



UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

Subsidiary Body for Scientific and Technological Advice
Sixty-fifth session (SBSTA65)
(Antalya, Türkiye, 9 to 20 November 2026)

Agenda item 12(b): Emissions from fuel used for international aviation and maritime transport

Submission by the International Civil Aviation Organization (ICAO)

1. Introduction

1.1 The [42nd Session of the ICAO Assembly](#), held in October 2025, adopted Assembly Resolutions [A42-21 on international aviation and climate change](#) and [A42-22 on CORSIA](#)¹. These Resolutions provide a clear and reinforced mandate for ICAO to advance its Strategic Goal of ensuring that *Aviation is Environmentally Sustainable*.

1.2 ICAO continues to lead the international aviation sector towards achieving its collective global aspirational goals and vision. Key priorities include accelerating the sector's transition to cleaner energies through the ICAO Roadmap for the implementation of the [ICAO Global Framework](#) for aviation cleaner energies and the [ICAO Long-Term Global Aspirational Goal \(LTAG\)](#) of net-zero carbon emissions by 2050. At the same time, implementation of [the Carbon Offsetting and Reduction Scheme for International Aviation \(CORSIA\)](#) is entering an important stage, with its second phase beginning in 2027.

		
Medium-term global aspirational goal of Carbon Neutral Growth from 2020 (CNG2020)	Long-term global aspirational goal (LTAG) of net zero carbon emissions by 2050	ICAO Global Framework for SAF, LCAF and other aviation cleaner energies — Global aspirational Vision to reduce CO₂ emissions by 5% by 2030 using cleaner energies

ICAO global aspirational goals and vision for international aviation

¹ A summary listing of reservations to provisions in Resolutions A42-21 and A42-22 is available at: <https://www.icao.int/events/assembly-42nd-session/Resolutions>

1.3 Climate financing to support aviation decarbonization remains an important focus, with the [ICAO ACT-SAF](#) and [ICAO Finvest Hub](#) programmes making significant progress in helping to assess the technical viability of sustainable aviation fuels (SAF) projects and bridge their financing gap.

1.4 However, challenges remain, including the continued emergence of [duplicative market-based measures \(MBMs\) on international aviation](#), such as aviation-related taxes and levies, intended to mobilize climate finance for other sectors. Such developments risk undermining CORSIA as the only global MBM applying to international aviation and diverting focus and resources away from measures that directly reduce aviation CO₂ emissions.

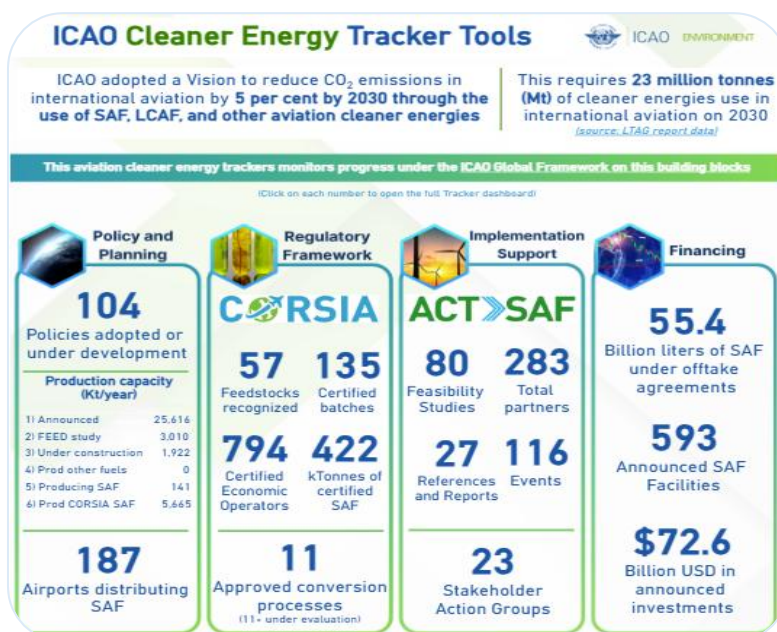
2. PROGRESS ON IMPLEMENTATION OF ICAO ROADMAP

2.1 ICAO continues to make progress on its Roadmap for the implementation of the ICAO Global Framework for aviation cleaner energies and the LTAG, while pursuing balanced progress between the four interdependent Building Blocks.

Building Block 1 (Policy and Planning)

2.2 SAF policy development by States continues worldwide. By October 2026, the [ICAO SAF Policies Tracker](#) counted more than 100 policies adopted or under development, up from 92 policies shared in [ICAO's SBSTA64 submission](#) with updates from various regions. The [ICAO guidance on policy measures for SAF development and deployment \(2026\)](#) summarizes potential policies and coordinated approaches for the deployment of SAF, completing a toolbox of guidance material for use by ICAO Member States together with the [ICAO SAF Rules of Thumb](#).

