



# ICAO's Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)

## MODERATOR



**Karen Ortega Marín**  
Environment Officer,  
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## SPEAKERS



**Molly Peters-Stanley**  
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(TAB)



**Ben Rattenbury**  
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Designated National  
Authority for 6.4  
Mechanism, Madagascar



1. Scene-setting on CORSIA by ICAO
2. Presentation by speakers
3. Questions from the Moderator
4. Q&A session with the audience



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# Scene-setting on CORSIA by ICAO

# CORSIA



**Karen Ortega Marín**  
Environment Officer,  
International Civil Aviation  
Organization (ICAO)



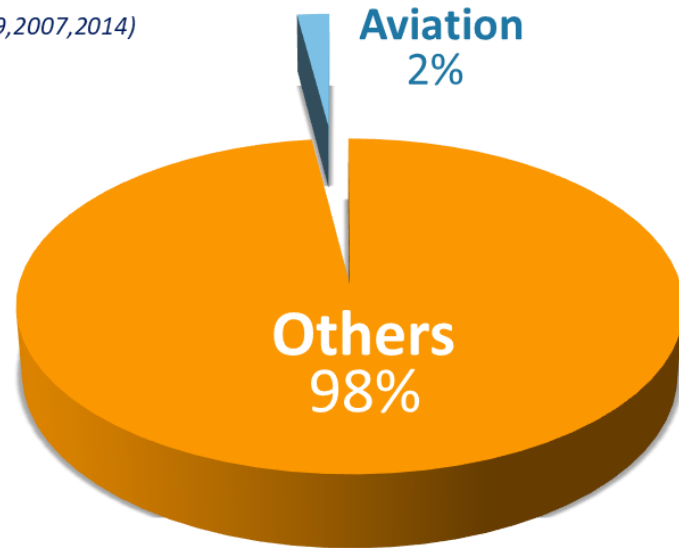
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# International Aviation & Climate Change

## CO<sub>2</sub> Emissions

IPCC(1999,2007,2014)



Emissions from **international aviation** are **not included in the Nationally Determined Contributions (NDCs)** under the Paris Agreement



Transboundary nature of international aviation necessitates a **sectoral approach under ICAO's leadership**, to complement the Paris Agreement temperature goals



# Collective ICAO Global Aspirational Goals and Vision for International Aviation



**Carbon Neutral Growth from 2020 (CNG2020)** as the medium-term global aspirational goal



**Long-term global aspirational goal (LTAG)** of net zero carbon emissions by 2050



**Global aspirational Vision to reduce CO<sub>2</sub> emissions by 5% by 2030 using cleaner energies** under the ICAO Global Framework for SAF, LCAF and other aviation cleaner energies



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# Carbon Offsetting and Reduction Scheme for International Aviation (CORSI<sup>Unrestricted</sup>A)

2016 – 2026

Celebrating **10 years** of the agreement on CORSIA






**C**  **RSIA**

The 39<sup>th</sup> Session of the ICAO Assembly adopted CORSIA as the **first global MBM scheme** for any industry sector



# Carbon Offsetting and Reduction Scheme for International Aviation (CORSAIA)

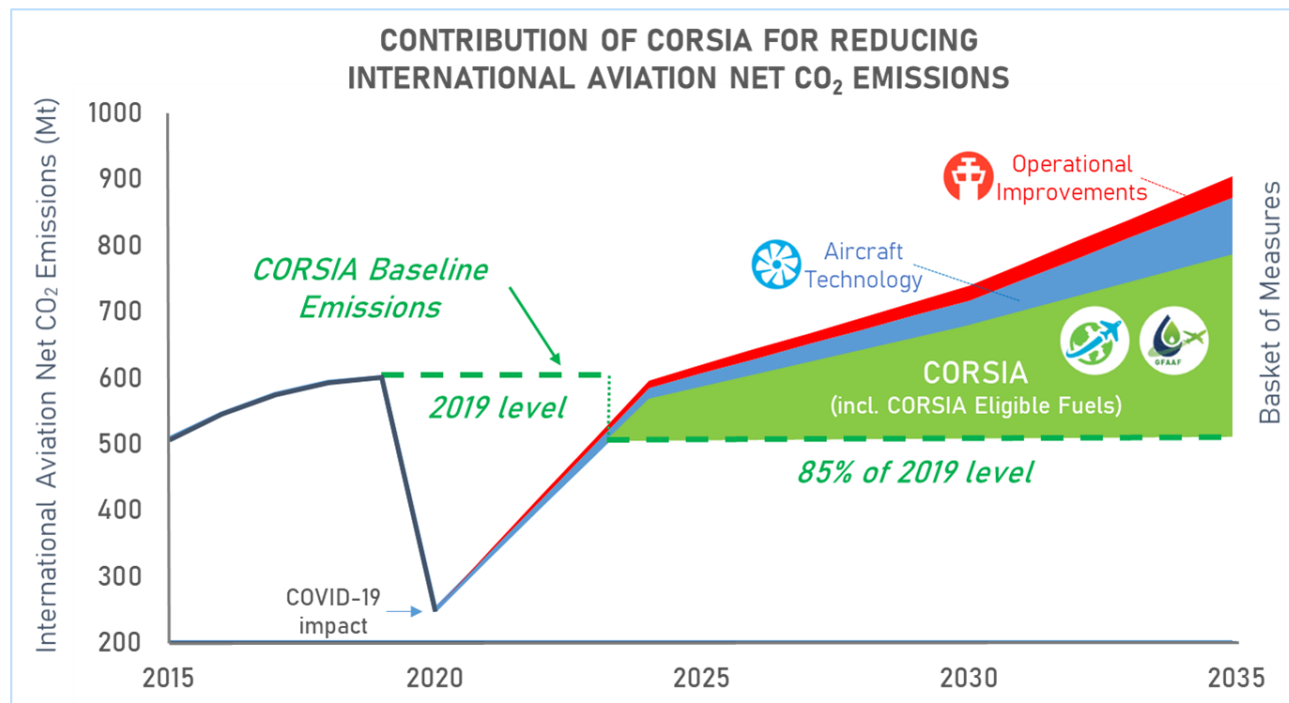
**Basket of measures to address aviation CO<sub>2</sub> emissions**

Aircraft Technologies      Operational Improvements      Aviation Cleaner Energies



- 42nd ICAO Assembly in 2025 reaffirmed CORSIA as the **only global market-based measure for international aviation CO<sub>2</sub> emissions**.
- **Objective:** CORSIA to address the remaining “emissions gap” to achieve CNG2020.
- Use of **CORSIA Eligible Emissions Units from the carbon market to offset CO<sub>2</sub> emissions** that cannot be reduced through aviation in-sector measures.



<https://www.icao.int/CORSAIA>



# Why CORSIA?

## CORSIA



**Direct environmental benefits**



**Aviation CO<sub>2</sub> emissions are accounted for only once**



**Accommodates special circumstances and respective capabilities of States**



**Minimizes market distortion**



**Administrative simplicity**



**Cost-effective**



# Why CORSIA?



- No direct environmental benefits
- Diverts financial resources from aviation decarbonization
- Negative impact on connectivity and socio-economic development

**IMF calls for carbon levy on ships and planes**  
Jan 12, 2016 Energy, Politics  
 NEWS: Influential financial body estimates US\$30 a tonne tax on emissions from international transport could have raised \$25 billion in 2014

**Norway Mulls Replacing Passenger Tax With Sustainability-Focused Levy**  
David Casey March 15, 2022  
 Press Release  
 Every hour European governments lose out on €4 million in aviation taxes

**UK hints at green taxes for frequent fliers**  
NEWS - ENERGY AND CLIMATE

**France's eco-tax: the best way to cut down aviation emissions?**  
Howe misg Adelle Be  
 France recently announced plans to put in place an eco-tax on all flights leaving the country, which will increase passenger fares from 2020.

**Taking more than 2 flights a year? €50 frequent flyer tax could raise much-needed €64bn for climate**  
July 10, 2023  
 AVIATION CLIMATE FINANCE USING A GLOBAL FREQUENT FLYING LEVY

**Destination Net Zero: The Urgent Need for a Global Carbon Tax on Aviation and Shipping**  
By Simon Black, Ian W.H. Parry, Sunalika Singh, Nate Vernon-Lin October 4, 2024

**Coalition set sights on taxing luxury air travel to fund climate action**  
July 1, 2025 | Last Updated: July 2, 2025 Finance, News  
 A group of eight countries is pledging to tax premium flying in a bid to find new money for resilience-building

**COP29 climate talks: What new taxes could help raise money to fight climate change?**  
By Reuters November 16, 2024 12:37 PM EST Updated 6 months ago

**Carbon tax on fossil fuels, marine and aviation transport could generate additional development financing for Africa**  
United Nations Economic Commission for Africa

**Rail and clean industry players join forces with NGOs to call for the introduction of a fuel tax for planes**

**Netherlands Joins Germany, UK, Belgium, Sweden, France, Austria, Italy and Other Countries as Soaring Air Travel Levies Push Ordinary Flights into Luxury Status, Disrupt Tourism,...**  
Netherlands joins Germany, UK, Belgium, Sweden, France, Austria, Italy and others as make flights costly,...

**Guinea considers introduction of carbon levy for some sectors**  
July 10, 2023  
 The African state of Guinea could potentially introduce carbon taxes on aviation and maritime, similar to measures that have...

**Gabon introduces carbon levy for airlines and shipping**  
July 10, 2023  
 The African state of Gabon has introduced a carbon tax on aviation and shipping, similar to measures that have...

**France, Kenya set to launch Cop28 coalition for global taxes to fund climate action**  
Nov 16, 2023 Finance, Justice, Politics  
 The taskforce, set to be launched at Cop28, will consider the feasibility of levies on...

**Djibouti to launch own carbon registry, tax this year**  
July 10, 2023  
 The tiny Republic of Djibouti in eastern Africa is set to launch its own carbon registry this year as part of a "voluntary mandatory"...

**EU doubles down on carbon tax for international flights**  
The move sets up a fight with the United States, which opposes carbon pricing

**Denmark introduces green tax on air passengers from 2025**  
By Reuters

**Green taxes could damage aviation and Caribbean tourism**  
The View From Europe  
By David Lewis

**Sweden reverses air travel tax, pushing against 'flight shaming' wave it created**

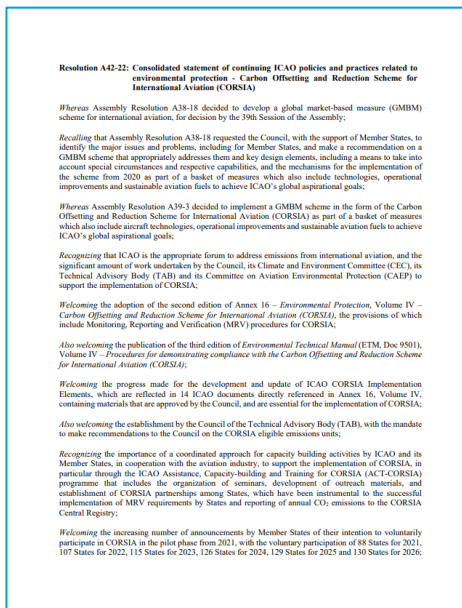
**Ryanair threatens flight cuts over Belgian passenger taxes and ETS**  
By David Lewis  
 Ryanair has warned it will scale back flights in Belgium after new passenger taxes raised by federal and local authorities,...

