of regulatory burdens on business: Primary sector
2010	Productivity Commission	Wheat export marketing arrangements
2013	ABARES	Review of selected regulatory burdens on agriculture and forestry businesses
2014	ABARES	Australian agricultural productivity growth: Past reforms and future opportunities
2015	OECD	Innovation, agricultural, productivity and sustainability in Australia

Sources: Updated from Gropp, Hallam and Manion (2000); IC (1991) and PC (2010d).

The recent history of agricultural marketing reforms was summarised by Gray et al. (2014) (updated in table B.3). Gray et al. (2014) estimated that regulation-induced misallocation of resources reduced productivity growth in Australia's broadacre agricultural industries by 4.1 per cent per year between 1977-78 and 1989-90. Subsequent market reforms generated efficiency gains from the reallocation of resources that accounted for over a third (34.5 per cent per year) of productivity growth between 1989-90 and 1999-2000, and two-thirds (66.7 per cent per year) between 1999-2000 and 2009-10.

Table B.3 A summary of agricultural policy reform

<i>Decade</i>	<i>Commodity</i>	<i>Policy change</i>
1970s	Wheat	Move from guaranteed to stabilised prices; provision for 'grower to buyer' sales outside the pooling arrangements; home consumption price limited to wheat for human consumption and determined by a formula to take account of export prices
1980s	Dried vine fruits	End of price stabilisation arrangements in 1980
	Citrus	Decade-long phase down of tariffs from 30 to 5 per cent, beginning in 1986; state marketing boards amalgamated, reducing geographical barriers to competition
	Eggs	State-based production and pricing controls progressively withdrawn from 1989
	Sugar	Domestic administered price arrangements and export controls terminated by the Commonwealth in the late 1980s
	Wheat	Domestic market deregulated in 1989; grower levy fund introduced to replace the Commonwealth guarantee of Australian Wheat Board borrowing
1990s	Barley	Competition gradually introduced into domestic feed and malting barley marketing in South Australia and Victoria from 1998
	Dairy	Phased reductions in market support payments on export of dairy products
	Dried vine fruits	Commonwealth price equalisation levy and statutory equalisation of domestic sales removed in the early 1990s, as was the industry's exemption from section 45 of the Trade Practices Act 1974 (Cwlth) (which reduced the scope for collusive price discrimination)
	Horticulture	Underwriting scheme for apples and pears terminated in 1990
	Tobacco	Local Leaf Content Scheme and the Tobacco Industry Stabilisation plan ceased in 1995; withdrawal of vesting powers in 1995
	Sugar	Import tariffs and domestic price supports removed in mid 1997
	Wheat	Australian Wheat Board converted from statutory authority to a grower-owned company in 1999
	Wool	Reserve Price Scheme ceased in 1991

(Continued next page)

Table B.3 (continued)

<i>Decade</i>	<i>Commodity</i>	<i>Policy change</i>
2000s	Dairy	State-based controls over sourcing and pricing of market milk ceased in 2000; 9-year Dairy Industry Adjustment Package (DIAP) concluded in 2009
	Barley	South Australian single-desk arrangements terminated in 2007; Western Australian market deregulated in 2009 (allowing any number of licensed entities to export barley)
	Canola	Exports of canola and lupins deregulated in Western Australia in 2009 (traders no longer required to apply for licenses to export)
	Sugar	Queensland Sugar Limited lost its compulsory acquisition powers in 2006 and lost exemption from the Trade Practices Act in 2009
	Wheat	Bulk exports deregulated in 2008, meaning proposals to export bulk wheat no longer needed approval from the single-desk seller (Australian Wheat Board)
2010s	Rice	NSW Rice Marketing Board retains powers to vest, process and market all rice produced in NSW (about 99 per cent of Australian rice is produced in NSW)
	Potatoes	Western Australian Potato Marketing Corporation controls the supply of fresh table potatoes in that state
	Wheat	From 1 October 2014, port access for the bulk wheat export industry was regulated by a mandatory code of conduct administered by the Australian Competition and Consumer Commission
	Sugar	Queensland Parliament passes the <i>Sugar Industry (Real Choice in Marketing) Amendment Bill 2015</i> which has potential to regulate the options that sugar millers have for marketing sugar internationally

Source: Updated from Gray et al. (2014).