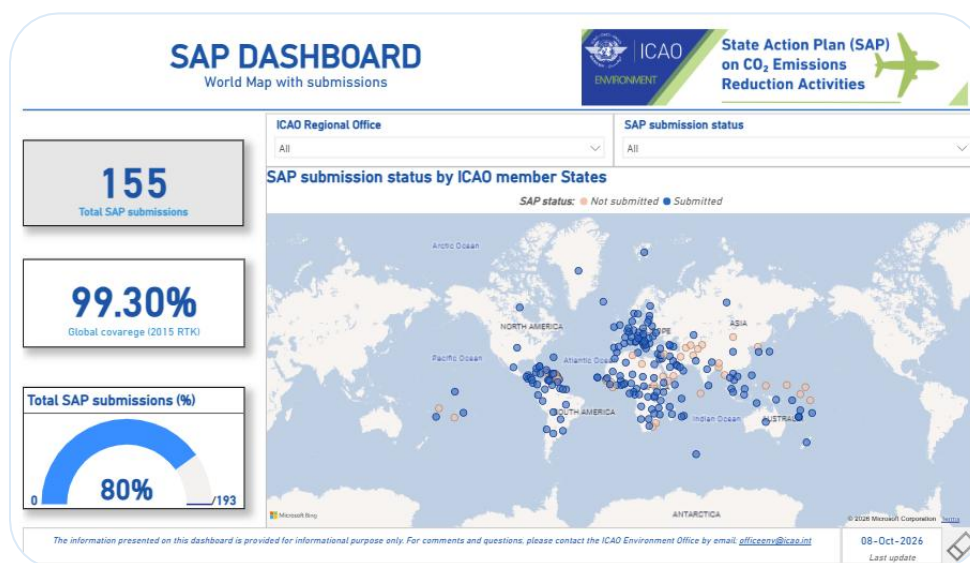
2.3 SAF production projects also continue to advance. As of October 2026, ICAO is tracking almost 600 announced SAF facilities worldwide. Separately, 41 facilities are currently producing CORSIA Eligible Fuels (CEFs), while global announced SAF production capacity stands at around 37 Mt. Detailed information is available on the [ICAO SAF Facilities Tracker](#).



ICAO Cleaner Energy Tracker Tools (as of October 2026)

2.4 Work is ongoing by the ICAO Committee on Aviation Environmental Protection (CAEP) to implement the [LTAG Monitoring and Reporting \(LMR\) methodology](#), which combines assessments to compare the actual performance of international aviation with previously defined milestones, along with assessments to provide updated CO₂ emissions projections toward 2050. The LMR methodology is supported by information from the [ICAO Tracker Tools](#), State Action Plans for aviation CO₂ emissions reductions, and the ICAO annual LTAG Stocktaking / Aviation Climate Week events.

2.5 ICAO continues its collaborative efforts with States to facilitate the development, update and submission of ICAO [State Action Plans \(SAP\)](#). To date, 155 SAPs have been submitted, covering more than 99 per cent of global air traffic. The SAP initiative is expected to be an integral part of the ICAO ACT-LTAG programme, which is currently under development to deliver targeted and practical support tailored to States' specific needs and to contribute to the achievement of LTAG.



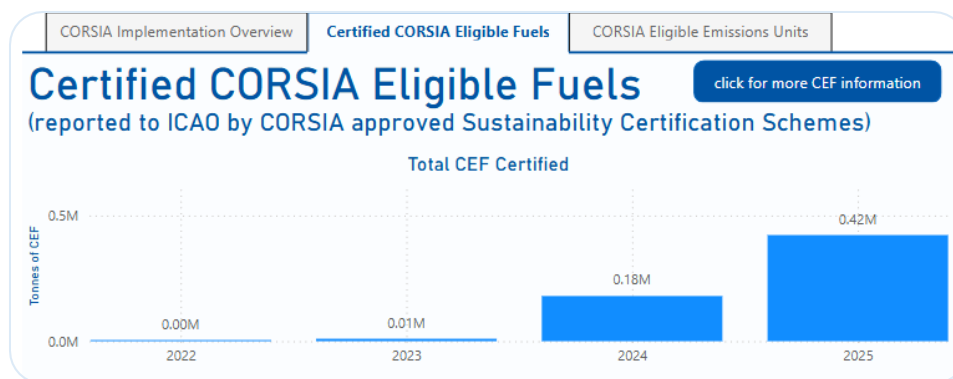
ICAO State Action Plans Dashboard (as of October 2026)

2.6 ICAO hosted its annual [Aviation Climate Week from 2 to 4 June 2026](#), with over 500 in-person attendees. The event took stock of progress on aviation decarbonization solutions, including technologies, operations and cleaner energies, and addressed policy and market developments, implementation support and financing, as well as CORSIA implementation.

Building Block 2 (Regulatory Framework)

2.7 The sustainability criteria, sustainability certification, and the methodology for the assessment of life cycle emissions used for CORSIA Eligible Fuels (CEFs) is the accepted basis for the eligibility of SAF, lower carbon aviation fuels (LCAF) and other aviation cleaner energies used in international aviation. ICAO continues to advance the analysis and approval of life cycle values for new fuel sources and pathways, and their sustainability certification, in line with the CORSIA requirements.

