TECHNICAL VERIFICATION ALLIANCE

CORSIA certification for sustainable aviation fuel supply chains

Australian market perspective

ISCC CORSIA | Traceability | LCA | Audit

Focus audience: Australian SAF project developers, feedstock suppliers, collecting points, traders, processing units, fuel suppliers, airlines, airports and public bodies.

What this deck explains

1. **Feedstock route**
   crop-based and waste & residue / by-product SAF pathways
2. **Evidence model**
   sustainability, chain of custody and life-cycle emissions
3. **Audit logic**
   certified sites, annual audits, risk-based surveillance
4. **TVA relevance**
   how an Australian client engagement can be framed

TVA positioning for this deck

Audit and certification are the core company offer, delivered locally in Australia on behalf of TUV NORD. Consulting can also be offered to public organisations.

What ISCC CORSIA covers

A practical view of the certification architecture behind CORSIA eligible fuels

From sustainable feedstock to airline claim

1. Sustainability requirements

Proves that SAF complies with the approved CORSIA sustainability criteria for CORSIA Eligible Fuels. From CORSIA first phase, the scope extends beyond GHG and carbon stock into water, soil, air, conservation, human rights, local development and food security.

2. Traceability + chain of custody

Connects the physical flow of material with sustainability characteristics. Step-by-step traceability is documented with Sustainability Declarations; chain of custody can use physical segregation or mass balance.

3. Life-cycle emissions

Determines life-cycle emissions values and savings along the supply chain. Operators can use approved default values or calculate actual values under the CORSIA methodology.

ISCC CORSIA vs ISCC CORSIA PLUS

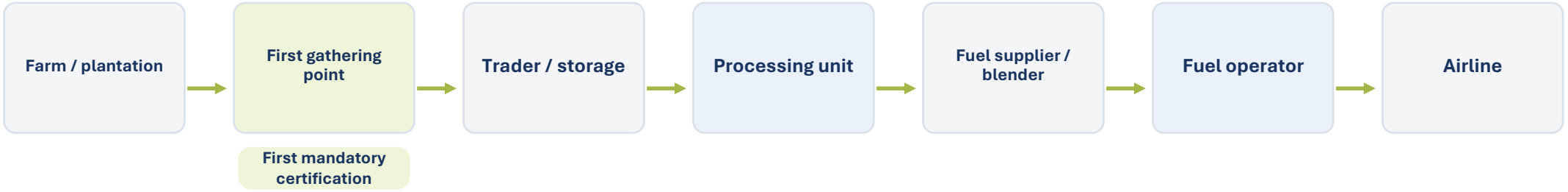
ISCC CORSIA demonstrates compliance with the approved CORSIA sustainability criteria for CEF. ISCC CORSIA PLUS also ensures compliance with the CORSIA criteria, but adds further sustainability requirements under the six ISCC Principles.

Two practical SAF supply-chain routes under ISCC CORSIA

The first individually certified point depends on the feedstock pathway

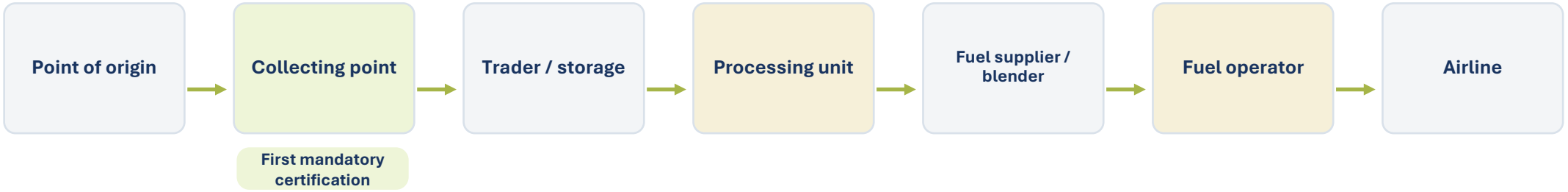
Route A - crop-based SAF

agricultural route



Route B - waste / residue / by-product SAF

alternative-material route



Transport itself is not subject to certification, but the transport information and associated life-cycle emissions data must be carried through the certified chain.

