



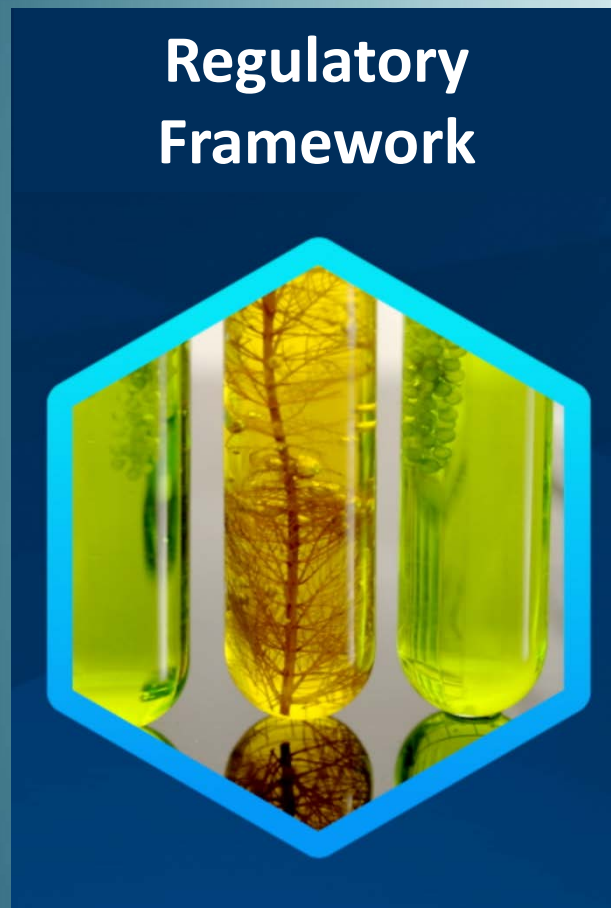
ICAO

ENVIRONMENT

ICAO Secretariat

Session 2 – Regulatory Framework (CORSA)

Agenda



Session 2 : Regulatory Framework (CORSlA)

➤ CAAF/3 Global Framework: Building Block 2

- Introduction to Building Block 2 on Regulatory Framework
- CORSlA Implementation
- Eligibility of SAF, LCAF and other aviation cleaner energies

➤ Regional update on implementation of CORSlA

➤ Q&A Session

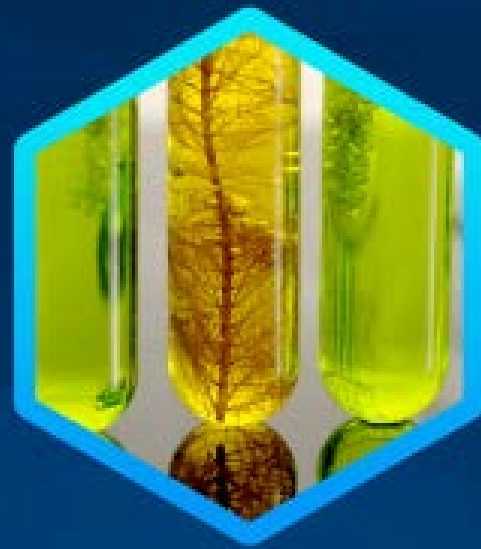


ICAO Global Framework on SAF, LCAF and other Aviation Cleaner Energies

Policy and Planning



Regulatory Framework



Implementation Support



Financing



- Supports global scale up of aviation cleaner energies – Collective Vision to reduce 5% CO₂ by 2030
- Provides clarity, consistency and predictability to all stakeholders on 1) policy and planning, 2) regulatory framework, 3) implementation support, and 4) financing – 4 Building Blocks
- Monitors the implementation progress on emissions reductions and means of implementation
- Aspiring to have cleaner energy production facilities in all regions by CAAF/4 (no later than 2028)
- To update the Vision at CAAF/4 on the basis of market developments

Building Block 2 – Regulatory Framework



2. Regulatory Framework

- **CORSIA eligibility framework as accepted basis for SAF, LCAF and other aviation cleaner energies**
- **Increase the number of SCS, additional fuel production pathways / life-cycle values**
- **Parameters for fuel accounting methodologies, leveraging on CORSIA MRV system**
- **Study of fuel accounting systems to determine any possible ICAO role**

Building Block 2 – Regulatory Framework:

12. In the interests of providing regulatory transparency, certainty, stability and assurances of environmental integrity to feedstock producers, fuels producers and financial institutions, the CORSIA sustainability criteria, sustainability certification, and the methodology for the assessment of life cycle emissions used for 'CORSIA eligible fuels', should be used as the accepted basis for the eligibility of SAF, LCAF and other aviation cleaner energies used in international aviation.
13. ICAO, States and industry are encouraged to enhance efforts to increase the number of ICAO approved Sustainability Certification Schemes, in all regions, to accelerate the sustainability certification of qualifying SAF, LCAF and other aviation cleaner energies in line with the CORSIA requirements, without excluding any particular fuel source, pathway, feedstock or technology. In this regard, ICAO, with technical and neutral contributions of CAEP, is encouraged to accelerate the development and approval of new Sustainability Certification Schemes for SAF, LCAF and other aviation cleaner energies and to accelerate the analysis and approval of life cycle values for new fuel sources and pathways.
14. ICAO, States, industry and other relevant stakeholders are encouraged to work with fuel standards bodies, such as ASTM, to accelerate the certification of additional fuel production pathways, with a view to maximizing the number of certified sources of SAF, LCAF and other aviation cleaner energies.
15. Accounting methodologies on the use of SAF, LCAF and other aviation cleaner energies for international aviation, such as the CORSIA MRV, provides confidence in the use of such fuels and the claim of their environmental benefits by aeroplane operators, noting that such accounting methodologies could help support the monitoring of progress towards the achievement of the LTAG. Accounting methodologies and the associated reporting frameworks should take into account the following parameters, which seek to promote transparency, accuracy, consistency, comparability and completeness:
 - a) ensure the global coverage of emissions from international civil aviation, as part of the monitoring of the LTAG;
 - b) support consistent application of methodologies amongst States, in a transparent manner;
 - c) enable accurate emissions reporting, including the use of cleaner energy for international civil aviation;
 - d) ensure environmental integrity through the avoidance of double-counting, including between domestic and international civil aviation;
 - e) use verified emissions information, supported with other information for the verification or validation of reported emissions;
 - f) promote cost-effectiveness by using simple accounting and reporting methodologies and procedures;
 - g) avoid excessive administrative burden on States and aeroplane operators; and
 - h) leverage, to the extent possible, existing methodologies and procedures under the CORSIA MRV.
16. ICAO should, with technical contributions of CAEP, undertake a study of fuel accounting systems for international aviation currently used in the open market. This study would include preliminary exploration of the so-called 'book and claim' concept to assess its relevancy and applicability, and taking into account relevant developments in other UN bodies, including the Article 6 of the Paris Agreement. The intent of the study would be to better understand these accounting systems and concepts and identify potential areas for further investigation. This work can help determine what, if any, role ICAO could have in supporting these systems to facilitate access to environmental benefits of SAF, LCAF and other aviation cleaner energies for international aviation and ensure environmental integrity, with a view to fostering without disincentivising the global production of such fuels, in particular in developing countries.

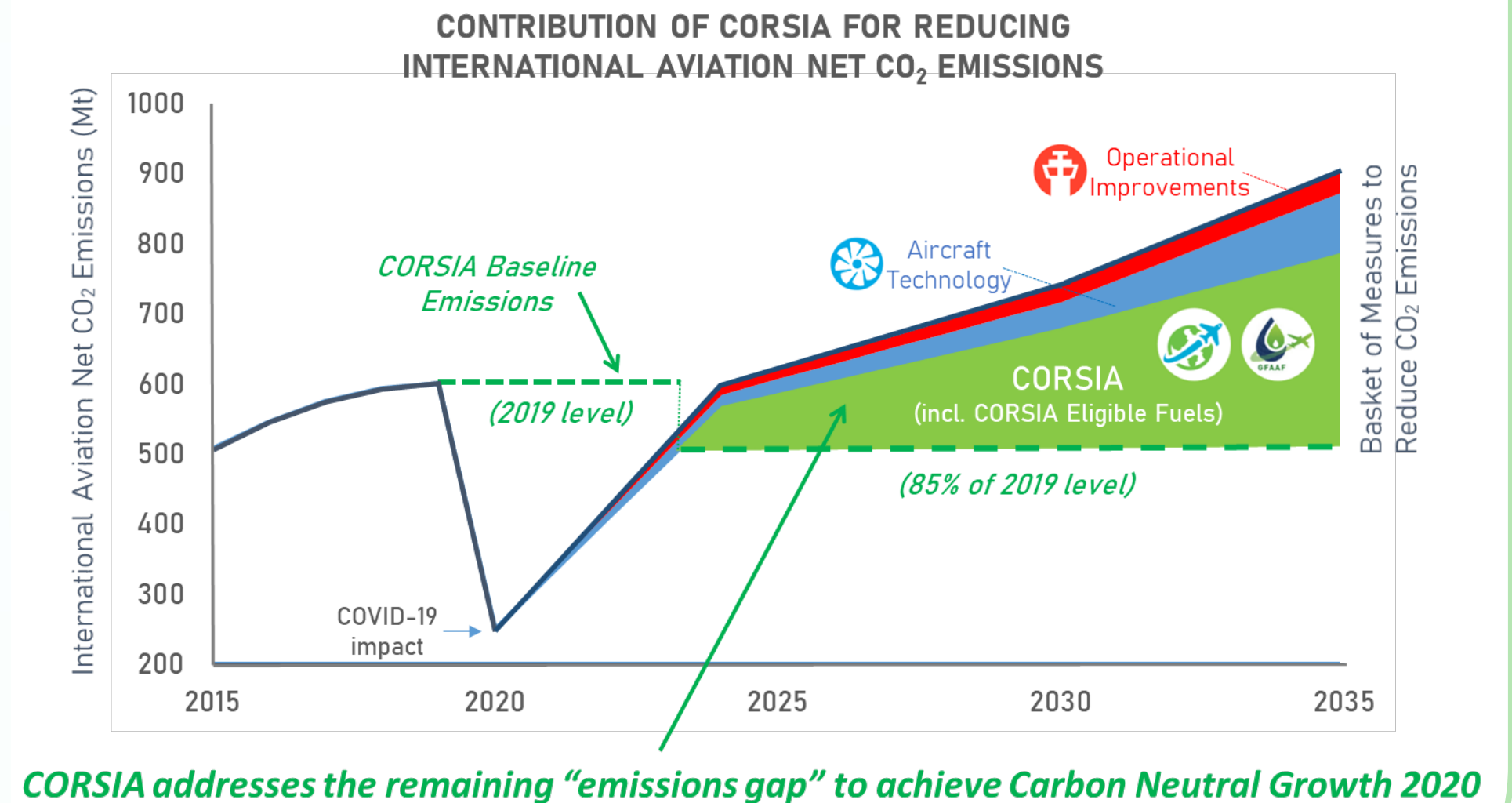


ICAO Regulatory Frameworks: CORSA Implementation



To achieve ICAO's global aspirational goal of carbon neutral growth from 2020 (CNG 2020), **CORSIA is one complementary element in the basket of measures to:**

- **Aircraft technology**
- **Operational improvements**
- **Sustainable aviation fuels**

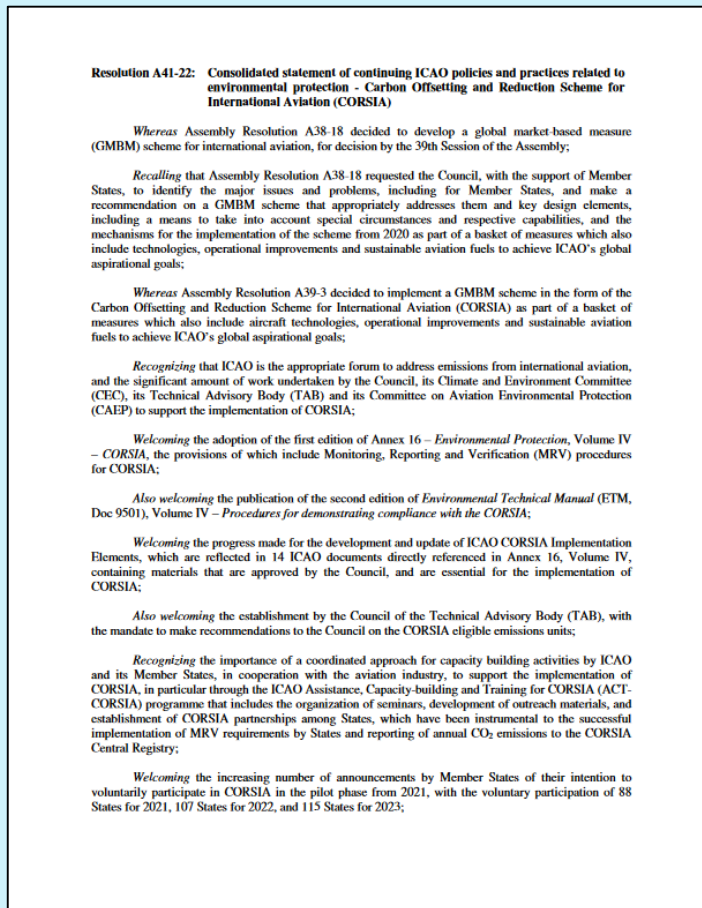


ICAO Regulatory Framework for CORSIA Implementation



Assembly Resolutions in force (A41-22)