2.8 The annual reports submitted by the [ICAO-approved Sustainability Certification Schemes \(SCS\)](#) show that the production of CEFs expanded significantly in 2025, with certified volumes reaching 422 kt of SAF (0.42 Mt), which are more than double the 179 kt of SAF (0.18 Mt) certified in 2024, resulting in some 1.1 Mt of CO₂ emissions reductions, drawing on technical corn oil, used cooking oil and animal fats as feedstocks. Production of CORSIA co-processed SAF also rose significantly, from 4 tonnes to 6,176 tonnes.



ICAO Tracker reflecting certified CEFs reported to ICAO by SCS

2.9 This growth was underpinned by an increase in the number of certified fuel producers, from 7 in 2024 to 16 in 2025. By 2025, 794 entities across the SAF supply-chain were certified under CORSIA across 42 States, reflecting an increasingly broad and balanced geographic participation. Detailed information is available on the [ICAO Tracker of CORSIA Certified Fuels and Economic Operators](#).

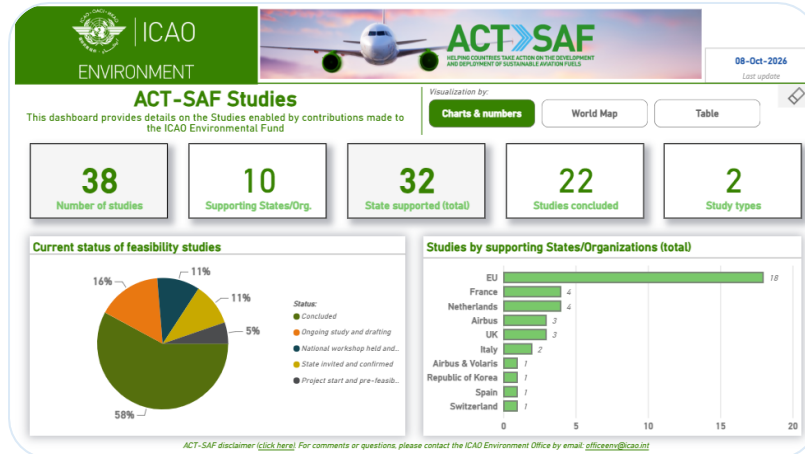
Building Block 3 (Implementation Support)

2.10 Accelerating implementation requires effective capacity-building and targeted support, which can be delivered through ICAO's partnerships with its Member States and stakeholders. To this end, ICAO launched the [Assistance, Capacity-building and Training for SAF \(ACT-SAF\) programme](#) in 2022. ACT-SAF provides tailored support to States at different stages of SAF development and deployment, facilitates partnerships and cooperation under ICAO's coordination, and promotes knowledge sharing and the recognition of initiatives worldwide.

2.11 There are over 280 ACT-SAF partners to date, comprising stakeholders from across the SAF supply chain. Progress has also been made in the development of ACT-SAF feasibility and business implementation studies for States, with 38 studies completed or ongoing. The three most recent ICAO ACT-SAF studies were completed and delivered to the national authorities of Mozambique in June, and Côte d'Ivoire and Senegal in September 2026. In addition, six of the ICAO ACT-SAF studies have been recently kicked off: for Mexico in May, for Costa Rica and Angola in June, for Egypt and Nigeria in July, and for Cameroon in September 2026.



Over 280 ICAO ACT-SAF Partners (as of October 2026)



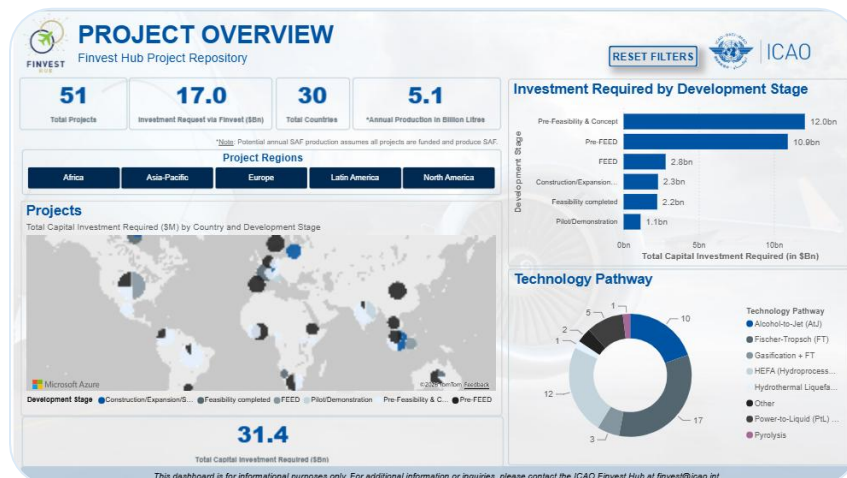
Dashboard on ICAO ACT-SAF studies (as of October 2026)

Building Block 4 (Financing)

2.12 Effective implementation of aviation decarbonization measures will require access to financing, particularly for the deployment of SAF, LCAF and other aviation cleaner energies, which are estimated to require cumulative investments of around USD 3.2 trillion by 2050.