C Case studies: the burden of regulation on farm businesses

Purpose of the case studies

Defining and quantifying the cumulative burden of regulation on farm businesses is not easy. To better understand the cumulative burden of regulation on farm businesses, the Commission conducted semi-structured interviews with three agricultural businesses located in northern New South Wales and southern Queensland (box C.1). The purpose of the interviews was to document and report on the day-to-day experiences of farm businesses complying with regulation.

Case study results

The case studies revealed that the burden of regulation is derived from three main sources.

- The diversity of farming operations — businesses are affected by a diverse array of regulation that can be time consuming to keep track of and comply with.
- The timing of farming operations is critically dependent on weather events, and regulation that coincides inflexibly with major farming operations can be difficult to comply with.
- Regulations are often designed with the operation of other industries (like manufacturing) and operating environments (such as urban areas) in mind, and this can make regulations incompatible with the rural operating conditions of farm businesses.

Box C.1 Case study method

Respondents

The sampling frame for the interviews was opportunistic, and was developed in collaboration with Cotton Australia, GrowCom and the Queensland Farmers' Federation. Participating farm businesses included two large cotton farming businesses near Moree in New South Wales and Goondiwindi in Queensland, and a large horticultural business in south east Queensland.

Two similar cotton farms in New South Wales and Queensland were selected to compare differences in regulation between states. A horticultural business was chosen to provide an industry contrast.

Format

The case studies were derived from semi-structured, key informant interviews (Bernard 2011). Interviews were conducted face-to-face during visits with each business, and followed up with phone calls and emails to ensure that the narrative used to represent each example was acceptable to the respondents. The main respondents at each farm were the owner/operators, although other staff were called on to provide additional information.

Questions

General information about each farm business was collected to provide context and allow the reader to understand the perspective on regulatory compliance provided by each example. The interviews were conducted as conversations structured around the following questions:

- What major activities occur in each month throughout the year?
- What types of regulation are associated with these activities?
- What effort (in terms of time and cost) is involved in complying with regulations?
- What would staff and resources be allocated to if not complying with regulations?

Prompts

Prompts were given to help define direct costs such as staff time, travel costs and equipment, as well as tasks including form filling, emails, phone calls and meetings. Prompts were not initially given regarding the types of regulation affecting farm businesses in order to identify the issues of most concern to the respondents. Relevant areas of regulation that may have been overlooked by the respondents were introduced later in the interview as required.

Case studies

Narratives were constructed from detailed notes taken during the interviews, including direct quotes, supplemented by recall. Each case study was validated, and in two cases edited, by the respondents to ensure that the text accurately represented their narrative.

The topics covered by the case study narratives are summarised in table C.1, while elements of these case studies have been used throughout the report.

Table C.1 Summary of case studies

Cotton farm — Moree

<i>Activity</i>	<i>Regulation/issue</i>	<i>Impact</i>
Peak periods of farming operation	Water licences	Stressful in peak periods
Submitting forms	Unreliable internet	Lost email, repeat form filling
Monitoring GM crops	GM licensing	Time consuming, aids agronomy
Trialling new crop varieties	Heavy-handed implementation	'Terrible waste' – crop burnt
Moving farm machinery	Heavy vehicle registration	Forgone contracting work
Floodplain harvesting	Establishing water rights	Forgone investment

Cotton farm — Goondiwindi

<i>Activity</i>	<i>Regulation/issue</i>	<i>Impact</i>
Trading water	Slow regulatory approval	Lower crop yields, profit
Building a bridge	Duplicate state regulation	Stress, unnecessary bureaucracy
Trucking cotton to gin	Larger loads permitted	Fewer trips, less trucks on road
Employing foreign workers	Opaque visa application process	Time wasted, delays
Adding to environmental flows	Narrow focus of regulators	Delays, lost ecological opportunity
Responding to market prices	Costly chemical registration	Missed market opportunities
Conserving soil moisture	Overly prescriptive regulation	Lost crop opportunities, low yields
Keeping staff safe at work	Risk shifted to employers	Reduced workforce, inefficient use of machinery
Developing a new property	Native vegetation regulation	Lost investment opportunity