**An Aviation Tax Could Be The Answer To Climate Change Worries**  
By Tom Stone Published June 22, 2023

**Air Malta says aviation fuel tax could destroy jobs as costs soar and prices rise**  
Cost of aviation fuel will rise by 90% under a proposal included in the Energy Tax Directive as Air

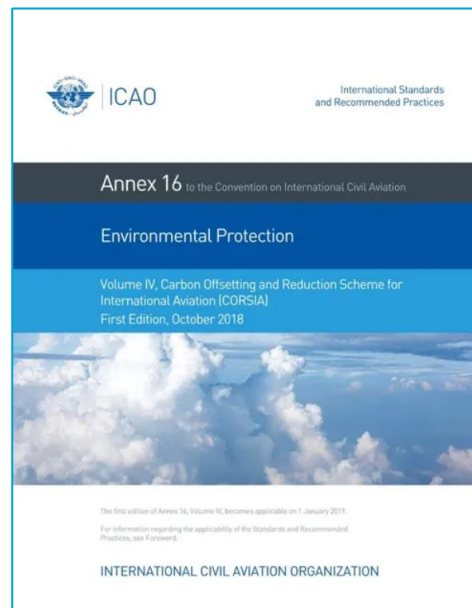
# CORSIA Implementation Package

## Assembly Resolution A42-22



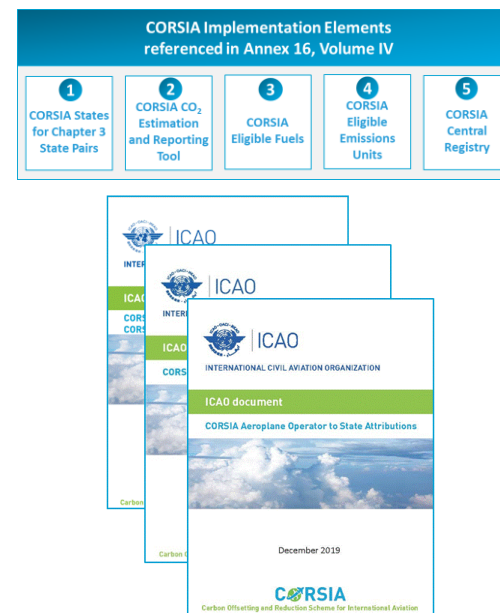
*(overall ICAO policy on CORSIA)*

## Annex 16, Vol. IV



*(Standards and Recommended Practices)*

## CORSIA Implementation Elements and related ICAO documents



*(essential information for CORSIA implementation)*

## Doc 9501 (ETM), Vol. IV



*(guidance for the implementation of the SARPs)*

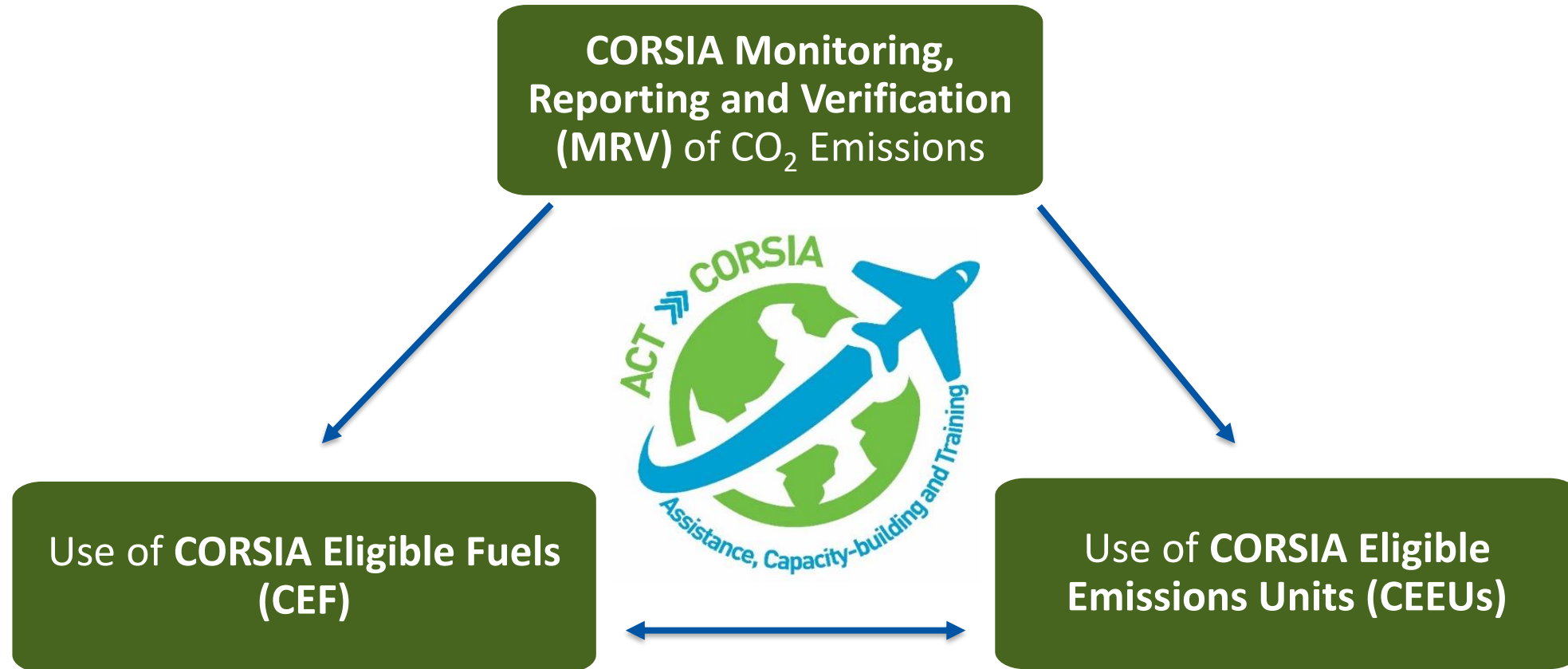


# CORSIA Phased Implementation



### Second phase participation criteria:

- Cumulative 90% of global 2018 RTK
- Individual 0.5% of 2018 RTK
- Voluntary participation
- Exemptions: LDCs, LLDCs, SIDS

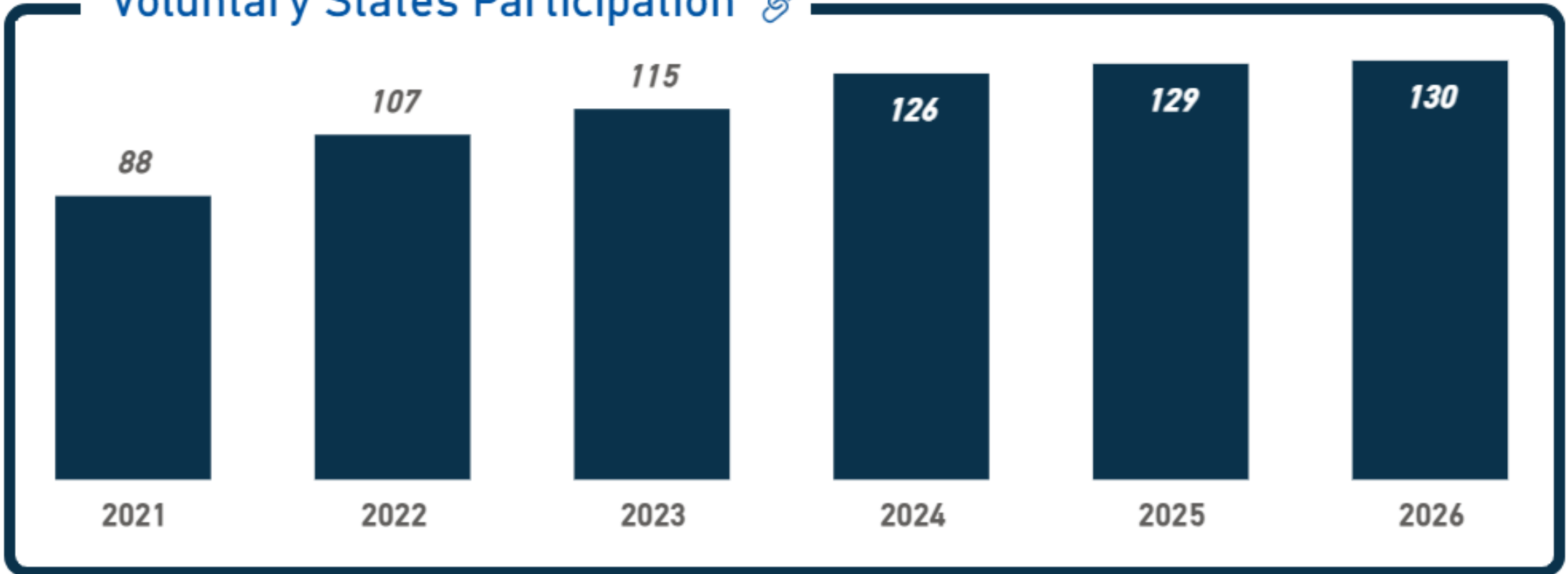


CORSIA offsetting requirements (until 2035) could be met by CEF or CEU



# CORSIA Volunteer States

## Voluntary States Participation

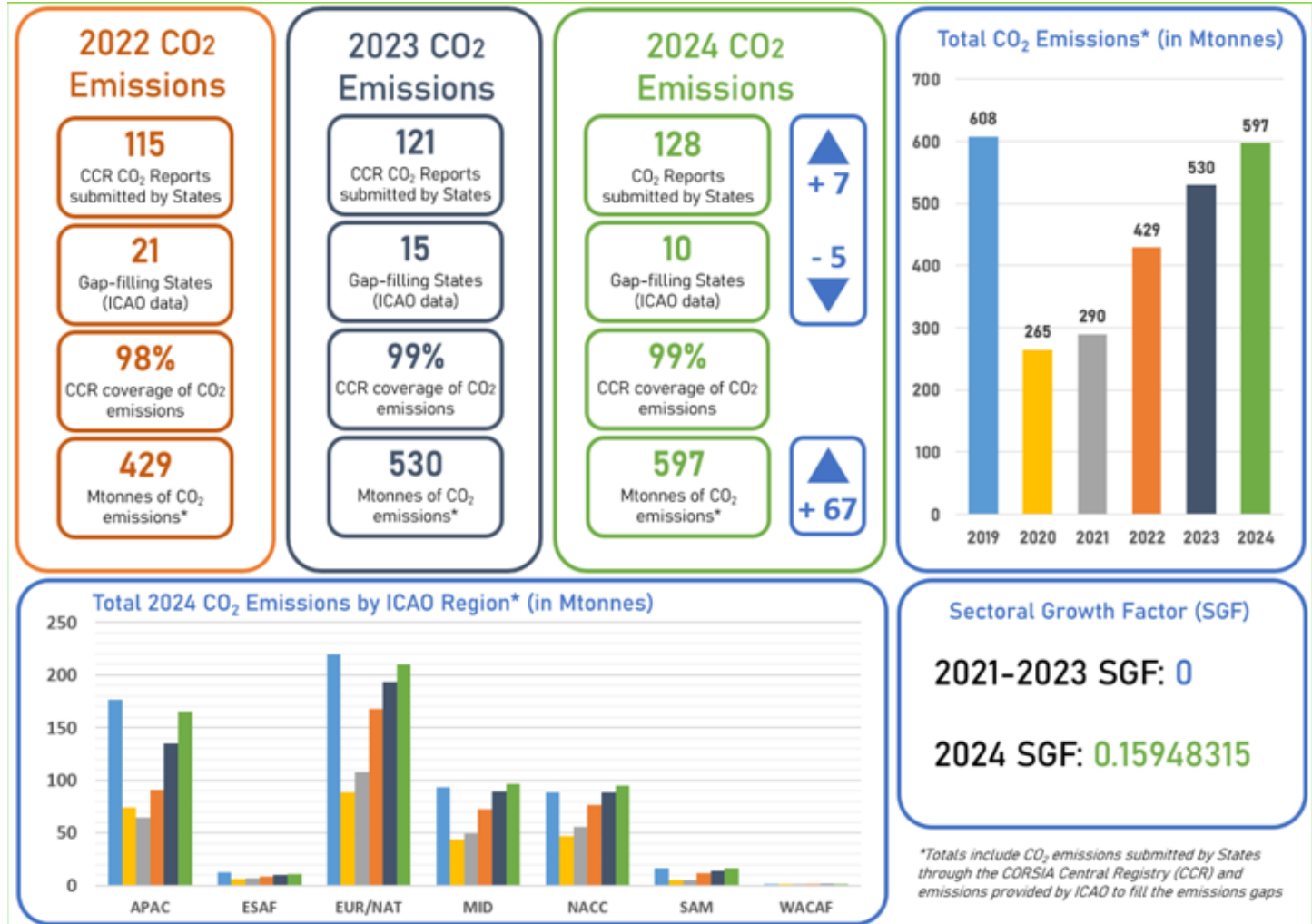
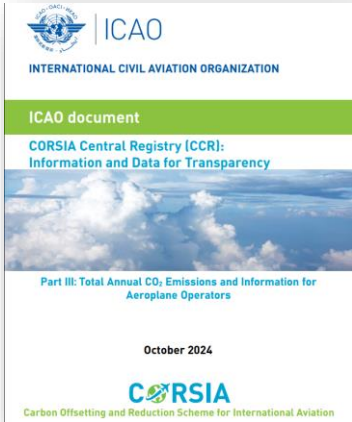


More information available at: <https://www.icao.int/CORSIA/corsia-states-chapter-3-state-pairs>



Unprecedented number of States reported 2024 CO<sub>2</sub> emissions through the CCR, the CORSIA MRV system

