

25 Years of Scottish Salmon Shame



Scottish salmon farming is a gift that keeps on giving as far as environmental and food safety journalists are concerned. Over the last few decades the news articles have built up faster and higher than Scottish salmon's 'mort mountain'.

Here's a selection of news articles ranging from [listeria contamination](#) to [sea-bed contamination](#); from [illegal chemical pollution](#) to [state-sponsored chemical pollution](#); from [genetic pollution](#) to [genetic modification](#); from [cancer-causing chemicals in farmed salmon](#) to [artificial colourings in farmed salmon](#); from [Private Eye](#) to [cataracts](#); from [mass escapes](#) to [mass mortalities](#); from [sea lice infestation](#) to [sea life devastation](#); from [organic contaminants](#) to [organic cons](#); from the [killing of seals](#) to the [killing of workers](#); from [infectious diseases](#) to [insanitary cases](#); and from [the Thermolicer](#) to the [sea lice crisis](#).

[Click on the photos to access the articles in full]

For more background read "[25 Reasons to Boycott Scottish Salmon](#)" and "[Celebrate](#)" [25 years of "international success of Scottish salmon"?!](#)

2017:

Salmon industry toxins soar by 1000 per cent

Mark Macaskill

January 1 2017, 12:01am,
The Sunday Times



Between 2006-16, farmed salmon production increased by 35 per cent while the use of chemicals to control flesh-eating lice rose 932 per cent.

Scottish salmon farming's sea lice 'crisis'

By Douglas Fraser
Business/economy editor, Scotland

14 February 2017 | Scotland

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As the latest figures reveal a significant drop in the weight of Scottish salmon being farmed in the last three months of 2016, BBC Scotland's Business and Economy editor Douglas Fraser considers the impact of sea lice on the industry.

The Scottish salmon farming industry is facing major problems from sea lice, which have led to a cut in output, fast rising costs and a big rise in prices.

The problem is not new, but it has burgeoned during this decade. Chemicals have been extensively used, but lice are becoming increasingly resistant.

Environment

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Lousy threat to Scotland's fish farms

Soaring numbers of sea lice have hit farmed salmon output in Scotland and Norway



Record chemical use 'of concern' to salmon giant

Mark Macaskill

February 12 2017, 12:01am,
The Sunday Times



Hydrogen peroxide tackles parasites but weakens the fish
DAVID CHESKINIPA ARCHIVE

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Save



The world's largest salmon farmer has expressed "concern" over the use of chemicals to fight disease after a record 20m litres of hydrogen peroxide — a substance harmful to fish — were dumped into coastal waters around Scotland.

More than 160 farms resorted to the chemical in 2015 to tackle parasites such as sea lice, according to the Scottish Environment Protection Agency (Sepa).

Enough hydrogen peroxide was used to fill eight Olympic-size swimming pools, including more than 1m litres at a site operated by Marine Harvest, the Norwegian-owned firm.

Fish 'hooked on chemicals'

Farmed salmon: Antibiotics are risk to public health, warns campaigner

FAVOURITE DISH: Salmon can become dependent on a 'cocktail of chemicals', it is claimed

BY KEITH FINDLAY

Salmon farming nemesis Don Staniford has warned the continued use of antibiotics to combat disease in the industry is a public health risk.

Mr Staniford, an arch critic of the sector for years,

believes farmed salmon are "addicted to a cocktail of chemicals" and a threat to the environment and public health.

Citing figures obtained from the Scottish Environment Protection Agency (Sepa) through a Freedom of Information request, he

highlighted scientific papers claiming a link between the use of antibiotics on fish farms and increased bacterial resistance to the drugs.

But industry body the Scottish Salmon Producers' Organisation (SSPO) accused Mr Staniford of pre-

sending "skewed" information to "support his own agenda".

According to Mr Staniford, who fronts the Global Alliance Against Industrial Aquaculture (GAAIA), Scottish salmon farms use large quantities of antibiotics.

Citing the Sepa figures,

over two decades and antibiotic resistance means that the drugs don't work anymore."

The Sepa figures were also highlighted in a statement from GAAIA, which said: "Scottish salmon farms are still using significant quantities of antibiotics, with 2015 use higher

again Don Staniford has presented skewed information and data to support his own agenda.

"False and unfounded accusations have the potential to damage the reputation of the UK's favourite fish - and Scotland's largest food export, which is often seen as the

'Risk of food poisoning for consumers'

More than a quarter of abattoirs fail to take basic hygiene precautions to prevent contaminated meat reaching butchers and supermarkets, it has been reported.

Consumers could be at risk of acute food poisoning from exposure to E.coli, salmonella or campylobacter due to breaches identified at the slaughterhouses.

Analysis of government audits at 323 abattoirs in England, Wales and Northern Ireland by The Observer and the Bureau of Investigative Journalism identified failings at 86 of them.

Store recalls beef product

Supermarket Morrisons has recalled one of its meat-based products over concerns it may cause flu-like symptoms in vulnerable people.

The retailer has asked customers who bought its 150g Ready to Eat Peppered Beef Slices to return them, after the Food Standards

2016:

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Thousands of fish poached alive in lice treatment bungle that could hit Christmas salmon prices



Prince Charles visiting a Marine Harvest fish farm, run by the same firm which owns the plants where 175,000 salmon were killed CREDIT: JANE BARLOW/PA

Fish Farmer

VOLUME 21 NUMBER 10 OCTOBER 2019

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Prince Charles drops in on Marine Harvest

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The Herald

Sea lice on wild fish Scotland's shame



Sea lice on wild fish Scotland's shame

13 Jun 2016 / David Ross



4 comments

Scotland lags far behind all North Atlantic countries in failing to properly protect wild fish from sea lice coming from fish farms, relying only on gentlemen's agreements, an anglers' leader claims.

Stornoway Gazette

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Faclan book festival

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Higher mortality of farmed salmon stock over summer months

Marine Harvest has 'serious AGD issues'

Marine Harvest Scotland have confirmed their farmed salmon stock has been hit hard by Amoebic Gill Disease which has led to the regular sight of deceased fish being ferried off the island for incineration.

But the company are hopeful they have turned the corner as the water temperatures begin to drop which they believe should see the fish clear of AGD.

A spokesperson for Marine Harvest Scotland told the Gazette: "We have had some serious issues with Amoebic Gill Disease (AGD) during the summer months which has led to higher fish mortality."

CONTINUED ON PAGE 2



Salmon stock has been hit hard by Amoebic Gill Disease

Development

Rival wind farm bids made by townships

Two crofting townships on the Isle of Lewis have submitted development applications to the Crofting Commission to build community wind farms on their common crofts. These new applications will directly rival development plans on the same land by a private consortium led by energy giant BEM.

Melbourn & Brannahoe and Sandwick North Street are the first townships to apply for development permission to the Crofting Commission using a new section of the Crofting Reform (Scotland) Act 2007 which allows for a wide range of community developments to go ahead on crofting land - and gives powers to the Commission to override landowners who may be opposed.

Melbourn & Brannahoe want to erect eight turbines and Sandwick North Street want one.

CONTINUED ON PAGE 5

By Dawn Thompson

SUPERMARKET salmon could be fed a 'revolving' mix of abattoir waste under plans that have renewed the debate over food standards in fish farming.

The proposals would see farmed salmon fed 'avian protein' - made up of poultry by-products including offal and blood, as well as ground-up bone and feathers.

Supermarket giant Morrisons is taking part in a £68,000 project - involving scientists and food companies - to discuss the idea and test the possible reaction of consumers.

The move would save fish farmers a fortune by turning a readily available waste product into a cheap food source. Researchers also say it will be more environmentally friendly and provide cheaper salmon.

Guidelines already permit the use of avian protein in food but although it is widely used in other parts of the world, fears that consumers would find it unacceptable have always prevented its use in the UK.

That could change if the six-month study - part-funded by the Scottish Aquaculture Innovation Centre, which has contributed £41,500 - finds public opinion has altered.

But critics condemned the idea. Don Staniford, director of the Global Alliance Against Industrial Aquaculture, said: "Feeding chicken parts to farmed salmon is revolting. It's completely unnatural, a nutritional nightmare and compromises salmon welfare."

Consumers will be appalled to learn that Scottish salmon could be fed on chicken waste. If I wanted to eat chicken, I'd go to KFC.

The project is led by food company Bimby in partnership with Morrisons, the Institute of Aquaculture at Stirling University and raw material producer SARVA.

An institute press release said: "Adopting avian protein could significantly reduce food costs and, in doing so, overall production costs."

If consumer perception around avian protein is found to be positive, later phases of the project could compare nutritional and fish quality analysis.

The institute admitted that, while Chilean and Australian salmon farmers have used poultry by-products for more than a decade, there are still some challenges around consumer acceptance of introducing these products into the UK.

Avian proteins are also used throughout Europe in foods for other farmed fish species, including sea bream, sea bass and trout.

Brett Glenross, Professor of Aquaculture Nutrition at Stirling University, said: "Australian salmon feeds are a lot cheaper than in the UK. Most of it is made of avian protein and it works really well."

Salmon is a coproduct; it's designed to eat meat. Whether that meat comes from a fish or from a chicken, the animal's digestive system doesn't differentiate.

Professor Glenross quoted research suggesting many consumers didn't care whether farmed fish were fed on fish or plants. He added:

Coming soon to a fish counter near you, the salmon that's truly fowl...



Backlash over plan to feed farmed favourite on 'avian protein' to save money



"It's about having a grown-up conversation. We don't want to force consumers to do anything."

The British people, Europeans in general, have faced some of the most prolific of food scares through history - black pudding, bangers.

He said avian protein would only come from birds destined for human

birds not wanted for human consumption - including bones, feathers, blood and the guts - could be ground down and dried before further processing. The protein could then be incorporated into the pellets used to feed farmed salmon.

Farmed salmon is Scotland's biggest food export, with an annual retail value of £1.1bn. Scottish Government estimates suggest 5,000 jobs rely on the industry.

Morrisons said: "Our role on this project is to advise on research with consumers. All of our salmon is fed on avian protein and fish meal and we have no plans to change that."

Bimby project developer De Karonis Kweek said: "The consensus covers the full salmon value chain and the power to influence change will be greater than ever before in the UK."

Microbiologist and food safety

NET VALUE: Farmed salmon is worth £1bn a year in Scotland

expert Professor Hugh Bennington said: "We get enormous amounts of chicken. There's a fair amount of waste from that and it's a good idea if it was used for something else."

But Phil Brooke of Compassion in World Farming said: "Salmon farming is problematic. The problem arises when you try to farm a carnivore, which is something that in the rest of farming we almost never try to do. So we catch huge numbers of wild fish to feed the farmed fish, which is neither efficient, humane nor sustainable."

"We are struggling for alternatives,

such as chicken, but salmon wouldn't naturally eat chicken as they are in the sea. I think we should be asking whether we should be farming salmon at all."

Writer Bruce Sandison, founder of the Salmon Farm Protest Group, said: "Salmon farming is an abomination. It's quite simple - for the sake of producing fake food, we are sacrificing the treasure of the sea. I wouldn't feed it to my cat."

Food Standards Scotland said: "It is the responsibility of food and food businesses to ensure that the food or food they produce is safe."

'I wouldn't feed it to my cat'

food, adding: "You can't make a good food from a bad ingredient."

According to SARVA's website, its UK brand SARVAL takes unwanted waste from abattoirs, meat processing plants and butchers' shops.

Under the proposals, parts of the

sundayherald

Scotland's 'trigger-happy' salmon farmers risk losing £200m US export market

11 Sep 2016 / Rob Edwards



0 comments

Scotland's salmon farming industry will lose its £200 million export market to the US if it persists in shooting seals, according to the US government.

A senior US fisheries official has told the Sunday Herald that countries that want to keep exporting fish to the US have to show that their products "are not associated with a fishery in which intentional killing or serious injury of a marine mammal is allowed."

The warning comes as new official figures reveal that fish farms in Scotland have been shooting seven or eight seals a month this year, despite the industry's promise to cut the killing to zero.

Oops: fish farm firm kills 175,000 of its salmon by accident



A worker at a salmon farm on Loch Linnhe near Fort William. Outbreaks of sea lice and accusations that farmed salmon are artificially coloured and may contain PCBs and dioxins, have put the fish farm industry under severe pressure.

6 Nov 2016 / Exclusive by Rob Edwards



EXCLUSIVE

ONE of the world's largest fish farming companies has accidentally killed more than 175,000 of its caged salmon in Scotland while trying to treat them for lice and disease, according to internal Government memos.

Blunders by Norwegian multinational, Marine Harvest, have cost millions of pounds and led to over 600 tonnes of salmon having to be incinerated. The losses have contributed to a 16 per cent drop in the company's Scottish salmon production.

2015:

The Herald

Protests planned as number of seals killed in Scots salmon farms rises by 20 per cent



Protest as number of seals killed in Scots salmon farming rises

30 Oct 2015 / **Martin Williams**, Senior News Reporter /  @MWilliamsHT

8 October 2015 at 1:30pm

Salmon industry under fire for shooting seals

CHRIS CHOI CONSUMER EDITOR

New figures from the Scottish government show more than 100 seals have been shot so far this year to protect the salmon industry. Although they are officially protected, seals can be shot under special licence. Campaigners say non-lethal means should be used to deter the marine mammals.



110 seals have been shot
so far this year to
protect the salmon industry

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Figures reveal salmon farms that shot seals

By Marc Ellison
Data journalist, BBC Scotland

30 August 2015 | [Scotland](#)

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New figures have revealed, for the first time, which individual salmon farms have shot seals.

The Scottish Information Commissioner ordered the Scottish government to release data to campaigners.

