



**ICAO Seminar on
Sustainable Aviation
Fuels and CORSIA**

**THE CORSIA
SUSTAINABILITY
FRAMEWORK**





Sustainability Criteria for CORSIA Eligible Fuels

Background

- ***Since 2013, the ICAO Assembly has acknowledged multiple dimensions of sustainability (environmental, social and economic)***

Resolution A40-18 (reaffirmed from A38-18(2013) and A39-2 (2016))

Acknowledging the need for such fuels to be developed and deployed in an economically feasible, socially and environmentally acceptable manner...

(...)

The Assembly:

(...)

24. Requests States to:

*d) recognize existing approaches to assess the sustainability of all fuels in general, including those for use in aviation which should **achieve net GHG emissions reduction on a life cycle basis, contribute to local social and economic development; competition with food and water should be avoided**...*

RESOLUTIONS

ADOPTED BY THE ASSEMBLY



ASSEMBLY – 40th SESSION
Montréal, 24 September–4 October 2019



Sustainability Criteria for CORSIA Eligible Fuels

Costs of Sustainability Certification

- *Sustainability certification cost is on the order of 0.1% of production costs on a per tonne basis**
- *Costs may vary with maturity of production processes*
- *Alignment with existing approaches reduces costs*

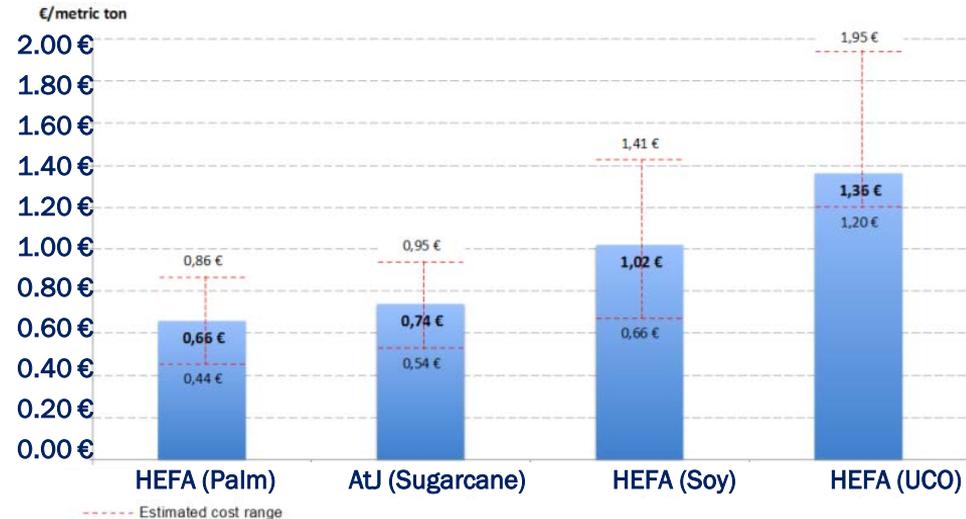


Fig. 1: Cost Estimates For Sustainability Certification of Entire Supply Chains For SAF production

*Reference: CAEP-SG20183-WP/12



Sustainability Criteria for CORSIA Eligible Fuels

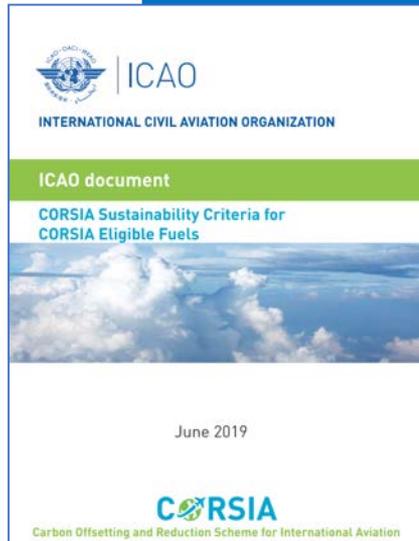
Alignment with other global existing approaches

- CORSIA sustainability criteria closely adhere to existing sustainability approaches, including work developed by other UN bodies*