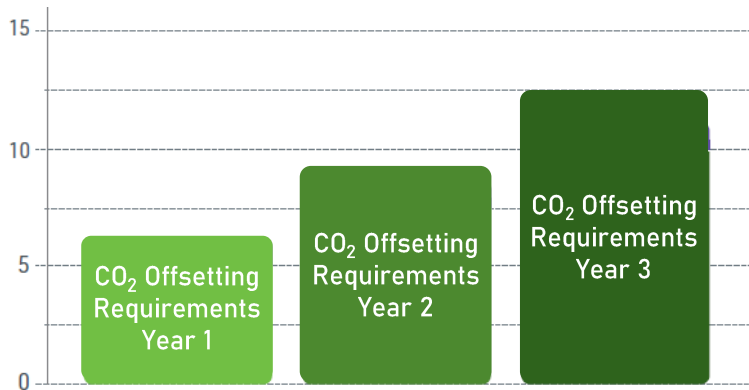
99% coverage maintained



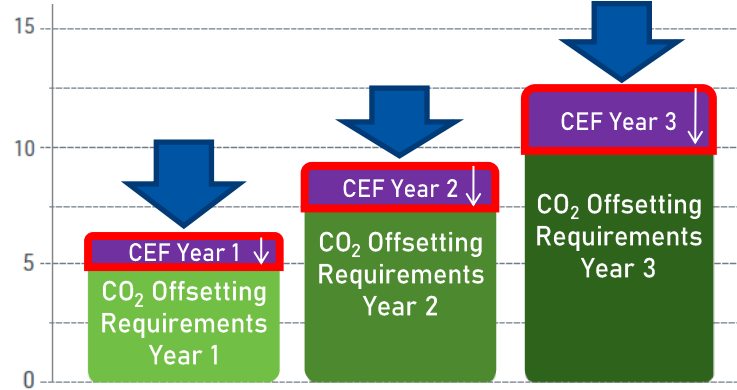
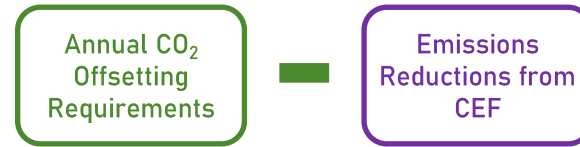
# CORSIA Offsetting Requirements - CEF

An aeroplane operator can reduce its CORSIA offsetting requirements by claiming emissions reductions from the use of CORSIA Eligible Fuels (CEF)

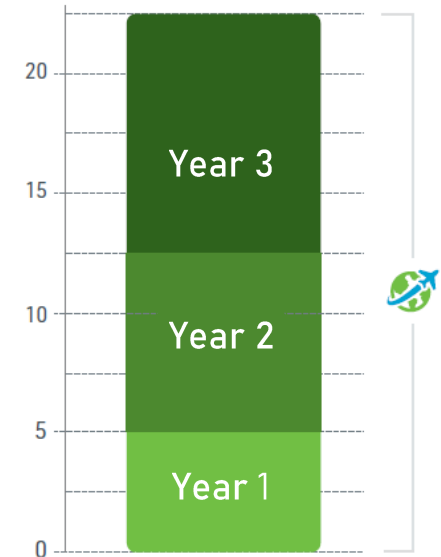
① **CO<sub>2</sub> Offsetting Requirements** calculated by the State for each year



② Emissions reductions claimed from the use of **CORSIA Eligible Fuels (CEF)**



③ **Total Final CO<sub>2</sub> Offsetting Requirements** for a 3-year Compliance Period



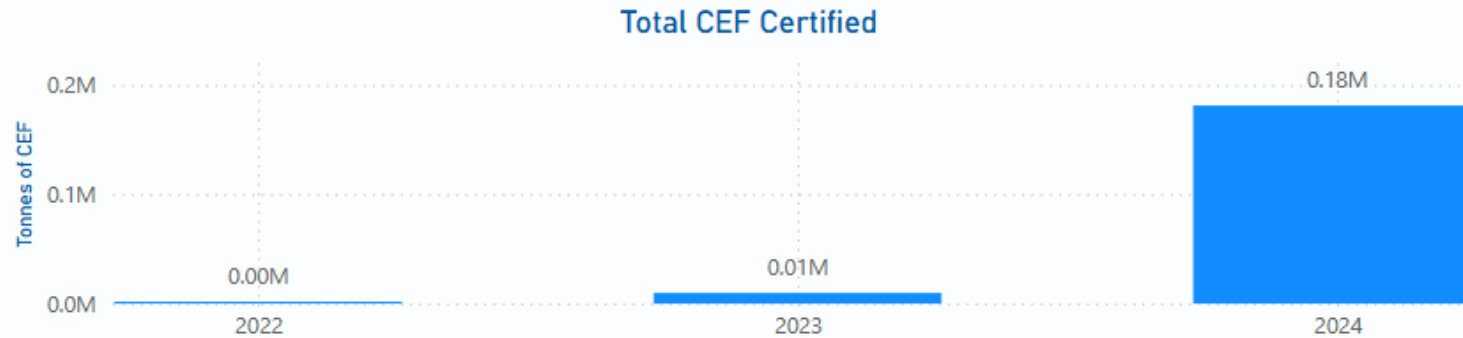
- CORSIA eligible fuels (CEFs) can be used by an operator to reduce its offsetting requirements.
- CEFs are either CORSIA sustainable aviation fuels (SAF) or CORSIA lower carbon aviation fuels (LCAF). CEF needs to be certified based on the CORSIA Sustainability Criteria.
- Total final CO<sub>2</sub> offsetting requirements will be covered with CORSIA Eligible Emissions Units (CEEUs).


[CORSIA Implementation Overview](#)
**Certified CORSIA Eligible Fuels**
[CORSIA Eligible Emissions Units](#)

## Certified CORSIA Eligible Fuels

[click for more CEF information](#)

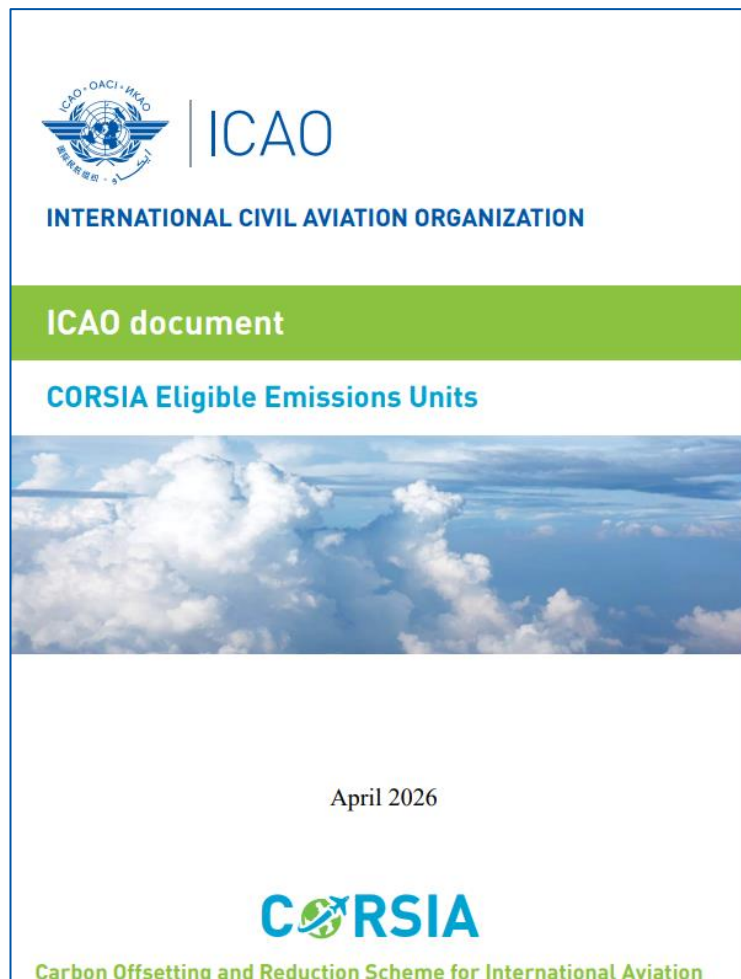
(reported to ICAO by CORSIA approved Sustainability Certification Schemes)


 Production Year: 

State	Scheme	Feedstock	Conversion process	Mass produced (tonnes)
China	RSB	UCO	HEFA	945
Republic of Korea	ISCC	UCO	Coprocessing HEFA	4
Singapore	ISCC	UCO	HEFA	5,893
United States of America	ISCC	Tallow	HEFA	65,605
United States of America	ISCC	Technical Corn Oil	HEFA	86
United States of America	RSB	Tallow	HEFA	108,730
<b>Total</b>				<b>181,263</b>

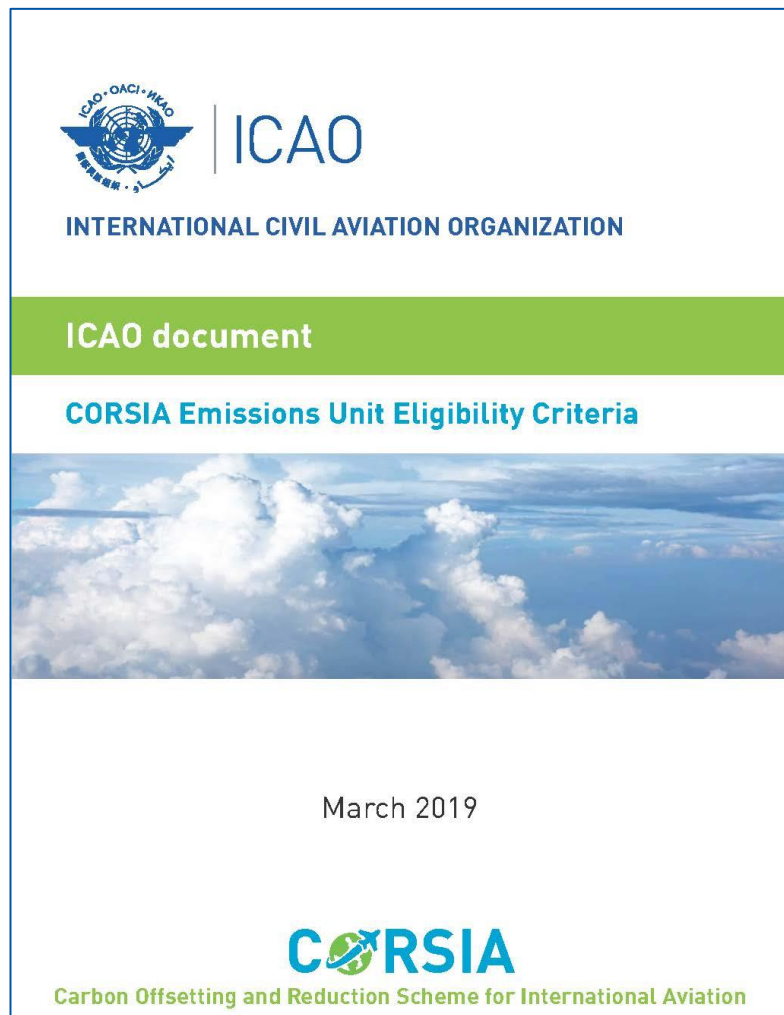

<https://www.icao.int/CORSIA>

# CORSIA Eligible Emissions Units (CEEU)



- **CEEU**s are ‘carbon offsets’ that have been **approved by the ICAO Council, upon recommendation the Technical Advisory Body (TAB)** for their use in CORSIA.
- CEEUs shall meet the CORSIA Emissions Unit Criteria (EUC)
- Listed in the ICAO document ‘CORSIA Eligible Emissions Units’ as approved by the ICAO Council. Edition currently applicable: 14 April 2026.
- This document provides information on which emissions units are CORSIA-eligible and thus can be purchased and cancelled by aeroplane operators to meet their offsetting requirements in CORSIA.
- Next expected update: to be published in November 2026
- Reminder: reporting on cancellation of CORSIA Eligible Emissions Units will take place for the first time in April 2028.

# CORSIA Emissions Unit Eligibility Criteria



- First edition approved by the ICAO Council in 2019 – unchanged since then.
- Information in this document to be used by the Council's Technical Advisory Body (TAB) in its assessment of CORSIA eligibility of applicant emissions unit programmes and emissions units.



