



| ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY





ICAO

ENVIRONMENT

CORSIA Overview



Blandine Ferrier
Chinga Mazhetese

Environment Officers, ICAO, ESAF, WACAF





1

CORSIA Introduction

2

CORSIA Key Design Elements

3

CORSIA MRV Overview

4

CORSIA Periodic Review

5

ICAO ACT-CORSIA Programme



1

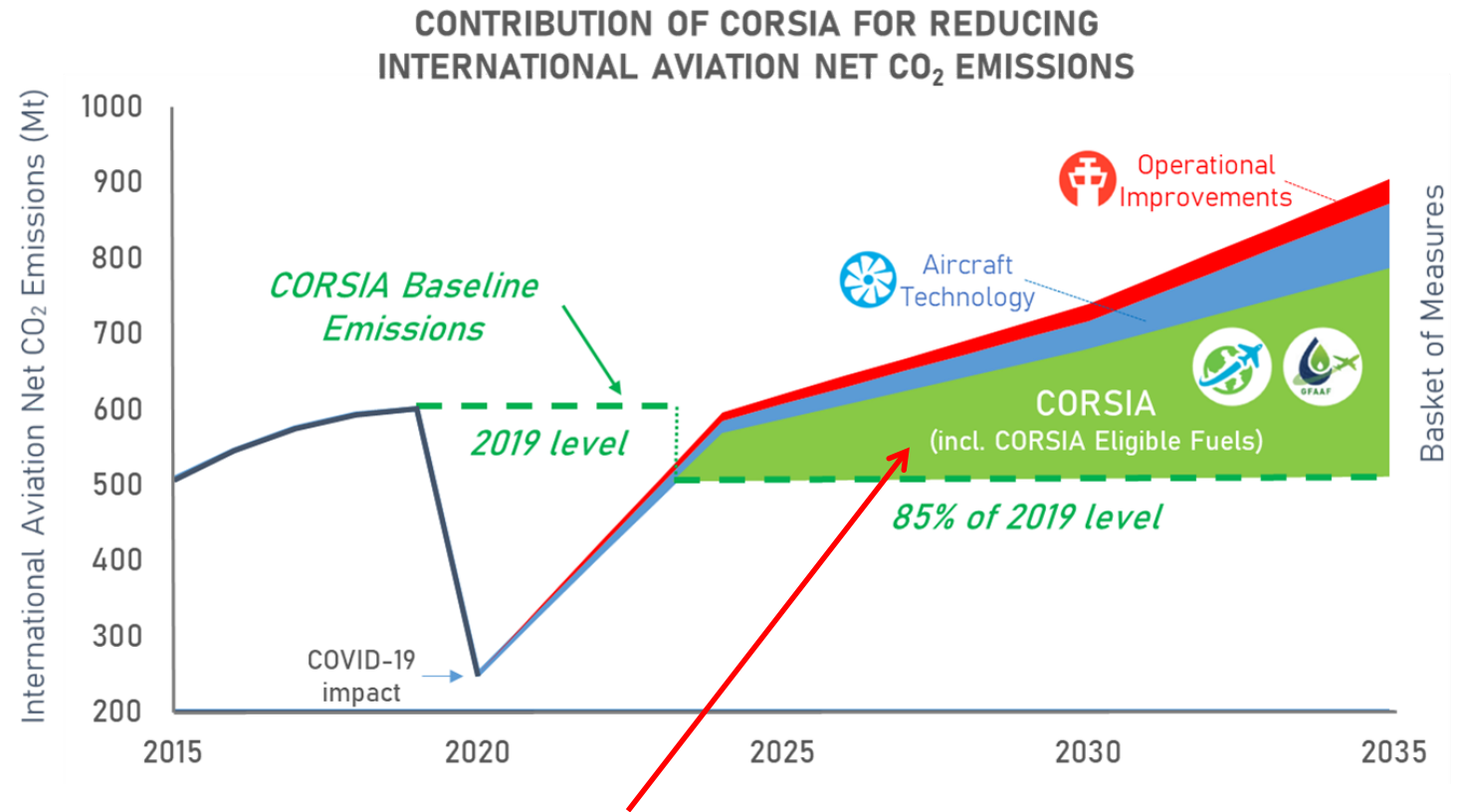
CORSIA Introduction

The first global market-based measure for any industry sector

CORSIA complements the other three elements in the ICAO basket of measures:

- technological innovations
- operational improvements
- sustainable aviation fuels

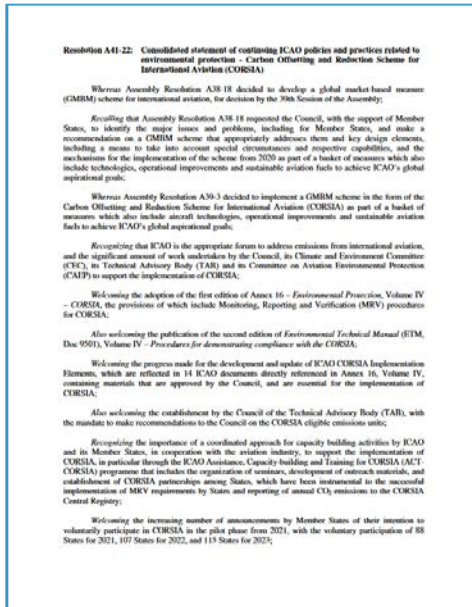
Objective: Achieve ICAO’s global aspirational goal of carbon neutral growth from 2020 (CNG 2020)



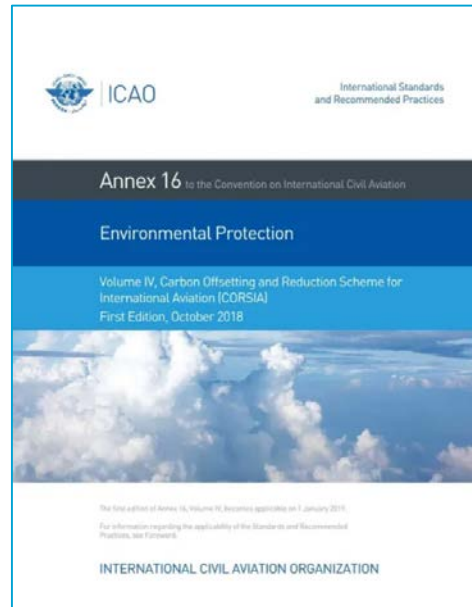
CORSIA addresses the remaining “emissions gap” to achieve CNG2020



Assembly Resolution A41-22



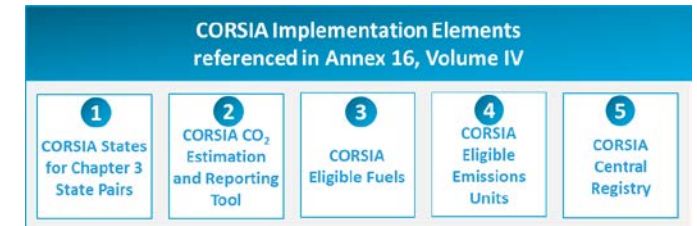
Annex 16, Volume IV



Doc 9501 (ETM), Vol. IV (CORSIA)