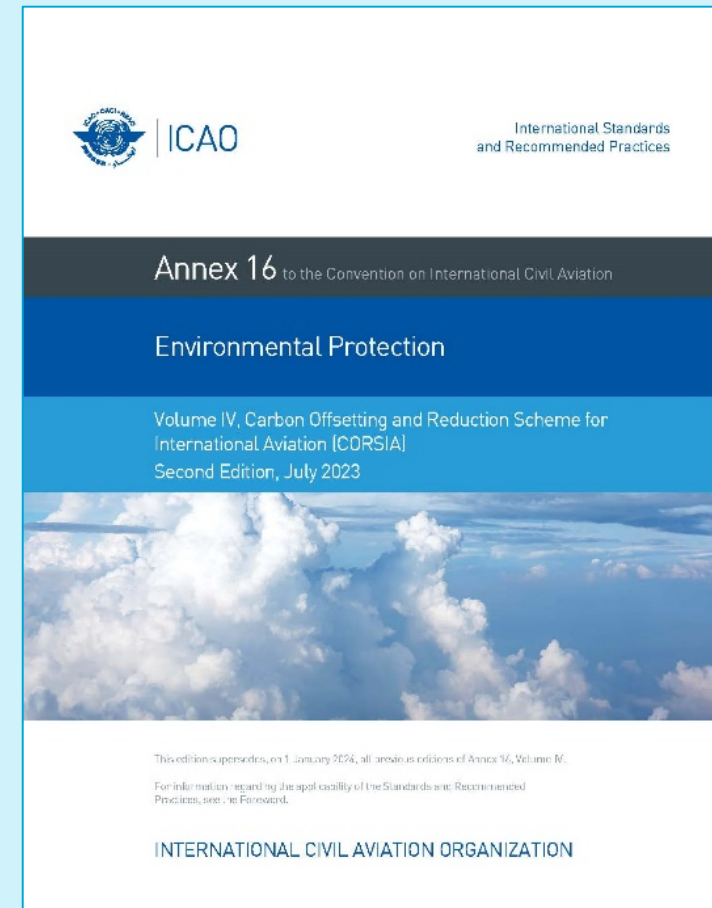
Adopted by 2022 Assembly



Overall ICAO policy on CORSIA

Annex 16, Volume IV

2nd Edition
Applicable from 2024



Standards and Recommended Practices (SARPs) on CORSIA

Doc 9501 (ETM), Vol. IV

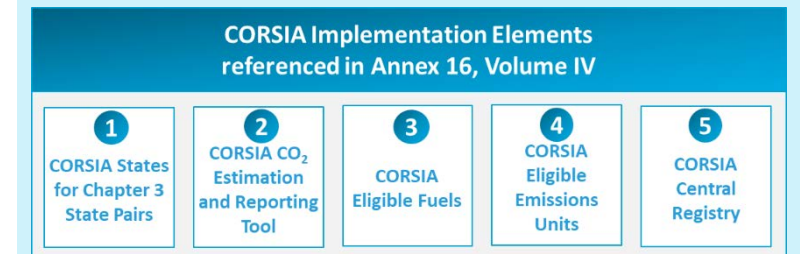
3rd Edition to support 2nd Edition of Annex 16, Volume IV



Overall ICAO policy on CORSIA

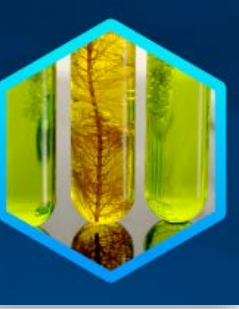
CORSIA Implementation Elements and ICAO CORSIA documents

Regularly updated/approved by Council



14 ICAO CORSIA documents directly referenced in Annex 16, Volume IV - Essential for CORSIA implementation

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 Volunteer States



88 States for 2021

- | | | | |
|----------------------------------|-------------------|------------------|-----------------------------|
| Afghanistan | El Salvador | Kenya | Republic of Korea |
| Albania | Equatorial Guinea | Latvia | Republic of Moldova |
| Armenia | Estonia | Lithuania | Romania |
| Australia | Finland | Luxembourg | Rwanda |
| Austria | France | Madagascar | San Marino |
| Azerbaijan | Gabon | Malaysia | Saudi Arabia |
| Belgium | Georgia | Malta | Serbia |
| Benin | Germany | Marshall Islands | Singapore |
| Bosnia and Herzegovina | Ghana | Mexico | Slovakia |
| Botswana | Greece | Monaco | Slovenia |
| Bulgaria | Guatemala | Montenegro | Spain |
| Burkina Faso | Guyana | Namibia | Sweden |
| Cameroon | Honduras | Netherlands | Switzerland |
| Canada | Hungary | New Zealand | Thailand |
| Costa Rica | Iceland | Nigeria | Turkey |
| Côte d'Ivoire | Indonesia | North Macedonia | Uganda |
| Croatia | Ireland | Norway | Ukraine |
| Cyprus | Israel | Papua New Guinea | United Arab Emirates |
| Czechia | Italy | Philippines | United Kingdom |
| Democratic Republic of the Congo | Jamaica | Poland | United Republic of Tanzania |
| Denmark | Japan | Portugal | United States |
| Dominican Republic | Kazakhstan | Qatar | Zambia |

107 States for 2022

- Bahamas
- Grenada
- Palau
- Trinidad and Tobago
- Barbados
- Kiribati
- Saint Kitts and Nevis
- Tuvalu
- Belize
- Mali
- South Sudan
- Vanuatu
- Cook Islands
- Nauru
- Suriname
- Gambia
- Oman
- Tonga
- Uruguay



115 States for 2023

- Zimbabwe
- Federated States of Micronesia
- Maldives
- Timor-Leste
- Saint Vincent and the Grenadines
- Cuba
- Cambodia
- Iraq



126 States for 2024

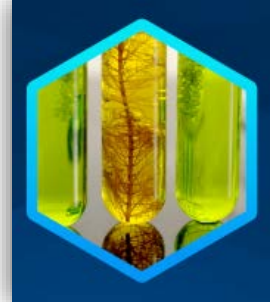
- Antigua and Barbuda
- Bahrain
- Ecuador
- Kuwait
- Samoa
- Seychelles
- Sierra Leone
- Solomon Islands
- Mauritius
- Malawi
- Haiti



128 States for 2025

- Mauritania
- Saint Lucia

...



Calculation of CORSIA Offsetting Requirements

Offsetting requirements are calculated annually, based on CORSIA MRV data of Aeroplane Operator (AO)'s emissions between participating States, and using a combination of Sectoral Growth Factor and AO's Individual Growth Factor

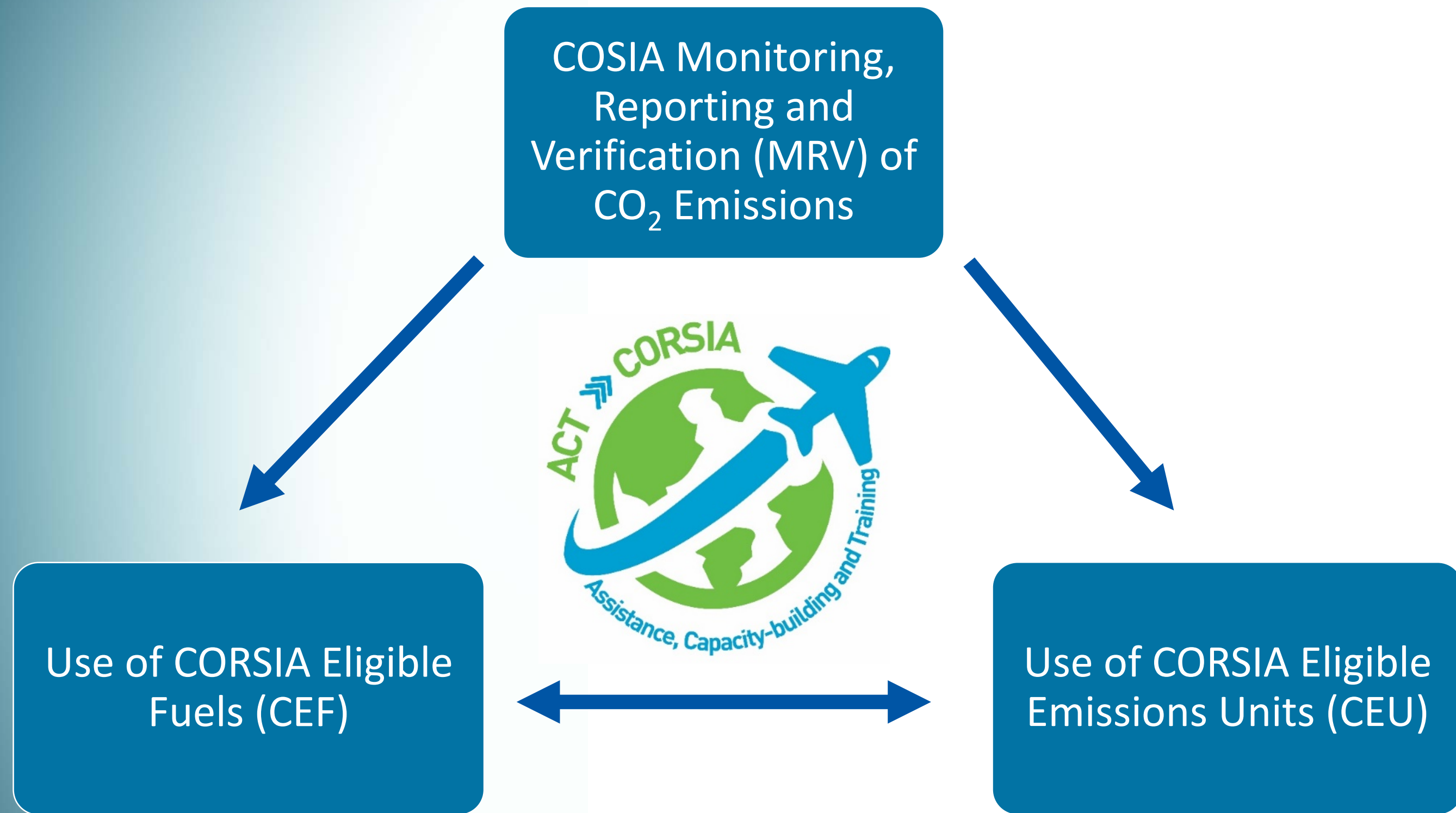
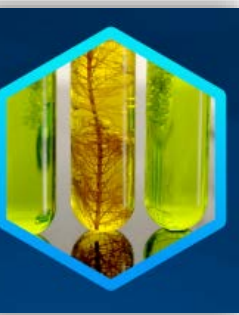
From 2021 to 2032: 100% sectoral and 0% individual