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# CORSIA-Related Capacity-Building and Outreach Activities

## ACT-CORSIA Buddy Partnerships

- ICAO Assistance, Capacity-building and Training on CORSIA (ACT-CORSIA) was launched in July 2018, to provide States with the CORSIA implementation support
- ACT CORSIA is designed to support a **coordinated approach** to harmonize and promote coherence to all capacity building efforts for implementation of CORSIA Annex 16, Volume IV (*Resolution A41-22, paragraph 21*)
- ACT-CORSIA also allows to **monitor the global progress** on CORSIA implementation and enhance transparency



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# Thank You





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Designated National  
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Mechanism, Madagascar

## SPEAKERS



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Unrestricted

# ICAO Technical Advisory Body CORSA eligibility process



**Molly Peters-Stanley**  
Chair of the ICAO  
Technical Advisory Body  
(TAB)

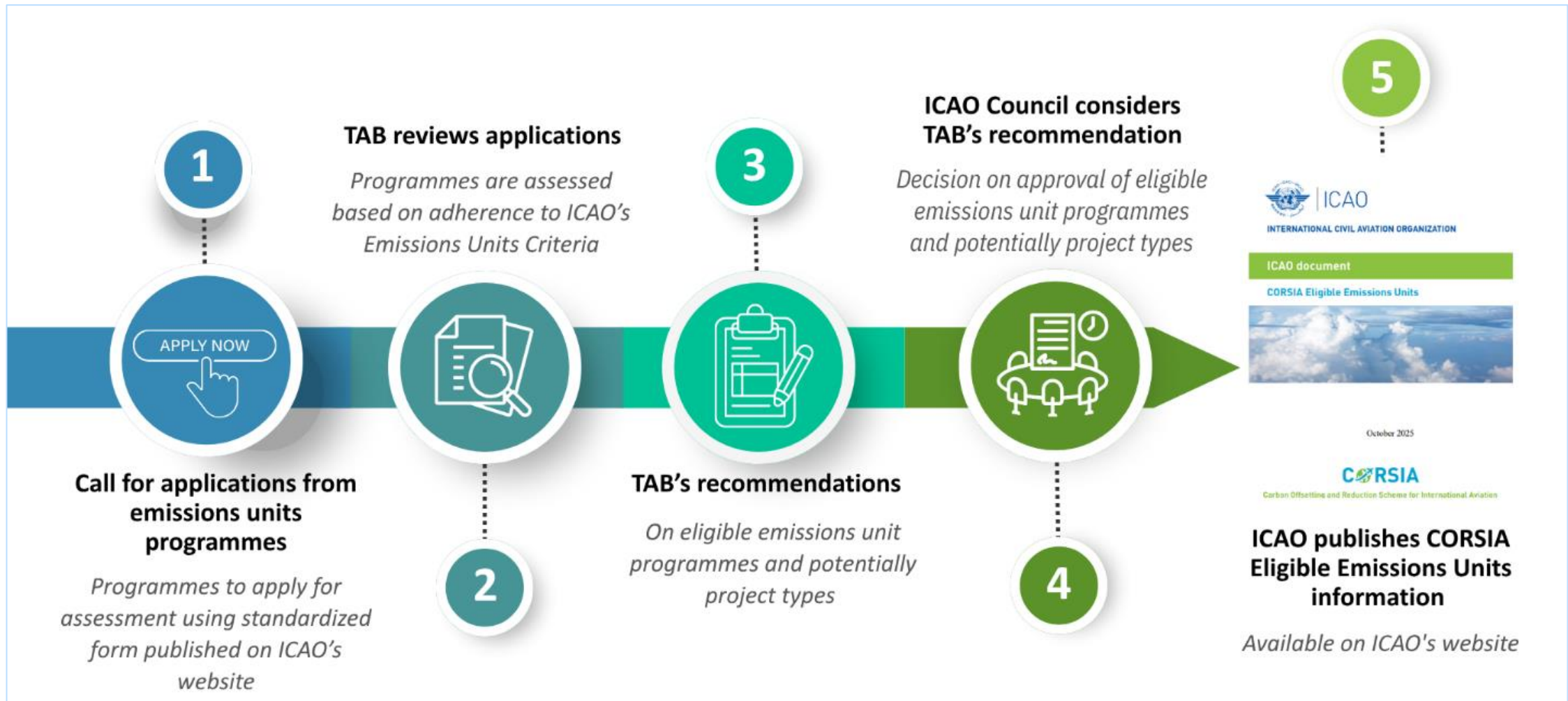


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# CORSIA Eligible Emissions Units (CEEU)

## ICAO process for approval of CEEUs



# CORSIA Eligible Emissions Units (CEEUs)

## Summary Table of approved programmes (April 2026)

Programme	2021 -2023 Compliance Period (Pilot Phase)	2024 -2026 Compliance Period (First Phase)	2027 – 2029 Compliance Period (in Second Phase)
American Carbon Registry	2016 – 2023 units <sup>1,2</sup>	2021 – 2026 units <sup>1,2</sup>	2021 – 2029 units <sup>1,2</sup>
Architecture for REDD+ Transactions	2016 – 2023 units <sup>1,2</sup>	2021 – 2026 units <sup>1,2</sup>	2021 – 2029 units <sup>1,2</sup>
BioCarbon Fund Initiative for Sustainable Forest Landscapes	2016 – 2020 units <sup>1</sup>	2021 – 2026 units <sup>1,2</sup>	
Cercarbono		Conditionally eligible <sup>3</sup>	
China Certified Emission Reduction	2016 – 2020 units <sup>1</sup>		
Clean Development Mechanism	2016 – 2020 units <sup>1</sup>		
Climate Action Reserve	2016 – 2023 units <sup>1,2</sup>	2021 – 2026 units <sup>1,2</sup>	
Forest Carbon Partnership Facility	2016 – 2020 units <sup>1</sup>	2021 – 2026 units <sup>1,2</sup>	
Global Carbon Council	2016 – 2020 units <sup>1</sup>	2021 – 2026 units <sup>1,2</sup>	
Gold Standard	2016 – 2023 units <sup>1,2</sup>	2021 – 2026 units <sup>1,2</sup>	2021 – 2029 units <sup>1,2</sup>
Isometric		2021 – 2026 units <sup>1,2</sup>	
Joint Crediting Mechanism between Japan and Mongolia	Conditionally eligible <sup>3</sup>		
SOCIALCARBON	2016 – 2020 units <sup>1</sup>		
Thailand Voluntary Emission Reduction Programme		2021 – 2026 units <sup>1,2</sup>	
Verra Verified Carbon Standard / Jurisdictional Nested REDD Programme	2016 – 2023 units <sup>1,2</sup>	2021 – 2026 units <sup>1,2</sup>	2021 – 2029 units <sup>1,2</sup>

**Note:** All Eligible Emissions Units must be generated from an activity that started its first crediting periods in 2016 or later.

<sup>1</sup> Subject to various exclusions as set out in the relevant section of the ICAO document titled “*CORSIA Eligible Emissions Units*”.

<sup>2</sup> Units with vintages from 2021 onward have specific requirements relating to host-Party attestations.

<sup>3</sup> Pending further actions by the Programme.

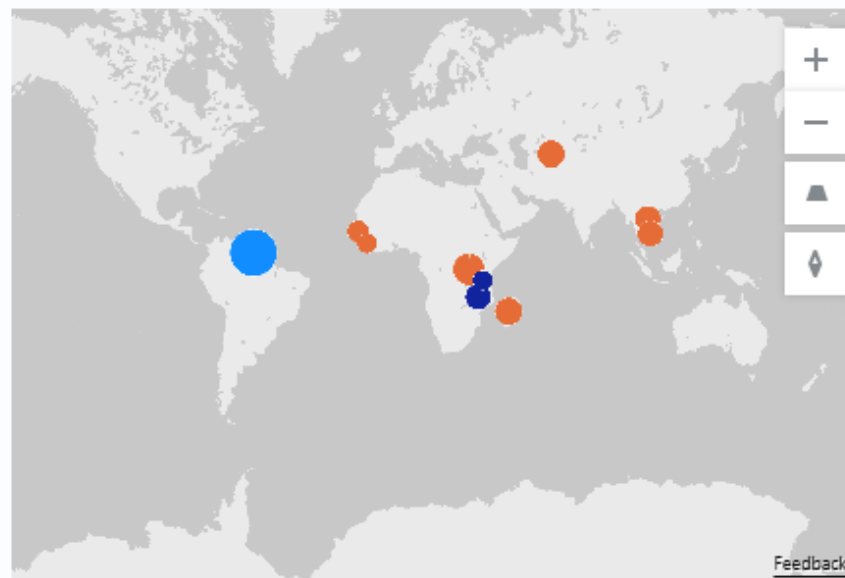
More information available at: <https://www.icao.int/CORSIA/corsia-eligible-emissions-units>

## CORSIA Eligible Emissions Units

[click for more CEEUs information](#)

(Issued by Programme Registries) – As of May 28, 2026

Host Country	Program Registry	Quantity of CEEUs (tonnes)
Cambodia	<a href="#">VCS</a>	1,275,362
Gambia	<a href="#">VCS</a>	196,652
Guyana	<a href="#">ART</a>	24,963,214
Lao	<a href="#">VCS</a>	1,276,305
Madagascar	<a href="#">VCS</a>	2,280,812
Malawi	<a href="#">GS</a>	1,376,880
Rwanda	<a href="#">GS</a>	51,199
Rwanda	<a href="#">VCS</a>	4,577,464
Sierra Leone	<a href="#">VCS</a>	2,078
Tanzania	<a href="#">GS</a>	2,806
Uzbekistan	<a href="#">VCS</a>	1,568,083
<b>Total</b>		<b>37,570,855</b>



Program Registry ● ART ● GS ● VCS

The information presented here is the amount of [CORSIA Eligible Emissions Units \(CEEU\)](#)s that have been issued by those emissions unit programmes approved by the ICAO Council to supply CEEUs for the CORSIA first phase (2024 – 2026 compliance period), extracted directly from public websites of the programmes' registries.

The quantities refer to units **verified, issued and labelled as CORSIA eligible by the programmes**, which may be used to comply with CORSIA offsetting requirements. The labelled units meet CORSIA criteria on avoidance of double claiming (e.g. Letter of Authorization by the host country). Some of the units may have already been cancelled in the programmes' registries. The quantity of CEEUs does not include any forecasted/in the pipeline units linked to a published Letter of Authorization by the host country.

Aeroplane Operators should contact the programmes directly for information on the market availability of those CEEUs.



<https://www.icao.int/CORSIA>


The **host country attestation\*** is a key measure defined by the EUC to **avoid double claiming** of units used in CORSIA.

This is also a crucial factor that is linked to **the availability of CORSIA eligible emissions units**.

Through the attestation, the host country confirms that CEEUs will be used in CORSIA and are not counted toward any National Determined Contributions (NDCs) under Paris Agreement and the CEEUs will be properly accounted for and reported as per Article 6.2 guidance (through to *applying corresponding adjustments*).

ICAO Member States are encouraged to provide letters of authorization well in advance of the **deadline (1 December 2027–31 January 2028)** for aeroplane operators to cancel CEEUs for the first phase, taking account of Article 6.2 and biennial reporting deadlines.

A6.2-TMPL-RPTG-004



**VOLUNTARY STANDARDIZED TEMPLATE<sup>1 2 3</sup>**  
**AUTHORIZATION OF USE OF THE INTERNATIONALLY TRANSFERRED MITIGATION OUTCOMES FROM A COOPERATIVE APPROACH**  
**(Version 01.0)**

**PURPOSE**

1. This document provides the information outlined in paragraph 5 of decision x/CMA.6 in relation to the authorization of the use of internationally transferred mitigation outcomes from a cooperative approach as referred to in decision 2/CMA.3, annex, paragraph 18.<sup>4 5</sup>
2. This document is:
  - The authorization referred to in decision 2/CMA.3, annex, paragraph 18; or
  - An attachment to the authorization referred to in decision 2/CMA.3, annex, paragraph 18.

**I. ELEMENTS OF THE AUTHORIZATION OF USE OF THE INTERNATIONALLY TRANSFERRED MITIGATION OUTCOME FROM A COOPERATIVE APPROACH**

**A: ELEMENTS RELATED TO THE AUTHORIZATION PROCESS**

<b>Party:</b>	>> <i>Name of Party as per common nomenclatures.</i>
<b>Authorization ID:</b>	>> <i>ID of the authorization as per the tracking system of the authority that provides the authorization.</i>
<b>Authorization date:<sup>6</sup></b>	Click or tap to enter a date.
<b>Version:</b>	01.0
<b>Date of last change to the authorization, if applicable:</b>	Click or tap to enter a date.
<b>Effective date of the change to the authorization:<sup>7</sup></b>	Click or tap to enter a date.
<b>Duration of the authorization:<sup>8</sup></b>	<b>Start date:</b> Click or tap to enter a date.

\* Also known as **host country 'authorization'** under the UNFCCC Paris Agreement, Article 6.



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Designated National  
Authority for 6.4  
Mechanism, Madagascar



# CORSIA implementation status

Supply and demand update

ICAO / IATA / IETA side event

Bonn, 9 June 2026



**Ben Rattenbury**  
VP Policy, Sylvera  
(IETA Representative)

Incentivizing investment in real climate action.