Vegetables — south east Queensland

<i>Activity</i>	<i>Regulation/issue</i>	<i>Impact</i>
Moving farm machinery	Local knowledge is ignored	Increased farm costs, reduced road safety
Labour hire companies	Illegitimate employment contracts	Undercut legitimate employers
Keeping staff safe at work	Risk shifted to employers	Reduced workforce, inefficient use of machinery
Purchasing water	Cost padding by utilities	Increased costs, reduced profit
Using more selective chemicals	Foreign testing not accepted Industry collaboration forgone	Reduced productivity and international competitiveness
Exporting to new markets	Costly export certification	Lost market opportunities

The diversity of regulations that apply to farm businesses

The main reasons for the regulatory burden experienced by farm businesses are the quantity, diversity and complexity of regulations that apply to them. This diversity was reflected in the types of regulation raised during the case study interviews, including those relating to the environment, water resources, biotechnology, transport and work health and safety (table C.1).

The case study interviews confirmed that the quantity and diversity of regulation that farmers have to deal with results in a lot of time spent keeping track of regulation and complying with it. The time and effort required to keep track of regulation is further compounded when activities or issues are regulated by multiple agencies in many jurisdictions, and when these regulations are subject to constant change (box 4.4).

The farm businesses that the Commission interviewed had dedicated farm managers to manage the day-to-day farming operations when the owner/operator was dealing with regulatory compliance. In smaller farm businesses, an individual farmer may need to manage farming activities and comply with regulation at the same time.

The timing of farming operations is often incompatible with regulatory timeframes

The case studies revealed that regulatory burden is not just a function of the time and effort required to keep track of regulation and comply with it, it is also a function of when the time and effort is required. All three case studies revealed that the timing of agricultural operations can be critical to productivity, and that there are tight windows of opportunity set by markets and weather conditions during which farming operations have to be completed for productivity and profitability goals to be met (box 4.3, box 7.2, box 7.3).

The flexibility needed to rapidly adapt farming operations to changes in market and seasonal conditions can be incompatible with the fixed deadlines that apply to regulatory compliance. For example, the timing of sowing operations can determine the profitability of a crop and have a significant influence on the farm's income. All three farm businesses that the Commission spoke to said that this routinely places farmers in the difficult position of choosing between regulatory compliance and higher profitability. Several of the examples in the case studies show why otherwise apparently minor regulatory compliance activities, such as reporting water use or getting a permit to move agricultural machinery, can cause significant stress during peak periods of farming activity.

Conflicts between the goals of regulators and the goals of farm operators

All three farm businesses mentioned that regulatory agencies can have responsibility for a specific type of regulation, and the goals or objectives of regulators can be largely unrelated to the goals of farmers relating to productivity, profitability or sustainability (box 2.8, box 3.9).

The farm businesses argued that there was a need for more participatory approaches to allow regulators to tailor compliance with regulation to local operating contexts.

Farming work styles may not match those needed to comply with regulation

The farm businesses also said one of the reasons why they feel burdened by regulation is that the administrative nature of complying with regulation is very different to the nature of nearly all other aspects of farm-based work (including working outdoors doing physically demanding tasks and operating heavy machinery).

Two of the farm businesses the Commission spoke to employed full time Chief Financial Officers, both of whom were qualified accountants and played key roles in terms of ensuring compliance with regulation. All three farm businesses employed office managers who also played an important role complying with regulation. While larger farm businesses may be able to employ staff to deal with regulation, smaller farm businesses are more likely to have to leave farm work to deal with regulatory issues.

Cultural differences between farm businesses and regulatory agencies

Farm-based work is also highly interpersonal, and often involves working closely with immediate family members. The owner/operators of the three farm businesses that the Commission met with lead diverse teams, and rely on trust-based relationships with input suppliers and marketing agents. Many farming transactions are also based on long standing interpersonal relationships and take place face-to-face or over the phone. In contrast, the farmer owner/operators described regulation as usually taking place through impersonal paper or web-based transactions with institutions represented by individuals who frequently change role. The owner/operators considered that this cultural disconnect added to the effort involved in complying with regulation, and worked against building the trust, reciprocity and volunteerism that would make regulation more effective.

All three farm businesses provided the Commission with examples of where they considered that better consultation could have resulted in improved outcomes for farmers, the community and the regulator. The examples included the burning of a GM cotton crop, opposition to the construction of a bridge, and registration of new chemicals in the cotton and horticulture industries.