2014:

Supermarkets sell Norwegian fish as 'Scots' salmon



A salmon farmer holds a young fish at the Strondoir Bay fish farm at Loch Fyne Scotland. Picture: PA

By
ALISTAIR MUNRO

Published: 00:00 Sunday 10 August 2014



INTENSIVELY farmed Norwegian fish are being sold as wild Scottish salmon, according to campaigners who have called in the competition authority over what they claim are "systemic failures" in the industry.

18

comments



Sandison's Scotland

BRUCE SANDISON'S reports and rumblings

"The most toxic product in the food industry"

You can fool all the people some of the time, and some of the people all the time, but you cannot fool all the people all the time. – **Abraham Lincoln.**

It's the same the whole world over, everywhere salmon farming goes disease and pollution follow. But in spite of the vast amount of money this industry must spend on trying to promote a clean image, the truth will out. Whether or not this will be in time to save the world's wild salmonid populations from degradation and extinction from the impact of salmon farm disease and pollution remains to be seen. However, you can help, now, to save our wild fish: simply do not buy or eat farmed salmon.

France

For many years the Scottish Salmon Producers Organisation (SSPO) and its predecessor bodies have

trumpeted the success in France of Scottish farmed salmon and their Label Rouge brand. However, this view was not shared in a recent prime-time TV programme on National Channel France 2. The



programme was broadcast on November 7 and here is a translation of a summary of the programme: "It is a symbol of good food [farmed salmon], recommended by doctors and nutritionists and the image of a healthy and natural product. In France, consumption has more than doubled in 50 years and this increase is particularly concerned with farmed fish.

"Yet the flesh of farmed fish contains many secrets and is alleged by many to be amongst the most toxic product in the food industry: the use of animal meal, massive use of antibiotics and pesticides, mercury

pollution and PCB's; a world secret and opaque where the interests of the industry sometimes come before that of the consumer.

"For months, not only in France but also in Norway and Vietnam, through Sweden and Denmark, our Special Envoy teams have put together a report into this global industry, farmed fish, fish products and fish dishes. Dive into the murky waters of a pathway out of control, which discharges to our knowledge a dangerous cocktail of chemicals into our food."

NEWS

‘Healthy’ smoked salmon fattier than pizza

Jon Ungeod-Thomas Published: 14 September 2014

Comment (4) Print



Smoked salmon from wild fish has a much lower fat content (Getty)

FARMED smoked salmon from Scotland — some of which is promoted as “lean” and “healthy” — has a greater proportion of fat than a margherita pizza, a Sunday Times analysis has revealed.

Asda axes salmon from 'problem' WRF

Mark Macaskill

SCOTLAND'S oldest independent salmon farm has been dropped as a supplier to one of Britain's largest supermarkets amid concern over its environmental impact.

Wester Ross Fisheries (WRF) has previously been lauded by Asda for its environmental credentials and the quality of its farmed salmon. However, a spokesman for the supermarket confirmed last week that WRF is no longer a supplier.

The disclosure coincides with mounting pressure on Highland council to force WRF to reapply for permission to farm fish at its Ardeslie sites in Ross and Cromarty.

A Scottish government audit recently found that an assessment of the firm's environmental impact, carried out in 2002, was "inadequate".

Among those urging Highland council to take action is the family of Sir Tim Rice, the West End composer, which has accused WRF of causing excessive sea lice pollution and the death of wild fish on the Dundonnell river, which runs through the family estate.

The row is embarrassing for Asda, which devoted a two-page spread to WRF in its in-house magazine last summer.

It claimed that "being

independent means that Wester Ross salmon fish farm can work in harmony with the natural environment and champion the welfare of salmon".

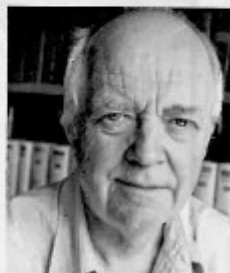
In December, however, Asda's senior executives were urged to halt supplies of farmed salmon from WRF by the Salmon & Trout Association (STA) "because of its appalling sea-lice record and the threat that poses to wild salmon and sea trout".

It followed data published by the salmon farming industry revealing that in the Kennart to Gruinard region of the northwest Highlands, where there are seven farms operated by two companies, including WRF, sea-lice numbers exceeded the industry's threshold every month from January to September.

Asda attempted to play down its decision to mothball WRF. A spokeswoman insisted the company was not a significant supplier of farmed salmon but refused to divulge details of their commercial relationship.

The decision has been welcomed by conservationists who said Asda deserved praise if the decision had been motivated by environmental concern.

"If it turns out that Asda has dropped this supplier because of its poor record of sea-lice control at its fish-farms in Wester Ross, and the damage that will have been causing to



Tim Rice: family wants action

wild fish conservation, then this is a very good decision and Asda will deserve praise for taking such action," said Guy Linley-Adams, a legal adviser to the STA.

Donald Rice, the son of Tim Rice, said questions had to be asked over why WRF has been allowed to farm fish at Ardeslie. "They appear to have discovered that this fish farm was known to Marine Scotland to be seriously problematic in terms of lice and siting, yet Marine Scotland's concerns were not passed on to Highland council. "All in all, it is another example of some of the deeply murky dealings in the aquaculture industry," said Rice.

Gilpin Bradley, a spokesman for WRF, said: "Wester Ross Fisheries Ltd are fully compliant with the planning and regulatory legislation."

Norway that's Scots salmon

Store giant forced to ditch misleading campaign

» **CRAIG McQUEEN**
c.mcqueen@dailyrecord.co.uk

TESCO were forced to scrap a marketing campaign after it emerged salmon labelled "100 per cent Scottish" came from Norway.

Stores across Scotland had been promoting farmed salmon with flags and flyers covered in Saltires, but staff were ordered to tone down the campaign after environmentalists pointed out the fish had been imported as eggs from Norway.

Don Staniford, of the Global Alliance Against Industrial Aquaculture, said: "Tesco's blatant breaches of trading



standards makes a mockery of their claim to be promoting Scots salmon.

"Surely they should be selling exclusively Scottish salmon, not flooding supermarket shelves with Norwegian farmed salmon?"

Tesco bosses also gave staff "refresher training" on the importance of accurate advertising.

A spokesman for the supermarket giant said: "These signs were put in

the wrong place by mistake. The products were clearly marked with their country of origin.

"We are working with our stores across Scotland to make sure only Scottish products are displayed in cabinets that feature Scottish flags."

The embarrassment for Tesco comes nearly a year after rival Sainsbury's faced similar problems with their packaging of Scottish salmon.

They claimed that smoked fish in their premium Taste the Difference range came from seawater farms off the islands of Skye, Lewis and Uist.

However, it emerged that the fish had been farmed at Loch Fyne.

Tesco in U-turn over 'red herring' of Scots salmon promotion

Mark Macaskill

TESCO has been forced into a U-turn over a Scotland-wide farmed salmon campaign after conceding products branded as "100% Scottish" were imported from Norway.

Hundreds of stores across the country have been promoting Scottish farmed salmon with Saltires, flags and "I'm Scottish" flyers.

However, the retail giant has ordered staff to tone down the campaign after environ-

mentalists pointed out that in many cases farmed salmon billed as Scottish had been imported as eggs from Norway and reared briefly on Scottish farms before reaching supermarket shelves.

Tesco has apologised after the Global Alliance Against Industrial Aquaculture wrote to Philip Clarke, the Tesco chief executive, accusing the retailer of misleading customers at stores in Edinburgh, Inverness and Perth.

A spokesman for Tesco

confirmed that in-store promotions of farmed salmon across Scotland were being updated after campaigners tipped off trading standards officials in several Scottish local authorities and lodged a complaint with the Advertising Standards Authority.

Staff have also been given "refresher training" on the importance of accurate advertising.

"Tesco's blatant breaches of trading standards makes a mockery of their claims to be

promoting Scottish salmon," said Don Staniford, from the anti-industrial aquaculture group. "Surely Tesco should be selling exclusively Scottish salmon not flooding [its] supermarket shelves with Norwegian farmed salmon?"

John Robins, secretary of Animal Concern and Save Our Seals Fund, said: "Tesco admitted to me that only a small amount of their salmon is sourced in Scotland. Despite this they have saturated their stores with Saltires. This is not

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Tesco blames wrong signage for Norwegian salmon marketed as Scottish

07 Apr 2014 | Helen Gilbert

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2013:

Fish company investigated after salmon farm pollutes Scottish loch

Marine Harvest, one of the largest fish-farming companies, is under investigation after polluting loch with pesticide



This article is 3 years old

<
52

Severin Carrell, Scotland
correspondent

Friday 10 May 2013 12.08 BST



Caged Scottish Salmon. Photograph: Alamy

Marine Harvest, one of the world's largest fish-farming companies, is under investigation after its salmon farms polluted a Scottish loch with toxic pesticide residues hundreds of times above environmental limits.

Sampling tests around salmon cages on Loch Shell in the Outer Hebrides by the Scottish Environment Protection Agency (Sepa) found that levels of [Teflubenzuron](#), used to kill sea lice parasites which affect hundreds of thousands of caged fish each year, were up to 450 times higher than recommended levels.

Wild trout 'eaten alive' by sea lice from fish farms'




Nick Drainey

Published at 12:01AM, July 4 2013

Wild trout are being "eaten alive" by large numbers of sea lice coming from salmon farms off Scotland's West Coast, environmentalists have claimed.

In the latest war of words between the wild fisheries sector and the fish farming industry, the Salmon and Trout Association (S&TA) said levels of infestation were out of control.

Young trout are being eaten alive, experts say
Colin Kirkpatrick

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Farms turning pristine waters 'to toxic toilets'

FOCUS



By
**Paula
Murray**

WHEN China pulled the plug on the import of Norwegian farmed salmon after implicated diseased fish, it was a blow to the industry. But it was also a chance to sign a new trade deal with the Communist superpower.

The move was hailed as a shrewd one with hopes the industry would double its production to satisfy demand in the Far East, creating jobs and income – particularly on Scotland's islands.

But the lull in the commercial trade has thrown the industry into a state of confusion. Some of the country's salmon farms, with allegations of pesticide use and net killing, have lost confidence towards the government around them, and fears over diseases and sea lice.

And the pressure to produce more fish for the lucrative new market, there are concerns that environmental considerations may have taken a back seat.

The industry is adamant it is doing everything by the book, but it is still facing fire from animal rights groups and conservationists.

Among the critics is the Global Alliance Against Industrial Aquaculture (GAAIA), which claims to have unearthed evidence that farmed salmon are bred with a highly toxic chemical to animals – but have used to control the spread of deadly sea lice.

The infectious condition, which affects salmon, has struck farms around the Scottish coast, and back in September it caused a spike of deaths in Orkney.

Then last week the Salmon & Trout Association (STA) Prime Clarke in the palace of the Lord expressed "major concerns" over the BSCA-run Freedom Foods certification scheme for farmed salmon.

A new report by the charity revealed that some farms with a "clean record" on pollution and pesticide levels were still being



CONTROVERSIAL: One Scottish farm, of the Global Alliance Against Industrial Aquaculture in one of salmon farms, is most vocal critics



granted recognition for higher animal welfare standards.

Hughie Campbell-Adamson, chairman of STA Scotland, called the Freedom Foods scheme a "comment for lack" to defend "aggressive criticism", and added that by "certifying farms that fail to meet basic environmental standards, the credibility of the BSCA is at stake and it runs the risk of being charged with breaching the standards and their credibility".

THE allegations have been vigorously denied by the STA, which says the scheme is "90 per cent committed to improving the welfare of all animals – in tandem with respect for the marine environment".

Scotland's first salmon farm was built in 1867 in Loch Ailort, near Lochaber in Inverness-shire, and since then another 180 have been given a licence to operate.

Critics say stocks of wild salmon and sea trout have collapsed north of the border, with many conservationists blaming the decline

on pollution and disease coming from the farms. Again, the allegations are disputed by the industry. The Scottish Salmon Producers' Organisation (SSPO) says statistics "clearly prove" problems with wild fish started decades before any salmon was farmed in Scotland, and that farmed and wild fish can exist side-by-side.

But Don Stanfield, of the GAAIA, does not agree. He is convinced the industry is polluting Scotland's waters, killing wild stock, and generally having a negative impact on the environment.

According to him, salmon farms regularly use chemicals such as formalin and chloramine T to fight AGD and other diseases.

Mr Stanfield said: "Formalin is the same stuff Damien Hirst uses to pickle his animals for his art. It is a powerful chemical which is turning farmed salmon into pickled salmon."

"They are turning pristine Scottish waters into toxic toilets."

"Effectively salmon farms are like battery farms for chickens. With a high concentration of animals in confined spaces spread of diseases and parasites is inevitable."

The Scottish Government has

and wild salmon stocks. But profits from the farms will go to Norwegian companies who share most of them while the salmon will be eaten by the Chinese, not Scots, yet Scotland will be left with an ecological disaster.

Another challenge for the fish farms is their reputation as sea lice destroyers. Hundreds of the marine mammals are killed every year as "the last resort" to protect stocks.

Salmon producers do not dispute that they occasionally kill seals, which can eat up to seven kilograms of fish a day. But most farmers are not brought out "willy nilly".

In a further blow to the industry's reputation, leaked emails from the Inverclyde-based Scottish Salmon Company – which produces one fifth of Scotland's farmed salmon – last week revealed how on Lewis had been described as a "tiger's nest".

The company planned to locate small salmon cages on a loch and "let the locals get used to it".

But, despite the negative publicity, the industry continues to thrive in Scotland and is worth about £150million in exports every year.

It supports around 6,000 jobs, and earlier this month data revealed an astonishing 1,121 per cent increase in export to the Far East since 2010.

The SSPO said it is accepted that fish farming is an effective way of producing food and that aquaculture will play an essential role in feeding the world in the coming decades.