From 2033 to 2035: 85% sectoral and 15% individual

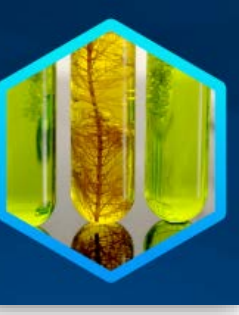


CORSIA Implementation

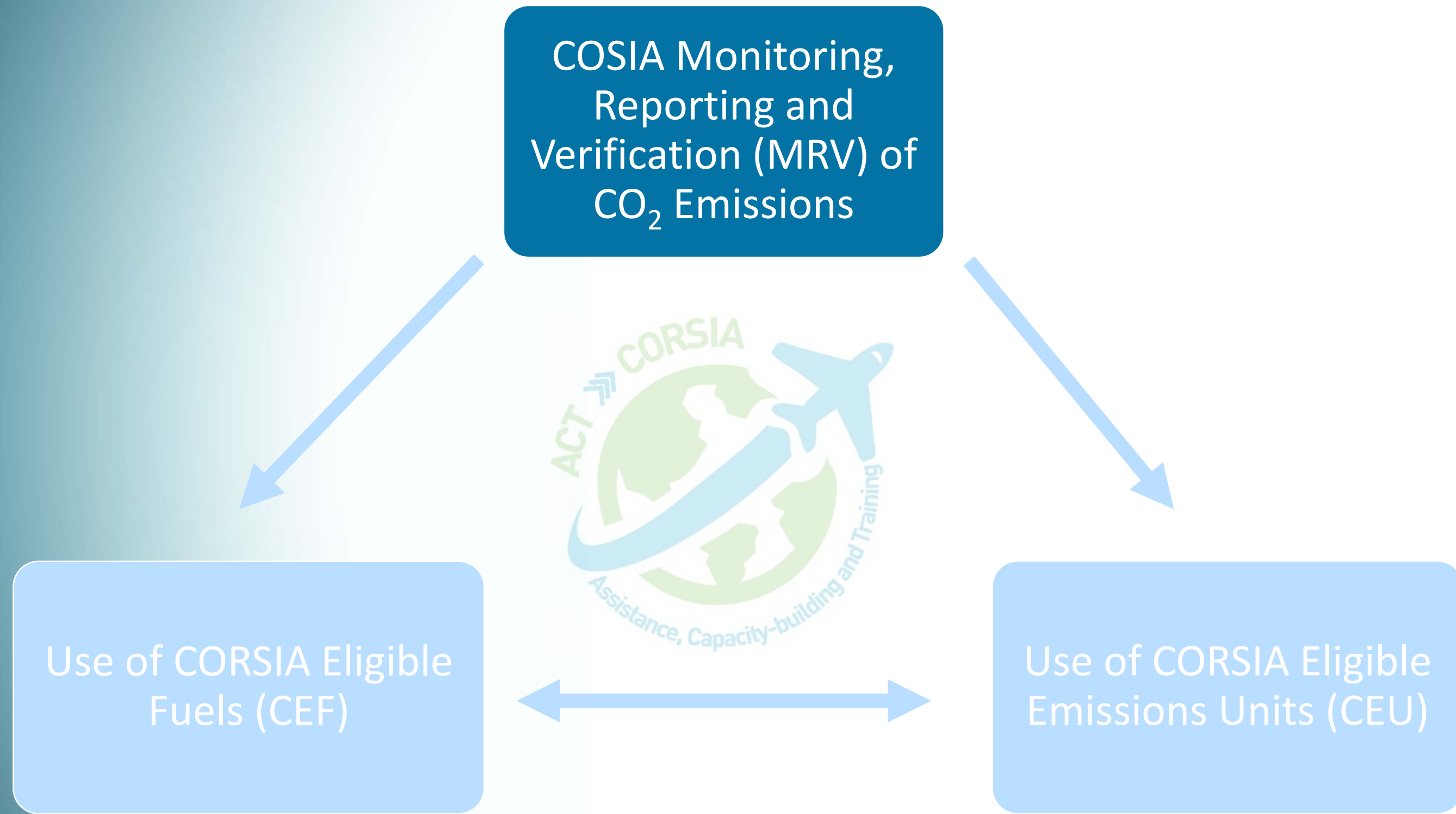


CORSIA offsetting requirements (until 2035) could be met by CEF or CEU





CORSIA Implementation



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



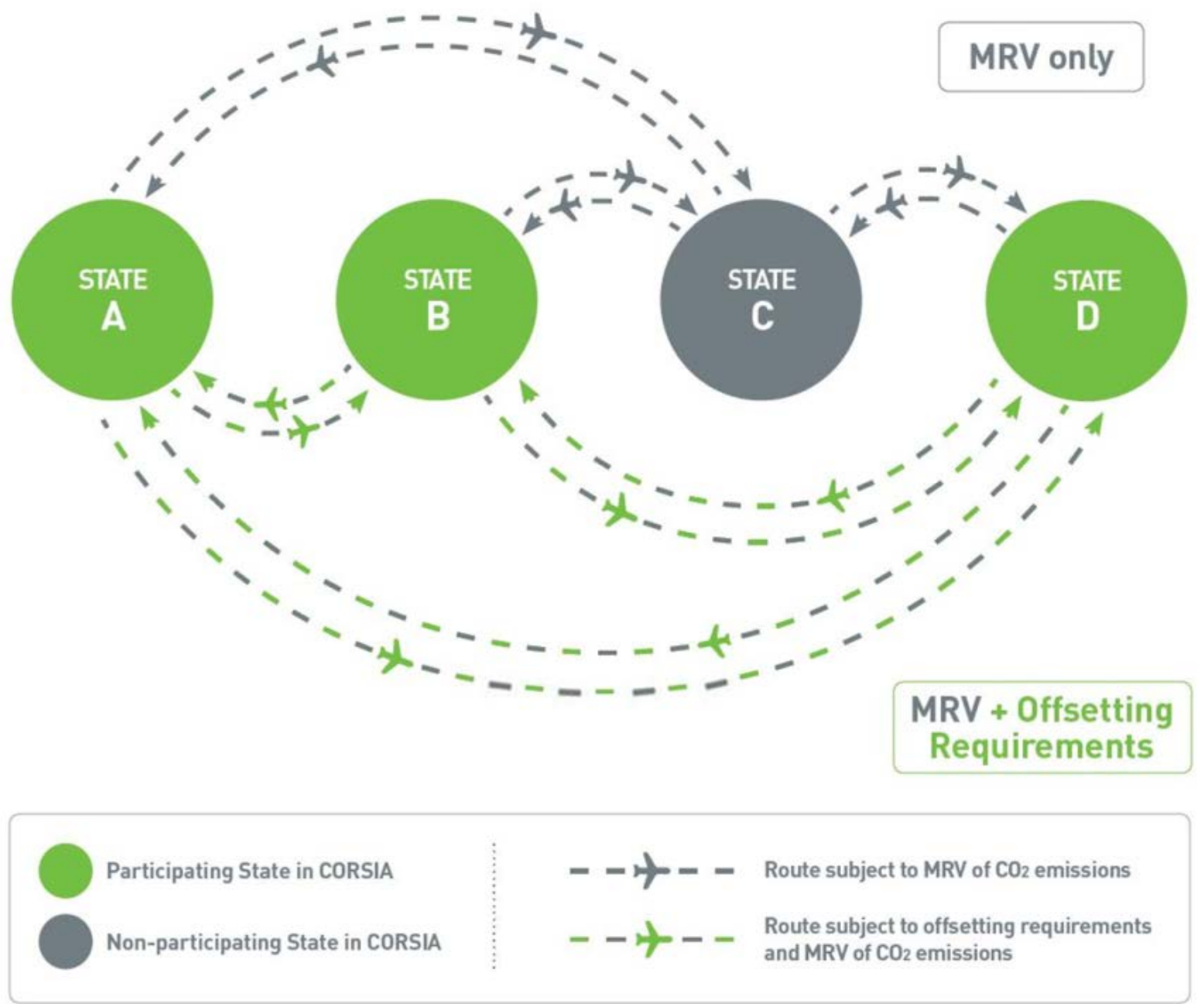


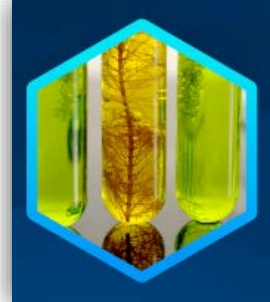
CORSIA CO2 MRV Requirements

From 1 January 2019, all operators performing international flights have to monitor CO2 emissions, annually reporting verified CO2 emissions to State, and States to report ICAO CORSIA Central Registry (CCR)

Purpose of CO2 MRV is to collect information on international aviation CO2 emissions on an annual basis and compare these emissions against the baseline emissions, to calculate CORSIA offsetting requirements

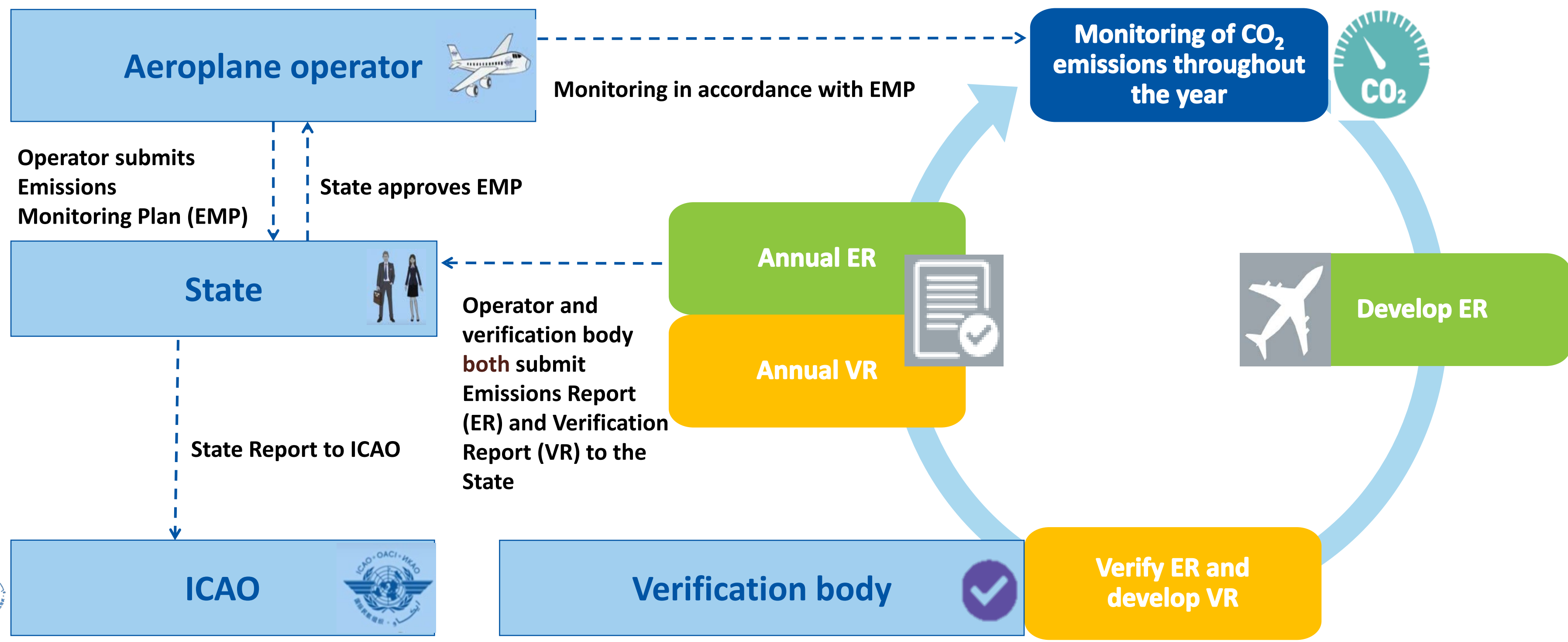
All operators performing international flights between States participating in CORSIA have to comply with the CORSIA offsetting requirements

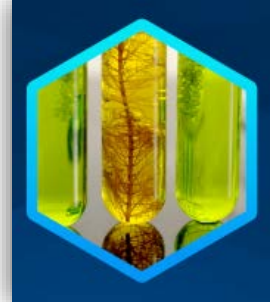




CORSIA CO₂ MRV Annual Cycle

ICAO 2024 Regional Seminar on Environment

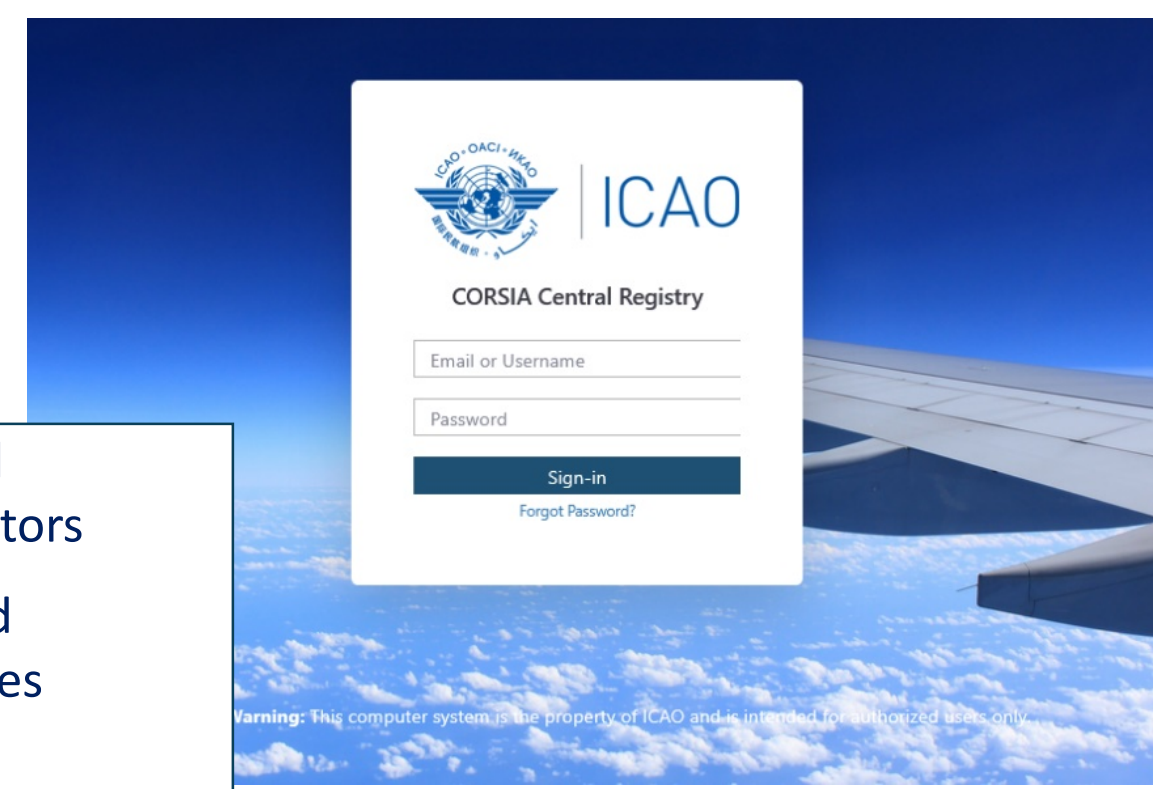




CORSIA Central Registry (CCR)

CCR for collection/publication of CORSIA-related data and info.

Consolidated CCR data published on ICAO CORSIA website



-  List of attributed aeroplane operators
-  List of accredited verification bodies
-  CO₂ emissions
-  CORSIA eligible fuels
-  Cancelled emissions units

Version 2 of CCR has been launched in March 2024 to include the 2nd Edition of Annex 16, Volume IV

CORSIA Central Registry (CCR)

The CORSIA Central Registry (CCR) is a database that is used by States to submit information and data to ICAO in accordance with the provisions of Annex 16, Volume IV and Appendix 1.

This ICAO CORSIA Implementation Element is reflected in the following five ICAC are referenced in Annex 16, Volume IV.

ICAO document "CORSIA Central Registry: Information and Data for the Implementation of CORSIA"

This an umbrella document for the following three ICAO documents, which contain information that supports the implementation of CORSIA. These ICAO documents are approved by the ICAO Council.

CORSIA Aeroplane Operator to State Attributions

<i>Description</i>	This ICAO document contains a list of aeroplane operators and the State to which they are attributed.
<i>Current edition</i>	Eighth edition (December 2023) – click here . Click here for a searchable list of the aeroplane operators included in this ICAO document.
<i>Past editions</i>	Previous editions of this ICAO document are available here .