# Contents

1. Context – the convergence
2. Overview – the dysfunctional equilibrium
3. Phase 1 demand
4. Phase 1 supply
5. Market projection
6. Conclusion

# Contents

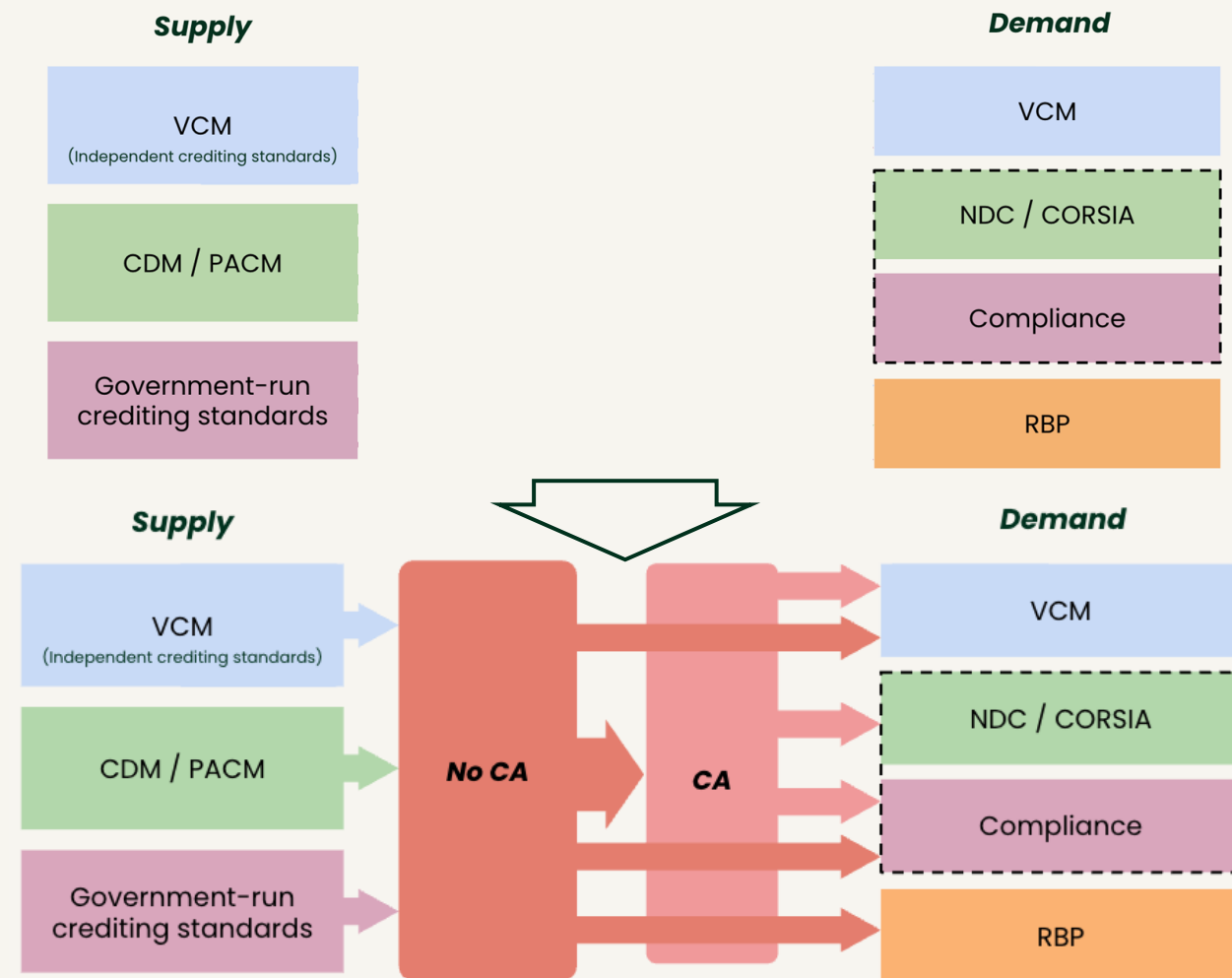
1. Context – the convergence
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# Context: convergence

The fundamental nature of carbon markets is changing - they are converging

**Long-held assumption:** different carbon markets are distinct; supply sources match demand sources

**Emerging reality:** Broadly speaking each of the major sources of supply can be used by each demand source - the essential distinction is only whether there is a corresponding adjustment



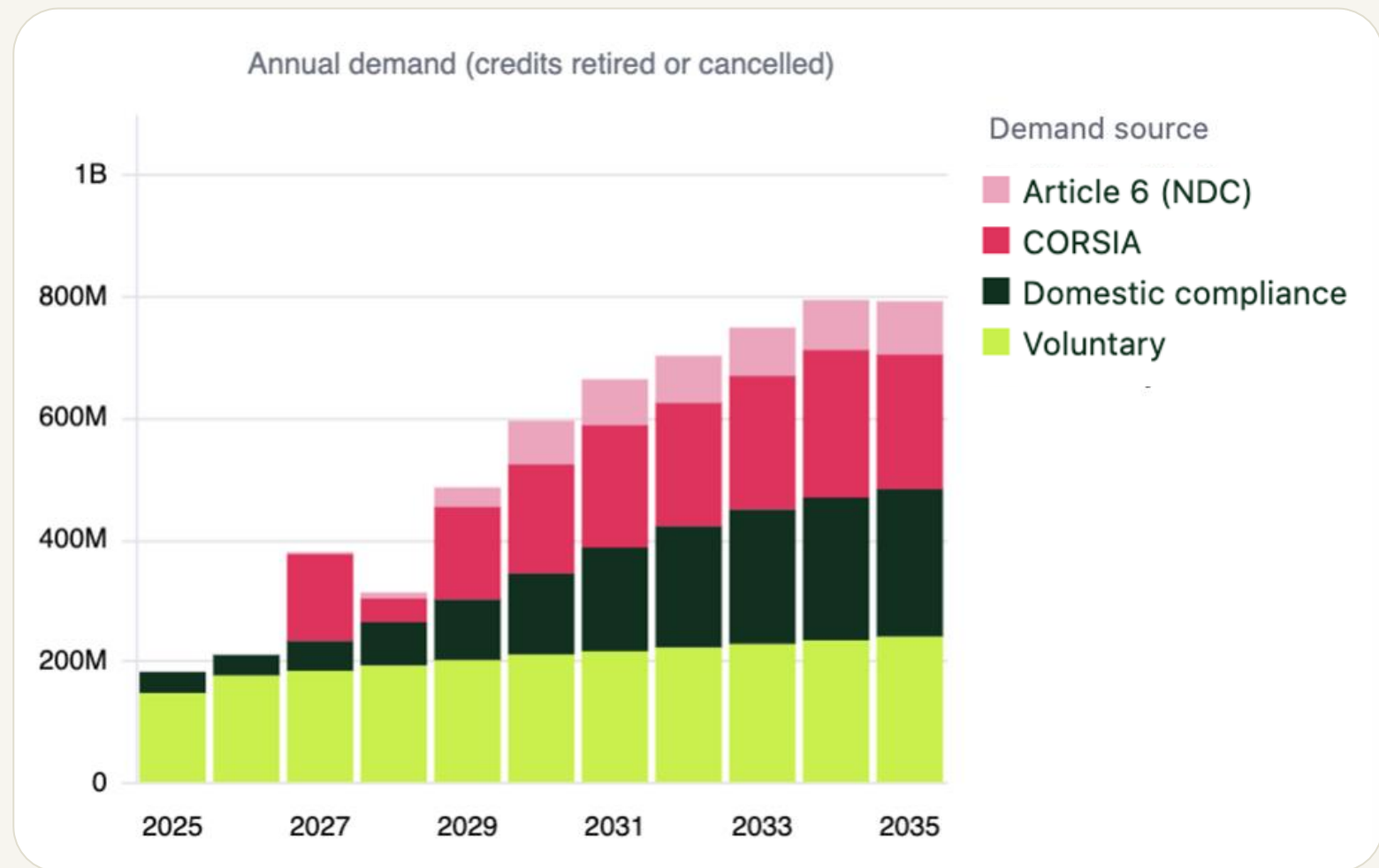
# Context: convergence and a shifting demand balance

The balance between the demand sources will shift radically in the coming years

In **2025** around **85%** of final demand for carbon credits (retirements or cancellations) was the VCM.

By **2033** we expect this to drop to **around 30%**, due to demand growth in

- CORSIA;
- Domestic compliance;
- Article 6 use to help countries meet their NDCs.



# Contents

1. Context – the convergence

2. Overview – the dysfunctional equilibrium

3. Phase 1 demand

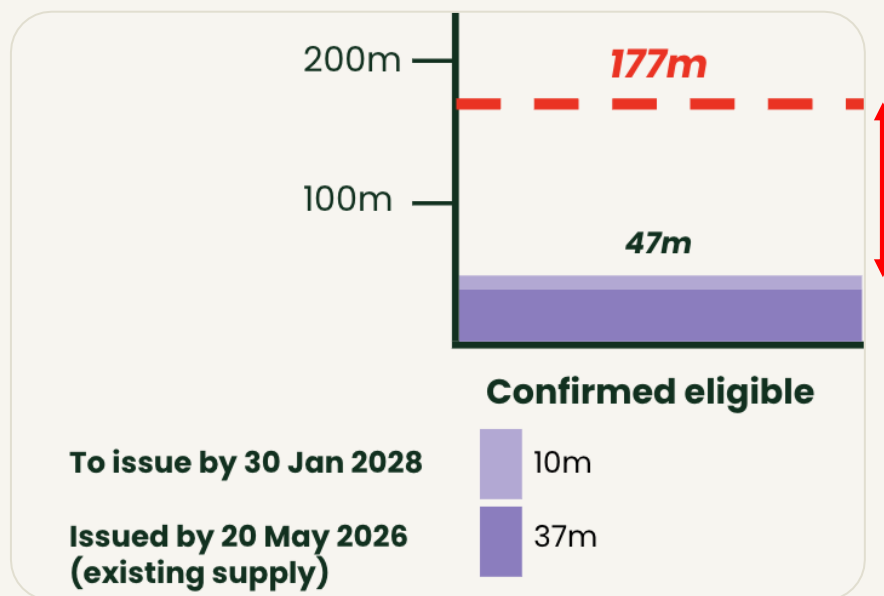
4. Phase 1 supply

5. Market projection

6. Conclusion

# Current status

Undersupplied and under-priced



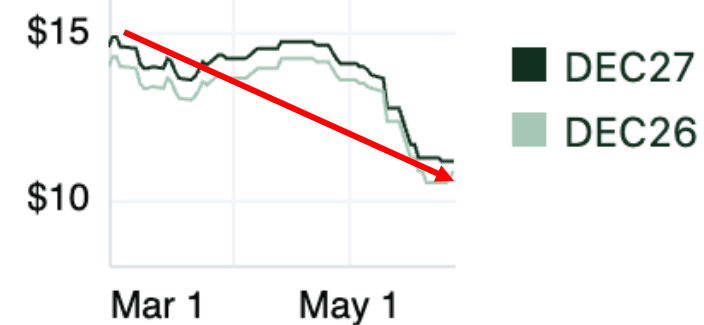
ICE futures ·  
May 28

DEC27

**\$11.12**

DEC26

**\$10.82**



# Current status

## Why? Caution and uncertainty predominate



### Overview

*Dysfunctional hedging equilibrium*

- All parties behaving rationally; local equilibria prevail
- \$2-5bn to be spent in next 18 months - if we can solve the riddle
- Clash of cultures has been slow to overcome
- June 2026 will be key



### Demand side

*Internally cautious; externally uncertain*

- Macro policy uncertainty
  - EU
  - US
- Iran war
- Lack of supply
- Hedging windows
- Compliance uncertainty