CHRISTOPHER Scott, Edinburgh, believes many of the attacks on his industry are politically motivated – and he is not alone. He is among the most vocal critics.

He added: "We have no intention of having dealings with a person with his history and reputation."

"This is a campaigner who carries a long, credible, salmon farming around the world. He is not credible and therefore we are not prepared to listen to or engage with him. The public should do the same."

The SSPO believes campaigners hope to push the industry back on to the dry land, something that at least one firm is planning to do.

But salmon farmers claim that is happening on a large scale.

SSPO's Ron Hughes said: "People are finding different ways to farm back around the world because we are going to have a shortage in 30 years' time. The reason the Scottish Government and the European Parliament are supporting the development of aquaculture is because it is an efficient way of producing food – and the critics don't like that."

At the end of the day the success of any industry is down to the end product and those who buy it. If consumers are unhappy it will reflect on sales – and for the time being, it seems the Scottish salmon industry has their next approval.

How long before YOU are eating frankenfish: It grows at terrifying speed and could wipe out other species. The GM super salmon muscling its way onto your plate

- GM salmon which grow twice as fast as wild fish have been developed
- Eggs given go-ahead in Canada while meat to be approved for sale in US
- If they escape from farms they could breed and wipe out wild fish
- Imported canned products could be in the UK within years

By [DAVID DERBYSHIRE FOR MAILONLINE](#)

PUBLISHED: 23:15, 2 December 2013 | **UPDATED:** 23:15, 2 December 2013



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View comments

As they splash around in their tanks, they look like any other healthy Atlantic salmon. Their eyes are bright, their skin is gloriously silvery and their fully grown bodies exude power.

Farmed salmon killed by disease leaps to 8.5 million

from Sunday Herald, 10 February 2013



The number of salmon killed by diseases at Scottish fish farms leapt to over 8.5 million last year, sparking fresh doubts about the sustainability of the £1 billion industry.

New figures released by the [Scottish Environment Protection Agency \(Sepa\)](#) reveal that losses from all salmon farms have reached nearly ten per cent of their production. The main problem has been the spread of Amoebic Gill Disease, blamed by some on the warmer seas caused by climate pollution.

A mountain of 13,627 tonnes of dead fish had to be disposed of in 2012 by 230 fish farms along the west coast and on the islands, compared to 9,717 tonnes in 2011 and 7,159 tonnes in 2010. The worst problems were in Shetland, where 2.4 million salmon died.

The mass mortalities – known in the industry as morts – have also [raised questions](#) about how such large amounts of diseased waste are safely disposed of, and how the process is regulated. Sepa and local authorities both say it is not their responsibility.

The yes ministers: Scottish Government 'is in bed with the fish-farming industry'

EXCLUSIVE
BY ROB EDWARDS
ENVIRONMENT EDITOR

THE Scottish Government has been accused of being "in cahoots" with the fish-farming industry after public agencies disclosed more than 750 fish farms have been approved in recent years – and only six have been refused.

Critics say plans for the farms are being rubber-stamped to help meet the Government's target of a 50% increase in production by 2020, and that ministers are failing to protect the environment.

They also point out that ministers have had more than 30 meetings with leaders of the fish-farming industry in the last three years.

After a request under freedom

of information law, the Scottish Government has released a list of such meetings. It shows that since January 2011, successive environment ministers have met with fish-farm companies 26 times, including eight site visits, four dinners, two award ceremonies and an industry exhibition at Trondheim in Norway.

Three meetings with Enterprise Minister Fergus Ewing in 2012 and 2013 are on the list, which also shows that in June this year First Minister Alex Salmond opened a fish hatchery run by the Norwegian-owned company Marine Harvest at Lochailort in Lochaber.

An official press release shows Salmond met with Marine Harvest bosses in Oslo in May 2012 – but this was not included in the list released by the Scottish Government. Officials said this was due to an "administrative oversight".

Another freedom of information response from the Scottish Environment Protection Agency (Sepa) reveals it has given the green light to 585 fish farms around the country since 2006, and rejected just one. Since 2003, Highland Council has consented to 66 farms and refused two, while Argyll and Bute Council has approved 32 and turned down two. Comhairle nan Eilean Siar (Western Isles Council) has approved 73 and rejected one since 2008 (see table, right).

The freedom of information requests were made by Don Staniford, an anti-fish-farming campaigner who runs a new group called Protect Wild Scotland. "The Scottish Government and the Norwegian salmon farming industry are clearly in cahoots," he said.

"The floodgates are being opened across Scotland to salmon-farming pollution, toxic chemicals, infectious

Fish farm developers brand loch protesters 'a nest of vipers'

Leaked emails 'betray cynical contempt for local feelings'

BY ENVIRONMENT EDITOR ROB EDWARDS

SCOTLAND'S £1.6 billion salmon farming industry is facing growing difficulties winning public support for massive expansion plans after a concerned local community was labelled a "nest of vipers" in a leaked company email.

Emails from within the foreign-owned Scottish Salmon Company, which produces one fifth of Scotland's farmed salmon, also reveal its public relations tactics for avoiding the "angst, time, delay and bad press" caused by objections.

The company planned to locate small outdoor cages on a loch and "let the birds get used to it" before upgrading to far larger ones in two or three years' time. The aim was to avoid "outright, strong, negative

Farmed salmon is Scotland's largest single food export, and one of the country's most important rural industries. Production has risen nearly fivefold over the last decade, and now involves 50 companies at about 100 sites along the west coast and on the islands. But its expansion has come at a cost, with local communities and environmentalists increasingly alarmed about pollution, the damage to coastal scenery and threats to wild fish.

Now the industry, backed by the Scottish Government, wants to further boost production of its farmed fish by 20%. This is resulting in escalating conflicts, as proposals for new and bigger salmon farms emerge.

One of the fiercest flashpoints has been at Plockton, on the east coast of Harris in the Outer Hebrides, where the Scottish Salmon Company wanted to expand a fish

Fish farms are an important rural industry, but their expansion has proved to be divisive. Photograph: Jeff Mitchell/Getty Images

demands on council (and the Scottish Salmon Company) that could be better spent on other sites that may be less oppositional. The problems "couldn't get much worse than Plock", she added.

She suggested "filling the council's time" with proposals for fish farms elsewhere on the Western Isles. Existing salmon cages at Plockton could be left for the local community to "get used to" in the hope that they would accept bigger cages in the future, she argued.

last week. According to one local group, Outer Hebrides Animal Fish Farms, it showed that the Scottish Salmon Company's public consultations were "just a cynical PR ploy designed to fool local people".

And it alleged: "The company clearly has a hidden agenda for expansion by the back door." The campaign group's spokesman, Peter Urquhart, argued that the leaked emails cast doubt on the Scottish Salmon Company's public statements. "Local communities

Scottish Salmon Company - which is backed by investors from Norway and Switzerland and is registered in the tax haven of Jersey - alleged that the release of the emails was part of a concerted campaign to discredit the company and the industry.

McLellan said: "It is unfortunate that the working of out-of-the-internal communications is being used by a few individuals to distort the facts. Once again, rather than contribute constructively, they wish to create confusion and others where none was intended."

EE
The company clearly has a hidden agenda for expansion by the back door

EXCLUSIVE

The new
sundayherald
13 January 2013



NEWS

Invasion of the Viking salmon

Scotland's wild stocks 'tainted' by Norwegian strains used in fish farms

Mark Macaskill Published: 3 March 2013

Comment (0) Print



A wild Atlantic salmon (Thomas Kitchin & Victoria Hurst)

AS MANY as one in four wild Atlantic salmon from Scotland has been genetically "tainted" by Norwegian fish, a study suggests. Analysis of almost 1,500 wild salmon from the west coast found 369 possessed genetic markers unique to the Scandinavian fish.

NEWS

Scots fish are 'Vikings with kilts on'

Mark Macaskill Published: 17 March 2013

Comment (0) Print



40m salmon are farmed every year in Scotland (David Cheskin)

ENVIRONMENTALISTS have questioned the provenance of farmed Scottish salmon amid evidence that most of the fish are Norwegian.

In the past decade, the number of salmon imported from Norway as eggs and reared on Scottish fish farms rose 11-fold, from 3m in 2003 to almost 36m in 2011.

Sainsbury's accused of misleading salmon adverts

Monday 20 May 2013

Supermarket giant Sainsbury's has been accused of selling "responsibly sourced" Hebridean salmon from a loch hundreds of miles away.



Sainsbury's Taste The Difference salmon is packaged with the claim that it is "reared in sheltered, fast-flowing seawater locations around the Isles of Skye, Lewis and Uist".

But the Salmon and Trout Association (S&TA) claims that it is actually sourced from Loch Fyne, a sea loch more than 200 miles from Skye, in Argyll that they allege is polluted with unacceptable levels of sea-lice, chemicals, faeces and diseases.

2012:

Dirty secrets down on the salmon farm

Charles Clover Published: 9 September 2012

♥ Comment (2)  Print



You have to credit the people who sell Scottish farmed salmon. They deserve their awards — for marketing. They have managed to convince us that their product in the supermarket is just as good as the wild thing and comes from clear, unpolluted waters with tidal flows that produce strong and healthy fish. All suggestions that salmon are kept like battery chickens in cages that foul the natural environment, have their flesh dyed, are prone to disease and are treated regularly with chemicals to remove parasites that have finished off wild sea trout and salmon — well, these slurs belong to the past.



Diseased farmed salmon. (Photo: GAAIA)

Chlamydia and gill disease ravage Scottish salmon: GAAIA



UNITED KINGDOM

Wednesday, November 07, 2012, 02:00 (GMT + 9)

The Global Alliance Against Industrial Aquaculture (GAAIA) claims that salmon farming in Scotland's Isle of Mull is being plagued by several diseases, such as amoebic gill disease, proliferative gill inflammation and chlamydia.

The organisation released this information in a report called *Scottish Salmon's Dirty Big Secret*, which issued last year based on the data obtained from a dossier via Freedom of Information.

Scottish fish farmers use record amounts of parasite pesticides

Farmers have been forced to increase amount of chemicals as the sea lice parasite becomes resistant to treatment



This article is 4 years old

38 145

Severin Carrell, Scotland correspondent

Monday 10 September 2012 14.29 BST



Scottish salmon ready to be transferred to a new cage at a fish farm on Orkney in Scotland. Photograph: Doug Houghton/Alamy

Scottish fish farmers have been forced to use record amounts of highly toxic pesticides to combat underwater parasites that prey on salmon, raising fears of significant damage to the marine environment.

Data released by the [Scottish Environment Protection Agency \(Sepa\)](#) shows a 110% increase in the use of chemicals to treat sea lice in the past four years, mainly because the parasite is becoming resistant to treatment. During that same period, however, salmon production has increased only by 22%, to 158,000 tonnes.

Fish farm plant with sick workers breached US food safety rules

from [Sunday Herald](#), 28 October 2012



A Scottish fish farming plant whose workers complained of a mystery illness has previously been reprimanded by the US [Food and Drug Administration \(FDA\)](#) for "serious violations" of food safety rules on pesticides in salmon.

A processing plant at Connel in Argyll run by [Scottish Sea Farms](#) was [warned by the FDA in March](#) this year that it was in breach of US federal regulations. "Your firm's aquaculture farmed salmon appear to be adulterated," the FDA said, "in that the products have been prepared, packed, or held under conditions whereby they may have been rendered injurious to health."

The company exports salmon worth £12 million a year to the US, and its Argyll plant was visited by FDA inspectors in September 2011. They were concerned about the way fish were tested for residues of three pesticides used to kill sea lice.

Last week the plant was at the centre of controversy because half its 40 staff had been sick, with [some suggesting](#) that toxic chemicals they were exposed to at work could be to blame.

This was denied by Scottish Sea Farms.

But the revelation that the plant had been investigated earlier by the FDA has sparked fierce criticism from an anti-fish farming campaigner. "It's now official - salmon farming makes people sick," said [Don Staniford](#) from the [Global Alliance Against Industrial Aquaculture](#).

"I'd rather eat my own vomit than eat Scottish farmed salmon. The ugly truth is that consumers should avoid farmed salmon like the plague. Cheap and nasty farmed salmon leaves a bad taste in the mouth."

Staniford claimed it must be "stomach-churning" for staff at the Argyll plant to discover that the FDA had warned that its fish could be harmful to health. "Scottish farmed salmon, like cigarettes, should carry a government health warning," he argued.

Probe into mass sickness at fish processing plant

By Victoria Allen

AN investigation has begun after a mass sickness outbreak among staff at a fish farm.

All 37 staff in the processing area of the farm in Connel, near Oban, Argyll, have been struck down by severe vomiting and coughing which has lasted almost three weeks.

Employees fear they could be falling ill because of toxic chemicals used to disinfect fish cages and prevent outbreaks of fish disease.

Many staff have been allowed to temporarily leave work over concerns about their health, while Argyll and Bute Council has brought in inspectors to try to discover the cause.

A member of staff at the Scottish Sea Farms site, whose comments were reported on the Fishupdate website, said: 'Everyone in the

'We're worried - we all have families'

processing area is coughing, vomiting and feeling like their chest is tight. More than 20 people are feeling ill on a daily basis.

'We don't want to be sick, we are all worried - we all have families and children.'

Bosses apparently told workers they were ill because of smoking at work, although not all of the 37 affected staff smoke. Staff walked out on October 11 after being told those feeling ill could leave, and were told by a doctor they could be facing a public health outbreak.

The aquaculture industry, which supplies most of the fish produced north of the Border, uses poisonous chemicals to control disease in its underwater cages.

These include solutions to disinfect



Outbreak: The Connel fish farm

the cages, anti-fouling agents and drugs to treat outbreaks of sea lice and other diseases more prevalent in fish which are not swimming freely.