CORSIA 2020 Emissions

<i>Description</i>	This ICAO document contains the international aviation CO ₂ emissions that are used to determine a new entrant.
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CORSIA on track – Measuring success by numbers

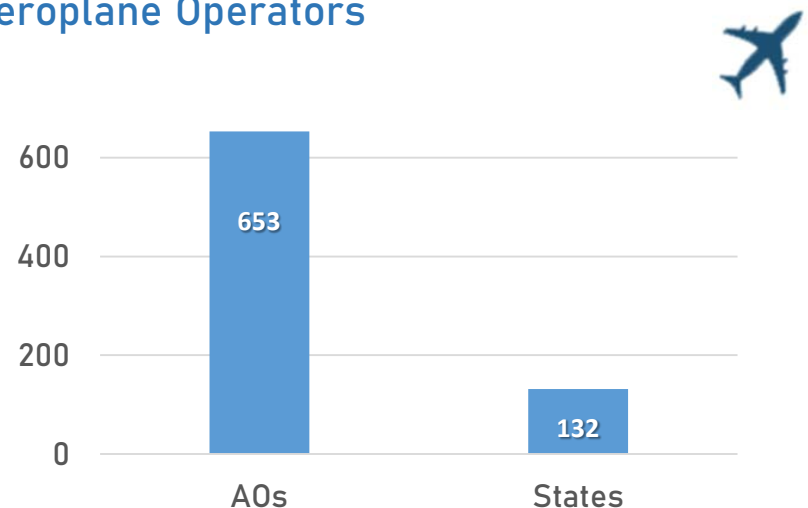
Successful CORSIA MRV implementation relies on the continued support of States under ACT-CORSIA Programme



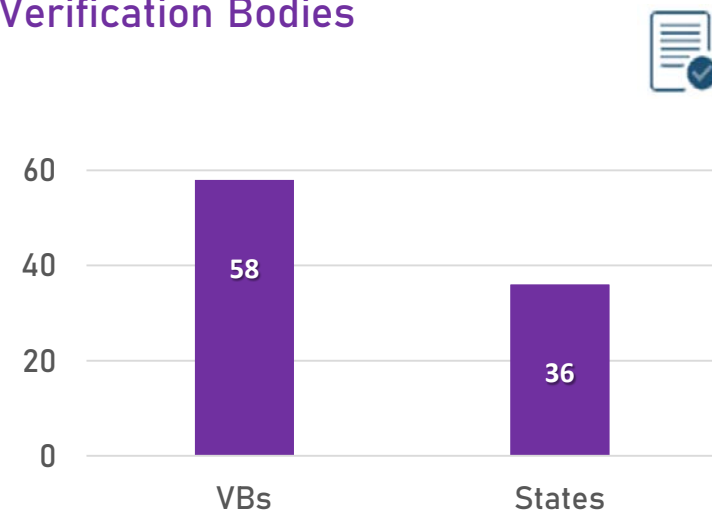
179
States have access to CCR

286
CCR Users Accounts

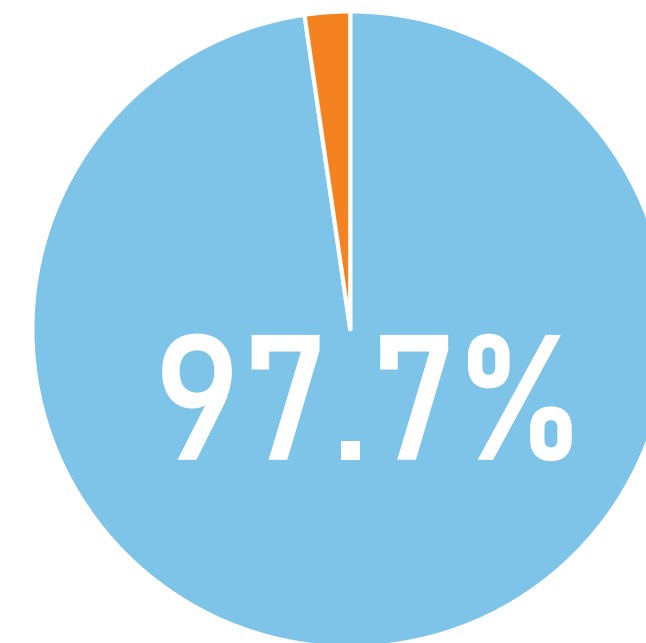
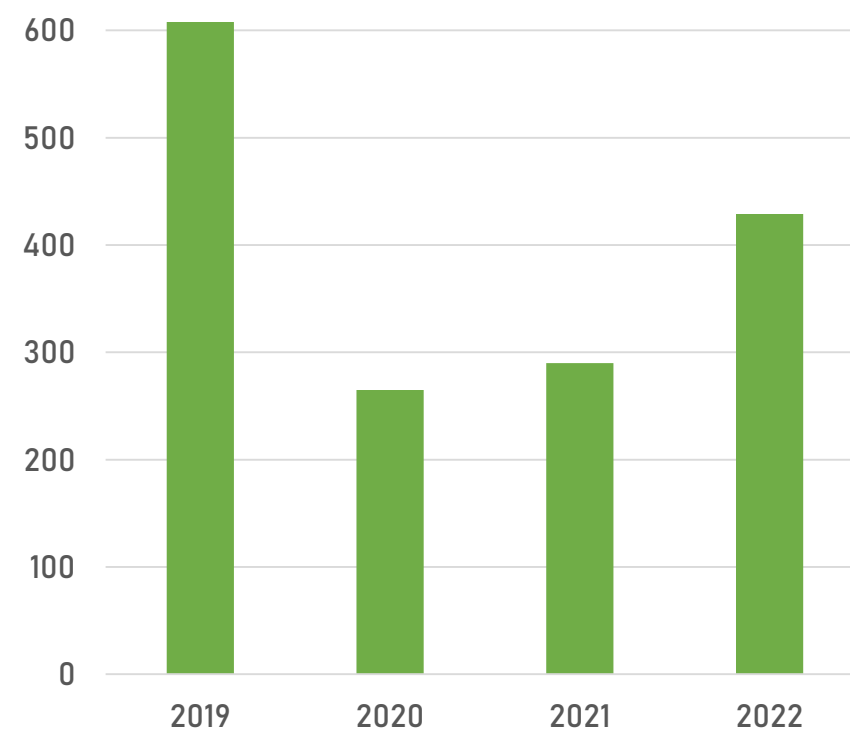
Aeroplane Operators



Verification Bodies



Total CO₂ Emissions (in Mtonnes)*



Submitted through the CCR Gap-filling

0
2021 and 2022 Sector Growth Factors

**Totals include CO₂ emissions submitted by States through the CORSIA Central Registry (CCR) and emissions provided by ICAO to fill the emissions gaps*

Summary of CCR Data - As of March 2024



Key Deadlines to report 2023 CORSIA-related Data

In accordance with Appendix 1 to Annex 16, Volume IV, States are required to report annual CORSIA-related information and data through the CORSIA Central Registry (CCR). These are the upcoming CORSIA implementation deadlines for States:

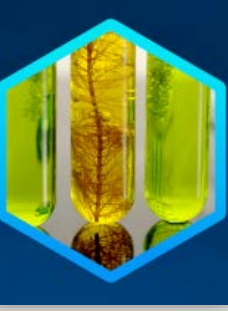
by 31 July 2024

States perform an order of magnitude check of the 2023 CO₂ emissions, including any filling of data gaps necessary, and use the CORSIA Central Registry (CCR) to report to **ICAO aggregated 2023 CO₂ emission data** and, if applicable, information on CORSIA eligible fuels.



by 30 November 2024

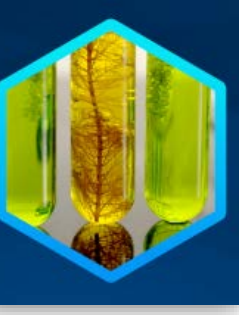
States use the 2023 SGF, obtained from the ICAO document “CORSIA Annual Sector’s Growth Factor (SGF)”, to calculate the 2023 offsetting requirements for the aeroplane operators and consequently, the States inform the aeroplane operators about their respective 2023 offsetting requirements.



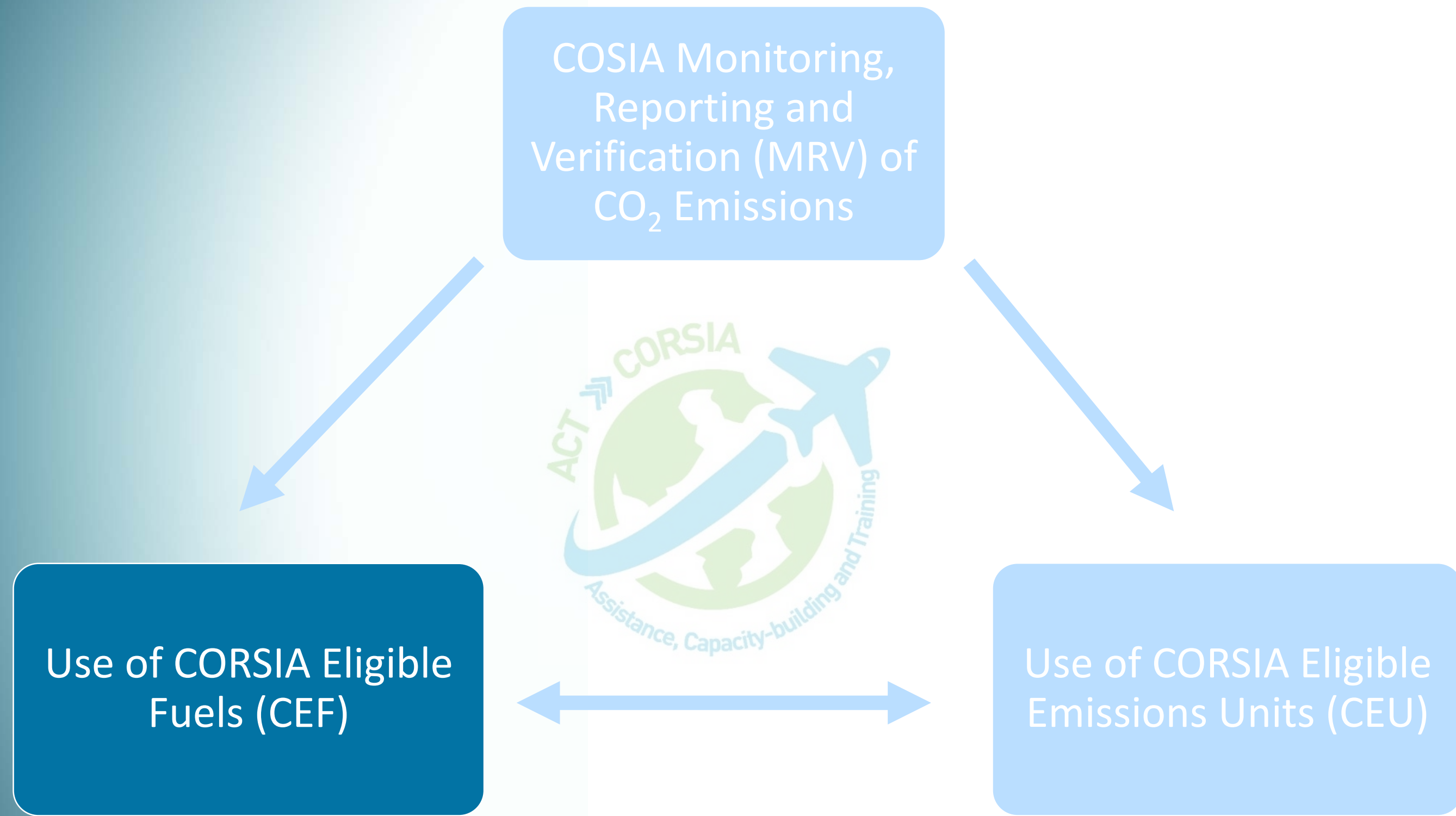
2023 CORSIA-related Data – Next Steps



- In accordance with Annex 16, Volume IV, the Secretariat will **fill the CO₂ emissions gap** for States that do not submit data through the CCR in accordance with the CORSIA submission deadlines.
- The Secretariat will compile the **2023 CO₂ emissions and any 2023 CEF-related data in Part III and Part IV, respectively, of the CORSIA document “CORSIA Central Registry (CCR): Information and Data for Transparency.”** The documents will be published on the ICAO website by **31 October 2024**.
- By **31 October 2024**, the ICAO Secretariat will publish **the ICAO document “CORSIA Annual Sector’s Growth Factor (SGF)”**, which will contain the **2023 SGF value**. States will use the 2023 SGF value **to calculate the 2023 offsetting requirements** of aeroplane operators attributed to them.