CORSIA Implementation Elements and ICAO CORSIA documents

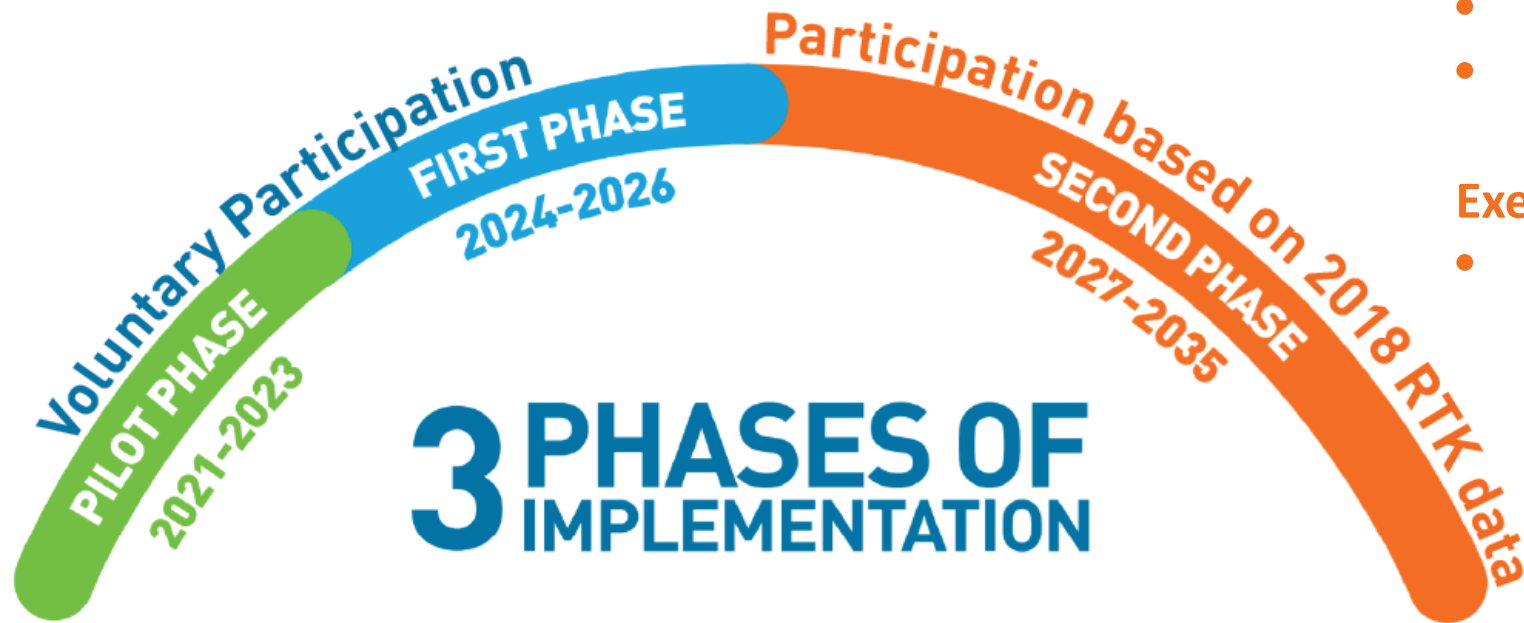


www.icao.int/corsia



2

CORSIA Key Design Elements



Second phase participation criteria:

- Cumulative 90% of global RTK
- Individual 0.5% of RTK
- Voluntary participation

Exemptions:

- LDCs, LLDCs, SIDS

All Member States are encouraged to participate in the pilot and first phase of the CORSIA