### Supply side

*Internally cautious; externally uncertain*

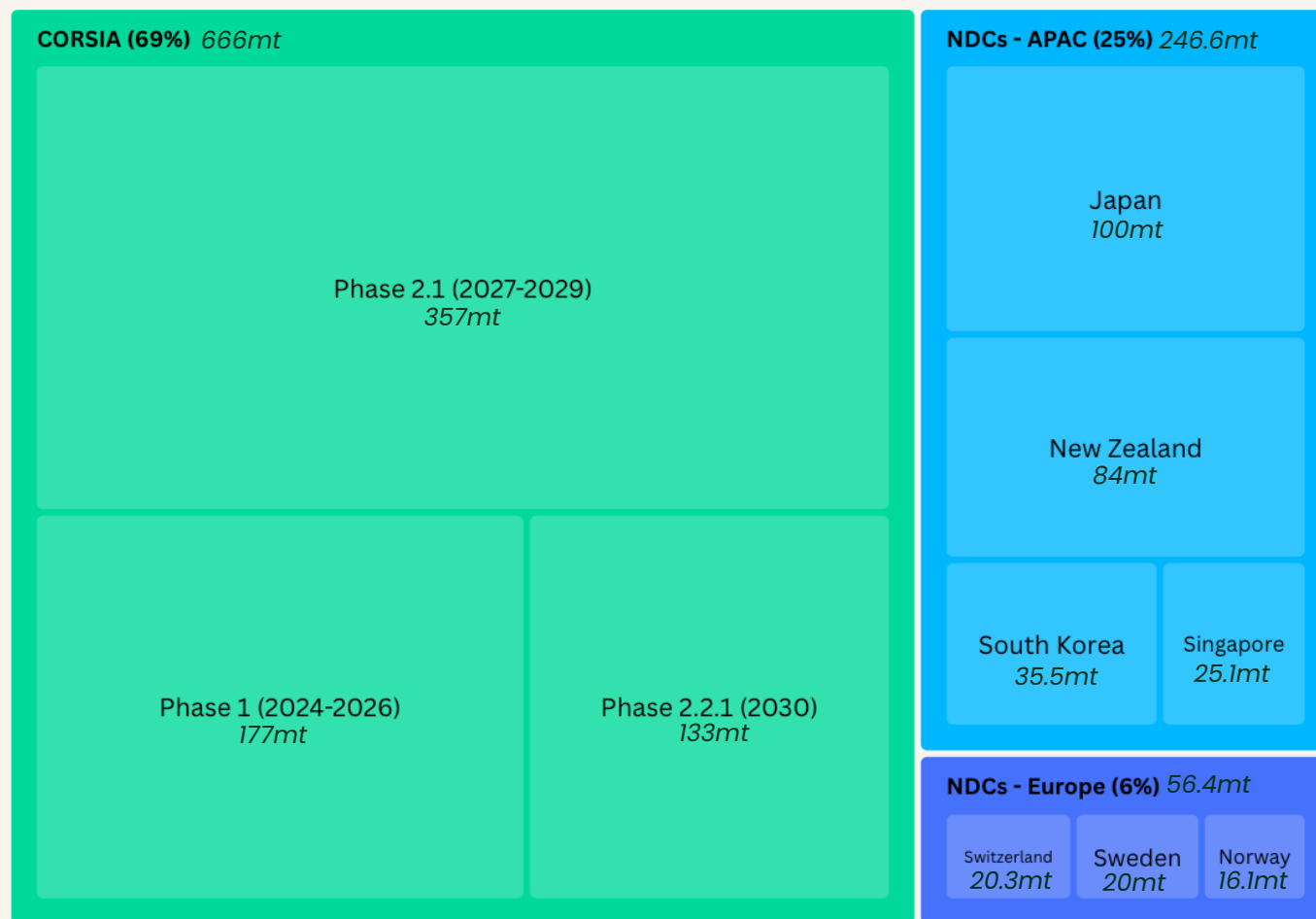
- Low prices; low demand
- Macro policy uncertainty
  - EU
  - US
- System rules uncertain
- Internal politics
- Iran war

# Contents

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2. Overview – the dysfunctional equilibrium
3. Phase 1 demand
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6. Conclusion

# CORSIA dominates the demand for adjusted credits to 2030

Demand for adjusted credits much larger, and more certain, for CORSIA than NDC use



**Total: 969mt**

Based on **official statements**, ITMO demand for NDC use by governments will be around 300mt; meaning just over two thirds of ITMO demand to 2030 will be from CORSIA.

Demand could be **higher** because

- New buying countries could enter the picture
- Aviation sector emissions could rise faster than expected

Demand could be **lower** because

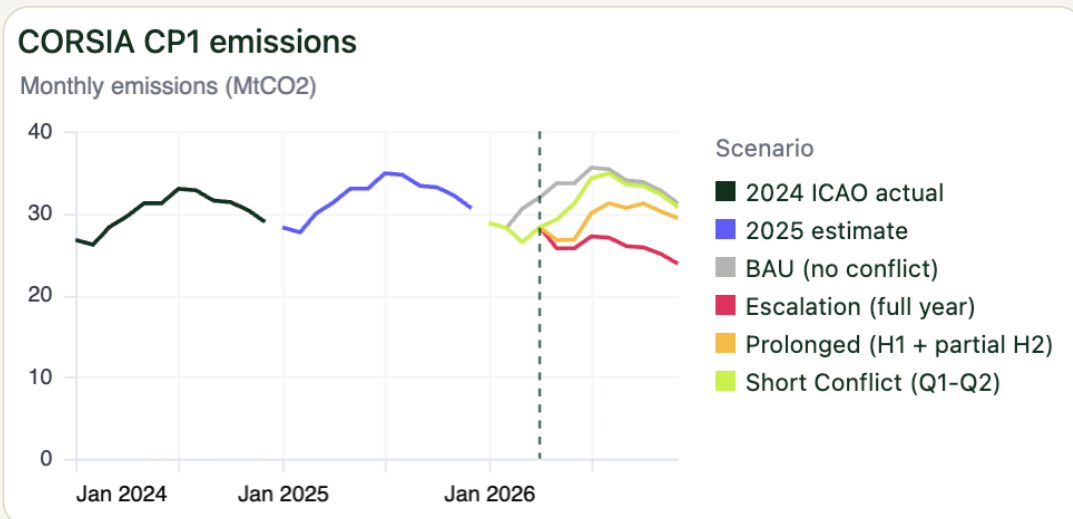
- Prospective buying countries do better than expected against their NDCs
- Prospective buying countries opt to fall short on their NDCs
- A shortage of corresponding adjustments means supply cannot meet demand

# CORSIA phase 1 demand

## Two big question marks over phase 1 demand

### Swing factor 1: Iran war

- BAU  $\longleftrightarrow$  Extended conflict =  $\pm$  71.5mt



### Swing factor 2: airline participation

- The EU is the second largest jurisdictional emitter, after the US

Operator	State	Int'l aviation emissions (MtCO <sub>2</sub> )	of which covered by CORSIA CP1	CP1 offsetting requirements ↓
1 Emirates	United Arab Emirates	91.45	60.92	10.82
2 United Airlines	United States	60.27	49.2	8.72
3 Ryanair	Ireland	48.38	43.5	7.71
4 Qatar Airways	Qatar	60.01	42.78	7.6
5 Turkish Airlines	Turkey	60.78	42.3	7.5
6 British Airways	United Kingdom	47.29	37.69	6.68
7 Delta Air Lines	United States	42.7	36.97	6.56
8 Singapore Airlines	Singapore	45.6	36.02	6.4
9 American Airlines	United States	41.02	33.84	6
10 Lufthansa	Germany	43.55	32.79	5.81
11 Korean Air	South Korea	38.37	32.16	5.71
12 Qantas	Australia	36.84	29.07	5.16
13 Air France	France	37.79	26.63	4.72
14 Air Canada	Canada	29.45	25.61	4.54
15 ANA	Japan	33.63	25.48	4.52

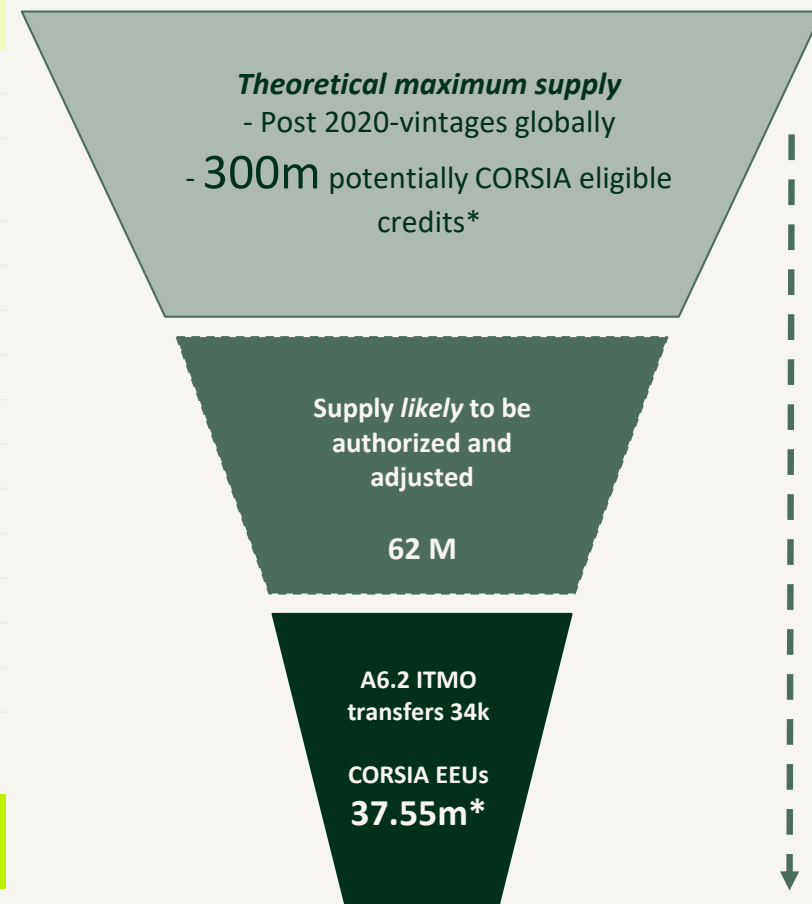
# Contents

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# CORSIA phase 1 supply

Current known supply of EEU's is roughly 12% of potential; 20% of demand

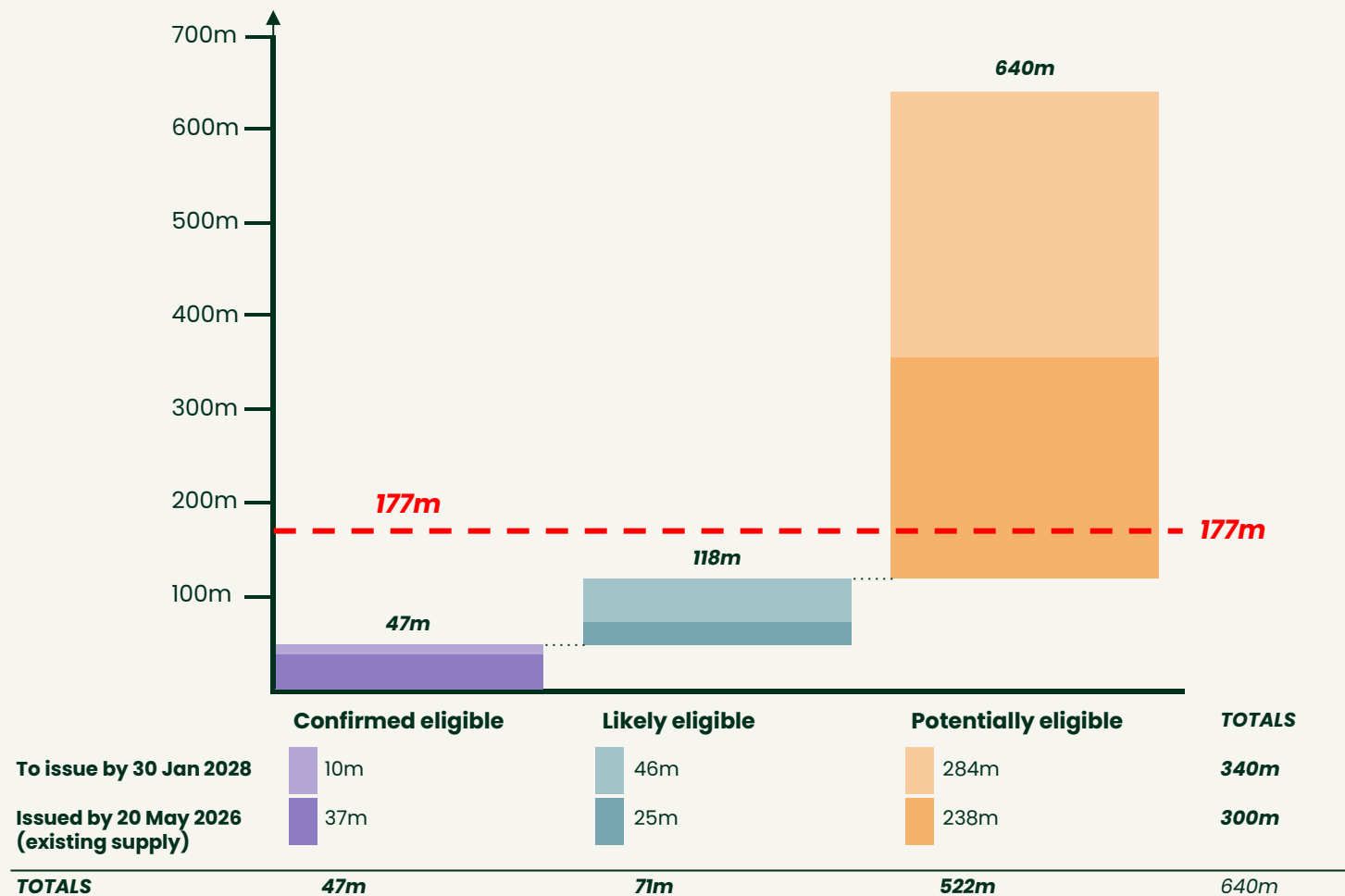
Country	Activity type	ID	Vintage	Available	Retired	Retiree
Guyana	JREDD+	ART 102	2021-23	24,814,614	36,100**	Japan Airlines (JAL), ANA
Rwanda	Cookstoves	VCS 4150	2022-24	2,842,729	-	
Madagascar	Cookstoves	VCS 2311, 2825-2827, 2774-2780 (PoA)	2021-24	2,595,222	-	
Rwanda	Cookstoves	VCS 3699	2022-24	1,734,350	-	
Uzbekistan	Fugitive emissions	VCS4531	2024	1,568,083	-	
Malawi	Cookstoves	GS 11677 11902 (PoA)	2021-22	1,246,880	130,000	Japan Airlines (JAL)
Laos	Cookstoves	VCS 2924	2023-24	951,542	150,000	Singapore Airlines, Scoot
Cambodia	Cookstoves	VCS 2925	2022-24	755,262	-	
Cambodia	Water purification	VCS 3052	2023-24	520,100	1,879	ASG Business Aviation
Gambia	Cookstoves	VCS 4000	2023-24	195,245	-	
Laos	Water purification	VCS 3204	2023-24	174,763	-	
Tanzania	Cookstoves	VCS 2676	2022-23	142,504	-	
Rwanda	Water purification	GS 10959 (PoA)	2023	51,199	-	
Sierra Leone	Cookstoves	VCS 3837	2023	2,078	-	
Tanzania	Cookstoves	GS 11732	2022-24	0	51,498	JAL, Skyservice Business Aviation, Execaire
				<b>37,545,879*</b>	<b>369,477</b>	



\*Based on Sylvera's CORSIA First Phase eligibility mapping, as of 8 June 2026

# CORSIA phase 1 supply

Rising volumes with decreasing levels of confidence (moving up and to the right)



\* A 25% haircut is applied to future and not-yet-eligible volumes to reflect that not all credits are likely to be authorised.