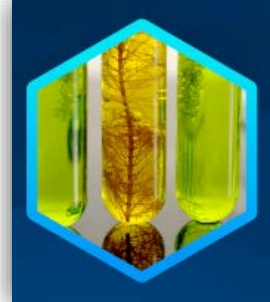


CORSIA Implementation



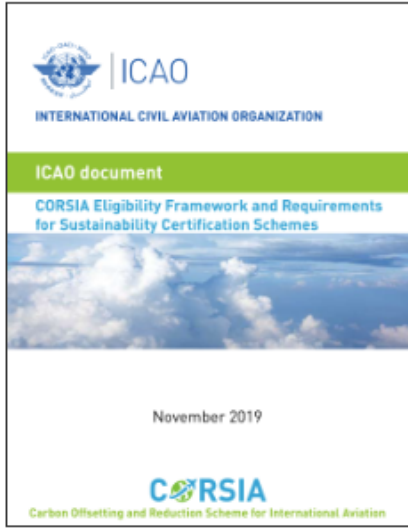


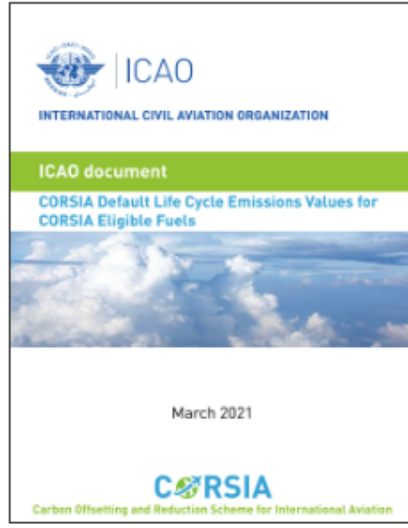
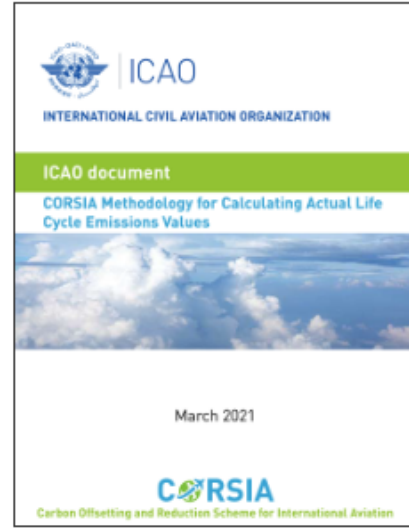
CORSIA offsetting requirements (until 2035) could be met by CEF or CEU





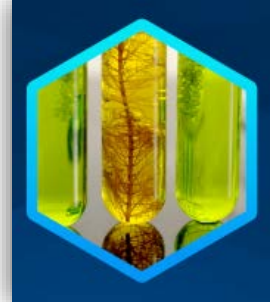
CORSIA Eligible Fuels and Offsetting Requirements

- **CORSIA eligible fuel (CEF) is CORSIA sustainable aviation fuel (SAF) and CORSIA lower carbon aviation fuel (LCAF), which an operator may use to reduce its offsetting requirements.**
- **CEF needs to be certified based on the CORSIA Sustainability Criteria, including its life-cycle emissions values, by an approved Sustainability Certification Scheme (SCS)**

				
CORSIA Eligibility Framework and Requirements for Sustainability Certification Schemes Third Edition, March 2024	CORSIA Approved Sustainability Certification Schemes* Second Edition, June 2023	CORSIA Sustainability Criteria for CORSIA Eligible Fuels** Third Edition, November 2022	CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels*** Fifth Edition, March 2024	CORSIA Methodology for Calculating Actual Life Cycle Emissions Values Fourth Edition, March 2024

All ICAO CORSIA documents related to CORSIA Eligible Fuels are available on the website, after the Council approval.



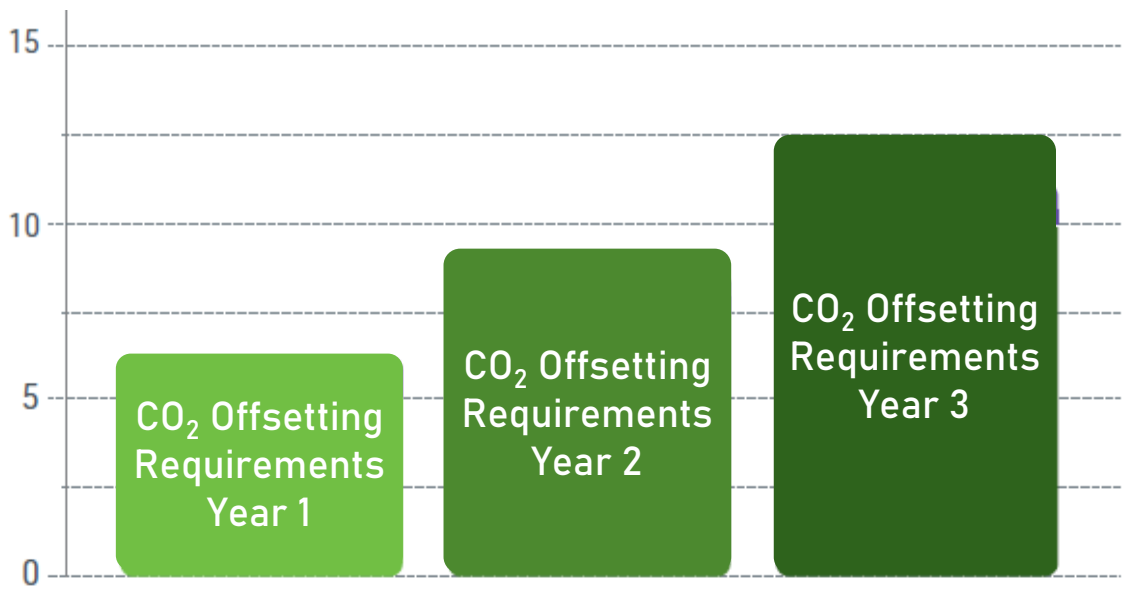


CORSIA Eligible Fuels and Offsetting Requirements

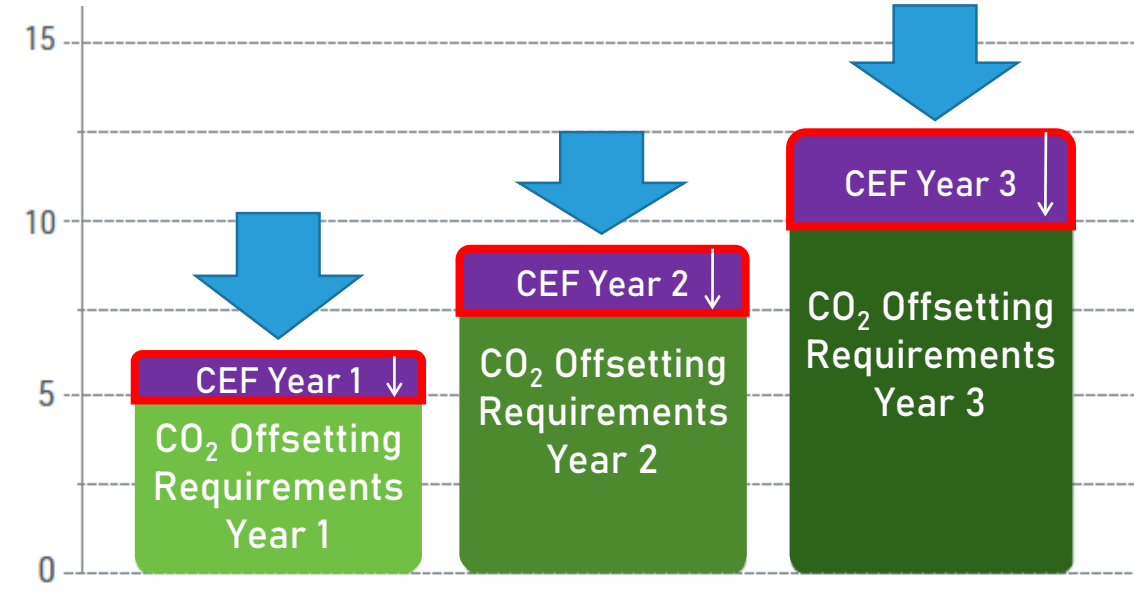
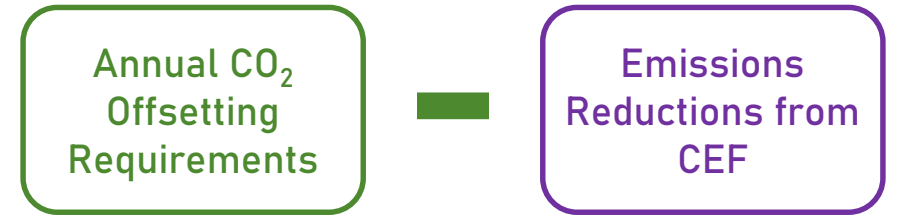
An aeroplane operator can reduce its CORSIA offsetting requirements by claiming emissions reductions from the use of CORSIA Eligible Fuels (CEF)

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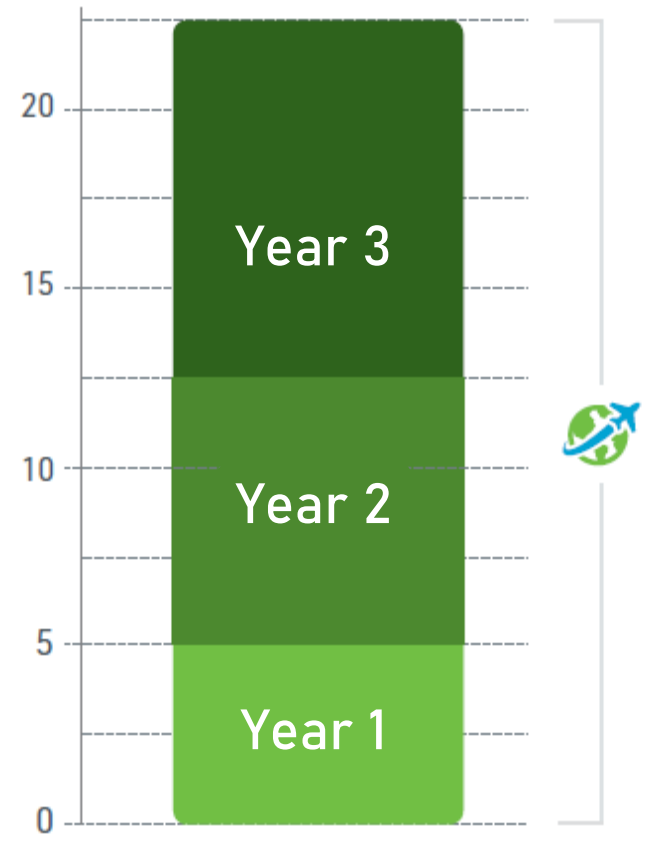
① **CO₂ Offsetting Requirements** calculated by the State for each year



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

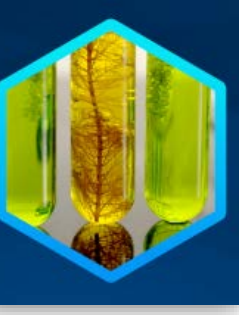


③ **Total Final CO₂ Offsetting Requirements** for a 3-year Compliance Period

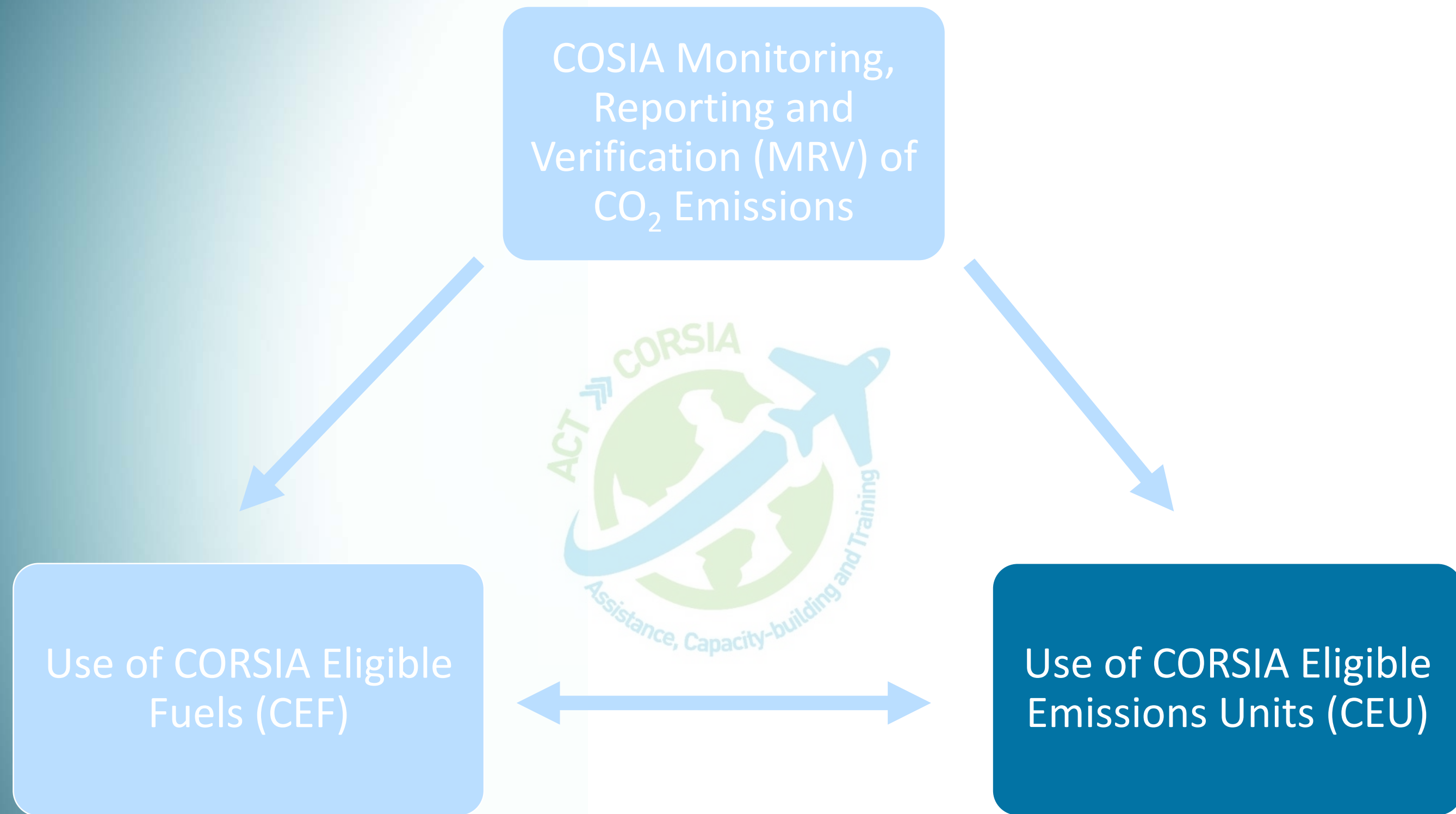


The remaining total final CO₂ offsetting requirements will be met by operators through the cancellation of CORSIA eligible emissions units (CEU)