Total of 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

Total of 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

Total of 115 States for 2023

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

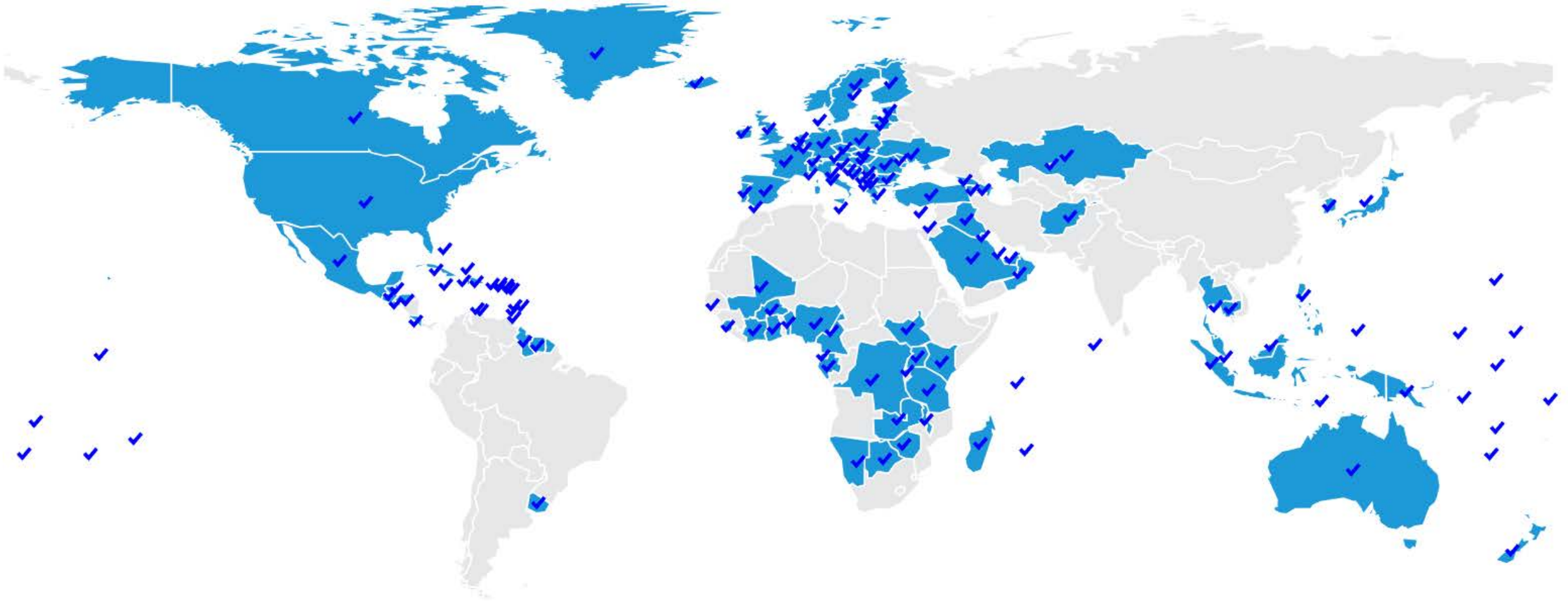




ICAO

ENVIRONMENT

124 Volunteer States from 1 January 2024





- The 41st ICAO Assembly strongly encouraged all States to voluntarily participate in the pilot phase and the first phase
- More are expected to join in the following years:
 - Deadline for volunteering from 1 January 2025: 30 June 2024
 - Deadline for volunteering from 1 January 2026: 30 June 2025

List of volunteer States per year are available here:

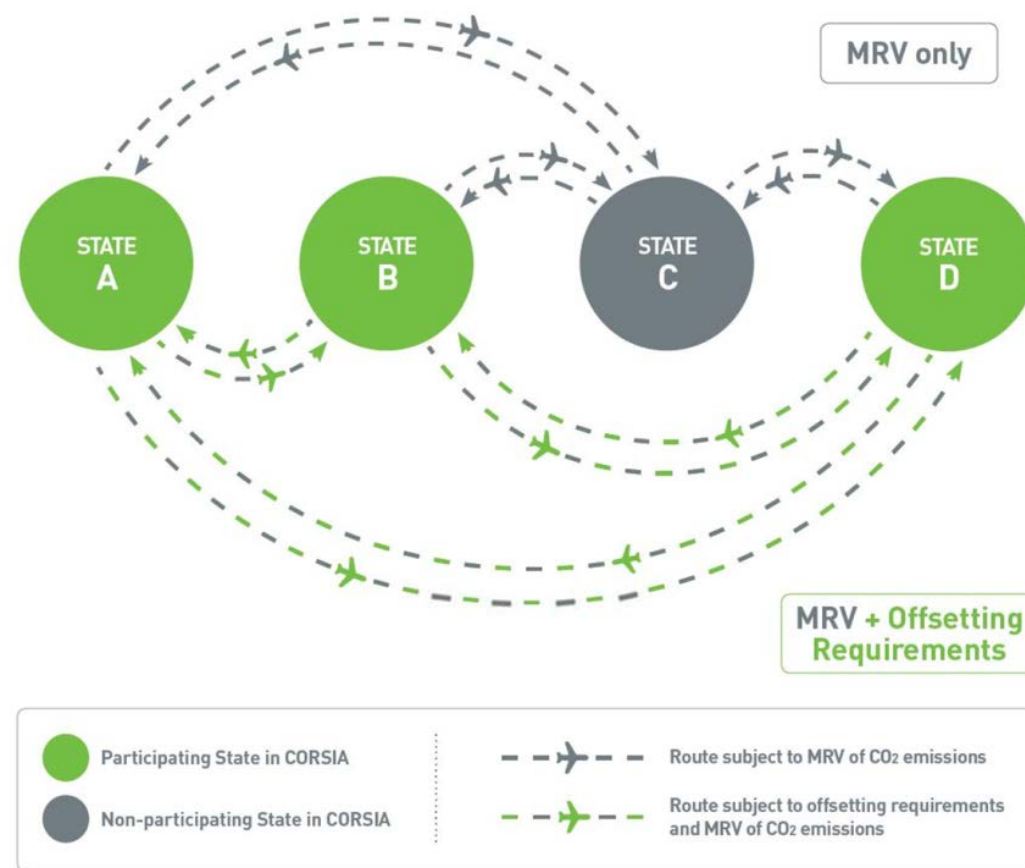
<https://www.icao.int/environmental-protection/CORSIA/Pages/state-pairs.aspx>