2.13 ICAO has made further progress in operationalizing the ICAO Finvest Hub. The [Finvest project repository](#) now comprises over 50 projects across 30 States, with the number of projects having nearly doubled since SBSTA64, representing approximately USD 17 billion in investment requests. Targeted expansion of the Finvest partner group is also underway, and ICAO continues to welcome engagement with Member States and relevant stakeholders, including public and private financial institutions, investors and insurers, as well as other UN bodies and international organizations, to identify and promote financing and funding opportunities for aviation decarbonization projects.

2.14 The Finvest operating model has been further enhanced through the establishment of a structured project pathway covering project submission, completeness checking, initial assessment, targeted capacity-building support and, where appropriate, referral to participating financing platforms and Finvest partners. A Project Bankability Self-Assessment Tool has been developed to help project proponents better understand their readiness for financing and identify areas requiring further development.



Dashboard on ICAO Finvest Hub (as of October 2026)

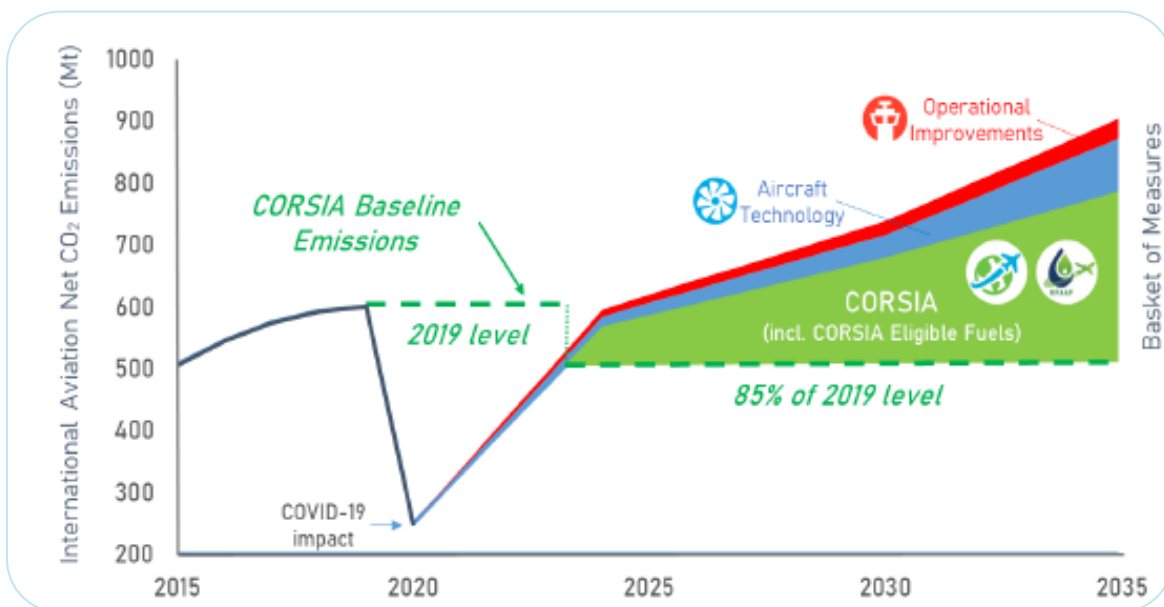
2.15 Planning is also underway for the [Global Sustainable Aviation Marketplace 2027 \(GSAM\)](#), to be jointly organized with the [ICAO Aviation Climate Week 2027](#), from 31 May to 4 June 2027 at the ICAO headquarters in Montréal, Canada. The combined format connects several linked themes, with the GSAM component maintaining a distinct focus on investment readiness, practical solutions, and engagement between project proponents, States, industry and financial institutions.

3. Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)

3.1 The 39th Session of the ICAO Assembly in 2016 agreed on ICAO's [Carbon Offsetting and Reduction Scheme for International Aviation \(CORSIA\)](#) as the “only global market-based measure (MBM) applying to CO₂ emissions from international aviation so as to avoid a possible patchwork of duplicative State or regional MBMs, thus ensuring that international aviation CO₂ emissions should be accounted for only once”. CORSIA complements other aviation in-sector emissions reductions efforts such as technological innovations, operational improvements and aviation cleaner energies to meet the medium-term ICAO global aspirational goal of carbon neutral growth from 2020.