Sustainability requirements – how evidence is shown in practice

The CORSIA first phase widened the criteria set from 2024 onwards

Six-principle view used in ISCC CORSIA PLUS

1. High biodiversity + high carbon stock
2. Soil, water, air + waste management
3. Safe working conditions
4. Human, labour + land rights
5. Laws + international treaties
6. Good management practices

Audit pass logic

The sustainability criteria are divided into Major Musts and Minor Musts. All Major Musts and at least 60% of the Minor Musts must be fulfilled. If a producer does not comply with Major Musts in Principles 2-6, corrective action is required within 40 days; Principle 1 land-use failures cannot be corrected retroactively.

Evidence route by theme cluster

Audited directly — Themes linked to life-cycle emissions, high carbon stock, water, soil, air, conservation, waste and chemicals are addressed through ISCC requirements and audit checks.

National attestation — Themes 10-12 - human and labour rights, land-use rights and water-use rights - must be demonstrated by a national attestation from the State where the SAF is produced.

Operator reporting — Themes 13-14 - local and social development and food security - are demonstrated by reporting the actions taken to the certification body.

Key takeaway: CORSIA eligibility is more than carbon accounting - the certification path also needs evidence on land, environment, rights and governance.

Traceability and chain of custody

Why Sustainability Declarations and bookkeeping are central to the integrity of CORSIA claims

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Step-by-step traceability model

Origin
feedstock source

→

Gather / collect
first certified control point

→

Trader / storage
quantities and batch control

→

Processing unit
conversion + batch attributes

→

Fuel supplier
blending and onward delivery

→

Claiming party
airline or intermediate purchaser

Sustainability Declarations / Proofs of Sustainability connect each certified hand-off.

What Sustainability Declarations do

- carry sustainability characteristics for a specific physical batch
- allow step-by-step trace-back and trace-forward through the chain
- ensure the quantity claimed as sustainable never exceeds the quantity supplied
- cannot be issued by non-certified supply-chain elements

Two eligible chain-of-custody methods

Mass balance

Physical mixing is allowed, but bookkeeping must preserve the batch characteristics and ensure no over-claiming.

Physical segregation

Sustainable material stays physically separated from non-sustainable material throughout handling.

Practical implication: before an Australian operator can claim CORSIA-eligible SAF, the documentation chain and certified-site status must already be clean end-to-end.

Life-cycle emissions - what determines eligibility

The LCA boundary runs from source to aircraft engine

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Minimum climate threshold

CORSIA eligible fuels must achieve at least a 10% net GHG emissions reduction compared with the baseline life-cycle emissions value for aviation fuel.

LSf = core life-cycle value + ILUC value

Unit: gCO2e / MJ of fuel produced and combusted in an aircraft engine (LHV basis)

How operators obtain values

Use approved default values or calculate actual values under the CORSIA life-cycle emissions methodology.

System boundary

1. **Production at source** — cultivation / extraction
2. **Conditioning** — harvest, collection, recovery
3. **Processing** — feedstock extraction / treatment
4. **Transport to plant** — logistics to processing facility
5. **Fuel conversion** — feedstock-to-fuel process
6. **Distribution** — fuel transport and delivery
7. **Combustion** — non-biogenic CO2 in aircraft engine

Special rule for waste, residues and by-products

If the fuel feedstock is classified as a waste, residue or by-product under ISCC CORSIA 201-1, the actual core LCA value becomes the total LSf - an ILUC add-on is not applied.

Allocation and reporting

Co-products are allocated by energy content. The chain of custody must also pass through the life-cycle emissions information so that the airline claim remains supported.

Audit model and risk management

ISCC CORSIA audits are structured, retrospective and risk-sensitive

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Certification journey

1 **Contract + registration**

System User contracts a recognised CB and registers with ISCC.