Argyll and Bute Council said it was aware of a flu-like illness including respiratory symptoms in some workers at the South Shian fish processing plant.

A spokesman added: 'Investigations carried out by the company, including visits from the council's environmental health team and NHS Highland, have not identified a source.'

'Environmental health officers have examined company procedures and have not found any cause for concern.'

'Water sampling has not revealed any issues, and medical examination of the employees concerned has not highlighted anything indicating a single source. The council continues to liaise with the company.'

Scottish Sea Farms said it had carried out a series of health and safety checks and found nothing wrong at the plant.

The company confirmed that an occupational health nurse is on site.

FISHupdate.com

Scottish Sea Farms staff walk out over sickness

Published: 24 October, 2012

AN INVESTIGATION is continuing into the cause of a sickness which saw staff in the processing plant of a west coast of Scotland fish farm walk out over fears for their health.



Staff at Scottish Sea Farms site in Connel, left their posts on October 11 after feeling ill and coughing and vomiting.

One Scottish Sea Farms employee, who did not wish to be named, said the sickness had been ongoing for 'two to three' weeks.

The staff member has worked at the South Shian site, which employs 37 people in the processing area, for several years and has never experienced issues like this before.

He said: 'Everyone in the processing area is coughing, vomiting and feeling like their chest is tight. Over 20 people are feeling ill on a daily basis.'



SATURDAY 30 JUNE 2012

Salmon firms 'hiding damning reports'

Scotland's £1 billion salmon farming industry has been accused of hiding "damning" information about its environmental dangers.

Salmon companies are refusing to send vital data to Scottish Government scientists, to avoid it being released under Freedom of Information law. On the few occasions they have had to forward information, it has been deleted by government officials.

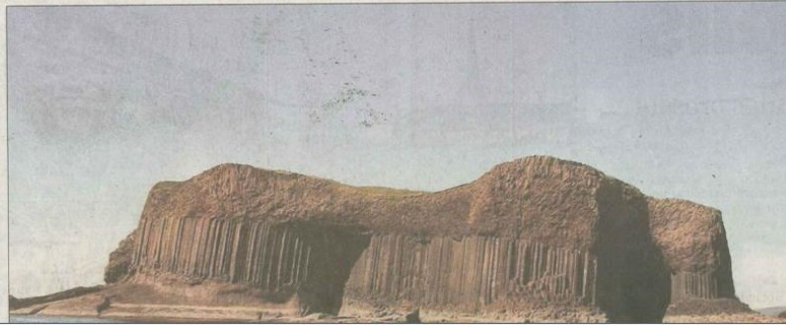
Residents of tiny island to fight plan for salmon farm

Fears project would harm tourism and endanger lives

EXCLUSIVE

DAVID ROSS
HIGHLAND CORRESPONDENT

PLANS for a controversial salmon farm off one of the lesser-known Hebrides have split nearby communities amid claims the venture will damage tourism and make island life more dangerous.



Small wonder

LOCATION



THE twin islands of Gometra and Ulva lie just off the west coast of Mull. The tiny Gometra, which is just 1.5 miles in size, was

Islanders claim salmon farm plan is dangerous and a blight on horizon



Roc Sandford on Gometra with Staffa in the background

By
MOIRA KERR

Published: 05:26 Saturday 17 March 2012



More than 340 people have signed a petition backing a tiny island's fight against plans to site a large salmon farm on the sea route to Staffa.

6

comments

Picture: JOHN GILES/PA

Fish ban call over seal culls



TARGETED: More than 300 seals have been killed in Scotland in the course of a year

ANIMAL rights groups have called for a ban on Scottish salmon after new figures revealed that fish farms killed more than 300 seals in just one year.

Campaigners say retailers have "blood on their hands" after the shocking extent of the legal cull was revealed after a Freedom of Information request.

The data, supplied by Marine Scotland, showed hundreds of the mammals were destroyed over the 12 months to April.

And now the activists are compiling a "name and shame" list of the firms, which "murder" seals "wholly unnecessarily".

The Global Alliance Against Industrial Aquaculture (GAAIA) and the Save Our

By **Paula Murray**

Seals Fund (SOSF) repeated the plea to ban salmon imports while asking supermarkets to stop sourcing "seal-unfriendly" fish.

Don Staniford, of the GAAIA, said: "Scotland's seal killers should hang their heads in shame and hang up their guns."

"Supermarkets such as Sainsbury's and Tesco, which condone the killing of seals by selling seal-unfriendly farmed salmon have blood on their hands."

The SOSF Scotland has approached the US Department of Commerce to use existing legislation to ban the import of

Scottish farmed salmon until they install seal exclusion nets.

According to the groups, only a fifth of the country's fish farms use the predator nets, yet the law says the animals cannot be shot without a licence – and even then, destruction must be as a "last resort".

But the Scottish Government insisted strict licensing means seals are given an "unprecedented level of protection".

A spokeswoman said "few" animals target fish entering fisheries and nets, or attack farms, and added: "Licensing is necessary to control the removal of these seals, as a last-resort measure after any non-lethal alternatives have failed."

Flesh-eating lice spread by fish farms kill 39 per cent of wild salmon



Campaigners have claimed that farmed salmon is ravaged with disease. Picture: PA

By JULIA HORTON

Published on **Tuesday 6 November 2012 22:10**

SCOTTISH fish farms are spreading a deadly parasite that now kills more than a third of wild salmon in the north-east Atlantic, experts warned today.

- **Farmed salmon in Scotland are ravaged with disease, say anti-aquaculture campaigners**

NEWS

Salmon farms turn sea bed into graveyard

Mark Macaskill Published: 9 September 2012

[Comment \(2\)](#) [Print](#)

DOZENS of salmon farms around the Scottish coastline have been dumping unacceptable levels of pollutants into the sea.

The impact of Scotland's £500m aquaculture industry, which supplies many of Britain's top chefs, including Rick Stein and Gordon Ramsay, is revealed in the results of sea bed surveys released by the Scottish Environment Protection Agency (Sepa).

The surveys, carried out over the past three years, cover more than 250 fish farms run by 23 companies. Some farms have been surveyed more than once. Sepa classed 137 of the surveys (44%) as unsatisfactory, indicating high levels of organic matter, such as fish faeces and uneaten food, on the sea bed.

Such waste can disrupt biodiversity by killing off flora and fauna. A further 64 (21%) of surveys were deemed borderline — defined as close to having an unsustainable impact on the environment — and 106 (34%) were satisfactory.

The findings have prompted fresh criticism of aquaculture as a “dirty industry” and renewed calls for chefs to boycott farmed fish. Stein and Ramsay declined to comment.

According to Sepa, the companies with the poorest records included Wester Ross Fisheries: 70% of its reports were classed unsatisfactory and 30% were borderline. Of the surveys of sites run by Loch Duart — which, according to its website, supplies Stein's Seafood Restaurant in Padstow, Cornwall, and Ramsay's Maze in London — 68% were unsatisfactory.

2011:

28 January 2011 Last updated at 01:13

363

Share



Sharp rise reported in Scots fish lice chemical

The level of chemicals used by fish farmers to treat sea lice infestations has risen dramatically, a BBC Scotland investigation has learned.

Scottish government figures showed that over the past five years, the industry used a broader range of chemicals and more of them.

Campaigners claim the figures are evidence the natural parasite is becoming resistant to the treatments.



Salmon farmers have been using chemicals to control the level of sea lice

NEWS

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Firms fined £640,000 over Loch Creran barge deaths

🕒 4 July 2011 | [Glasgow & West Scotland](#)



Two companies have been fined a total of £640,000 over the deaths of two men on a fish farm barge in Argyll.

Maarten Pieter Den Heijer, 30, and 45-year-old Robert MacDonald died on Loch Creran, near Oban, in May 2009.

Both men lost consciousness in a low oxygen environment below deck while trying to help a colleague who had passed out but survived.



Maarten Den Heijer and Robert MacDonald died on the barge

Wild Atlantic salmon 'under threat' from escaped farmed fish and sea lice

Scottish salmon industry criticised by leading anglers group which says government fish farm inspections are 'too lenient'



This article is 5 years old

0

Severin Carrell, Scotland correspondent

Thursday 7 April 2011 21:45 BST



Young wild Atlantic salmon are being killed by sea lice before they breed, leading to a slump in their numbers, the Salmon and Trout Association claims. Photograph: Murdo Macleod

Fish farms are being frequently hit by parasite infestations and mass escapes that threaten the survival of the UK's wild salmon stocks, a leading anglers' group has said.

Official inspections have revealed that scores of salmon farms around the Scottish coast have had infestations of the sea lice parasite that breached recommended levels or have led to fish suffering wounds or an early death.



The two managers are said to have poisoned over 6,000 farmed salmon. (Photo: FIS)

Salmon farm managers charged with animal cruelty over salmon deaths



UNITED KINGDOM

Friday, January 28, 2011, 15:00 (GMT + 9)

Two managers of a Shetland salmon farm have been charged with animal cruelty after poisoning more than 6,000 farmed salmon that then died on 15 August 2010.

the **ENDS** *report*

Intelligence for environmental professionals

Analysis

Scottish salmon farms 'disregard' environment

3 May 2011 17:04 BST

Scottish Government inspection reports obtained under freedom of information rules record frequent problems with sea louse infestation, threatening wild salmon

DAMNED LICE



This estate once teemed with wild salmon but today they are being destroyed by parasites. Now Jenny Scobie is fighting to restore the species to its glory days



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THE ARRAN BANNER

Arran's Weekly Newspaper

SATURDAY, 5 NOVEMBER, 2011

Thousands of fish wiped out

Rare disease in Lamlash Bay hits Kings Cross farm stocks

Ghostly goings





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Salmon farm threatens Scottish island of Eigg's green credentials

Kathrine Anker

26th September, 2011

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5

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The Isle of Eigg has won prizes for its use of renewable energy resources. But a proposed fish farm could ruin the eco-friendly reputation that the small island community has worked so hard to obtain, and the tourist appeal that comes with it



The picturesque island of Eigg, off the West coast of Scotland, is 95 per cent self-sufficient in energy

Hugh Fearnley-Whittingstall tackles farmed salmon feed controversy

Tom Levitt

11th January, 2011

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Channel 4 series will look at ecological cost of producing millions of tonnes of fishmeal for Scottish salmon farms - first revealed by the Ecologist back in 2008



SATURDAY 29 OCTOBER 2011

Award-winning fish farm in pollution row

A HIGHLAND salmon farm that was granted £630,000 of taxpayers' money, given an environmental prize and labelled as a "Freedom Food" producer has been accused of lice infestation and pollution that breach official guidelines.

Wester Ross Fisheries near Ullapool is under investigation by Government and voluntary agencies following complaints from a local landowner, Jenny Scobie. She says sea lice from caged salmon are contaminating wild fish on the River Ullapool, which flows through her land on the Rhidorroch Estate.

2010:

Salmon farm facing prosecution over thousands of fish deaths

from [Sunday Herald, 26 September 2010](#)

One of Scotland's leading fish farm companies may face prosecution after many thousands of salmon were accidentally killed by an overdose of an unauthorised and highly toxic pesticide.

The Sunday Herald has learnt that investigators found significant quantities of pesticides banned for use on fish farms during raids on boats used by Hoganess Salmon, run by the Lakeland Group at Burrastow near Walls on the west coast of Shetland.

Excessive amounts of the pesticides, meant to kill the lice that eat away at salmon, are thought to have been used to douse the fish, causing mass mortalities and destroying other marine wildlife.

The incident occurred on 15 August when salmon were being treated for lice in a well boat, which has containers for live fish. It was initially reported that 6,000 fish died, but investigators have told the Sunday Herald that the total could be up to 20,000.



An investigation has been launched by the [Scottish Environment Protection Agency \(Sepa\)](#), the [Scottish Society for the Prevention of Cruelty to Animals \(SSPCA\)](#), [Shetland Islands Council](#) and several other agencies. Though it is not yet completed, investigators say that there will be a prosecution.

The [Lakeland Group](#), which was owned by the Norwegian fish farming multinational, [Marine Farms](#), before being bought this month by the Polish company [Morpol](#), has admitted that "lice products not approved for salmon may have been used". It has suspended all harvesting of fish from Hoganess.

2009:

Analysis

UK salmon farms rate poorly on environment

27 November 2009

A life-cycle analysis of UK salmon farms shows they are more harmful to the environment than their foreign competitors.

Animal welfare

The Observer



This article is 7 years old



Paul Kelbie

Sunday 22 March 2009 00:01 GMT

Fish virus detected at third farm

Animal welfare groups have called for the whole of Shetland's salmon farming industry to be placed under quarantine after the presence of infectious salmon anaemia (ISA) was confirmed on a third salmon farm.

The farm is close to those where ISA virus was detected on 2 January and 31 January. In line with the Scottish government's objective of eradicating the outbreak, a spokesman said the farm would be cleared of fish as soon as possible by the farm owners, Hjaltland Seafarms Ltd, under the supervision of the Fisheries Research Services.

Although the third outbreak is within the existing ISA control zone set up in the south-west of Shetland on 2 January, John Robins of Animal Concern has called for the exclusion zone to be widened and any salmon farmers who may have been negligent in allowing the contamination to spread held to account.

"The whole salmon farming industry in Shetland should be quarantined to make sure no live product is moved in or out until this outbreak has been dealt with," said Mr Robins. "One of the causal effects is sea lice infestation. These parasites suck the salmon's blood lowering their immune system and make them very susceptible to diseases. Now sea lice infestation can be avoided and when it does occur it should be treated immediately. Failure to do this is a criminal offence under the 2006 Animal Health and Welfare [Scotland](#) Act.