Incompatible technologies increase the costs of complying with regulations

All three farm businesses said that the costs of corresponding with government (and commercial institutions) were high. Many institutions have switched from surface mail to email for correspondence based on the high speed internet services available in most urban areas. However, unreliable internet services in rural areas have resulted in lost

correspondence and staff spending large amounts of time re-entering data lost when web-based forms failed.

Regulations that are not compatible with the operating environments of farms

Regulations that apply to farm businesses may cover, or have been designed for, other industries. Examples include regulations affecting employment conditions, work health and safety, roads and transport and planning and zoning (box 2.8, box 11.3).

The farm businesses told the Commission that attempts to standardise regulation can add to the regulatory burden in agriculture if differences in operating conditions are not recognised. For example, the horticultural business suggested that rules for operating machinery such as forklifts were often designed for operating conditions in warehouses. One of the businesses illustrated this point by outlining how the application of these rules to the use of forklifts for vegetable harvesting reduced productivity for seemingly little or no safety benefit.

Another theme was that regulation limiting the movement of large machinery does not adequately recognise the low risks involved in moving machinery between nearby farms.

All three farm businesses, commenting on changes to work health and safety standards, said the standards were now almost impossible to meet. One owner/operator said this was in part due to the ‘ramping up at any cost’ of work health and safety regulation during the mining boom. All three farm businesses also considered potential work health and safety claims to be a constant threat to the viability of their businesses (box 11.6).

The owner/operators also highlighted regulations that they acknowledged met important societal goals but worked against international competitiveness — examples included minimum wages rates and superannuation, and visa conditions placed on foreign workers.

D Analysis of rice price premiums

This appendix provides an analysis of price premiums for rice exported from Australia. It updates and extends previous analysis by Deloitte Access Economics (2012), which compared the unit value of Australian exports to the price of Californian rice exports. It extends this analysis using price data from the Food and Agriculture Organization of the United Nations (FAO) to compare price premiums generated in different groups of countries ('regions') to which Australia exports rice.

Methodology

Comparison with California

Deloitte Access Economics (2012) compared the unit value of Australian rice exports to the price of Californian rice exports for the years 2001-02 to 2010-11. The Commission repeated this analysis for two time periods (1989-90 to 2012-13 and 2003-04 to 2012-13) using price data published by ABARES (2015a).

The nominal prices of Australian and Californian rice exports were converted from US dollars to Australian dollars using exchange rates published by ABARES (2015a), and converted into real terms using the consumer price index (with 2011-12 as the base year) from the same source.

Price premiums were calculated by subtracting the Californian price from the Australian price, weighted by the volume of trade in each year across the two time periods. This compensates for years (such as drought years) when price premiums can be large for a volume of trade that is small.

As a form of sensitivity analysis, price premiums were also calculated after adjusting prices to reflect packaging and transport differences. This adjustment was made because the costs incurred in packaging and transporting Australian rice are not price premiums that are available to be distributed to rice growers.

Australia exports rice mainly as branded and pre-packaged products, and its price is quoted at the point of export. In contrast, California exports similar varieties of rice in bulk, and the export price is quoted free-on-board at the mill rather than at the point of export. This means that the published price data do not reflect the costs of packaging and transport to the point of export.

It is difficult to estimate the value added by packaging and transporting rice to the point of export without detailed industry data, so an approximation was used for sensitivity analysis. Spencer (2004) found that the value added by processing, packaging and transport to the final price of rice was between 20 and 25 per cent. Exporting is only an intermediate step in the value chain, so it is reasonable to assume that the value added by processing, packaging and transport is a higher proportion of unit export values than it is of the final retail price. This would suggest using an estimate higher than the 20 to 25 per cent range. However, the value added estimated by Spencer already includes processing as well as packaging and transport to the point of sale. This suggests using an estimate lower than the 20 to 25 per cent range. Taking both of these factors into account, the Californian price was conservatively adjusted upwards by 10 per cent to reflect the value added of packaging and 5 per cent to reflect the value added by transport to the point of export.