→

2 **Certification audit**

Audit verifies the applicable CORSIA requirements before a certificate is issued.

→

3 **Certificate issued**

The certificate scope must match the actual operation.

→

4 **Annual re-audit**

An audit is required at least every twelve months.

→

5 **Surveillance if needed**

High-risk chains or concerns can trigger extra audits.

Core audit rules

- audits are retrospective, except the initial audit where claims history is not yet available
- on-site is the default mode across the supply chain
- fully remote audits are only allowed for low-risk situations where equivalent assurance can be achieved
- all relevant year-long records must be available for traceability and mass-balance review

Risk-driven document sampling

Regular	random samples from 3 successive months
Medium	3 months sampled + 1 month checked completely
High	3 successive months checked completely

Group certification option

Group certification can be used for homogeneous groups - for example nearby farms, points of origin under common management, or storage / logistics networks with harmonised processes. External auditors then evaluate the internal audit system and sample part of the group.

homogeneous group **sampling** **periodic review**

Special routes: alternative feedstocks and low LUC risk projects

Two pathways that often matter in Australian project development conversations

A. Waste / residues / by-products

Waste discarded material with no economic value

Residue secondary material with little economic value

By-product secondary product with economic value and inelastic supply

Practical certification points

- Traceability begins where the material occurs or is generated - the point of origin.
- The first element requiring individual certification is the collecting point for processing waste / residues / by-products, or the first gathering point for agricultural residues.
- The Sustainability Declaration must clearly identify the raw material and, for many non-agricultural alternative materials, explicitly state that land-related sustainability criteria were not part of the certification process.

B. Low LUC risk projects

Yield increase approach

more feedstock from the same land area through improved practice

→

Unused land approach

sustainable cultivation on eligible unused land

Evidence package for certification

- written low LUC risk report describing the measure and selected land
- historic crop-yield dataset for the preceding five years before implementation
- baseline calculation plus expected additional feedstock output
- periodic audits; designation can remain in place until 2030 if requirements continue to be met

Australian talking point: these routes are especially relevant where project economics depend on alternative feedstocks, residue logistics or crop-yield optimisation without land expansion.

ISCC CORSIA document map used for this presentation

A simple reference guide to system documents

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102 Governance

scheme governance, complaints, sanctions, integrity programme

201 System Basics

architecture, participants, certification logic

202 Sustainability Requirements

criteria, themes, principles, pass conditions

203 Traceability + Chain of Custody

Sustainability Declarations, mass balance, segregation

204 Audit Requirements + Risk

audit process, surveillance, risk-based controls

205 Life Cycle Emissions

default values, actual values, LSf method

206 Group Certification

homogeneous groups, sampling, internal audit

201-1 Waste / Residues / By-products

classification and special supply-chain rules

Guidance Low LUC Risk

yield increase, unused land, extra evidence pack

In practice, Australian project teams usually need a coordinated reading of at least 201 + 202 + 203 + 205, with 204 and 201-1 / low-LUC guidance added depending on the pathway.

How TVA can frame the CORSIA conversation in Australia

Company-facing delivery is centred on audit and certification under the TUV NORD framework

For companies

1. scope the pathway and identify the relevant ISCC CORSIA document set
2. define which operational sites need certification and where the first mandatory certification point sits
3. prepare for evidence requirements on sustainability, chain of custody and life-cycle emissions
4. execute audit and certification activity through the TVA / TUV NORD delivery model

Audit **Certification**

Typical Australian stakeholders

- feedstock growers and aggregators
- points of origin, collecting points and first gathering points
- traders, storage operators and logistics networks
- processing units and co-processing sites
- fuel suppliers / blenders, airports and airlines

The structure above is derived from the supply-chain roles in the ISCC system documents and translated here into an Australian market lens.

For public organisations

In addition to certification-related delivery, public organisations can also be supported on scheme interpretation, programme design, policy interface and implementation planning.

TVA can help Australian stakeholders turn CORSIA from a policy concept into an auditable and certifiable operating model - with local delivery and TUV NORD certification depth.