\*\* Likely-to-deliver countries have Sylvera LoA and CA risk scores below 50%.

Country-level intent to authorize specific activity types or serve CORSIA has not been factored in.

# CORSIA phase 1 supply

Host countries vary substantially in their level of risk

## Lowest risk

LoAs

Name	LoA count	LoA risk ⓘ ↑	CA risk ⓘ
Thailand	3	25%	46%
Bhutan	0	30%	34%
Nepal	0	31%	30%
Zambia	0	31%	30%
Peru	1	31%	36%
Zimbabwe	4	31%	75%

CAs

Name	LoA count	LoA risk ⓘ	CA risk ⓘ ↑
Zambia	0	31%	30%
Nepal	0	31%	30%
Bhutan	0	30%	34%
Uzbekistan	1	48%	35%
Peru	1	31%	36%
Chile	0	36%	38%

## Highest risk

Name	LoA count	LoA risk ⓘ ↓	CA risk ⓘ
Angola	0	80%	84%
Republic of the Congo	0	80%	84%
Cameroon	0	76%	81%
Saudi Arabia	0	75%	68%
Nicaragua	0	75%	69%
DR Congo	2	74%	78%

Name	LoA count	LoA risk ⓘ	CA risk ⓘ ↓
Angola	0	80%	84%
Republic of the Congo	0	80%	84%
Cameroon	0	76%	81%
DR Congo	2	74%	78%
Laos	3	56%	75%
Ethiopia	1	55%	75%

# CORSIA phase 1 supply

Recall the convergence – CORSIA supply may not end up in CORSIA

*Illustrative matrix of supply and demand considered by the model*

		VCM demand sources				Compliance demand sources				
Project ID	CORSIA eligible	Energy & utilities	Heavy industry	Tech & finance	...	California	Singapore	CORSIA	NDC	...
Proj. 1	No					n/a	n/a	n/a	n/a	...
Proj. 2	No						n/a	n/a		...
Proj. 3	Yes					n/a	n/a			...
Proj. 4	Yes									...
...	...	...	...	...	...	...	...	...	...	...

Our model considers all types of supply and demand for carbon credits.

For each scenario, it simulates annual demand, supply and price by project type.

However, it is possible to focus on subsegments, e.g. the **CORSIA and A6 markets**.

Assumptions on wider voluntary and compliance markets have *marginal* impact on CORSIA-specific results.

We also have **real-world examples** of this playing out, e.g. CORSIA-tagged African cookstoves credits recently selling into the VCM.

# Contents

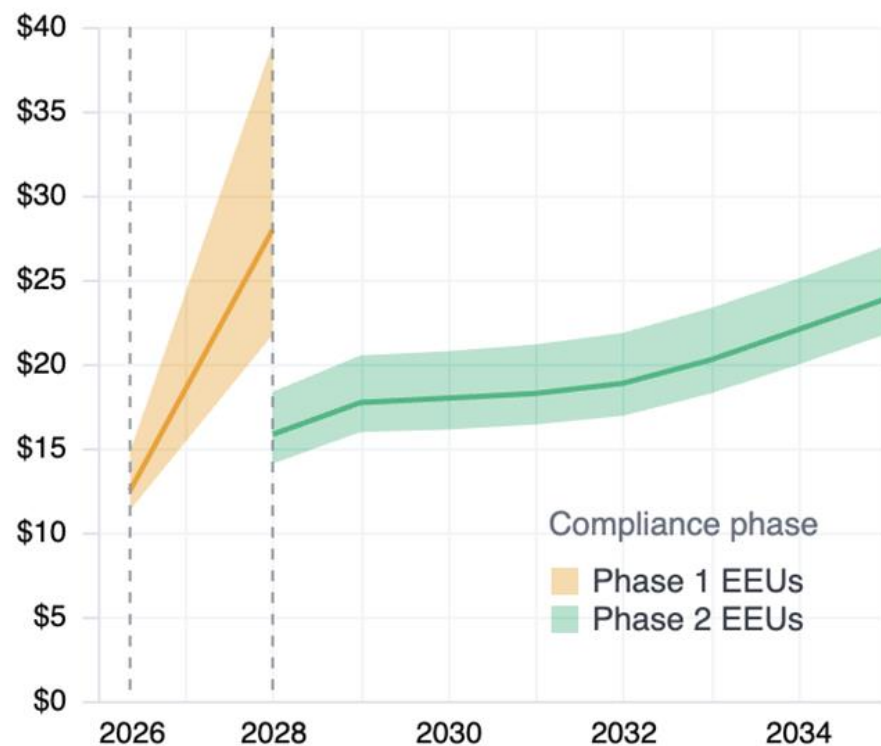
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# CORSIA phase 1 market projection

Prices likely to rise (if the market stabilises)

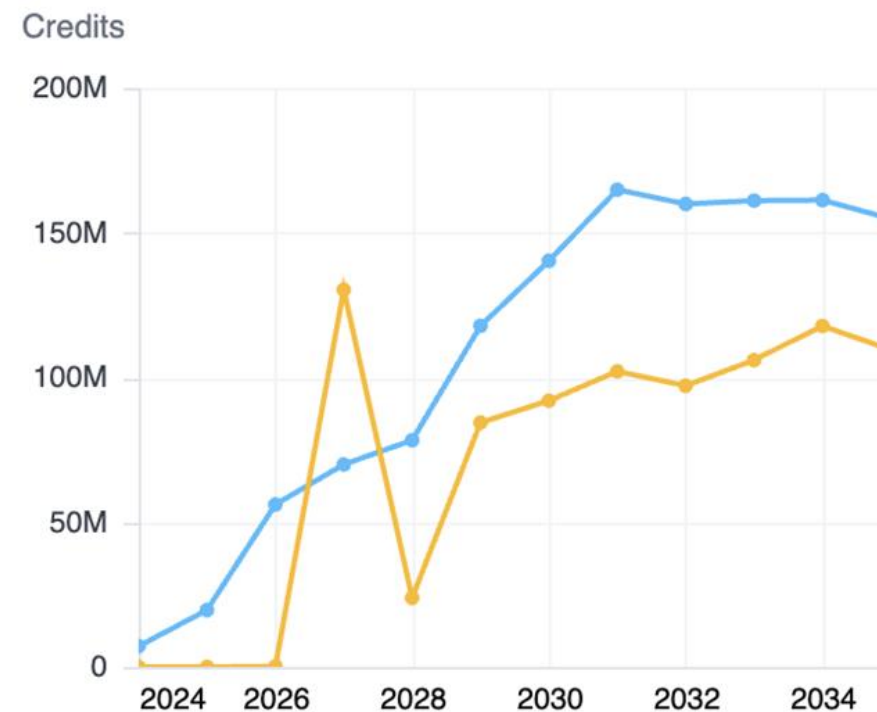
## CORSIA spot price

Potential shortage around CP1 deadline (Jan 2028)



## CORSIA EEU supply and demand

Annual supply (authorized) Annual demand



# Contents

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4. Phase 1 supply
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# Conclusion

## Reasons to be positive

Despite multiple significant headwinds, we expect CORSIA to succeed because

- All governments and most airlines want CORSIA to work
- Host countries have more to gain than to lose from signing (high quality) LoAs
- The capacity is ramping up fast
- The community is coming together

# Thank you!

*ben@sylvera.io*

Incentivizing investment in real climate action.



# ICAO's Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)

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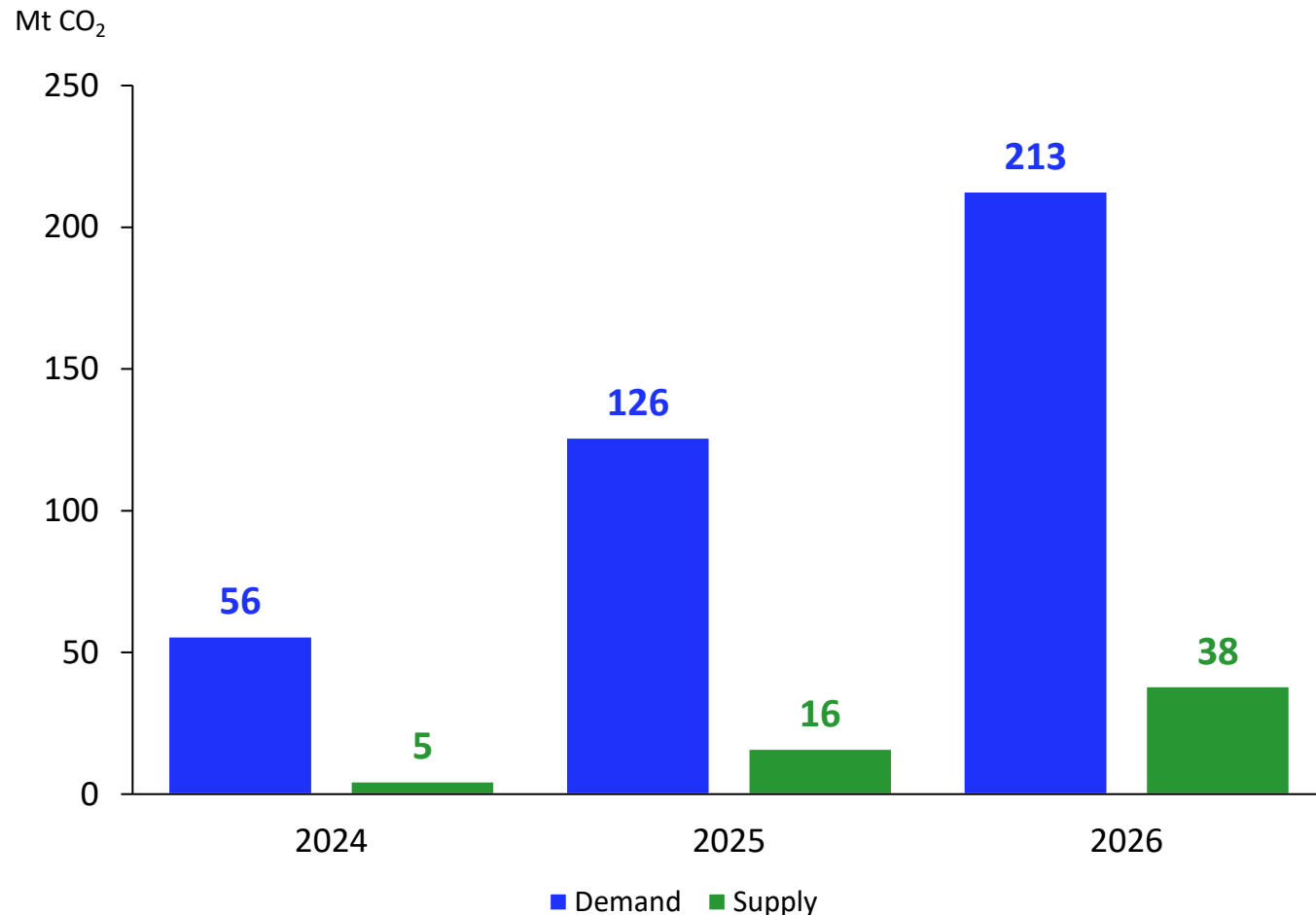
**Lantonirina  
Ratovonjanahary**  
Designated National  
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Mechanism, Madagascar

# Upscaling CORSIA Eligible Emissions Units



# CORSIA EEU demand versus supply

## EEU demand and supply, cumulative



- In this first phase of CORSIA (2024-2026), our central scenario for the offsetting requirement is: **213 MtCO<sub>2</sub>**
- The supply of CORSIA EEUs is currently: **38 MtCO<sub>2</sub>**
- The shortfall is therefore around: **175 MtCO<sub>2</sub>**

# CORSIA First Phase

## Participation:

**130 States** from 2026, **134 States** from 2027 (~85% international aviation emissions covered)

## Demand for the First Phase:

**170 to 236 Mt**

## Opportunity for climate investment:

Estimated at **USD 4-5 billion**

## Supply as of June 2026 from 10 countries:

About **38 Mt**, gap of **132 to 198 Mt**

## Main challenges:

- **Continued lack of awareness regarding CORSIA as an opportunity for host countries and the requirements and the relevant provisions of Article 6 of the Paris Agreement regarding CORSIA authorizations**
- Lack of awareness regarding ways to create synergies between **host countries' nationally determined contributions (NDCs) and CORSIA**
- **Delay in Art 6 reporting:** Letters of authorizations, Initial Reports, and Biennial Transparency Reports

# IATA's effort in upscaling CORSIA EEUs

## Aviation Carbon Markets Compact

On this 10<sup>th</sup> anniversary of the adoption of the milestone Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) by the 193 Member States of the International Civil Aviation Organization, we...