CAEP-Proposed Themes	EXISTING APPROACHES TO SUSTAINABILITY									
	UN FAO SAFA	GBEP	ISO	EU RED	ISPO	RFS2	Bonsucro	ISCC	RSB	RSPO
3. Water	X	X	X	X	X	X	X	X	X	X
4. Soil	X	X	X	X	X	X	X	X	X	X
5. Air	X	X	X	X	X	X	X	X	X	X
6. Conservation	X	X	X	X	X	X	X	X	X	X
7. Waste and Chemicals	X	X	X	X	X	X	X	X	X	X
8. Human and labour rights	X	X	X	X	X		X	X	X	X
9. Land use rights and land use	X	X	X	X	X		X	X	X	X
10. Water use rights	X		X				X	X	X	X
11. Local and social development	X	X		X	X	X	X	X	X	X
12. Food security	X	X	X	X		X		X	X	
Total of Themes Covered	10	9	9	9	8	7	9	10	10	9

Sustainability Criteria for CORSIA Eligible Fuels

CORSIA Sustainability Criteria for CORSIA Eligible Fuels



Three chapters:

- **Chapter 1:** CORSIA SUSTAINABILITY CRITERIA APPLICABLE FOR BATCHES OF CORSIA ELIGIBLE FUEL PRODUCED BY A CERTIFIED FUEL PRODUCER BEFORE 1 JANUARY 2024
- **Chapter 2:** CORSIA SUSTAINABILITY CRITERIA APPLICABLE FOR BATCHES OF CORSIA SUSTAINABLE AVIATION FUEL PRODUCED BY A CERTIFIED FUEL PRODUCER ON OR AFTER 1 JANUARY 2024
- **Chapter 3:** CORSIA SUSTAINABILITY CRITERIA APPLICABLE FOR BATCHES OF CORSIA LOWER CARBON AVIATION FUEL PRODUCED BY A CERTIFIED FUEL PRODUCER ON OR AFTER 1 JANUARY 2024



Sustainability Criteria for CORSIA Eligible Fuels

Chapter 1: APPLICABLE FOR FUEL PRODUCED BEFORE 1 JANUARY 2024

Chapter 1: CORSIA SUSTAINABILITY CRITERIA APPLICABLE FOR BATCHES OF CORSIA ELIGIBLE FUEL PRODUCED BY A CERTIFIED FUEL PRODUCER BEFORE 1 JANUARY 2024

Theme	Principle	Criteria
1. Greenhouse Gases (GHG)	Principle: CORSIA eligible fuel should generate lower carbon emissions on a life cycle basis.	Criterion 1.1: CORSIA eligible fuel will achieve net greenhouse gas emissions reductions of at least 10% compared to the baseline life cycle emissions values for aviation fuel on a life cycle basis.
2. Carbon stock	Principle: CORSIA eligible fuel should not be made from biomass obtained from land with high carbon stock.	<p>Criterion 2.1: CORSIA eligible fuel will not be made from biomass obtained from land converted after 1 January 2008 that was primary forest, wetlands, or peat lands and/or contributes to degradation of the carbon stock in primary forests, wetlands, or peat lands as these lands all have high carbon stocks.</p> <p>Criterion 2.2: In the event of land use conversion after 1 January 2008, as defined based on the Intergovernmental Panel on Climate Change (IPCC) land categories, direct land use change (DLUC) emissions will be calculated. If DLUC greenhouse gas emissions exceed the default induced land use change (ILUC) value, the DLUC value will replace the default ILUC value.</p>

Two agreed initial Sustainability Criteria on CO₂ reduction for the CORSIA Pilot Phase (SAF and LCAF)

- ✓ Net GHG emissions reductions of at least 10% on a life cycle basis
- ✓ No feedstock from deforested areas

Guidance on the application of sustainability criteria

- a) Compliance with Themes 1 and 2 is granted on the basis of independent attestation by Sustainability Certification Schemes included in the ICAO document “CORSIA Approved Sustainability Certification Schemes” which is available on the ICAO CORSIA website.
- b) A fuel producer can produce batches of CORSIA eligible fuels for 365 calendar days after it has been certified by an SCS for compliance with the CORSIA Sustainability Criteria, after which the fuel producer shall be re-certified for compliance with the sustainability criteria applicable at the time of re-certification.
- c) CORSIA Sustainability Criteria for CORSIA Eligible Fuels does not set a precedent for, or prejudice the outcome of negotiations in other fora.