CORSIA Implementation



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

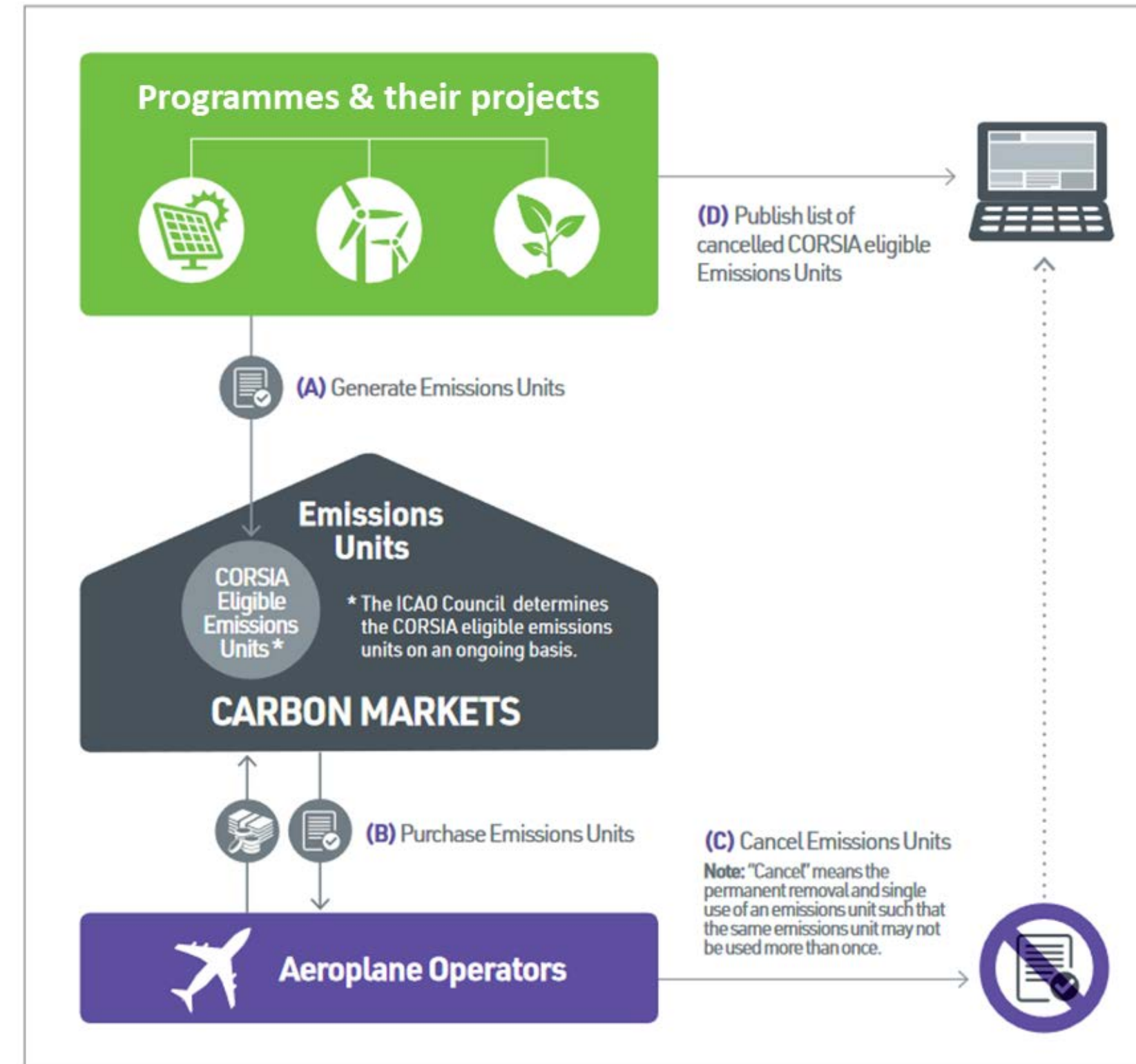


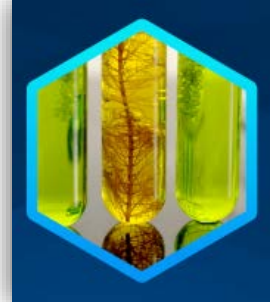


CORSIA Eligible Emissions Units

To fulfil its CORSIA offsetting requirements for a compliance period, an aeroplane operator must **purchase and cancel** CORSIA eligible emissions units (CEUs) equivalent to its **total final CO₂ offsetting requirements**:

- CEUs are generated by eligible CEU programmes that meet the CORSIA eligibility criteria (A)
- Operators purchase CEUs from the international carbon market (B)
- The cancellation of CEUs takes place within a registry designated by an eligible CEU programme (C)
- For transparency, cancellations are to be published on the registry's public website (D)





CORSIA Eligible Emissions Units

Emissions Unit Programmes to supply CORSIA Eligible Emissions Units (as approved by Council, as of March 2024)

ICAO 2024 Regional Seminar on Environment

For the pilot phase (2021-2023 period):

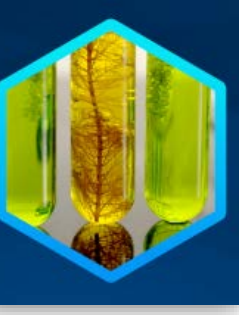
- 1) American Carbon Registry 
- 2) Architecture for REDD+ Transactions 
- 3) Biocarbon Fund Initiative for Sustainable Forest Landscapes 
- 4) China GHG Voluntary Emission Reduction Program 
- 5) Clean Development Mechanism 
- 6) Climate Action Reserve 
- 7) Forest Carbon Partnership Facility Program 
- 8) Global Carbon Council 
- 9) Socialcarbon 
- 10) The Gold Standard 
- 11) Verified Carbon Standard 

For the first phase (2024-2026 period):

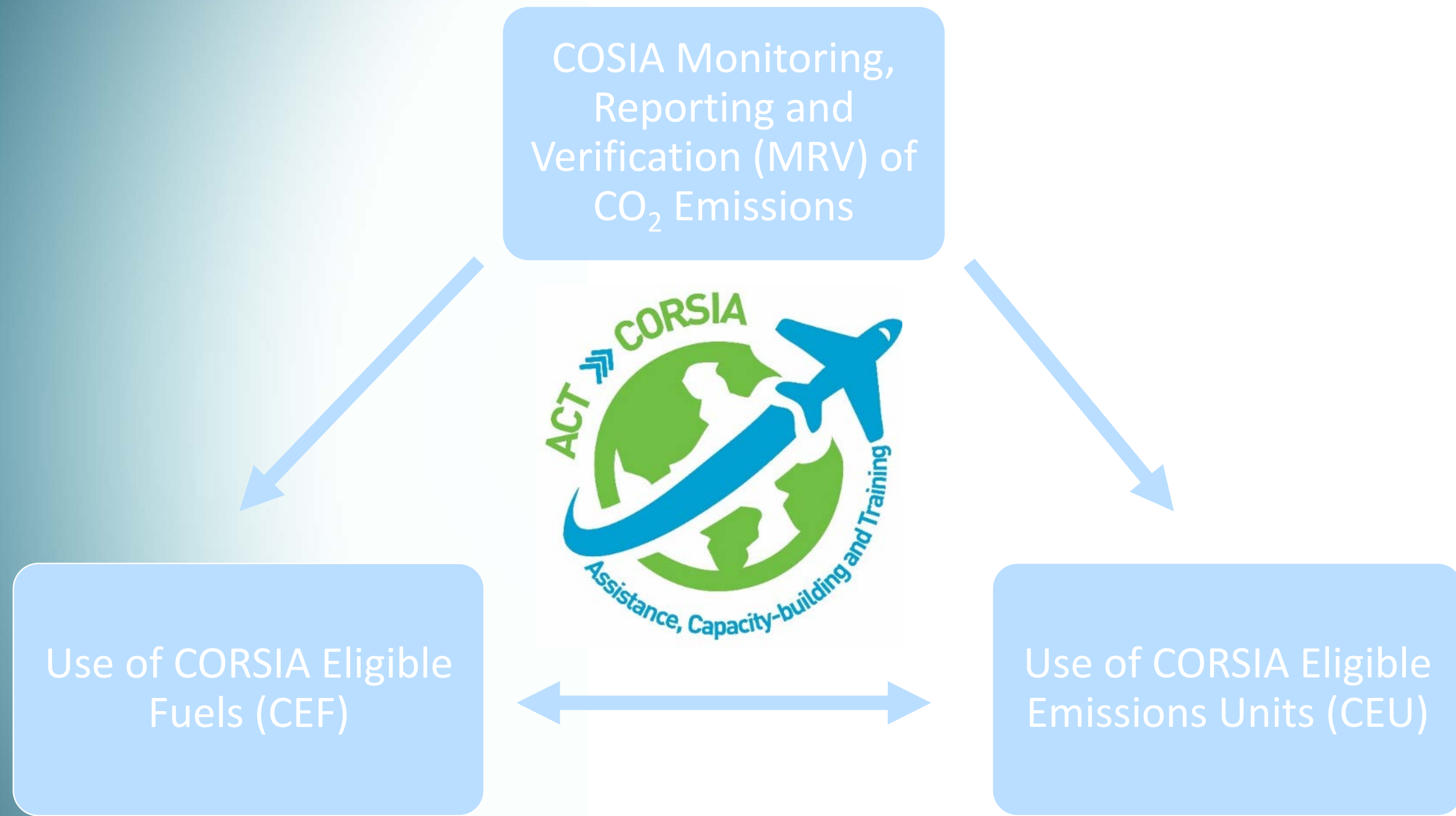
- 1) American Carbon Registry 
- 2) Architecture for REDD+ Transactions 

Additional 8 programmes as conditionally-approved, to be further assessed together with new applicants

Note:
Not all units from these programmes are eligible for use in CORSIA. Each Programme's Scope of Eligibility is described in the Council-approved ICAO document: CORSIA Eligible Emissions Units



ICAO ACT-CORSIA Programme



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





ICAO ACT-CORSIA Programme

- Annex 16, Volume IV was adopted in June 2018, with the applicability date of 1 January 2019 and associated challenges for States to prepare for timely implementation of CORSIA.
- **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.

CORSIA» IMPLEMENTATION	ACT » CORSIA
<ul style="list-style-type: none"> • Assembly Resolution A41-22 <div style="display: flex; justify-content: center; gap: 5px;"> EN FR SP RU AR ZH </div> • Reservation to Resolution A41-22 • SARPs - Annex 16 Volume IV • Environmental Technical Manual - Volume IV <ul style="list-style-type: none"> » Templates • ICAO CORSIA Implementation Elements <ul style="list-style-type: none"> » CORSIA States for Chapter 3 State Pairs » ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT) » CORSIA Eligible Fuels » CORSIA Eligible Emissions Units » CORSIA Central Registry (CCR) <p>Additional Material for CORSIA Implementation Status of CORSIA Implementation</p>	<ul style="list-style-type: none"> • CORSIA Buddy Partnerships • Examples of Good Practice <ul style="list-style-type: none"> » Model regulations » CO₂ Aggregation • Frequently Asked Questions • Brochure and Leaflets • Videos (Navigating CORSIA) • Seminars • Background Information

www.icao.int/corsia



ACT-CORSIA Buddy Partnerships

- ACT-CORSIA includes the organization of **seminars and training sessions**, development of **outreach materials** (e.g., brochure, leaflets, videos, newsletters) and establishment of **CORSIA buddy partnerships among States**, which have been instrumental to the successful implementation of MRV requirements.
- Under ACT-CORSIA buddy partnerships, technical experts from **supporting States** are working together with CORSIA Focal Points of support-requesting States to provide on-site / remote training and follow-up on the required actions, in close coordination with the Secretariat (HQ and ROs).



ACT-CORSIA Buddy Partnerships



ACT-CORSIA rolled out in different phases with specific focus areas to support necessary actions by States with different timelines.

Phase I (Sep 2018 – Apr 2019): 15 supporting States and 98 requesting States

- Development and approval of Emissions Monitoring Plans
- Establishment of national/regional regulatory frameworks

Phase II (May 2019 – Apr 2020): 16 supporting States and 114 requesting States

- CO₂ Emissions reporting and verification

Phase III (Apr 2020 - ongoing): 17 supporting States and 119 requesting States

- CO₂ Emissions reporting and verification
- Use of the CORSIA Central Registry
- CORSIA Eligible Fuels (CEF) and Eligible Emissions Units (CEU)

Annual Training of Trainers (e.g. 6 and 7 March 2024) to supporting States to ensure the coordinated / harmonized approach for providing support to requesting States under ACT-CORSIA Buddy Partnerships, in close coordination with ICAO Secretariat.