Comparison by export region

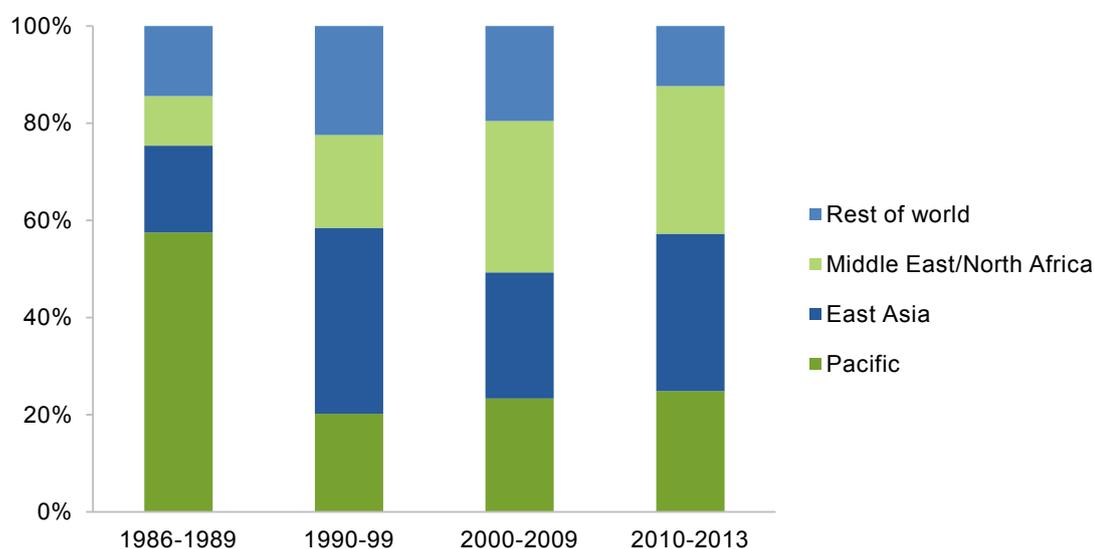
According to NSW Trade & Investment (2012), a weakness with the type of analysis conducted by Deloitte Access Economics is that it relies on global average data, rather than individual country data. As SunRice is the only exporter of rice from Australia, the Australian Bureau of Statistics maintains commercial confidentiality by not publishing export volumes or values by country of destination.

Deloitte Access Economics (2012) cited unpublished SunRice data which suggested that there was a 20 per cent price premium for the Middle East and New Zealand markets.

The FAO publishes volume and value data for rice exported from Australia and imported into 123 countries between 1986 and 2013 (FAO 2016a). The Commission used this data from 1989 onward to estimate price premiums from 25 Middle East and North African (MENA) nations accounting for around 30 per cent of Australia's exports, and for New Zealand which accounts for about 10 per cent of exports (figure D.1). The trade weighted price for the MENA region mainly reflects Australian exports to Israel, Saudi Arabia, Jordan and Turkey, and to a lesser extent exports to Kuwait, the United Arab Emirates and Syria. The analysis was repeated for two time periods, the 24 years from 1989-90 to 2012-13, and the 10 years from 2003-04 to 2012-13.

As above, a trade-weighted import price was calculated by dividing the value of imports by the volume of imports from Australia to each country, and weighting the resulting 'unit import value' (average price of imports in each year) by the volume of imports to each country in each year. Prices were converted from United States to Australian dollars using exchanges rates published by ABARES (2015a) and converted into real terms with 2011-12 as the base year using the consumer price index from the same source.

Figure D.1 Destination of Australian rice by region^a



^a Average per decade or part-decade.

Data source: FAO (2016a)

The price of imports from Australia into each region was adjusted for the cost of insurance and freight to estimate a free-on-board export price that could then be compared to the price of Californian exports (available from 1989 onwards, and adjusted for transport and packaging as above). The cost of containerised shipping for agricultural products to north and east Asia was reported by Shipping Australia Limited (2014) to be around A\$30 a tonne, which is similar to the cost of bulk grain exports estimated by Stretch et al. (2014). A cost of A\$40 a tonne was conservatively estimated for shipping from Australia to the Middle East and North Africa, and A\$15 a tonne to New Zealand.

To compare the price of Australian imports to New Zealand, the price of Californian rice was increased by A\$25 a tonne ($\$40 - \$15 = \25) to reflect the additional cost of transporting rice from California to New Zealand. This is consistent with the cost of transporting grain from California to Asia as estimated by Stretch et al. (2014). This transport cost advantage is a form of price premium that should be available for distribution to Australian rice growers, provided it is not dissipated in other markets.