3.2 The 41st Session of the ICAO Assembly in 2022 adopted [Resolution A41-22](#) on CORSIA, containing the adjustments to the CORSIA design features recommended by the ICAO Council following the 2022 [CORSIA periodic review](#), including:

- CORSIA baseline: using 2019 emissions for the pilot phase (2021 – 2023), and using 85 per cent of 2019 emissions after the pilot phase (2024 – 2035); and
- Calculation of CORSIA offsetting requirements: changing the percentage use of the sectoral and individual operator's growth factors as 100 per cent sectoral and 0 per cent individual (for the 2021 – 2032 period), and 85 per cent sectoral and 15 per cent individual (for the 2033 – 2035 period).



*Contribution of CORSIA towards reducing international aviation net CO₂ emissions
(with the adjusted CORSIA baseline emissions)*

3.3 The [42nd Session of the ICAO Assembly](#) in 2025 reaffirmed the role of CORSIA as “*the only global market-based measure (MBM) applying to CO₂ emissions from international aviation*”. It also acknowledged the substantial progress achieved in the robust implementation of CORSIA, encouraged the continued and expanded participation of States as the scheme enters its second phase in 2027, and expressed overwhelming concern regarding initiatives seeking to collect taxes from international aviation to mobilize climate finance, recognizing their potential impact on the implementation of CORSIA.

3.4 Against this backdrop, on 6 October 2026, ICAO and the international aviation community marked the [10th anniversary since the adoption of CORSIA](#) by the ICAO Assembly, providing an opportunity to reflect on the progress achieved in its implementation as the globally harmonized framework for addressing CO₂ emissions from international aviation. As CORSIA enters its second phase in 2027, [continued support from States, industry and relevant stakeholders will be important to ensure its effective implementation](#), alongside efforts to scale up CORSIA Eligible Fuels (CEFs) and increase the availability of CORSIA Eligible Emissions Units (CEEUUs).

CORSIA Implementation Framework

3.5 The CORSIA implementation framework consists of three components: the ICAO Standards and Recommended Practices (SARPs) in [Annex 16, Volume IV to the Chicago Convention](#)²; guidance in [ICAO Document 9501 — Environmental Technical Manual \(ETM\), Volume IV](#); and five CORSIA Implementation Elements: 1) CORSIA participating States; 2) CEFs; 3) CEEUUs; 4) CORSIA CO₂ Estimation and Reporting Tool (CERT); and 5) CORSIA Central Registry (CCR).

CORSIA Participating States

3.6 The 42nd Session of the ICAO Assembly recalled its decision on the use of a phased implementation for CORSIA, stating that its second phase applies from 2027 through 2035 to all States that have an individual share of international aviation activities in Revenue Tonne-Kilometres (RTKs) in year 2018 above 0.5 per cent of total RTKs or whose cumulative share in the list of States from the highest to the lowest amount of RTKs reaches 90 per cent of total RTKs, as well as other States that voluntarily participate in this phase ([Resolution A42-22](#), paragraph 9 refers).

3.7 In line with Resolution A42-22 and with the relevant provisions contained in Annex 16, Volume IV, the seventh edition of the [ICAO document CORSIA States for Chapter 3 State Pairs](#) was published in July 2026, containing the list of States that define the State pairs subject to CO₂ offsetting requirements in CORSIA in 2027 (i.e. the first year of CORSIA’s second phase).

Monitoring, Reporting and Verification (MRV) of CO₂ emissions

3.8 The robust implementation of CORSIA relies on the timely and consistent MRV of annual CO₂ emissions by all aeroplane operators performing international flights. In accordance with the provisions in Annex 16, Volume IV, many operators are eligible to apply simplified procedures for the monitoring and reporting of CO₂ emissions using [CERT](#), for which annual updates are developed by ICAO CAEP and approved by the Council.