ACT >>> CORSIA ^{Phase III} Assistance, Capacity-building and Training on CORSIA	
AUSTRALIA 1. BRUNEI DARUSSALAM 2. INDONESIA 3. NAURU 4. PAPUA NEW GUINEA 5. SRI LANKA 6. THAILAND	KENYA / UNITED KINGDOM 1. ETHIOPIA 2. RWANDA 3. SEYCHELLES 4. SOUTH SUDAN 5. UGANDA 6. UNITED REPUBLIC OF TANZANIA
BRAZIL 1. ANGOLA 2. CABO VERDE 3. MOZAMBIQUE 4. SAO TOME AND PRINCIPE	NEW ZEALAND 1. FIJI 2. SAMOA 3. SOLOMON ISLANDS 4. VANUATU
CANADA (Facilitated by CASSOS) 1. ANTIGUA AND BARBUDA 2. BARBADOS 3. GUYANA 4. HAITI 5. JAMAICA 6. SURINAME 7. TRINIDAD AND TOBAGO	NIGERIA 1. GAMBIA 2. GHANA 3. LIBERIA 4. SIERRA LEONE 5. SUDAN
CANADA / FRANCE 1. BENIN 2. BURKINA FASO 3. BURUNDI 4. CAMEROON 5. CENTRAL AFRICAN REPUBLIC 6. CHAD 7. COMOROS 8. CONGO 9. CÔTE D'IVOIRE 10. DJIBOUTI 11. D. R. OF CONGO 12. GABON 13. GUINEA 14. MADAGASCAR 15. MALI 16. MAURITANIA 17. MAURITIUS 18. NIGER 19. SENEGAL 20. TOGO	REPUBLIC OF KOREA 1. LAO PEOPLE'S D. R. 2. MONGOLIA 3. PAKISTAN 4. PHILIPPINES 5. VIETNAM
FRANCE (Facilitated by ACA0) 1. ALGERIA 2. MOROCCO 3. TUNISIA	QATAR 1. SAUDI ARABIA 2. IRAQ 3. JORDAN 4. KUWAIT 5. LIBYA 6. OMAN
GERMANY 1. ALBANIA 2. ARMENIA 3. AZERBAIJAN 4. BELARUS 5. GEORGIA 6. KAZAKHSTAN 7. NORTH MACEDONIA 8. REPUBLIC OF MOLDOVA 9. SAUDI ARABIA 10. SERBIA 11. TAJIKISTAN 12. TURKMENISTAN	SINGAPORE 1. COOK ISLANDS 2. KIRIBATI 3. MARSHALL ISLANDS 4. PALAU 5. TONGA 6. TUVALU
ITALY / UNITED KINGDOM 1. BAHAMAS 2. ERITREA 3. SOMALIA	SOUTH AFRICA 1. BOTSWANA 2. ESWATINI 3. LESOTHO 4. MALAWI 5. NAMIBIA 6. ZAMBIA 7. ZIMBABWE
JAPAN 1. AFGHANISTAN 2. BANGLADESH 3. BHUTAN 4. CAMBODIA 5. MALAYSIA 6. MYANMAR	SPAIN (Facilitated by COCESNAI) 1. BELIZE * 2. BOLIVIA 3. COLOMBIA 4. COSTA RICA * 5. CUBA 6. EL SALVADOR * 7. EQUATORIAL GUINEA 8. GUATEMALA * 9. HONDURAS * 10. MEXICO 11. NICARAGUA * 12. PARAGUAY 13. PERU 14. URUGUAY
	USA 1. ARGENTINA 2. DOMINICAN REPUBLIC 3. ECUADOR 4. PANAMA



17 SUPPORTING STATES
119 REQUESTING STATES



CORSIA Frequently Asked Questions (FAQs)


The ICAO Secretariat has updated the **CORSIA FAQs** to reflect the amendment of the second edition of Annex 16, Volume IV and the third edition of the Environmental Technical Manual (Doc 9501) as well as detailed information on provisions relating to CORSIA eligible emissions units and CORSIA eligible fuels.



CORSIA Newsletter

ACT » CORSIA

- CORSIA Buddy Partnerships
- Examples of Good Practice
 - » Model regulations
 - » CO₂ Aggregation
- Frequently Asked Questions
- Brochure and Leaflets
- Videos (Navigating CORSIA)
- Seminars
- Background Information



FAQ Category:

Search:

- General questions about a market-based measure (MBM) and CORSIA**
 - 1.1 What is a market-based measure (MBM)?
 - 1.2 What is the contribution of aviation to global greenhouse gas emissions?
 - 1.3 Why does the Paris Agreement not include international aviation emissions?
 - 1.4 Why did ICAO decide to develop a global MBM scheme for international aviation?
 - 1.5 What ICAO process was followed to develop CORSIA?
 - 1.6 What is CORSIA and how does it work, in general?
- Questions about CORSIA's key design elements**

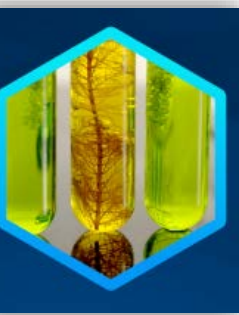
Key design element 1: Phased implementation of CORSIA

 - 2.1 What is the rationale for the phased implementation of CORSIA?
 - 2.2 What are the different phases?
 - 2.3 What is the difference between the pilot phase (from 2021 through 2023) and the first phase (from 2024 through 2026)?
 - 2.4 Which criteria determine the participation or exemption of States from CORSIA offsetting in its second phase from 2027 to 2035?





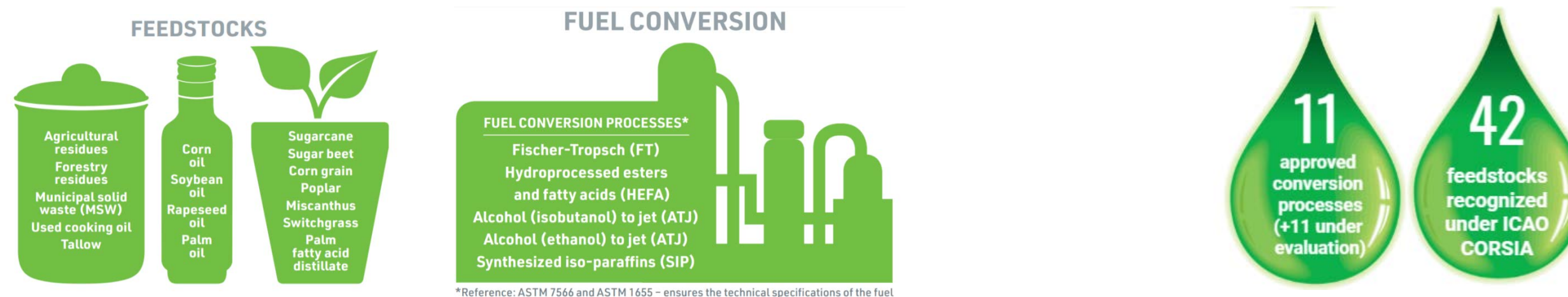
Further details on ICAO Regulatory Frameworks for CORSIA Eligible Fuels



What are CORSIA Eligible Fuels?

- CORSIA eligible fuel (CEF) is CORSIA sustainable aviation fuel (SAF) or CORSIA lower carbon aviation fuel (LCAF), which an operator may use to reduce its offsetting requirements
 - SAF is defined as a **renewable or waste-derived aviation fuel** that meets the CORSIA Sustainability Criteria
 - LCAF is defined as a **fossil-based aviation fuel** that meets the CORSIA Sustainability Criteria
- CEF needs to be certified based on the CORSIA Sustainability Criteria, including its life-cycle emissions values, by an approved Sustainability Certification Scheme (SCS)

How can CORSIA Eligible Fuels be produced today?

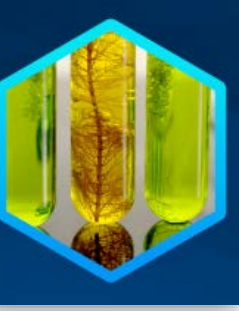


- More feedstocks and conversion processes will become available as the industry evolves.
- Up-to-date information is available on the ICAO website

https://www.icao.int/environmental-protection/Pages/SAF_Feedstocks.aspx

<https://www.icao.int/environmental-protection/GFAAF/Pages/Conversion-processes.aspx>





ICAO has published five key documents containing all relevant requirements and procedures regarding CORSIA eligible fuels

ICAO CORSIA Implementation Elements	ICAO documents
CORSIA States for Chapter 3 State Pairs	1. CORSIA States for Chapter 3 State Pairs
ICAO CORSIA CO ₂ Estimation and Reporting Tool (CERT)	2. ICAO CORSIA CO ₂ Estimation and Reporting Tool
CORSIA Eligible Fuels	3. CORSIA Eligibility Framework and Requirements for Sustainability Certification Schemes 4. CORSIA Approved Sustainability Certification Schemes 5. CORSIA Sustainability Criteria for CORSIA Eligible Fuels 6. CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels 7. CORSIA Methodology for Calculating Actual Life Cycle Emissions Values
CORSIA Eligible Emissions Units	8. CORSIA Eligible Emissions Units 9. CORSIA Emissions Unit Eligibility Criteria
CORSIA Central Registry (CCR)	10. CORSIA Central Registry: Information and Data for the Implementation of CORSIA 11. CORSIA Aeroplane Operator to State Attributions 12. CORSIA 2020 Emissions 13. CORSIA Annual Sector's Growth Factor (SGF) 14. CORSIA Central Registry (CCR): Information and Data for Transparency

CORSIA Eligibility Framework and Requirements for Sustainability Certification Schemes Third Edition, March 2024	CORSIA Approved Sustainability Certification Schemes* Second Edition, June 2023	CORSIA Sustainability Criteria for CORSIA Eligible Fuels** Third Edition, November 2022	CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels*** Fifth Edition, March 2024	CORSIA Methodology for Calculating Actual Life Cycle Emissions Values Fourth Edition, March 2024

Definitions (reference: Annex 16 Vol IV)

CORSIA Eligible Fuel: A CORSIA Sustainable Aviation Fuel or a CORSIA Lower Carbon Aviation Fuel, which an operator may use to reduce their offsetting requirements



The CORSIA Sustainability Criteria covers all major themes

First global approach to sustainability for an industry sector, applies to both SAF and LCAF



ICAO document

CORSIA Sustainability Criteria for CORSIA Eligible Fuels



November 2022



For more details, please refer to [ICAO document - CORSIA Sustainability Criteria for CORSIA Eligible Fuels](#)

Sustainability themes	
1. Greenhouse Gases (GHG)	Carbon-reduction themes
2. Carbon Stock	
3. GHG emissions reduction permanence	Environmental themes
4. Water	
5. Soil	
6. Air	
7. Conservation	
8. Waste and chemicals	
9. Seismic and vibrational impacts (only for LCAF)	
10. Human and labour Rights	Socio-economic themes
11. Land Use Rights and Land Use	
12. Water use rights	
13. Local and social development	
14. Food security	

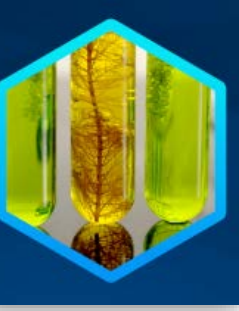
Carbon-reduction themes

Environmental themes

Socio-economic themes

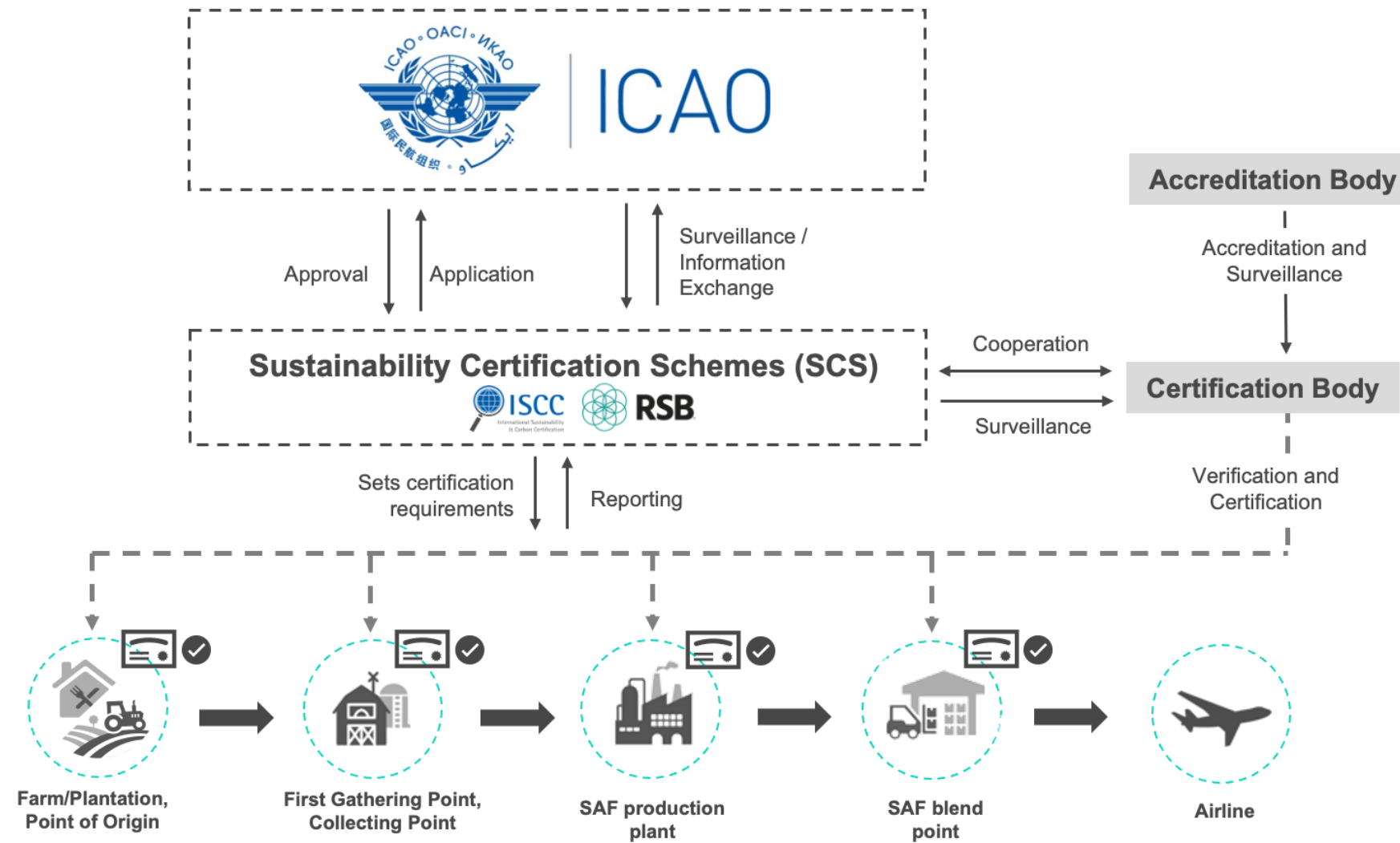
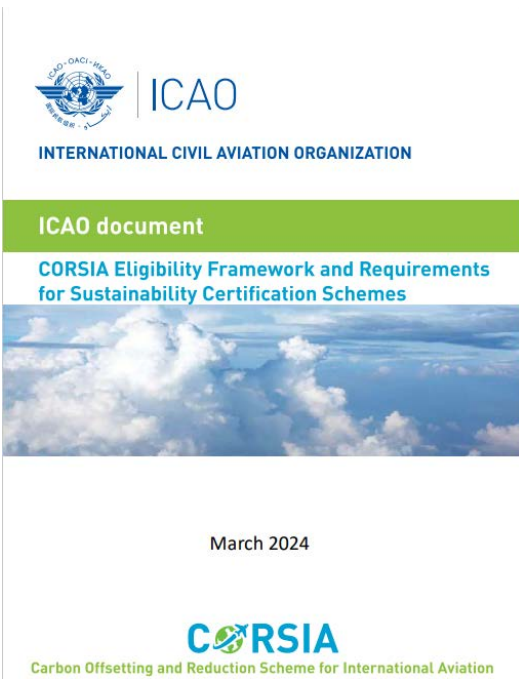
Carbon reduction themes applicable for batches of CEF produced by certified fuel producer before 1 January 2024