From 1 January 2019, all States with operators performing international flights have to establish a monitoring, reporting and verification (MRV) system for CO₂ emissions

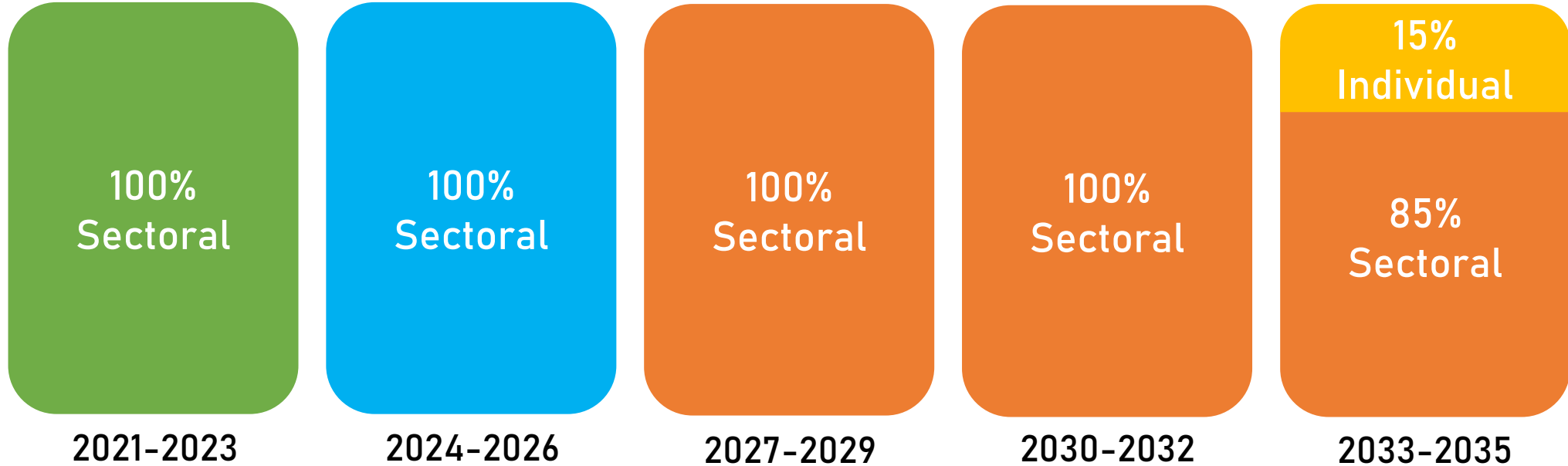
From 1 January 2019, all operators performing international flights have to monitor CO₂ emissions - operators with emissions more than 10,000 tonnes annually have to verify CO₂ emissions and report to State

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



$$\text{Operator's Annual CO}_2 \text{ Offsetting Requirements} = \text{Operator's Annual CO}_2 \text{ Emissions subject to Offsetting Requirements} \times \text{Growth Factor}^*$$

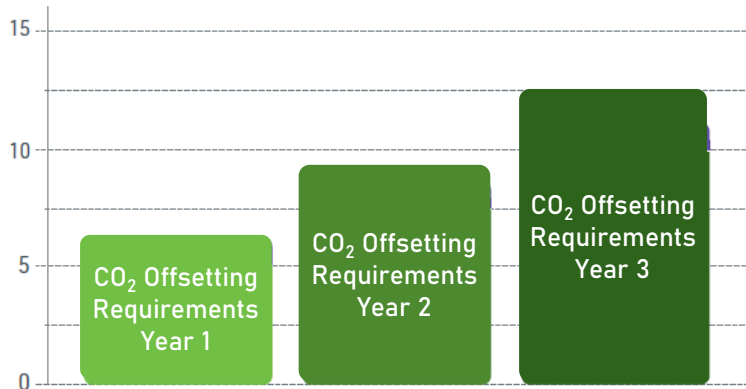
* The Growth Factor changes every year taking into account the annual Sector's Growth Factor, which is calculated by ICAO, and (for 2033-2035) the individual operator's growth factor as shown below.