Sustainability Criteria for CORSIA Eligible Fuels

Theme: ENV topic covered by the *standard*

Principle: Agreed requirement for a sustainable production

Chapter 1: CORSIA SUSTAINABILITY CRITERIA APPLICABLE FOR BATCHES OF CORSIA ELIGIBLE FUEL PRODUCED BY A CERTIFIED FUEL PRODUCER BEFORE 1 JANUARY 2024

Theme	Principle	Criteria
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Criteria: Describe the specific conditions to be met and assessed, to achieve the principles

Guidance: Documentation and information that an SCS can review from a producer, as well as potentially applicable parameters that an SCS can use to demonstrate compliance.

Guidance on the application of sustainability criteria

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- c) CORSIA Sustainability Criteria for CORSIA Eligible Fuels does not set a precedent for, or prejudice the outcome of negotiations in other fora.



Sustainability Criteria for CORSIA Eligible Fuels

Chapter 2: APPLICABLE FOR SAF PRODUCED ON OR AFTER 1 JANUARY 2024

For next CORSIA Phases:

✓ **10 additional themes approved for SAF:**

- **Environmental:** Water; Soil; Air; Conservation; Waste and Chemicals;
- **Socio-Economic:** Human and labor rights; Land use rights and land use; Water use rights; Local and social development; and Food security

✓ **Ongoing work on additional themes for LCAF (Chapter 3)**

3. Water	Principle: Production of CORSIA SAF should maintain or enhance water quality and availability.	Crit imp qua Crit imp avo resc	6. Conservation	Principle: Production of CORSIA SAF should maintain biodiversity, conservation value and ecosystem services.	Criterion 6.1: CORSIA SAF will not be made from biomass obtained from areas that, due to their biodiversity, conservation value, or ecosystem services, are protected by the State having jurisdiction over that area, unless evidence is provided that shows the activity does not interfere with the protection purposes.
4. Soil	Principle: Production of CORSIA SAFs should maintain or enhance soil health.	Crit mar or ; mai phy			Criterion 6.2: Low invasive-risk feedstock will be selected for cultivation and appropriate controls will be adopted with the intention of preventing the uncontrolled spread of cultivated alien species and modified microorganisms.
5. Air	Principle: Production of CORSIA SAF should minimize negative effects on air quality.	Crit limi			Criterion 6.3: Operational practices will be implemented to avoid adverse effects on areas that, due to their biodiversity, conservation value, or ecosystem services, are protected by the State having jurisdiction over that area.
			7. Waste and Chemicals	Principle: Production of CORSIA SAF should promote responsible management of waste and use of chemicals.	Criterion 7.1: Operational practices will be implemented to ensure that waste arising from production processes as well as chemicals used are stored, handled and disposed of responsibly. Criterion 7.2: Responsible and science-based operational practices will be implemented to limit or reduce pesticide use.
			8. Human and labour rights	Principle: Production of CORSIA SAF should respect human and labour rights.	Criterion 8.1: CORSIA SAF production will respect human and labour rights.
			9. Land use rights and land use	Principle: Production of CORSIA SAF should respect land rights and land use rights including indigenous and/or customary rights.	Criterion 9.1: CORSIA SAF production will respect existing land rights and land use rights including indigenous peoples' rights, both formal and informal.
			10. Water use rights	Principle: Production of CORSIA SAF should respect prior formal or customary water use rights.	Criterion 10.1: CORSIA SAF production will respect the existing water use rights of local and indigenous communities.
			11. Local and social development	Principle: Production of CORSIA SAF should contribute to social and economic development in regions of poverty.	Criterion 11.1: CORSIA SAF production will strive to, in regions of poverty, improve the socioeconomic conditions of the communities affected by the operation.
			12. Food security	Principle: Production of CORSIA SAF should promote food security in food insecure regions.	Criterion 12.1: CORSIA SAF production will, in food insecure regions, strive to enhance the local food security of directly affected stakeholders.