Price premiums were calculated by subtracting the Californian price from the Australian export price (calculated from the adjusted price of Australian imports into each region), and weighted by the volume of trade in each year across the two time periods (again to compensate for variability such as drought years when price premiums can be large but the volume of trade small).

Sensitivity analysis was conducted around the various adjustments made to compensate for differences in cost, freight and packaging.

Results

Comparison with California

The analysis comparing Australia's aggregate export price to the price of Californian exports shows a price detriment of -5.9 per cent for the period 1989-90 to 2012-13, and a small premium of +1.2 per cent for the period 2003-04 to 2012-13 (table D.1). When the Californian price is adjusted for packaging and transport, the analysis of table D.1 shows a price detriment of -18.1 per cent for the period 1989-90 to 2012-13, and -12.0 per cent for the period 2003-04 to 2012-13.

Comparison by export region

The results of the analysis by export region are presented in table D.2. For the 24 years from 1989-90 to 2012-13, the trade-weighted price detriment of Australia's rice exports to all 123 countries was -4.7 per cent, compared to -12.1 per cent for the MENA region and (a price premium of) +25.3 per cent for New Zealand. For the 10 years from 2003-04 to 2012-13, the analysis suggests that premiums were close to zero for all countries (+0.8 per cent) and the MENA region (+1.1 per cent), but strongly positive for New Zealand (+46.9 per cent).

Sensitivity analysis shows that estimates of price premiums are larger without adjusting for the costs of insurance, freight and processing. Along with trade weighting the price data, this may account for differences with past analyses.

Conclusion

The Commission's preliminary analysis finds little or no evidence of a sustained and positive price premium for Australian rice exports in world markets. Premiums received for markets such as New Zealand appear to be offset by lower returns in other markets.

Table D.1 Comparison of Australian and Californian export prices

	<i>Nominal</i>		<i>US\$/A</i>	<i>Nominal</i>			<i>CPI</i>	<i>Real</i>			<i>Price premium (Aus to Cal.)</i>	
	US\$/t			A\$/t				A\$/t (2011-12 prices)			A\$/t	%
	Cal ^a	Cal+ ^b		Aus ^c	Cal	Cal+		Aus	Cal	Cal+		
89-90	358	411	0.77	440	465	534	55.7	790	834	959	-45	-5
90-91	355	408	0.79	452	451	519	58.6	771	770	886	1	0
91-92	396	456	0.77	402	515	592	59.7	674	862	991	-188	-22
92-93	395	454	0.70	448	562	646	60.3	743	931	1070	-188	-20
93-94	486	559	0.69	480	703	809	61.4	781	1144	1316	-364	-32
94-95	392	450	0.74	513	527	606	63.4	809	832	956	-22	-3
95-96	465	535	0.76	600	612	704	66.1	907	926	1065	-19	-2
96-97	432	497	0.78	567	552	635	67.0	846	824	948	22	3
97-98	413	474	0.68	565	605	696	67.0	844	904	1039	-60	-7
98-99	484	557	0.63	587	772	888	67.8	865	1138	1309	-273	-24
99-00	475	546	0.63	665	755	868	69.4	958	1087	1250	-129	-12
00-01	338	389	0.54	607	628	722	73.6	824	853	981	-29	-3
01-02	294	338	0.52	637	561	645	75.7	841	740	851	100	14
02-03	327	376	0.58	564	559	643	78.0	724	717	824	7	1
03-04	533	613	0.71	508	748	860	79.9	636	936	1077	-301	-32
04-05	404	465	0.75	651	537	618	81.8	796	657	756	139	21
05-06	484	557	0.75	767	648	745	84.4	909	767	882	142	18
06-07	538	619	0.79	787	685	787	86.9	905	788	906	118	15
07-08	694	798	0.90	692	774	890	89.8	770	861	990	-91	-11
08-09	1119	1286	0.75	779	1495	1719	92.6	841	1613	1855	-772	-48
09-10	791	910	0.88	1535	896	1031	94.8	1619	946	1087	674	71
10-11	796	916	0.99	1799	806	927	97.7	1840	824	948	1016	123
11-12	764	879	1.03	1116	741	852	100.0	1116	741	852	375	51
12-13	712	819	1.03	813	693	797	102.3	795	678	780	117	17

^a **Cal**: Californian price; US no. 1 medium grain milled, bulk, free on board truck at Californian mill. Prior to August 2010 reported as sacked. ^b **Cal+**: California price increased by 15 per cent for value adding. ^c **Aus**: Australian price; gross unit value of Australian exports. From 1988-89, calculated from marketing year (April–March) total export values.