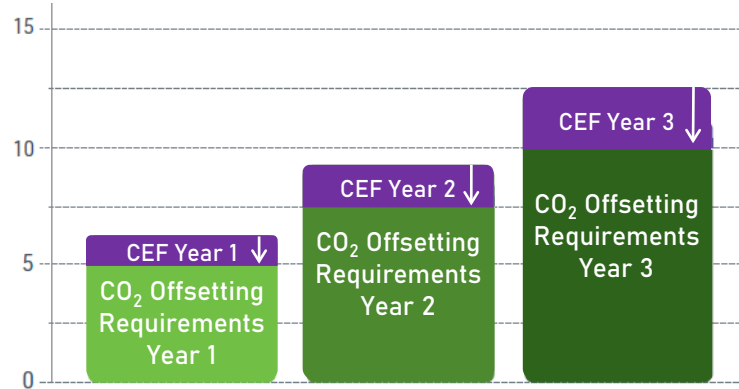
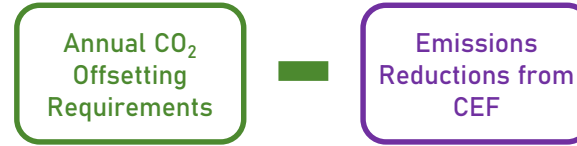


An aeroplane operator can reduce its CORSIA offsetting requirements by claiming emissions reductions from the use of CORSIA Eligible Fuels (CEF)

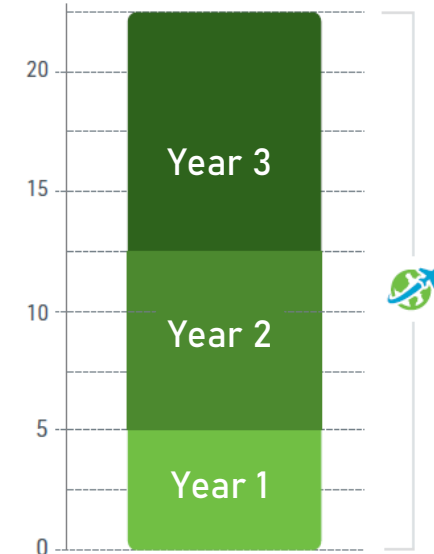
① **CO₂ Offsetting Requirements** calculated by the State for each year



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



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



Total final CO₂ offsetting requirements will be met by operators through the cancelation of CORSIA eligible emissions units



3

CORSIA MRV Overview



CO₂ Monitoring

Monitoring of CO₂ emissions is either based on a Fuel Use Monitoring Method, or the use of the ICAO CORSIA CERT.

CO₂ Reporting

CO₂ emissions will be reported from aeroplane operators to their State Authority, and from States to ICAO.

CO₂ Verification

CO₂ emissions information is accurate and free of errors.



CO₂ Monitoring

CO₂ Reporting

CO₂ Verification

	WHO	WHEN	HOW
CO₂ Monitoring	OPERATOR	Continuously	Emissions Monitoring Plan
CO₂ Reporting	OPERATOR STATE	Annually Annually	Emissions Report to STATE Data to ICAO CCR
CO₂ Verification	OPERATOR VERIFIER STATE	Annually Annually Annually	Pre-verification Verification Report Magnitude Check



4

CORSIA Periodic Review



- **Periodic review** of CORSIA every three years – **First 2022 review was completed prior to A41**
- Allows the Council to make informed decisions on whether it is necessary to make adjustments to the next phase(s) of the scheme
- Special review by end of 2032 on termination of the scheme, its extension or any other improvements of the scheme beyond 2035
- At the request of A41, the Council to develop a **methodology and timeline** for future reviews

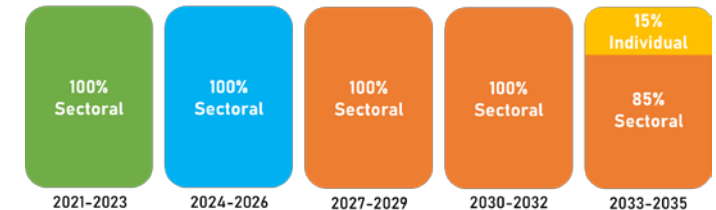


On the conclusion of the 2022 CORSIA review, the ICAO Council recommended the following adjustments to the Scheme, which were adopted at the 41st Session of the ICAO Assembly:

- Adjustments to CORSIA baseline emissions:
 - For pilot phase (2021 – 2023): 2019 CO₂ emissions (*as per Council decision in June 2020*)
 - From 2024 onwards: 85% of 2019 CO₂ emissions

- Changes to the percentage use of sectoral and individual operator’s growth factors for the calculation of CORSIA offsetting requirements:
 - 100% sectoral and 0 % individual for 2021 – 2032
 - 85 % sectoral and 15% individual for 2033 – 2035

- Use of 2019 emissions to determine new entrants





5

ICAO ACT-CORSIA Programme



ICAO Assistance, Capacity-building and Training on CORSIA (ACT-CORSIA):

ACT CORSIA is a **coordinated approach** to harmonize and bring together all relevant actions and promote **coherence to capacity building efforts for CORSIA implementation** – also enabling the **monitoring of global progress / transparency**



- CORSIA Buddy Partnerships
- Examples of Good Practice
- Frequently Asked Questions
- Brochure and Leaflets
- Videos
- Seminars
- Online Tutorials
- Background Information

- Cornerstone of ACT-CORSIA to support States to prepare for CORSIA implementation
- Technical experts provided by supporting States are working together with the CORSIA Focal Points of support-receiving States to provide on-site training, and to closely follow-up on the actions required for the implementation of CORSIA



Different phases with specific focus areas in order 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 - 2023): 17 supporting States and 119 requesting States

- Use of the CORSIA Central Registry (CCR)

The focus areas of each Phase can form the basis for checklist to assess the progress made and milestones achieved in order to determine the need for a tailored approach to training.

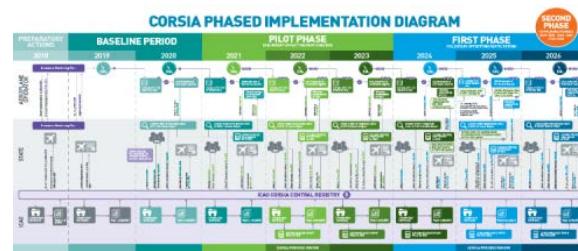
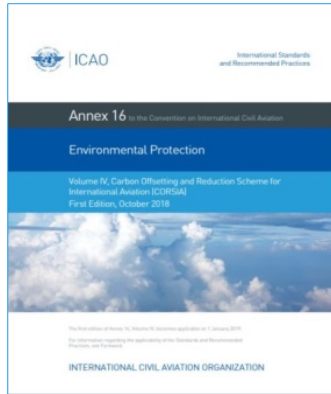
ACT >>> CORSIA Assistance, Capacity-building and Training on CORSIA	
AUSTRALIA	KENYA / UNITED KINGDOM
1. BRUNEI DARUSSALAM	1. ETHIOPIA
2. INDONESIA	2. RWANDA
3. NAURU	3. SEYCHELLES
4. PAPUA NEW GUINEA	4. SOUTH SUDAN
5. SRI LANKA	5. UGANDA
6. THAILAND	6. UNITED REPUBLIC OF TANZANIA
BRAZIL	NEW ZEALAND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

17 SUPPORTING STATES
119 REQUESTING STATES



ICAO

ENVIRONMENT



Search...

- About ICAO
- Global Priorities
- Meetings and Events
- Information Resources
- Careers
- Subscribe

ICAO / Environmental Protection / CORSIA

- ENV Homepage
- CORSIA Homepage
- CORSIA IMPLEMENTATION
- ACT CORSIA

Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)

CORSIA News (click here to consult the complete list)

19-25 Jan 2019

Trinidad & Tobago and Jamaica received training under the ACT-CORSIA Buddy Partnership with Germany

Progress indicator: 10 dots, 1st dot filled.

CORSIA IMPLEMENTATION

- Assembly Resolution A39-3
- SARPs - Annex 16 Volume IV
- Environmental Technical Manual - Volume IV (New)
 - » Templates (New)
- ICAO CORSIA Implementation Elements
 - » 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)

ACT CORSIA

- CORSIA Buddy Partnerships
- Model Regulations
- Frequently Asked Questions
- Brochure and Leaflets
- Videos
- Seminars
- Online Tutorials
- Background Information

Additional Material for CORSIA Implementation



For more information, please visit our website: <http://www.icao.int/corsia>