*Resolve* to give critical momentum to international aviation's climate change goal of carbon-neutral growth from the year 2020 and the ICAO Long-Term Aspirational Goal of net zero CO<sub>2</sub> emissions by 2050, by uniting behind the challenge of **rapidly increasing the supply of CORSIA Eligible Emissions Units (CEEUs) to 225–250 million by spring 2027**. Such an outcome would enable CORSIA compliance by hundreds of participating airlines worldwide and contribute to the achievement of the goals set out in the Paris Agreement;

*Value* the exceptional promise of CORSIA to offset and reduce international aviation emissions from 2020, as the only global market-based solution to international air transport's CO<sub>2</sub> emissions;

*Recognize* that international aviation's demand for EEUs in CORSIA's First Phase (2024–2026)—when airlines are expected to cancel for compliance around of 200 million CEEUs by January 2028, at an estimated value of USD 4–5 billion—is an unparalleled opportunity for Paris Agreement Parties to attract new investments in climate actions that generate the credits required for CORSIA compliance. In addition, host Parties are encouraged to retain a meaningful share of emissions reductions for their domestic climate objectives, to enhance their ability to meet their Nationally Determined Contributions (NDCs) under the Paris Agreement;

*Regard* the current critical shortfall in the supply of CEEUs for the First Phase of CORSIA as a threat to the viability of CORSIA and to this promising flow of carbon finance for host Parties, whose timely authorization of the use of their emissions reductions to offset aviation emissions under the CORSIA can unlock significant CEEU supply from diverse projects. This challenging period will test the coordination and usability of the multilateral frameworks that guide how Parties provide and act on Letters of Authorization (LoAs) to avoid counting the same emissions reductions toward both Paris Agreement emissions targets and CORSIA's offsetting requirements;

*Rise* to meet this challenge by joining a community of signatories representing States that are Parties to the Paris Agreement and Contracting States to the Convention on International Civil Aviation (1944) or ICAO Observer Organizations; also, signatories representing international aviation, carbon markets, finance, development, technology and fuels industries, as well as civil society and global initiatives promoting high-integrity carbon credit market development;

*Commit* to working individually and together to actively promote, pursue, and deliver on the goals set out herein, to reinforce the vision for climate change solutions and sustainable development pursued under CORSIA and in Paris Agreement Parties' respective NDCs, including the following aims:

**Aiming to raise awareness of the need for market action and to provide direct assistance for host Party authorizations and a full cycle of reporting under Article 6.2, leading to meaningful EEU supply for the first phase of CORSIA (2024-2026; unit cancellations due in Dec 2027–Jan 2028)**

- I. Aviation Carbon Markets Compact
- II. Supporting Alliance
- III. Implementation Assistance to Host Countries

# I. The Aviation Carbon Markets Compact

## Raising Global Awareness of CORSIA's Opportunities, Supply Challenges, and Solutions

### Aviation Carbon Markets Compact

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*Commit* to working individually and together to actively promote, pursue, and deliver on the goals set out herein, to reinforce the vision for climate change solutions and sustainable development pursued under CORSIA and in Paris Agreement Parties' respective NDCs, including the following aims:

- Seeks commitments from a global community of actors to confront the core barriers to CEEU supply for the first phase of CORSIA
- Aiming to close the supply gap to 225–250 MtCO<sub>2</sub>e by mid-2027—a necessary volume to ensure market access and liquidity
- Inviting signatories representing a diverse cohort of carbon credit market actors—
  - ... from host Parties...
  - ...to carbon credit activity developers...
  - ...to their certification standards bodies...
  - ...to the carbon market support structure (capacity-builders, civil society)...
  - ...to the airlines implementing CORSIA.



## II. Supporting Alliance for CORSIA EEU Supply

- Open to:
  - **Compact signatories**
  - Organizations and host Parties **making significant contributions** to the development of CEEU supply and the robust implementation of CORSIA and the Paris Agreement's Article 6.2 guidance
- Through mid-2027 (*at least*), **quarterly updates** for information-sharing on progress of CEEU supply, CSP efforts, and remaining or emerging barriers to CORSIA EEU supply, focusing on the three thematic areas:
  - Authorization Innovation
  - Certification Coherence
  - Implementation Assistance
- **Periodic opportunities** for participant recognition; participation in events, panels, announcements; and direct engagement

# III. Host Country Implementation Assistance

- **Direct assistance** (virtual; in-person if/as needed) to develop or refine LoAs
  - that are fully consistent with Paris Agreement Article 6.2 guidance
  - that enable the supply of CORSIA-eligible verified emissions reductions needed to implement the first phase and for host country NDC advancement
- Sustained support for a **full Article 6.2 reporting cycle in 2026-2027**
- **Utilizing Article 6.2 guidance and best-in-class materials and templates** where available; with practitioner input, innovating additional materials where needed
- **Collaborating with respected organizations**

# How to engage with and benefit from the Supporting Alliance

Contact us at [CORSIA@iata.org](mailto:CORSIA@iata.org)

- **Key engagement opportunities:**
  - UNFCCC June Climate Meetings in Bonn (8–18 June)
- **Commit to the Compact aims and be recognized in mid-2026 announcements** and participation in future quarterly convenings
  - Clearly indicate desire to associate with the Aviation Carbon Markets Compact and the Supporting Alliance
- Inquire about **receiving host country implementation assistance** in 2026-2027
- **Introduce your country contact(s) to the IATA team** to further explore their need for assistance and opportunities
- Explore **materials that you can share with host country(ies)** in which you are working



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Ratovonjanahary**  
Designated National  
Authority for 6.4  
Mechanism, Madagascar

# MADAGASCAR'S EXPERIENCES IN AUTHORIZING ITMOs

ICAO-IATA-IETA Side Event for UNFCCC SB64  
Bonn, June 2026



**Ratovonjanahary Lantonirina**  
Designated National Authority for 6.4 Mechanism  
Ministry of Environment and Sustainable Development, BNCCREDD+  
Madagascar





# Madagascar's Project Portfolio

Participation in different carbon market mechanism since becoming a Party to the Kyoto Protocol and Paris Agreement

## Voluntary Carbon market

Around 40 projects , mainly under Gold Standard and Verified Carbon Standard including improved cookstove projects, renewable energy projects, nature-based projects, and waste management projects

## CDM

8 projects registered under the CDM, including water purification projects, improved cookstove projects, renewable energy projects, and a hydropower plant project, 2 projects transitioning to the mechanism 6.4





## Practical steps to authorize ITMOs

- Capacity building by UNFCCC
- The Government of Madagascar, through the Ministry of Environment and Sustainable Development, and the DNAMC is also developing partnerships to promote carbon markets in Madagascar and operationalize Article 6

### **KCM/We act** ( as pilot project)

- support the development of Madagascar's Article 6 roadmap
- Capacity building for Stakeholders

### **WORLD BANK**

- Support for the development of the national regulatory framework
- Support the establishment of the DNAMC, Intersectorial, and composed by SC, TC, and Secretariat





# Approval and Authorization Processes

## DESIGNATED NATIONAL AUTHORITY FOR CARBON MARKET



- Analysis based on sustainable development criteria
- Analysis of the impact of potential projects/transfers on NDC compliance
- Provision of advice on the fulfillment of functions
- Relevant info into a registry system
- Issues letter of Authorization of entity, Authorization for Cooperative approaches

- Policy coordination
- High-level decision-making
- Authorization of mitigation outcomes for transfer under MoU
- Execution of ITMO transfers
- Issues ITMOs authorization letters based on the technical recommendation of CT

- Organizes committee meetings
- Preparation and submission of the reports required under the UNFCCC ( initial report, annual report, and of BTRs)



# Practical steps to authorize ITMOs

**2024**

## Development of Madagascar's Article 6 Roadmap

With support from KCM/We act :

- Training sessions and capacity building activities (DNA and relevant sectors involved in MC)
- Assessment of readiness and identification of requirements for article 6 implementation
- Establishment of an ITMOs Registry



**2025**

## Establishment of the Article6 Governance Framework

With support from the world Bank:

- Establishment of a national carbon governance through a decree
- Establishment of the DNA , intersectoral, composed by ST, TC and Secretariat
- Authorization of ITMOs for CORSIA
- Preparation of the BTR
- Preparation of reporting requirements under UNFCCC



**2026**

## ITMOs Authorization, reports

- Authorizations of ITMOs for CORSIA
- Preparation and submission of the reporting requirements under the UNFCCC Framework
- Submission of the BTR





# AUTHORIZATION CRITERIA

1. Project aligned with national priorities and contributing to sustainable development
2. Compliance with the Nationally Determined Contribution
3. Reserve of VCU for Madagascar's NDC
4. ITMOs are real, verified, and additional
5. Commitment to the establishment of a MoU with the ministry of Environment including:
  - Reserve of VCU to support Madagascar's NDC
  - Financing national mitigation activities, capacity building initiatives, developing article 6 infrastructure
6. Vintage 2021
7. Additionality of project, technology transfer
8. Application of Corresponding adjustments
9. Consideration of Methodologies and Standards
10. Investment mobilized
11. Consideration of environmental integrity





# PERSPECTIVES

## With world Bank

- Development of Madagascar's Article 6 participating Strategy
- Development of a Procedures Manuel

## Bilateral Agreement

- Ongoing discussions with the Government of Singapore toward the establishment of a bilateral agreement under Article 6





**THANK YOU** 



**SB64**  
**June 09, 2026**  
**Bonn, Germany**



1. Scene-setting on CORSIA by ICAO
2. Presentation by speakers
3. Questions from the Moderator
4. Q&A session with the audience



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# Recap

*CORSIA is the only global market-based measure for international aviation emissions, to avoid a possible patchwork of duplicative State or regional measures.*

Increasing States participation in CORSIA will increase its environmental integrity.

Important for Governments to issue Letters of Authorization to facilitate access and availability of CORSIA Eligible Emissions Units to aeroplane operators.

## To refrain from aviation taxation.

- Duplicates MBMs, negative impact on CORSIA implementation.
- Hinder air connectivity and aviation decarbonization efforts.
- Socio-economic impact especially in SIDS and developing States.

### CORSIA Implementation Overview

**Voluntary States Participation**

**Eligible Emissions Units Programmes**

**Data from the CORSIA Central Registry (CCR)**

- 2025 Aeroplane Operators: 690
- 2024 CO<sub>2</sub> Reports from States: 128
- 2025 Verification Bodies: 65
- Reports cover 99% of Total 2024 emissions
- Total CO<sub>2</sub> Emissions (tonnes): 608M (2019), 265M (2020), 290M (2021), 429M (2022), 530M (2023), 597M (2024)

**CORSIA Eligible Fuels**

- 57 Feedstock Types
- 14 Sustainability Themes
- 3 Sustainability Certification Schemes

### CORSIA Eligible Emissions Units (Issued by Programme Registries) – As of April 29, 2026

Host Country	Programme Registry	Quantity of CEEUs (tonnes)
Cambodia	VCS	1,275,362
Gambia	VCS	196,652
Guyana	ART	24,963,214
Lao	VCS	1,276,305
Madagascar	VCS	1,347,521
Malawi	GS	1,376,880
Rwanda	GS	51,199
Rwanda	VCS	4,577,464
Sierra Leone	VCS	2,078
Tanzania	GS	2,806
Uzbekistan	VCS	1,568,083
<b>Total</b>		<b>36,637,564</b>

Key news items from the collage:

- IMF calls for carbon levy on ships and planes
- Norway Mulls Replacing Passenger Tax With Sustainability-Focused Levy
- UK hints at green taxes frequent fliers
- France's eco-tax: the best way to cut down aviation emissions?
- Denmark introduces green tax on air passengers from 2025
- Malaysia to open for airline carbon levy from April
- Air Malta says aviation fuel tax could destroy jobs as costs soar and prices rise

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# Thank You