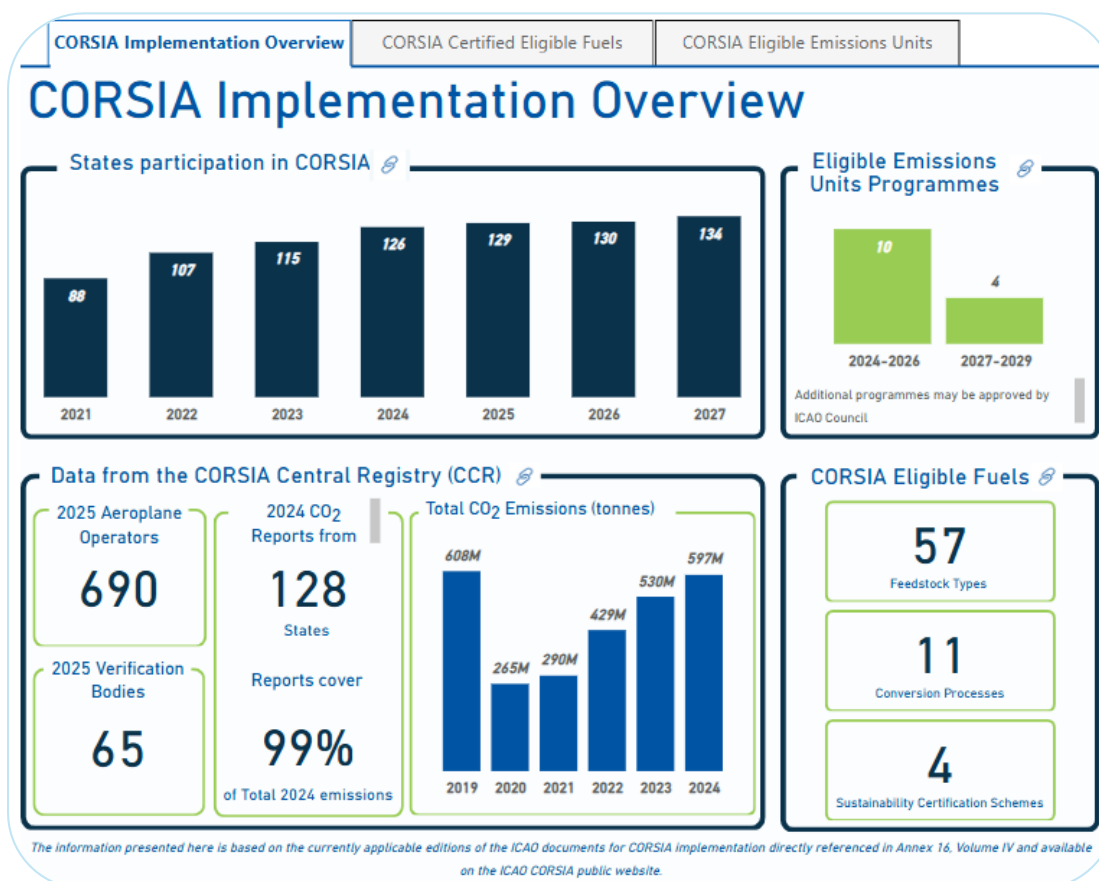
² In March 2026, the ICAO Council adopted Amendment 2 to Annex 16, Volume IV, which included clarifications on existing Standards related to the CO₂ emissions monitoring, reporting and verification of aeroplane operators. This amendment became effective on 3 August 2026 and will be incorporated into the Second Edition of Annex 16, Volume IV, becoming applicable on 1 January 2027.

3.9 Based on the data reported by operators, States are required to submit annual CO₂ emissions data to ICAO through the CCR, together with information such as list of operators; verification bodies accredited in States; emissions reductions from CEFs; and cancellation of CEEUs. This information serves as the basis for the [CCR-related ICAO documents published on the ICAO website](#).

3.10 A total of 128 States reported 2024 CO₂ emissions data, covering 99 per cent of total CO₂ emissions from international aviation in that year. ICAO filled the emissions gap of 10 States in accordance with the provisions of Annex 16, Volume IV. Regarding the 2025 CO₂ emissions data, ICAO is compiling the data and preparing the updated editions of the CCR-related documents, for publication on the ICAO website by 31 October 2026.

3.11 The CORSIA sector's growth factor (SGF) already had a positive value for the 2024 CO₂ emissions, leading to the generation of offsetting requirements for aeroplane operators for the first time since the start of CORSIA implementation. For offsetting requirements accrued during CORSIA's first phase (2024 to 2026), the following reporting actions will have to be undertaken in line with the requirements in Annex 16, Volume IV, Part II, Chapter 4 and Appendix 1:

- 30 April 2028: aeroplane operators shall submit to the State the verified Emissions Unit Cancellation Report for the first phase; and
- 31 July 2028: States shall report to ICAO information on emissions unit cancellation for the first phase.



Overview of CORSIA Implementation Elements (as of October 2026)

CORSIA Eligible Fuels (CEFs)

3.12 An aeroplane operator can reduce its CORSIA offsetting requirements in a given year by claiming emissions reductions from CEFs. As requested by the ICAO Assembly, ICAO is accelerating the analysis and approval of life cycle values for new fuel sources and pathways and their sustainability certification for CEFs. Certified CEF volumes have more than doubled between 2024 and 2025, from 0.18 to 0.42 million tonnes, with CORSIA currently recognizing 57 feedstock types and 11 conversion processes. The [five ICAO documents on CEFs](#) have been regularly updated and approved by the ICAO Council.

3.13 In June 2026, the ICAO Council approved Bonsucro as a CORSIA-approved Sustainability Certification Scheme (SCS), bringing the total number of CORSIA approved SCSs to four. Bonsucro's scope of eligibility includes the certification of CORSIA SAF economic operators associated with the supply chain, production, and handling of sugarcane and its derivatives and associated CORSIA SAF production using Alcohol-to Jet (ATJ) and Synthesized Iso-Paraffins (SIP) processes. The ICAO document [CORSIA Approved Sustainability Certification Schemes](#) has been updated and published on the website.