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Page last updated at 15:15 GMT, Sunday, 4 January 2009

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Deadly salmon infection detected

An infectious disease which can devastate farmed Atlantic salmon stocks has been detected on Shetland, the Scottish government has confirmed.

Infectious Salmon Anaemia (ISA) was discovered at one salmon farm site, which has been empty of fish since 21 December, in the Burra area.

The disease is also suspected at a further two sites in Burra, one of which was emptied six weeks ago.

ISA does not affect humans, but can seriously damage farmed salmon stocks.

The Scottish government said it had immediately set up a National Disease Control Centre and was taking action to control the spread of the disease.



An outbreak of ISA in 1998 severely damaged the Scottish salmon industry

Rob Edwards

environmental news
and comment

Company says sorry for offering environment officials free salmon

Exclusive, 10 February 2009



A Norwegian fish farming multinational has apologised for offering to reward officials at Scotland's environment watchdog with smoked salmon for giving the go-ahead for a new toxic pesticide in record time.

Marine Harvest suggested sending "some sides of smoked salmon" to staff at the Scottish Environment Protection Agency (Sepa) after they processed applications to dose salmon cages with deltamethrin in a matter of days.

The suggestion was unethical and should never have been made, the Oslo-based company said. It promised it would be sparing Sepa any embarrassment by sending the agency "an unconditional apology".

Last year salmon farmers were anxious to be allowed to use deltamethrin to treat sea lice, which eat fish alive. Previous pesticides were becoming ineffectual, as the lice were beginning to resist them.

2008:



FISH FARM DEATH TOLL — THE FACTS

Our front page features new photos of dead fish at the St Molio's fish farm, Lamlash Bay, and exposes the true story of the disease and death that has been affecting the fish stocks.

Written by [Alison Prince](#)
Thursday, 18 September 2008

690 views 1 comment

Last week, eight large containers of maggot-ridden dead salmon stood waiting for disposal on the slipway at St Molio's fish farm in Lamlash Bay. The photographs printed here were taken less than a week ago, as their digital date confirms, and they offer direct evidence that mortalities among the penned fish are still occurring. A disease epidemic ravaged stocks last year, and statistics obtained from SEPA under the Freedom of Information Act confirm that from October to December 2007, a shocking total of over 300,000 fish died.





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Last Updated: Saturday, 16 February 2008, 05:27 GMT

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Contamination alert over salmon

Ten major food stores have withdrawn nearly 50 salmon products from sale because of contamination fears.

The salmon's supplier, Marine Harvest, said it believed the fish had been contaminated by leaked diesel from a boat that take catches for processing.



The salmon is thought to have been contaminated with diesel

The fish went to supermarkets including the "big four" of Tesco, Sainsbury's, Asda and Morrisons.

The Food Standards Agency (FSA) said the salmon may taste unpleasant, but is very unlikely to pose a risk to health.

'Precautionary measure'

The fish, some of which was processed by a second firm, Young's Seafood, also went to Booths, Budgens, Co-op, Nisa-Today, ShopRite and Somerfield.

Tesco Pull More Salmon Over Fuel Contamination Scare

A FURTHER six Tesco salmon products are being pulled from sale due to possible diesel contamination, the food watchdog said today.



BY DAILYRECORD.CO.UK
15.50, 19 FEB 2008 UPDATED 10.02, 1 JUL 2012

NEWS

A FURTHER six Tesco salmon products are being pulled from sale due to possible diesel contamination, the food watchdog said today.

It follows last week's withdrawal of thousands of fresh Scottish salmon products by 10 major retailers.

The Food Standards Agency (FSA) today said one Costco product plus six Tesco own-brand salmon products have additionally been cleared from shop shelves.

Marine Harvest, which supplied the fish, believes the contamination was caused by diesel but is still investigating the source.

The taint is likely to give the salmon products an unpleasant taste.

2007:

Last Updated: Monday, 22 January 2007, 14:21 GMT

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Dive death marine 'ill-equipped'

A Royal Marine who died on a dive at a fish farm was ill-equipped and not adequately supervised, according to a sheriff's determination.

Martin Blackley, 26, of Aultbea, drowned while working at a fish pen in Loch Ewe, Wester Ross, in May 2002.




Martin Blackley was based at HMS Condor in Arbroath

Sheriff Desmond Leslie said Seahorse Aquaculture "ignored" regulations by allowing Mr Blackley to carry out dives in exchange for a £300 dry suit.

The commando based in Arbroath was on sick leave after injuring a leg.

Marine Harvest, the company whose fish farm Seahorse Aquaculture had been contracted to work on, have also been criticised.

Disease on-going as local fish farm re-brands

 **November 30, 2007**

Lighthouse Caledonia, the new name for Pan Fish, the company that owns St Molio's fish farm, is declining to disclose any further information about the local outbreak of Proliferative Gill Disease (PGD), despite further lorry-loads of fish being trucked off the island.

Isolated incident?

Lighthouse Caledonia has said that the outbreak of PGD is an isolated incident. The company has admitted that the affected fish were transferred from a Pan Fish Scotland Kyles of Bute site, although a spokesperson for the newly-formed aquaculture company said on Tuesday this week that 'at this present moment, to the best of my knowledge, there are no further cases of the disease at other Lighthouse Caledonia sites.' The picture is clouded by a complicated restructuring of Marine Harvest Global (MH), the parent company of Lighthouse Caledonia (LC). Its spokesman Steve Bracken confirmed that remaining Scottish fish farms belonging to MH do experience instances of the disease PGD.

Salmon farm campaigners in Halloween protest

Published: 31 October, 2007

DRACULA, Frankenstein and other Halloween-themed protesters took to the streets of Edinburgh today to highlight to consumers the "many environmental and social problems" associated with farmed salmon.



The Halloween-themed protesters gathered in Edinburgh

The events, part of the Pure Salmon Campaign's second annual Global Week of Action, aim to focus attention on how current fish farming practices are claimed to "damage the marine environment and pose other dangers to human health and workers' safety".

Commenting, director of the Pure Salmon Campaign, Andrea Kavanagh, said: "Contaminants in farmed salmon make this fish a scary choice for consumers. With the toxic brew of chemicals often used in the production of farmed salmon, it is hard to tell if you are getting a trick or a treat."

2006:

Food

The Observer

Why organic salmon is causing a nasty smell

What's the difference between organic farmed salmon and the much-demonised variety that's kept in cages, stuffed with colours and pesticides, doomed to swim in its own faeces and prematurely slaughtered? Surprisingly little, discovers Joanna Blythman

But here's the nub of the problem with organic salmon: it doesn't deliver the radical difference in production methods that consumers have come to expect from other categories of organic food. To make a very unsubtle joke, there just isn't enough clear blue water between conventional salmon farming - condemned by its critics as the biggest environmental disaster to afflict the west coast of Scotland in living memory - and the organic alternative. Indeed, delve into the supposed differences between the two and the water looks rather murky; so murky, in fact, that even some long-standing advocates of organic farming won't have any truck with it. As Iain Tolhurst, a highly respected organic grower and a key figure in the foundation of the modern British organic movement puts it: 'If the public was given the full facts about organic salmon, they would demand something better. So-called "organic" salmon is making a mockery of organic standards.'

The Telegraph

[HOME](#) » [NEWS](#)

Wild salmon put at risk as a million farmed fish escape

By Charles Clover, Environment Editor

12:01AM BST 29 Aug 2006

More than a million farmed salmon have escaped into the wild in the past three years in accidents which scientists fear may be driving the wild salmon population towards extinction.

The figures, released by the Scottish Executive, show that a total of 1.6 million salmon have escaped from fish farms in more than 50 separate accidents since 2000, with 821,512 escaping last year alone. So far this year, official figures show 105,987 of the fish have escaped from salmon farms.

Recent scientific evidence shows that the accidental escape of farmed salmon from pens each year can lead to catastrophically reduced survival of the progeny of wild salmon which breed with the domesticated fish.

Scientists call the effect the "extinction vortex" because they say it could lead to the demise of wild salmon populations which have evolved over thousands of years in particular rivers.

2005:

NEWS

Fears raised by salmon dump

Marc Horne

Published: 17 July 2005

[Comment \(0\)](#) [Print](#)

More than 100,000 fish have been buried, along with fish waste treated with acid, on a beach in North Uist.

Residents and campaigners say the dump is a threat to public health and called on the Scottish executive to introduce tougher regulations.

The fish were dumped following an outbreak of infectious pancreatic necrosis and a suspected outbreak of infectious salmon anaemia (ISA) at a fish farm run by Marine Harvest, a seafood firm, on the neighbouring island of South Uist.

Susan Rothwell, whose home is less than half a mile from the Kyles Paible dump, said: "The smell is indescribable. The stench of rotting fish day in, day out makes you feel ill. If you go anywhere near the place it is just covered by flies and seagulls.

"It is a clear health hazard and there is no way that it should be happening right next to the beach where kiddies play."

Bruce Sandison, chairman of the Salmon Farm Protest Group, said: "This is an environmental and public health hazard on one of the most sensitive landscapes in Europe."

Last Updated: Monday, 21 November 2005, 22:51 GMT

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[Printable version](#)

Seal killing concern at fish farm

Scotland's leading fish farm operator has been accused of recklessly shooting seals near one of its sites at Kyle of Lochalsh in the west Highlands.

Since the 1970s, seals have been a protected species but can be shot, under licence, to protect fish farms.



The company said it shot seals to stop them attacking salmon cages

There are concerns about the way Marine Harvest is carrying out the killings.

However, the company said it had to shoot the seals to stop them attacking the salmon cages and denied it was responsible for causing any woundings.

Marine Harvest, part of the multinational company Nutreco, owns fish farms up and down the west coast.

Shetland salmon farms fined for illegal use of sea lice chemical – Fishupdate.com

Posted on September 22, 2014 by systemwyvex • 0 Comments

Shetland salmon farms fined for illegal use of sea lice chemical Published: 08 July, 2005

TWO Shetland fish farm companies have been fined £2000 each for illegally administering sea lice chemicals.

Hoganess Salmon Ltd pled guilty at Lerwick Sheriff Court on Wednesday 6 July to polluting the Gruting Voe at Mid Taing between 2 June 2004 and 11 August 2004 by applying the chemical, emamectin benzoate (sold by Schering Plough as SLICE), to its salmon.

Wester Sound Salmon Ltd admitted permitting the same chemical to enter Cloudin Site, Vaila Sound, between 2 June 2004 and 11 August 2004.

Both companies are owned by the Norwegian company, Marine Farms ASA.

The Scottish Environment Protection Agency (SEPA) reported the cases to the Procurator Fiscal. David Okill, SEPA's Shetland team leader said: "It is very disappointing that some fish farm operators are willing to use and discharge medicines in a way which may endanger the marine environment. These cases demonstrate that where SEPA has clear evidence of illegal activity, enforcement action will be taken."

*the***ENDS***report*
Intelligence for environmental professionals

News

Fish farms fined over unlicensed chemical use

1 July 2005

Two Shetland fish farms - both subsidiaries of the Norwegian multinational Marine Farms ASA - have been fined for polluting water with the sea lice treatment emamectin benzoate. The compound is authorised by the Scottish Environment Protection Agency to kill lice on salmon, but neither company held a licence.

Down on the Fish Farm

CELEBRITY chef Jamie Oliver caused uproar when he promoted Sainsburys farmed salmon on TV over Christmas (*Eye* 1122). More than 40 complaints were received by the advertising standards authority (ASA) claiming that the ads were inaccurate and misleading.

The ASA response was unequivocal: "We checked the advertisement in which Jamie Oliver says to the fish farmer: 'What's so good about your salmon then?' The farmer replies: 'Well, as you can see here our fish are fit and healthy because they are in a tidal loch which means they have cold, clear water'. The advertisement is not making claims about salmon as a food. The advertisement is saying that a tidal loch is better for the fish than other farming alternatives, and we don't feel that this is likely to mislead consumers."

The fish farm site featured in the advert, at Loch Hourn in the West Highlands of Scotland, is

owned by Marine Harvest (Scotland) Limited, part of the Dutch multinational Nutreco. *Private Eye* has now seen photographs taken below the Loch Hourn cages on 31 December by a team of divers that included a marine scientist. The area below the cages and for a distance of up to 60 metres from the cages is virtually devoid of marine life. It is also littered with discarded feed bags and five-litre metal containers.

Most significant, however, is the proliferation of beggiatoa mat; an internationally accepted sign of severe degradation of the seabed. Beggiatoa occurs at sites of organic pollution, often in areas where there is poor water exchange with the open sea. Low oxygen levels result in death or loss of most mega and macro fauna.

Sainsburys is now reviewing its £45m contract with its advertising agency, Abbott Mead Vickers BBDO Limited, with whom it has worked for 25 years.

'Old Trout'

Queen caught up in row over Scots farmed salmon

By Derek Lambie

THE Queen has been embroiled in an environmental row after it emerged salmon served at her Highland estate comes from controversial fish farms.

Special guests invited to dine at Balmoral might well presume the fine smoked salmon on offer was caught fresh from the waters of the royal estate.

But it has emerged supplies come from a fish farm hundreds of miles away, sparking concern from experts who claim salmon farms have been linked with serious damage to the marine environment. The news may also alarm Prince Charles, who has lobbied against factory farming as patron of the Salmon and Trout Association.

The Sunday Express can reveal Balmoral supplier John Ross Jr - which holds the Royal Warrant "By Appointment to Her Majesty the Queen" - is to be named on a list of firms that disguise the fact their fish is farmed rather than wild.

Bruce Sandison, who runs the Salmon Farm Protest Group, said he planned to list the Aberdeen-based firm among 24 others he claims are



CONCERN: A controversial salmon farm, above, and the Queen

misleading customers. He said: "I can imagine the Queen being a bit upset about this - particularly the way Prince Charles thinks of salmon farms."