(continued next page)

Table D.1 (continued)

	Price premium (Aus to Cal+)		Exports '000t	Trade weight		Trade weighted price premium (Aus to Cal)				Trade weighted price premium (Aus to Cal+)			
	A\$/t	%		89-90 to 12-13	03-04 to 12-13	89-90 to 12-13		03-04 to 12-13		89-90 to 12-13		03-04 to 12-13	
					A\$/t	%	A\$/t	%	A\$/t	%	A\$/t	%	A\$/t
89-90	-170	-18	311	0.03	-1	-0.2			-5	-0.6			
90-91	-115	-13	321	0.03	0	0.0			-4	-0.4			
91-92	-317	-32	423	0.04	-8	-1.0			-14	-1.4			
92-93	-327	-31	516	0.05	-10	-1.1			-18	-1.6			
93-94	-535	-41	502	0.05	-19	-1.7			-28	-2.1			
94-95	-147	-15	548	0.06	-1	-0.2			-8	-0.9			
95-96	-158	-15	594	0.06	-1	-0.1			-10	-0.9			
96-97	-102	-11	614	0.06	1	0.2			-7	-0.7			
97-98	-196	-19	540	0.06	-3	-0.4			-11	-1.1			
98-99	-444	-34	703	0.07	-20	-1.8			-32	-2.5			
99-00	-292	-23	607	0.06	-8	-0.7			-18	-1.5			
00-01	-157	-16	710	0.07	-2	-0.3			-12	-1.2			
01-02	-11	-1	661	0.07	7	0.9			-1	-0.1			
02-03	-101	-12	704	0.07	0	0.1			-7	-0.9			
03-04	-441	-41	287	0.03	0.15	-9	-1.0	-46	-4.9	-13	-1.2	-68	-6.3
04-05	40	5	151	0.02	0.08	2	0.3	11	1.7	1	0.1	3	0.4
05-06	27	3	69	0.01	0.04	1	0.1	5	0.7	0	0.0	1	0.1
06-07	-1	0	103	0.01	0.06	1	0.2	6	0.8	0	0.0	0	0.0
07-08	-221	-22	414	0.04	0.22	-4	-0.5	-20	-2.3	-9	-1.0	-49	-4.9
08-09	-1014	-55	191	0.02	0.10	-15	-0.9	-79	-4.9	-20	-1.1	-103	-5.6
09-10	532	49	45	0.00	0.02	3	0.3	16	1.7	2	0.2	13	1.2
10-11	892	94	21	0.00	0.01	2	0.3	11	1.4	2	0.2	10	1.0
11-12	263	31	91	0.01	0.05	4	0.5	18	2.5	3	0.3	13	1.5
12-13	15	2	501	0.05	0.27	6	0.9	31	4.6	1	0.1	4	0.5
Total			1.00	1.00	-75	-5.9	-45	1.2	-209	-18.1	-176	-12.0	

Sources: ABARES (2015a), analysis follows Deloitte Access Economics (2012).

Table D.2 Price premiums for Australian rice exports

Market	Percentage of Australian exports		Insurance and freight A\$/t	Packaging and transport A\$/t	Premium relative to Californian price			
	1989-90 to 2012-13 %	2003-04 to 2012-13 %			1989-90 to 2012-13		2003-04 to 2012-13	
					A\$/t	%	A\$/t	%
World								
(123 countries)	100	100						
Baseline			30	15	-52	-4.7	3	0.8
Low			20	10	2	1.4	57	7.0
High			40	20	-107	-10.9	-51	-5.5
No adjustment			0	0	112	13.7	164	19.4
MENA								
(25 countries)	26.9	36.2						
Baseline			40	15	-120	-12.1	3	1.1
Low			30	10	-66	-5.9	53	7.3
High			50	20	-173	-18.3	-48	-5.2
No adjustment			0	0	50	7.7	164	21.1
New Zealand	6.8	10.2						
Baseline			15	15	193	25.3	379	46.9
Low			10	10	242	30.9	425	52.5
High			20	20	144	19.7	332	41.3
No adjustment			0	0	339	42.1	518	63.8

Source: Productivity Commission analysis.

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