CORSIA Eligible Emissions Units (CEEs)

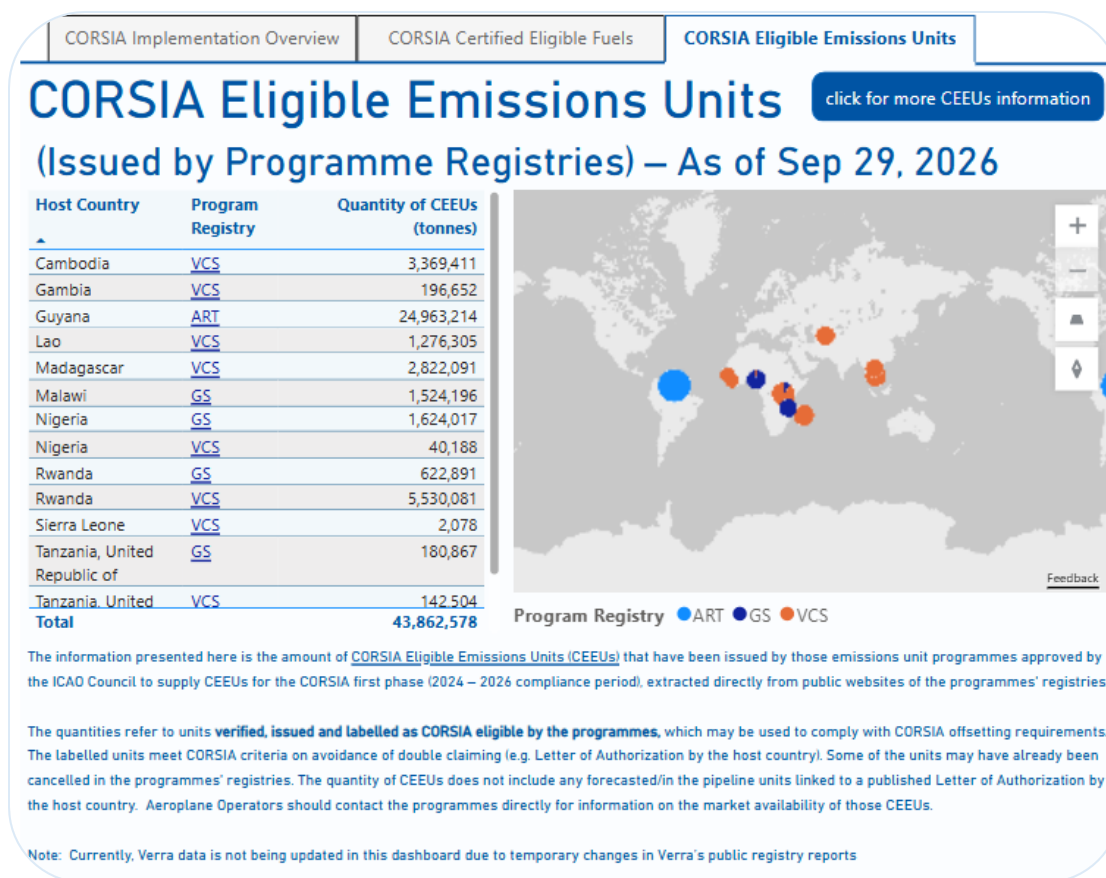
3.14 CEEUs used by an aeroplane operator to meet CORSIA offsetting requirements are determined in the [ICAO document on CEEUs](#), which is regularly updated and approved by the ICAO Council, after considering technical recommendations by its [Technical Advisory Body \(TAB\)](#). To date, 10 emissions unit programmes are approved by the Council as eligible to supply CEEUs for the 2024 to 2026 compliance period (CORSIA first phase); while 4 programme are currently approved for the 2027 to 2029 compliance period (part of CORSIA second phase).

3.15 TAB, in its 2026 assessment cycle, received 25 applications for eligibility to supply CEEUs for the 2027 to 2029 compliance period of CORSIA's second phase, as well as information provided by the UNFCCC regarding the Paris Agreement Crediting Mechanism (PACM). The recommendations resulting from TAB's assessment will be considered by the ICAO Council in November 2026.

3.16 The UNFCCC COP29 in November 2024 finalized the rules under Article 6 of the Paris Agreement, which is important for CORSIA as the governments hosting activities that generate CEEUs as approved by the ICAO Council, now have the necessary guidelines for authorizing those units to be used under CORSIA.

3.17 In this regard, such host country attestation (letters of authorization)³ for CEEUs is a key requirement to avoid double-counting of emissions reductions and to ensure the availability of such units for aeroplane operators to meet their CO₂ offsetting requirements in CORSIA. As such, ICAO actively encourages governments hosting activities that generate CEEUs to issue the Letters of Authorization which may facilitate the access and availability of CEEUs to aeroplane operators.