"Nowhere on the John Ross Jr site will you find they're selling farmed salmon. To me it's quite clear they're pretending - they're saying they've got the Royal Warrant and implying it's good enough for the Queen, when we know farmed salmon

is second rate fish. According to the firm's website John Ross Jr has been "smoking Scottish salmon in Aberdeen, in the traditional time honoured way".

The site then gives detail about how the fish is smoked using "truly traditional" methods, but there is no mention that the fish are not wild.

The Sutherland-based Salmon Farm Protest Group believes many firms are using their web-

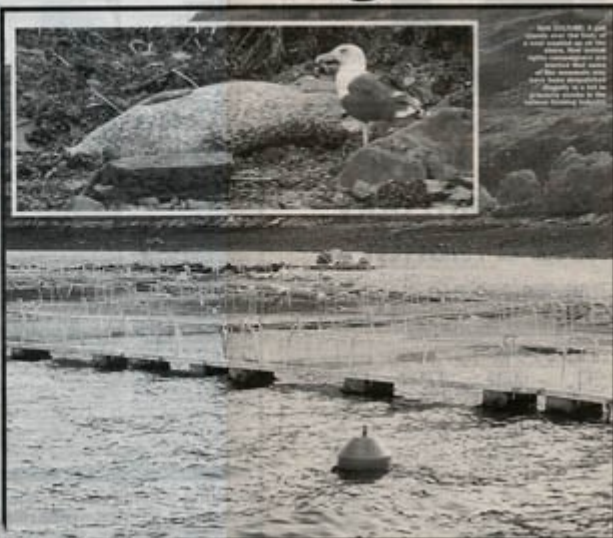
sites to disguise the fact their fish is farmed. Mr Sandison said: "I approached John Ross Jr and asked if their salmon was farmed or wild. They said farmed, and admitted their website could have been misleading."

Buckingham Palace confirmed the Aberdeen firm held a Royal Warrant and supplied fish to the Queen. However, a spokeswoman refused to discuss the issue of the fish being farmed.

Suffering in the culling fields

EXCLUSIVE Gunmen leave seals to a painful death in bid to save farm salmon

A HIBERNIAN seal of seals is being run by a small-scale farmer in the Hebrides. The farmer, who is a member of the Hebridean Salmon Fishermen's Association, has been told that he must stop shooting seals. The farmer has been told that he must stop shooting seals because the seals are suffering from a painful death. The farmer has been told that he must stop shooting seals because the seals are suffering from a painful death. The farmer has been told that he must stop shooting seals because the seals are suffering from a painful death.



US to block seal cull farm salmon

EXCLUSIVE

By Meg Milne

US Government officials are set to ban the import of Scottish salmon from fish farms where seals are shot.

The move follows Scottish Sunday Express revelations that seals are being slaughtered in the sea around Skye.

A secret cull is being carried out by marksmen for a multi-million-pound salmon giant in a bid to protect their fish stocks.

Yesterday it was revealed government lawyers in Washington are studying a legal opinion warning that under the US Marine Mammal Protection Act it is illegal to sell fish produced on farms that shoot seals.

Amsterdam-based Marine Harvest, which predicts an annu-



SEAL CULL: The animals are being shot to protect fish farms

al turnover of one billion euros this year, ordered the cull after losing around 3,000 fish.

Marine Harvest, part of the giant Nutreco multi-national, which employs 6,000 people in eight countries, insist seals have must be shot to stop them attacking salmon at their Hebrides fish farm.

Yesterday, Don Staniford, the European co-ordinator of Pure

Salmon, a fish-farming pressure group, applauded the American move.

Mr Staniford said: "Either the company stops killing seals or they potentially lose access to one of the world's largest farmed salmon markets."

"The simple solution to the problem - as well as escapes, waste pollution and discharges - is to enclose the cages."

On Friday, Mr Staniford attended a Nutreco meeting in Amsterdam and presented a dossier of our revelations to the company's board.

Nutreco bosses were also given a copy of the legal opinion warning of US prohibition on the importation of salmon from their fish farm.

The controversial cull, to the west of Sron an Tairbh at Loch Alsh, has been condemned by campaigners demanding seals are given more protection.

Local businessman Nigel Smith, who runs a local wildlife tourist business, photographed some of the dead animals.

Mr Smith said: "When I went past with a boat load of tourists, all they could see was carcasses rotting on the beach."

Marine Harvest insist they only shoot seals "as a last resort".

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REPORT



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Global Assessment of Organic Contaminants in Farmed Salmon

Ronald A. Hites^{1,*}, Jeffery A. Foran², David O. Carpenter³, M. Coreen Hamilton⁴, Barbara A. Knuth⁵, Steven J. Schwager⁵[+ See all authors and affiliations](#)

Science 09 Jan 2004;
Vol. 303, Issue 5655, pp. 226-229
DOI: 10.1126/science.1091447

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Abstract

The annual global production of farmed salmon has increased by a factor of 40 during the past two decades. Salmon from farms in northern Europe, North America, and Chile are now available widely year-round at relatively low prices. Salmon farms have been criticized for their ecological effects, but the potential human health risks of farmed salmon consumption have not been examined rigorously. Having analyzed over 2 metric tons of farmed and wild salmon from around the world for organochlorine contaminants, we show that concentrations of these contaminants are significantly higher in farmed salmon than in wild. European-raised salmon have significantly greater contaminant loads than those raised in North and South America, indicating the need for further investigation into the sources of contamination. Risk analysis indicates that consumption of farmed Atlantic salmon may pose health risks that detract from the beneficial effects of fish consumption.

Scottish farmed salmon 'is full of cancer toxins'

By Roger Highfield, Science Editor

12:01AM GMT 09 Jan 2004

Farmed Atlantic salmon from Scotland contains the highest levels of cancer-causing chemicals in the world, a new survey has found.

It was so contaminated that, according to American guidelines, it should be eaten only once every four months. Otherwise, it will increase the risk of cancer by at least one case in 100,000, say scientists.

Levels of cancer-causing substances - including PCBs, dioxins, dieldrin and toxaphene - were significantly more concentrated in farmed salmon than in wild fish, said the study, published today in Science magazine.

Scottish samples of farmed Atlantic salmon were up to 10 times more contaminated than the least contaminated wild salmon, from Kodiak, Alaska. The cause is thought to be contaminated high-fat fish feed.



Down On The Fish Farm

9T WOULD be easy to crow the "Eye told you so" – but it did. For five long years, Old Trout has been highlighting the potentially harmful effects of eating farmed salmon. And now a group of American scientists has published a peer-reviewed report in *Scientist*, one of the world's leading science journals, confirming that eating too much farm salmon might seriously damage your health.

Old Trout's advice remains the same: give Scottish farmed salmon, smoked or otherwise, a miss; and take the official denials that anything's wrong with a large pinch of salt.

NEWS

Listeria found in smoked salmon

Camillo Fracassini

Published: 25 January 2004

[Comment \(0\)](#) [Print](#)

Almost a fifth of smoked salmon samples bought from supermarkets and food suppliers last week contained traces of the bug, dealing another damaging blow to the industry.

The level of contamination was high enough to mean that the fish would be banned from America, Australia and New Zealand as well as a number of European countries, all of which have a “zero tolerance” of food contaminated with listeria. America has already blocked dozens of consignments of Scottish smoked salmon amid fears that they may be contaminated with listeria.



DAILY NEWS 9 January 2004

Farmed salmon more contaminated than wild

By Rob Edwards

Farmed salmon have significantly higher levels of toxic contaminants than salmon from the wild, US scientists have found.

Contamination by PCBs, dioxins and pesticides is on average 10 times higher in farmed salmon. The consequent health risks, such as a raised risk of cancer, could detract from the known health benefits of eating oily fish, the scientists warn.

The pollutants, widely used by industry and agriculture in the past, are now ubiquitous in fish. They accumulate in the fat of farmed salmon because the fish are fed a diet of concentrated fish oils and meal. But the salmon farming industry has always argued that the levels are too low to pose any danger.

Now that assurance is facing its first serious challenge as a result of a major investigation by environmental experts at universities in Indiana, Michigan and New York.

"I and my family do not eat farmed salmon," says Jeffrey Foran, a toxicologist from the University of Michigan and one of the team. "My hope is that public health agencies will look at our study and issue advice encouraging people to eat less contaminated fish." Ensuring fish is labelled as farmed or wild allows consumers make a better choice, the scientists say.

the **ENDS** *report*

Intelligence for environmental professionals

News

Wester Ross Salmon fined for overproduction

1 September 2004

Scottish salmon farmer Wester Ross Salmon has been fined £12,000 after being caught exceeding its permitted production limit and thereby causing too much waste water to enter controlled waters.

AQUACULTURE

Wester Ross firm fined for licence breach

Fish Farming Today

Published: 01 September, 2004

WESTER Ross Salmon Hatcheries Ltd was fined £12,000 on 26 August at Dingwall Sheriff Court for massively over-producing salmon smolt at its fish farm on Loch Tollaidh, Wester Ross over a 4-month period last year. The company pled guilty to allowing too much waste water from its fish farm into Loch Tollaidh, a popular freshwater angling loch near Gairloch between 7 July 2003 and 3 November 2003. The case was reported to the Procurator Fiscal by the Scottish Environment Protection Agency (SEPA).

Down On The Fish Farm



THERE was great excitement in the Scottish press when the list of gifts received by Scottish ministers was revealed at the beginning of the month. They have scooped some 785 "tokens of appreciation" over the past five years; including freebies to sporting events, several gallons of whisky and assorted glassware, ties and cufflinks.

Leading the pack with 120 offerings is first minister Jack McConnell, who counted among his presents a set of gold cufflinks in the shape of salmon. Valued at £100 they were presented to him by his friends in Scotland's biggest fish farm company, the foreign-owned multinational Marine Harvest. Noticeable by its absence from the first minister's list, however, was the side of wild Alaskan smoked salmon (value £25) that was delivered to Mr McConnell at his official residence, Bute House, in Charlotte Square, Edinburgh, on 14 December 2002 by an environmental group concerned about the impact fish farm disease and pollution was having on Scotland's wild salmonids.

There is no doubt the minister received the gift because he later told one of the environmentalists it was "delicious" and added: "You'll never guess who was with me at the time: my brother, he works for Marine Harvest!"

'Old Trout'

Private Eye issue 1117 (15 October 2004)

2003:

UK news



6

**Andrew Osborn in Brussels
and James Meikle**

Tuesday 28 January 2003 14.33 GMT

Salmon pink becomes a grey area for EU

Its orangey-pinkish flesh glistens from countless supermarket shelves across the country but the highly prized salmon is about to undergo a chameleon-like change of colour - due to a new European Union food safety edict. Concerned that the chemical being fed to farmed salmon to give them their bright hue may also be harming people's eyesight, the maximum amount of artificial colouring allowed in the fish by the EU is to be slashed by a factor of three.

"Brighter eyesight or brighter salmon?" was how the European commission described the stark choice yesterday.

The pigment at the centre of the scare, canthaxanthin, is also fed to chickens to give their skin and eggs a brighter yellow complexion; the maximum authorised levels for poultry will also be cut.

However, three quarters of the eggs sold in the UK do not contain the chemical at all and the levels fed to poultry are said to be well within the EU's new stricter limits.

"Scientific assessments have shown that a high intake of canthaxanthins produces an accumulation of pigments in the retina, affecting the sight," David Byrne, the EU food safety commissioner, said. "The use of this feed additive is purely cosmetic, to colour food and reduced levels of the additive will not adversely effect taste or quality."



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the **ENDS** *report*

Intelligence for environmental professionals

Supermarkets react to concerns on farmed salmon

1 June 2003

Supermarkets are tightening their control of the supply chain for farmed salmon as environmental groups warn that the industry is threatening wild fish, polluting the environment and producing fish contaminated with harmful chemicals.

US rejects 'filthy' Scottish salmon

from [Sunday Herald](#), 30 November 2003

Salmon from Scottish fish farms have been banned from entering the United States because they are "filthy", "insanitary" or contaminated with a bug that can cause fatal infections.

The powerful US government watchdog, the [Food and Drug Administration](#), has this year condemned 27 imports of smoked salmon from leading Scottish companies as unfit for human consumption.

Companies claim the clamp down is forcing them to abandon the multi-million pound US market. "It is a scandal," said Andy Lane, managing director of Loch Fyne Oysters. "If I could sue, I would."

In order to protect the health of US consumers, the FDA regularly tests samples of food imports for contamination and decay. If it finds a problem, it rejects the import and publishes details on its website.

An analysis by the Sunday Herald of all the UK food rejected reveals that Scottish salmon is one of the most frequently refused. Since January, 15 shipments of smoked salmon have been turned away because they were contaminated with listeria.

A further nine salmon shipments from Scotland were classified as "insanitary". According to the FDA, they "may have become contaminated with filth" and "may have been rendered injurious to health".

Three more salmon shipments were officially defined as "filthy".

DEFINITIONS USED BY THE US FOOD AND DRUG ADMINISTRATION

FILTHY: "The article appears to consist in whole or in part of a filthy, putrid, or decomposed substance or be otherwise unfit for food.

INSANITARY: "The article appears to have been prepared, packed, or held under insanitary conditions whereby it may have become contaminated with filth, or whereby it may have been rendered injurious to health."

LISTERIA: "The article appears to contain Listeria, a poisonous and deleterious substance which may render it injurious to health."

Salmon from seven Scottish companies have been rejected, including some of the most famous names in the business. Loch Fyne Oysters at Cairndow in Argyll had the most shipments rejected – 10 between February and May, six because of listeria contamination.

Down on the Fish Farm

THERE was further embarrassment for the industry when the Scottish environment protection *[sic]* agency (Sepa) disclosed recently that fish farm pollution incidents had doubled in the year 2002/2003.