Sustainability Criteria for CORSIA Eligible Fuels

A wide range of criteria ensures **environmental, social and economic sustainability** of CORSIA eligible fuels

Sustainability Themes
1. Greenhouse Gases (GHG)
2. Carbon stock
3. Water
4. Soil
5. Air
6. Conservation
7. Waste and Chemicals
8. Human and labour rights
9. Land use rights and land use
10. Water use rights
11. Local and social development
12. Food security

Carbon-reduction themes

Environmental Themes

Socio-Economic Themes



Sustainability Criteria for CORSIA Eligible Fuels

- **Not all Themes are to be assessed in the same way:**

Recommended Sustainability Themes

1. Greenhouse Gases (GHG)
2. Carbon stock
3. Water
4. Soil
5. Air
6. Conservation
7. Waste and Chemicals
8. Human and labour rights
9. Land use rights and land use
10. Water use rights
11. Local and social development
12. Food security

Compliance with Themes 1 to 7 is granted on independent attestation by approved Sustainability Certification Schemes (SCS) and for Themes 3 to 7, also considering the guidance approved by the Council



Different States may have different approaches to economic and social sustainability: **National attestation of compliance is considered sufficient**

Compliance is exclusively based on a report of actions, without further judgement of those actions



Sustainability Criteria for CORSIA Eligible Fuels

Chapter 2: APPLICABLE FOR SAF PRODUCED ON OR AFTER 1 JANUARY 2024

THEME	PRINCIPLE	CRITERA	THEME	PRINCIPLE	CRITERA
3. Water	Principle: Production of CORSIA SAF should maintain or enhance water quality and availability.	Criterion 3.1: Operational practices will be implemented to maintain or enhance water quality.	6. Conservation	Principle: Production of CORSIA SAF should maintain biodiversity, conservation value and ecosystem services.	Criterion 6.1: CORSIA SAF will not be made from biomass obtained from areas that, due to their biodiversity, conservation value, or ecosystem services, are protected by the State having jurisdiction over that area, unless evidence is provided that shows the activity does not interfere with the protection purposes.
		Criterion 3.2: Operational practices will be implemented to use water efficiently and to avoid the depletion of surface or groundwater resources beyond replenishment capacities.			Criterion 6.2: Low invasive-risk feedstock will be selected for cultivation and appropriate controls will be adopted with the intention of preventing the uncontrolled spread of cultivated alien species and modified microorganisms.
4. Soil	Principle: Production of CORSIA SAFs should maintain or enhance soil health.	Criterion 4.1: Agricultural and forestry best management practices for feedstock production or residue collection will be implemented to maintain or enhance soil health, such as physical, chemical and biological conditions.	7. Waste and Chemicals	Principle: Production of CORSIA SAF should promote responsible management of waste and use of chemicals.	Criterion 6.3: Operational practices will be implemented to avoid adverse effects on areas that, due to their biodiversity, conservation value, or ecosystem services, are protected by the State having jurisdiction over that area.
5. Air	Principle: Production of CORSIA SAF should minimize negative effects on air quality.	Criterion 5.1: Air pollution emissions will be limited.			Criterion 7.1: Operational practices will be implemented to ensure that waste arising from production processes as well as chemicals used are stored, handled and disposed of responsibly.
<p>Compliance with Themes 1 to 7 is granted on the basis of independent attestation by approved SCS taking into account guidance approved by the Council</p>					Criterion 7.2: Responsible and science-based operational practices will be implemented to limit or reduce pesticide use.



Sustainability Criteria for CORSIA Eligible Fuels

Chapter 2: APPLICABLE FOR SAF PRODUCED ON OR AFTER 1 JANUARY 2024

THEME	PRINCIPLE	CRITERIA
7. Waste and Chemicals	Principle: Production of CORSIA SAF should promote responsible management of waste and use of chemicals.	Criterion 7.1: Operational practices will be implemented to ensure that waste arising from production processes as well as chemicals used are stored, handled and disposed of responsibly.
		Criterion 7.2: Responsible and science-based operational practices will be implemented to limit or reduce pesticide use.
8. Human and labour rights	Principle: Production of CORSIA SAF should respect human and labour rights.	Criterion 8.1: CORSIA SAF production will respect human and labour rights.
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National attestation of compliance is considered sufficient

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Key ideas

- To claim Emissions Reductions from CORSIA Eligible Fuels (CEF)
 - Need to be certified as compliant with CORSIA Sustainability Criteria
- The CORSIA sustainability framework covers a wide range of sustainability Themes, Principles and Criteria
 - Ensures environmental, social and economic sustainability of CEF
- Those are aligned to existing global sustainability approaches
- Sustainability certification cost are on the order of 0.1% of production costs
 - Not an economic barrier for sustainable production



**Thank you for your
attention!**