³ Host country attestation is also known as 'host country authorization' under Article 6 of the Paris Agreement. The terms "agree to account for" and "written attestation" have the same meaning as "authorize" and "the authorization" in Article 6, paragraph 2, of the Paris Agreement. Please refer to the ICAO CORSIA Newsletter (September issue) for more details: https://www.icao.int/sites/default/files/environmental-protection/CORSIA/Newsletter/CORSIA-Newsletter_August-September-2026_Final.pdf



ICAO Tracker reflecting CEEUs (as of October 2026)

These units are issued by eligible emissions unit programmes approved by the ICAO Council to supply CEEUs for the CORSIA first phase (2024 to 2026), extracted directly from public websites of the programmes' registries.

ICAO ACT-CORSIA programme

3.18 Launched in 2018, the **ICAO Assistance, Capacity-building and Training for CORSIA (ACT-CORSIA)** programme aims to assist all States in CORSIA implementation in a coordinated approach under the umbrella of ICAO. The cornerstone of the ACT-CORSIA programme is the [Buddy Partnerships](#), whereby experts from 16 supporting States engage with CORSIA Focal Points from 125 States to support CORSIA implementation in those States. ACT-CORSIA Buddy Partnerships will continue to be essential in supporting effective CORSIA implementation as the scheme transitions to its second phase (2027 to 2035).

3.19 The [CORSIA Verification Course](#) offered by ICAO's Global Aviation Training (GAT) Office provides training on how to verify CO₂ Emissions Reports that have been prepared by aeroplane operators, in accordance with the provisions of the CORSIA SARPs contained in Annex 16, Volume IV. This includes training on the verification of claims for emissions reductions from CEFs made under CORSIA. In 2026, three additional CORSIA training courses will be made available through ICAO Training, covering CORSIA overview, CEFs and CEEUs.

3.20 Other important elements of the ACT-CORSIA programme include the development and updates of outreach materials on CORSIA, namely: [CORSIA Frequently Asked Questions \(FAQs\)](#), the [CORSIA Newsletter](#); and the CORSIA guide videos – [Navigating CORSIA](#).

4. UNFCCC – Climate Finance

4.1 The UNFCCC COP29 meeting adopted the new Collective Quantified Goal on Climate Finance (NCQG), an agreement that aims to triple finance to developing countries, with developed countries taking the lead, from the previous goal of USD 100 billion per year, to at least USD 300 billion per year by 2035, and also to secure the efforts of all actors to work together to scale up finance to developing countries, from public and private sources, to the amount of USD 1.3 trillion per year by 2035. Since then, discussions on climate finance have continued across a range of processes and forums, including the Baku to Belém Roadmap to 1.3T and the Veredas Dialogue.

4.2 ICAO has been closely following international discussions and negotiations pertaining to climate finance. This includes proposals under consideration by other UN bodies and organizations, such as the [UN Committee of Experts on International Cooperation on Tax Matters](#) and the [Global Solidarity Levies Task Force \(GSLTF\)](#), which identified the aviation sector as a potential source of levies and taxes to mobilize climate finance in other sectors. Despite the ICAO's efforts to engage with the UN Committee of Experts on International Cooperation in Tax Matters regarding its workstream on "taxation of emissions in aviation", the Committee has continued to advance this workstream, including at its Thirty-third Session held from 20 to 23 October 2026.

4.3 The ICAO Assembly has consistently expressed an overwhelming concern with the increasing number of initiatives to collect taxes from international aviation for the mobilization of revenue for climate change and other purposes, emphasizing the need for significant financial resources to achieve aviation's clean energy transition. The Assembly also recognized that such initiatives would represent duplicative market-based measures (MBMs), leading to double charging for aviation CO₂ emissions, and negatively impacting the implementation of CORSIA and ultimately the achievement of the LTAG.

4.4 Notably, Assembly Resolution A42-21, paragraph 19 reinforced that *"while recognizing that no effort should be spared to obtain means to support the reduction and stabilization of CO₂ emissions from all sources and emphasizing the need for significant financial resources to achieve aviation's clean energy transition and the LTAG, urges that ICAO and its Member States express a clear concern, through the UNFCCC and other relevant processes, on the use of international aviation as a potential source for the mobilization of revenue for climate finance to the other sectors, in order to ensure that international aviation would not be targeted as a source of such revenue in a disproportionate manner."*

4.5 Duplicative MBMs are also inconsistent with the objective of CORSIA as "the only global MBM applying to CO₂ emissions from international aviation so as to avoid a possible patchwork of duplicative State or regional MBMs, thus ensuring that international aviation CO₂ emissions should be accounted for only once," as set out in Assembly Resolution A42-22, paragraph 18.

4.6 Introducing overlapping aviation levies and taxes will increase air travel costs, which could have a particularly negative impact on Small Island Developing States (SIDS) and developing countries with a heavy reliance on tourism and trade by air transport. Such a shift could undermine the economic viability of airlines and tourism-related businesses, hinder socio-economic development, and delay progress towards achieving multiple UN Sustainable Development Goals (SDGs).

4.7 Details and materials related to ICAO's deliberations on MBMs for international aviation, and why the ICAO Assembly adopted CORSIA as the only global MBM for international aviation, is available on [ICAO's website](#), providing context for the concerns outlined above.