These included sewage fungus and fungal growth in the River Moidart; diesel oil spills into Loch Hourm; fatty fish farm deposits on a Shetland beach; decaying salmon in Loch Erisort; and sewage fungus blanketing the River Rannoch in the West Highlands.

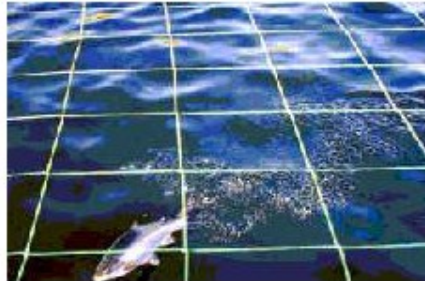
One incident Sepa chose to ignore involved a 10-metre fish farm pontoon owned by Lighthouse of Scotland that unaccountably broke loose from its mooring in Portree Bay on the Island of Skye. Four days later, having floated undetected across a busy shipping lane, it washed up on the shore near Gairloch in mainland Scotland. The five tanks on the pontoon, labelled "hydrogen peroxide", were in fact stuffed with dead and decaying farm salmon.

And what does the Scottish executive propose to do about all this fish farm filth and deception? In the wheeling and dealing between New McLabour and the Liberal Democrats to form a new administration following the Scottish parliament elections, the fish farmers have been promised that the executive will reduce the number of regulatory agencies that govern their industry. Treble farm salmon steaks all round!

'Old Trout'

7th July 2002

Study proves cancer-link chemicals in farm salmon



Call for consumer boycott as groundbreaking study finds evidence of major pollutants in the food chain

By [Rob Edwards](#), Environment Editor

Salmon reared in cages around Scotland are contaminated with high levels of toxic chemicals suspected of causing cancer, according to an authoritative new study. The revelation has already sparked a call for consumers to boycott farmed fish.

Experts from universities in Britain and Belgium have analysed salmon from Scottish fish farms and discovered that they contain a wide range of dangerous industrial pollutants. These include poisonous pesticides, cancer-causing PCBs (polychlorinated biphenyls) and 'gender-bender' chemicals known as PBDEs (polybrominated diphenyl ethers) which disrupt hormones.

Farm salmon is now most contaminated food on shelf

from [Sunday Herald](#), 20 October 2002

Farmed salmon is the most contaminated food sold by British supermarkets, according to a new analysis by government advisors.

Among 100 different worst-case examples of fruit, vegetables, meat and other foodstuffs polluted by pesticides over the past five years, salmon comes out bottom. Every sample of farmed salmon in the batch tested by scientists was found to contain at least three toxic chemicals.

The revelation comes as the Scottish salmon-farming industry faces its biggest, and potentially most damaging, nationwide protest to date. Millions of salmon, fed and reared in cages at the 350 fish farms around Scotland's coastline, are sold throughout the UK. Virtually all fresh salmon sold in British supermarkets is farmed.

On Saturday, protesters are planning to picket supermarkets in up to 100 towns and cities across the country, urging shoppers not to buy farmed salmon. The protests will cover all the big-name supermarkets such as Tesco, Safeway, Sainsbury's, Asda and the Co-op.

The day of action is being led by Bruce Sandison, a well-known angler from Sutherland, who chairs the newly formed Salmon Farm Protest Group. Last week the group launched its [website](#), encouraging people to join in the protest on October 26.

"I am greatly concerned by the failure of supermarkets to warn customers that some farm salmon might contain life-threatening levels of dioxins, DDT residues and other harmful substances," Sandison said.

"A decade of deceit, obfuscation and deception on the part of successive Scottish administrations has led to this public protest. The only way to save Scotland's remaining West Highlands and Islands wild salmon and sea-trout from extinction, caused by fish farm disease and pollution, is to explain to consumers why they shouldn't buy fake fish in their supermarkets."

THIS WEEK 27 April 2002

Big catch

By Rob Edwards

TOXIC chemicals used by salmon farms could be killing off tiny animals that are vital to the marine food chain, scientists warn in a confidential report for the British government leaked to New Scientist.

Salmon farming is one of the world's fastest growing food production industries. For the first time, the total amount of Atlantic salmon reared in cages in Norway, Chile, Scotland, Canada and elsewhere is expected to top one million tonnes this year.

But as the industry has grown, so have concerns about the pollution, disease and genetic contamination it may spread. Now, evidence from one of the biggest scientific investigations to date suggests that the pesticides applied at hundreds of salmon farms may be harming the marine environment.

The fish are fed or bathed in cypermethrin, azamethiphos or teflubenzuron to kill the sea lice that plague them. The lice damage the health of the fish, and in turn the salmon farming business. But shellfish farmers and environmentalists have long suspected that the chemicals could be harming other marine wildlife.

These fears prompted the British government to launch a £750,000 study in 1999, involving regulatory agencies, marine laboratories and the salmon farming industry. New Scientist has seen the 178-page second annual progress report of this study, dated April 2001.

the **ENDS** *report*

Intelligence for environmental professionals

Fish farm convicted for illegal chemical use

1 February 2002

Setterness Salmon has been fined £6,000 for illegal use of a veterinary medicine and causing the discharge of the chemical to coastal waters. The company subsequently announced its withdrawal from an industry quality assurance scheme.

DAILY NEWS 16 July 2002

Scottish salmon in “extinction vortex”

By Danny Penman

Pampered farmed salmon are driving their wild brethren into an “extinction vortex” in rivers along the west coast of Scotland, according to new research.

“Farmed fish are bred to grow fast,” says James Butler, director of the Spey Fishery Board. “Their voracious feeding ensures that they out compete native salmon.”

But the farmed salmon do not then replace wild salmon in UK rivers, Butler warns: “When the farmed fish migrate to the sea they rapidly die off or are killed, so the population plummets. Another problem is that you get hybridisation, which weakens the wild stock. It’s a double whammy that drives them into an extinction vortex.”

Butler conducted his research whilst working at the Wester Ross Fisheries Trust and will present it at the 6th International Atlantic Salmon symposium which starts in Edinburgh on Tuesday. Butler, with Jon Watt of the Lochaber Fisheries Trust, monitored 38 rivers along the west coast of Scotland between 1997 and 2001.

Pollution fear over fish farms



Fish farms are accused of harming open waters

A trained marine zoologist has passed pictures to the BBC which he says show the damage being caused by fish farms on the west coast of Scotland.

David Ainsley has also given his evidence to the Fisheries Minister, Rhona Brankin, and the Scottish Environmental Protection Agency (Sepa).

Mr Ainsley, who runs a diving business, is opposed to plans for new fish farms in the Firth of Lorn between Argyll and Mull.

The film he passed to the BBC shows rocky reefs and rich marine life.

But he said there had been a dramatic change in the same area eight weeks after a fish farm opened there.

The seabed is covered in a thick grey silt and

“I’m particularly against any form of intensive factory farming and fish farming is the forgotten factory under the sea in this country”

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Down on the Fish Farm



DICHLORVOS, a highly toxic organophosphate most fish farmers used to treat captive stock for sea lice infestations, has been banned in UK – but some fish farmers still have permission to use it. If humans come into contact with it, there is a risk it could seriously disrupt their nervous system.

Dichlorvos is an active ingredient in a number of household products such as fly sprays and its use has now been banned on advice from the Advisory Committee on Pesticides, the Committee on Mutagenicity, the Committee on Carcinogenicity, the government's chief medical officer and even Sir John Krebs' Food Standards Agency.

Do Scotland's foreign-owned multinational fish farm companies use this cancer-causing organophosphate to treat sea lice in their salmon cages? Has Seap (the Scottish environment pollution agency), which after a carefully "scientific" study gave the all-clear for Dichlorvos to be used in fish farms, withdrawn its consents?

Er, no -- because Seap doesn't know how many Dichlorvos consents it issued or to whom. According to Intrafish, the aquaculture industry information bulletin, Seap says: "The process of going through registers to find all the dichlorvos consents, so that they could be withdrawn, would deflect scarce manpower from the task of processing applications for the use of the current sea lice treatments."

Nothing to worry about there, then.

'Old Trout'

Salmon farming under fire



Fish farming has increased over the past decade

A report into salmon farming in Scotland has severely criticised the industry.

Down on the Fish Farm

AT LAST it has been admitted: the feed given to farm salmon is contaminated with potentially cancer-causing chemicals (PCBs or polychlorinated biphenyls).

Brian Simpson, chief executive of Scottish Quasi Salmon ("Quality", *shurely?*), the industry's representative body, said last week: "We are aware the EC is going to put limits on the levels of PCBs in animal feeds. Our own sampling indicates that the levels in our feeds at present are one-fifth or less than the proposed limits. But we would like to eliminate these contaminants completely."

Simpson was commenting after a Seap (Scottish environment protection agency) survey found high levels of PCBs below fake salmon cages along the west coast of Scotland. Scientific evidence suggests that PCBs and dioxins harm the natural environment and may be associated with learning difficulties in young children, and with reduced fertility in adults. Seap found "the highest concentrations in sediments were detected close to fish farms, suggesting the farms were the source of the PCBs".

Ross Finny, Scottish executive rural affairs and

environment minister, should explain why he allowed this to happen. There are more than 340 salmon farms in the West Highlands and Islands of Scotland producing nearly 100 million fake fish each year. The untreated sewage these farms dump daily into coastal waters exacerbates the PCB problem. But Finny recently contemptuously dismissed calls from the Scottish parliament for a public inquiry into this dirty business.

'Old Trout'



Farmed salmon 'contaminated'

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Salmon farmers are trying to reduce toxic contamination

UK scientists are calling for urgent research to be carried out into the safety of farmed salmon after research showed some fish contain worrying levels of potentially dangerous chemicals.

In a small pilot study, Canadian researchers using a comparison with wild Pacific Salmon found farmed fish contained significantly higher levels of polychlorinated biphenyls (PCBs).

The concerns were raised in a programme made for BBC TV, Warnings from the Wild, The Price of Salmon.

The production of PCBs is banned in most countries - but the chemicals accumulate in oceans after being released in industrial waste.

“We are maximising human exposure to these chemicals by promoting an artificial food chain”

Greenpeace scientist Dr Paul Johnston

Fish Farm Salmon Have Four Times The Fat Content Of Wild Salmon

The Sunday Times - London
<http://www.sunday-times.co.uk>

7-8-1

Farmed salmon - widely marketed as among the leanest and healthiest of fish - have been shown to be fattier than wild fish. Some have 20% fat, more than four times the amount in their natural, wild counterparts.

Such fat levels are similar to those in bacon and suggest that some farmed salmon should be eaten sparingly by anyone trying to control their weight.

The fats could also be contributing to increasing toxins in farmed salmon. Plump salmon from fish farms have been shown to accumulate higher levels of dioxins, polychlorinated biphenyls (PCBs) and organochlorine pesticides because such poisons build up in fat far better than in muscle.

Researchers at Surrey University have traced the problems to the high-fat feedstuffs used by farmers to make their fish grow faster.

2000:

Salmon producer kicked out



The farm has been investigated before

A Scottish farmed salmon producer has been expelled from an industry body following an inquiry into allegations of malpractice.

Scottish Quality Salmon said it took the decision after an independent investigation into Ardessie Salmon, in Wester Ross, revealed a breach of quality standards.

The ruling means that Ardessie Salmon cannot sell its products under the quality assurance schemes Tartan Quality Mark and French Label Rouge.



INDEPENDENT

Environment

Scottish salmon farming revolution that has left the seas awash with toxic chemicals

By Severin Carrell | 16 years ago |  0 comments

Scottish salmon, the fish which has gone from being a luxury to the ubiquitous filler of sandwiches and supermarket fish counters, is in trouble.

Scottish salmon, the fish which has gone from being a luxury to the ubiquitous filler of sandwiches and supermarket fish counters, is in trouble.

Environmentalists have accused the salmon farming industry of poisoning shellfish stocks, thus creating toxic algal blooms around the coast which threaten the survival of wild salmon stocks. Fish farms have also been accused of using illegal toxic chemicals, leading to criminal inquiries by environmental regulators. Mass escapes of farmed fish have also led to claims that these will irrevocably damage the country's wild stocks.

'Illegal poison' used on salmon

Chemical treatment at fish farms is hazard to health and marine life, claims ex-employee



0

Antony Barnett, Public
Affairs Editor

Sunday 30 April 2000 00.25 BST

Some of Britain's most prestigious salmon farmers have been accused of using illegal toxic chemicals, which experts claim destroy the marine environment and endanger human health.

Jackie MacKenzie, 47, a former worker at one of Scotland's longest-established salmon farms on the northwest coast, has blown the whistle on what he calls 'disgusting and dangerous' practices.

The claims will send shock waves through the £260 million Scottish salmon farm industry, which has created thousands of jobs in rural communities but which environmentalists believe has been an ecological disaster.

Despite promotional literature on supermarket shelves showing leaping salmon and idyllic Scottish lochs, critics say the reality of Scottish salmon is thousands of fish stuffed into small pens, fed artificial colouring to make their flesh pink and dosed with chemicals to stop rampant disease.

Although there has been anecdotal evidence of illegal chemicals being used in salmon farming, until now no one involved in the industry has spoken out - because of fears of a backlash from the local community.

But in a signed statement given to The Observer, MacKenzie, who worked at Ardesie Salmon for four years, alleges he was instructed by the company to buy and use Deosect to kill sea lice, parasites that infest intensely farmed salmon.


Illegal chemical 'used on salmon'



Environmentalists are concerned about fish farms

New concerns about the illegal use of chemicals in the salmon farming industry have been uncovered in a BBC Scotland investigation.