All themes applicable for batches of CEF produced by certified fuel producer on or after 1 January 2024



The certification system for CORSIA Eligible Fuels

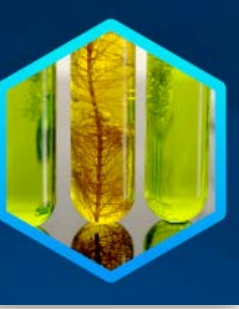
CORSIA sets requirements that Sustainability Certification Schemes (SCS) must fulfil to become CORSIA-approved SCS, and certify CORSIA Eligible Fuels



Source: ISCC presentation – ACT-SAF Series #2



For more details, please refer to [CORSIA ELIGIBILITY FRAMEWORK AND REQUIREMENTS FOR SCS \(icao.int\)](https://www.icao.int/corsia-eligibility-framework-and-requirements-for-sustainability-certification-schemes)



SCS currently approved by ICAO

The ICAO Council approves SCS for certifying CORSIA eligible fuels

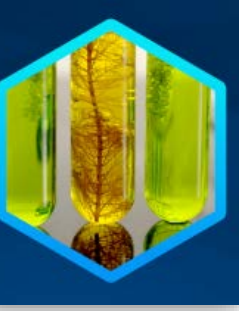


For more details, please refer to [ICAO document "CORSIA Approved Sustainability Certification Schemes"](#)



Name of the Sustainability Certification Scheme	Date of approval	Website	Scope of approval
International Sustainability and Carbon Certification (ISCC)	16 Jun. 2023	https://www.iscc-system.org/about/sustainable-aviation-fuels/corsia/	Certification of CORSIA Sustainable Aviation Fuels economic operators covered by Chapters 1 and 2 of the ICAO document "CORSIA Sustainability Criteria for CORSIA eligible fuels"
Roundtable on Sustainable Biomaterials (RSB)	16 Jun. 2023	https://rsb.org/rsb-corsia-certification/	Certification of CORSIA Sustainable Aviation Fuels economic operators covered by Chapters 1 and 2 of the ICAO document "CORSIA Sustainability Criteria for CORSIA eligible fuels"

In May 2024, two new SCS applications have been received by ICAO, and are currently under evaluation



First certifications under CORSIA

The CORSIA framework is ready to be used for SAF certification and accounting

First sustainable aviation fuel batches certified under CORSIA



Montréal, 14 June 2023 – For the first time, sustainable aviation fuels (SAF) have been certified under the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

Making use of the two ICAO-approved Sustainability Certification Schemes designed for this purpose, the development marks a significant milestone for both SAF production and aviation climate action by States.

The nine batches, totalling 1,542 tonnes, were certified by ISCC and RSB and produced in China, the Netherlands, and the United States, by ECOCHEM, Neste, and WorldEnergy, respectively.



For more details, please refer [CORSIA Certified Fuels and Economic operators \(icao.int\)](https://www.icao.int/corsia-certified-fuels-and-economic-operators/)

New website – CORSIA certified fuels

- Information on CORSIA-certified SAF and economic operators
- Based on annual reports from the approved SCS

CORSIA Certified Fuels and Economic operators

Table 1 of the ICAO document "CORSIA Eligibility Framework and Requirements for Sustainability Certification Schemes" requires approved SCSs to submit an annual report to ICAO. This annual report includes information on the CORSIA-certified economic operators, and products they produce (including CORSIA eligible fuels).

The annual reports provided by the approved SCSs are below.

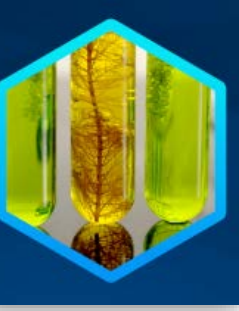
ISCC	RSB
2021 report	2021 report
2022 report	2022 report

The reports provide information on the certifications performed up to 31st December of the reporting year. For more up to date information, please refer to the websites of the ICAO-approved SCSs.

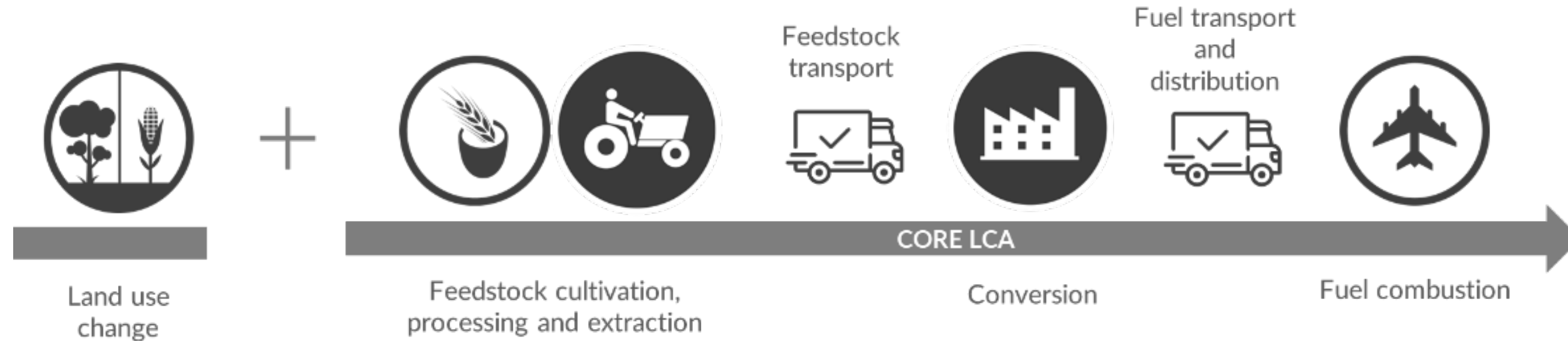
<https://www.iscc-system.org/markets/sustainable-aviation-fuels/>

<https://rsb.org/certification/certification-schemes/rsb-corsia-certification/>

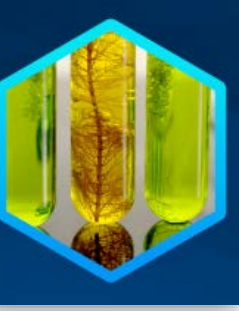




CORSIA life cycle emissions methodology



- CORSIA Sustainability Criteria: **Theme 1 (Greenhouse Gases)**
 - Life cycle emissions **reductions of at least 10%** (Induced Land Use Change (ILUC) + Core LCA)
 - ILUC considers both Direct & Indirect Land Use Change
 - **ILUC value** determined on the basis of **default values**, unless ILUC is considered as a zero
 - **Core LCA value** can be determined either on the basis of **default values**, or calculated **actual LCA values**
- CORSIA Baseline: 89 g CO₂e/MJ (jet fuel) and 95 g CO₂e/MJ (AvGas)



CORSIA life cycle emissions: Example

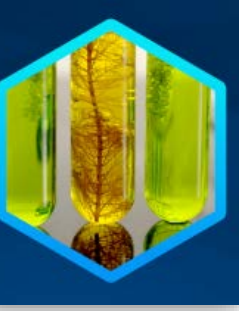
Life cycle emissions of sugarcane ethanol ATJ in Brazil

Production step	Associated emissions (gCO ₂ e/MJ)
Feedstock growth	-74
Feedstock cultivation	16.9
Feedstock processing, collection and recovery Feedstock processing and extraction	
Feedstock transportation to processing and fuel production facilities	1.6
Feedstock to fuel conversion	5.2
Fuel transportation and distribution	0.4
fuel combustion on aircraft engine	74
Total core LCA value	24.1
Induced Land use Change (ILUC value)	8.7
SAF Life cycle emission value (L_{CEF}) = core LCA + ILUC	32.8



63% emission reduction on a life cycle basis
(Compared with Baseline emission value of 89 gCO₂e/MJ)



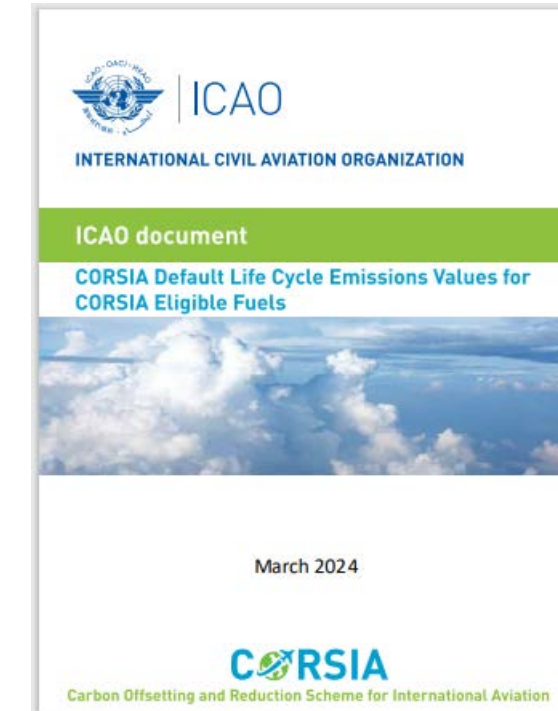


Two options available to obtain life cycle emissions for CORSIA Eligible Fuels

DEFAULT Life Cycle Emissions

ICAO document “CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels”

Default emission values, as a function of the feedstocks and conversion processes.

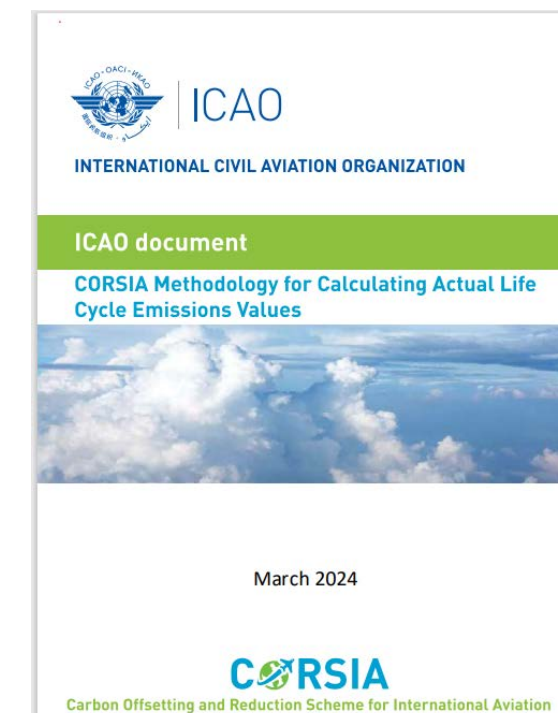


For more details, please refer to [ICAO document 06 - Default Life Cycle Emissions - March 2024.pdf](#)

ACTUAL Life Cycle Emissions

ICAO document “CORSIA Methodology for Calculating Actual Life Cycle Emissions Values”

Allows calculation of specific emissions values to a given SAF or LCAF



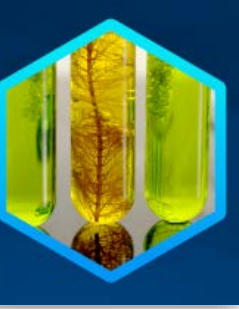
For more details, please refer to [ICAO document 07 - Methodology for Actual Life Cycle Emissions - March 2024.pdf](#)





ICAO Roadmap Building Block 2 – Regulatory Framework Planned Actions

ICAO Roadmap Building Block 2 – Regulatory Framework (CORSA)



Planned Actions

- To urgently accelerate the analysis and approval of **life cycle values for new fuel sources and pathways** as CORSIA eligible fuels, while ensuring environmental integrity in line with CORSIA requirements
- To urgently accelerate the development and approval of **new Sustainability Certification Schemes (SCS)** on the use of CORSIA eligible fuels in all regions, while ensuring environmental integrity in line with CORSIA requirements
- To undertake a **study of fuel accounting systems for international aviation**, which can help determine **any possible ICAO role**
- To develop and/or update necessary **ICAO regulatory frameworks**, as appropriate, based on the study of fuel accounting systems and the LTAG monitoring and reporting (LMR) methodologies
- To develop a **possible ICAO IT platform** to integrate the monitoring of the Global Framework LTAG implementation, as appropriate



Study on fuel accounting systems

Necessary ICAO regulatory frameworks

Possible ICAO IT platform



Regulatory Framework

Q&A Session

Thank You