Environment correspondent
Louise Batchelor
"Jonathan Davis says an illegal chemical was used"

 real 28k

While most salmon farmers maintain that they use the correct chemicals under licence, a former fish farm worker has revealed he treated fish with a product designed for horses and chickens.

Campaigners said the treatment was more lethal to the marine environment than sheep dip and have called for tighter regulation of the industry.

Salmon producer kicked out



The farm has been investigated before

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INDEPENDENT

Environment

Deadly heart disease found at salmon farms

Michael McCarthy, Environment Correspondent | @mjpmccarthy | 17 years ago | 0 comments

A serious new disease has been found in salmon on Scottish salmon farms. The disease, cardiomyopathy syndrome (CMS), produces heart failure in the fish.

Although CMS presents no threat to humans it is invariably fatal to the fish as there is no known treatment. It has been found in one and possibly two Scottish farms: in the first case, where it has been positively identified, it wiped out 60 per cent of a stock of 27,000 large adult salmon in a west coast sea loch over five weeks, with the remainder having to be destroyed at a cost of many thousands of pounds.

1999:

Monday, August 9, 1999 Published at 10:10 GMT 11:10 UK

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Special Report

Fish farming 'damaging' wild stocks



Wild stocks of salmon are said to be under threat

Intensive fish farming is seriously damaging stocks of wild salmon and sea trout, a government environment watchdog is warning.

Professor David Mackay, of the Scottish Environment Protection Agency, believes modern methods are distorting natural eco-systems.

The Sepa northern regional director also said evidence that sea lice from the caged fish are harming wild stocks is beyond reasonable doubt.



A leading toxicologist is also warning about the potentially harmful effects of fish farming.

Allan Berry said salmon farming is the main cause of the toxins which are threatening shellfishing.

Down on the Fish Farm

THE amnesic shellfish poison (ASP) outbreak (Eye 981), which has closed 9,000 square miles of Scottish seas to scallop fishing, is now in its third month.

Government scientists have no idea when the ban might be lifted and claim ASP is "naturally occurring". They insist it is not "triggered" by untreated nitrogenous fish farm filth entering Scotland's pristine coastal waters.

John Davies, deputy director at the government's marine laboratory in Aberdeen, suggests a rise in seawater temperature could have caused the outbreak. He says it has risen 4°C in the past six years. His colleague, Ian Davies, who is charged with examining the environmental impact of fish farming, claims these farms discharge only 7 percent of all nitrogen entering Scottish sea lochs. Therefore, he says, they can't be implicated. But no field research has been carried out.

What Ian Davies does not say is that in summer months, when farm salmon are most intensively fed, nitrogenous levels of fish farm ammonium entering sea lochs is probably in excess of 70 percent, rather than his conveniently "averaged" figure of 7 percent. And studies in France and Chile into the effect of animal wastes on phytoplankton show that a paralytic shellfish poison (PSP) dinoflagellate was stimulated by salmon farm waste ammonium. The Messrs Davies, known

affectionately to their friends as the "Taffy Mafia" of Tartan fish farming, might soon have some explaining to do.

In the meantime the boys from the valleys are getting on with what they do best: protecting their dirty baby, factory-salmon farming, from public scrutiny. This is becoming increasingly difficult, particularly following the Belgian food scandal when unacceptably high levels of life-threatening dioxins were found in animal feed, which almost certainly entered the human food chain.

It is alleged that Scottish fishery scientists have known since 1995 that farm fish contained high levels of dioxins, from dioxin-contaminated fishmeal fed to them, and that the most prominent contaminant was DDT. It seems persistent organic pollutants, known as POPs to the cognoscenti, are always with us, or rather will be until government recognises the risk they pose to human health and do something about them.

But not, apparently, if it upsets the fishery scientist's salmon farming chums. Ian Davies, speaking to a group of aquaculture experts at a conference in Canada in September, and well aware of which side his salmon steak is buttered, said that if EU proposals to reduce permitted dioxin levels in fish feed were implemented "...it could mean the end of salmon farming". He urged delegates to do everything they could to help avert this prospect. Well, he would, wouldn't he?

'Old Trout'

Down on the Fish Farm

PROFESSOR David Mackay, north region director of the Scottish Environment Protection Agency, claims that his political masters are "misleading people".

He says that current fish farm practices are causing environmental damage which is reaching "near crisis levels". He also blames salmon farms for the catastrophic decline in West Highland wild fish stocks.

Why should Prof. Mackay chose to speak out now, given that his quango and predecessor bodies have authorised the dumping hundreds of thousands of tonnes of untreated fish farm sludge into the sea for more than 25 years? One reason might be that the sludge is about to hit the fan. A legal challenge is being mounted by representatives of 150,000 UK sport anglers, alleging that Sepa has been negligent in its duty to protect Scotland's wild fish from disease and pollution from salmon farms.

A possible Sepa defence against this accusation could be: "Nothing to do with us. We only follow orders. Anyway, Prof. Mackay warned the Government about this last August." The prof dropped his bombshell in Norway at an international fish farming conference. He particularly accused the Scottish Executive (SE) of being less than frank about the current outbreak of amnesic shellfish poisoning (ASP). The outbreak, in its second month, now covers 10,000 square miles of Scottish waters.

SCOTLAND

Thursday, November 4, 1999 Published at 15:29 GMT

UK: Scotland Lethal fish infection spreads



Millions of salmon have been destroyed because of the disease

A deadly fish disease is believed to have spread for the first time to wild salmon in Scotland and has been detected on another six salmon farms.

The new scare involving Infectious Salmon Anaemia in the Shetland Isles, the Western Isles and Orkney has prompted the Scottish Executive to embark on an urgent review of the present controls.

A spokesman confirmed these were among the first cases in the world of the ISA virus being detected in wild salmon.

These latest figures bring to 24 the total number of farms in Scotland which have been suspected of having the disease over the last 18 months.

1998:

THIS WEEK 14 March 1998

A catch too far – Scottish lochs are paying the price for farmed salmon

By Rob Edwards

METAL pollution from salmon farms is threatening wildlife in some of Scotland's sea lochs. An investigation by the Scottish Environment Protection Agency (SEPA) has discovered levels of copper and zinc in sediments beneath fish farms up to 24 times as high as the agency's proposed safety limits.

Most of Scotland's 350 fish farmers use copper-based paints as antifouling agents to prevent the fish cages from becoming clogged by mussels, algae and seaweed. Zinc is used to galvanise the cages and is also a component of salmon feed. While the environmental risks of pesticides used on fish farms have been well documented ([This Week, 7 February, p 23](#)), SEPA's study is the first to present evidence that contamination by metals is also a problem.

The agency first found high levels of metals in 1996 while researching techniques for monitoring sediments. In an internal report, researchers noted that in one area near a fish farm off the island of Mull, concentrations of zinc in sediment had reached levels of 475 milligrams per kilogram—similar to those in parts of the Clyde estuary polluted by heavy industry.

Infested waters

By Rob Edwards

THE catastrophic decline of wild sea trout in northwest Scotland is largely due to commercial salmon farming, say government scientists. The researchers have found that sea lice, which have long infested caged salmon, have now spread to sea trout, weakening and killing them.

The accusation is the most serious ever levelled at salmon farmers, who have been criticised before for polluting lochs and damaging wildlife.

Both the number and weight of sea trout caught in northwest Scotland have dropped dramatically over the past nine years. According to the Freshwater Fisheries Laboratory in Pitlochry, annual catches by rod and line between 1989 and 1995 were only 29 per cent of those between 1952 and 1988. The average weight of each fish caught declined from 820 grams in 1988 to 540 grams in 1993.

Now scientists from the Pitlochry laboratory and the Marine Laboratory in Aberdeen, which advise the Scottish Office, have concluded that lice from farmed salmon are "a major contributory factor" in the collapse.

"It's as plain as the nose on your face," one senior government scientist, who wished to remain anonymous, told New Scientist.

THIS WEEK 7 February 1998

No free lunch – Salmon farms could be taking a lethal toll on marine life

By Rob Edwards

A PESTICIDE used by Scottish fish farmers to control salmon lice may be killing marine life in the surrounding sediment. A study by government scientists has found that ivermectin, which has been licensed to 15 salmon farms in the western Highlands, is lethal to polychaete worms such as the lugworm. The worms are an important source of food for wild fish.

The use of ivermectin is already under review by the Scottish Office because of objections from environmentalists and shellfish farmers about its toxicity. Ivermectin is a synthetic chemical designed to paralyse the neuromuscular system of invertebrates and is commonly used to deworm cattle, sheep and pigs. Because of the serious damage caused by lice, most of Scotland's 350 fish farms would like to use it too. Scientists have previously suggested that it could harm wildlife and even human health, but until now there has been little evidence to support their claims (This Week, 7 September 1996, p 4).

1997:

THIS WEEK 10 May 1997

Salmon boycott

TWO British supermarket chains are refusing to sell salmon from fish farms which use a pesticide called ivermectin to kill sea lice.

Tesco and Marks & Spencer say that they are responding to public concern about the dangers the chemical may pose to shellfish and human health. "We have decided to err on the side of caution," says a spokesman for Tesco.

Five salmon farms in Scotland are already licensed by the Scottish Environment Protection Agency to treat their fish with ivermectin, and many others are awaiting the outcome of an appeal by shellfish farmers against its use ([This Week, 7 September 1996, p 4](#)).

The Scottish Salmon Growers' Association insists that salmon treated with ivermectin are safe. William Crowe, the association's chief executive, complains that the supermarkets are "playing God".

1996:

the **ENDS** *report*

Intelligence for environmental professionals

Official decision imminent on "alarming" salmon pesticide

1 August 1996

The Scottish Environmental Protection Agency (SEPA) will announce shortly whether it will permit the use of a new biocide for killing lice on farmed salmon. Growers say the drug is a much needed new weapon in controlling fish lice - but environmentalists describe its potential impact on marine invertebrates as "alarming".

Can we make supersalmon safe?

By Debora MacKenzie

The transgenic salmon in tanks by a Scottish loch are becoming a problem. Should the British government allow the fish to grow up?

THE TINY fry swimming in high-security tanks next to Loch Fyne in Scotland all look alike. Salmon fry do. But in a few months' time some of them will stand out. They will be noticeably bigger than the other fish – and growing much faster. These salmon have been genetically modified. A year later, they will be many times the size of normal fish the same age.

What will happen to these rapidly growing fish? Ideally, fish farmers would like to use them to breed a lucrative race of supersalmon. But what are the consequences of these fish escaping from a fish farm? Are the risks too great? The British government could soon have to decide whether the experiment should be allowed to continue. Its decision will affect not just fish farming, but the whole biotechnology industry in Europe. The industry fears that any safety mishap could further damage its public image.

The salmon, at the Otter Ferry salmon hatchery on Loch Fyne, have been hatched from eggs that had been injected with a gene for salmon growth hormone, plus a promoter sequence from the ocean pout (This Week, 6 January). The combination was discovered by Garth Fletcher of Memorial University in Newfoundland and Choy-Leong Hew of the University of Toronto. It has not yet been approved for commercial trials in North America, but has been licensed to Otter Ferry and a hatchery in New Zealand by an American company, A/F Protein of Massachusetts.

1993:

the **ENDS** *report*

Intelligence for environmental professionals

Fish farm escapes lightly over unlicensed pesticide

1 February 1993

A Scottish fish farming business has been prosecuted successfully for using an unlicensed medicine, ivermectin, to control fish lice. The company failed to record use of the chemical, breaching the terms of its discharge consent. But the modest fine of £500 imposed by the court yet again raises questions about the efficacy of the Scottish prosecution system in bringing environmental offenders to book.

1992:

1992:

the **ENDS** *report*

Intelligence for environmental professionals

New salmon lice treatment may replace "red list" pesticide

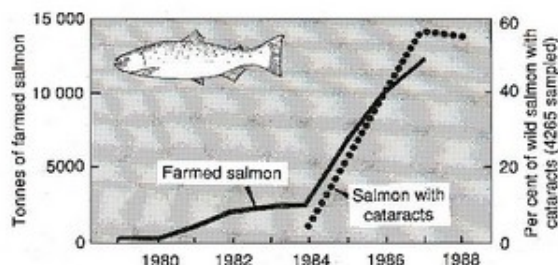
1 April 1992

A major Scottish fish farming company is to test hydrogen peroxide for the control of sea lice on salmon. The chemical has been used successfully abroad and looks a promising replacement for the "red list" pesticide dichlorvos.

And here's one news article from New Scientist from even earlier:

Science: Pesticide causes cataracts in salmon

By STEPHANIE PAIN



As salmon farming has increased, and with it the use of Nuvan to control lice, more salmon are affected by cataracts

WILD fish are suffering because of the upsurge in salmon farming around the coast of Scotland. Biologists have found that an increasing number of wild salmon and other fish are developing cataracts in one or both eyes. They link the epidemic of eye disease with the use of the pesticide Nuvan 500 EC.

Nuvan controls sea lice, a troublesome parasite for fish which are confined in cages. Some have blamed it for killing marine organisms in the vicinity of some fish farms. But new research shows that it is having chronic effects much further afield (*Experimental Eye Research*, vol 49, p 293).

Peter Fraser, of the University of Aberdeen, has been surveying wild fish since the first one with cataracts appeared in 1984. The damage ranges from small, opaque crescents deep in the lens of one eye, to total opacity of both lenses, making the fish blind. In 1985, less than 20 per cent of the salmon netted for the survey had cataracts in both eyes; by 1988, the number had reached 60 per cent.

Nuvan is a major pollutant around fish farms. When added to the water in fish cages, it simply washes out to the surrounding sea. The active ingredient is dichlorvos, a substance known to cause cataracts if swallowed in high concentrations in food. However, the odd appearance of the cataracts in wild fish suggested that Nuvan might be causing damage on contact with the eye.