



# Overview of Carbon Offsetting and Reduction Scheme for International Aviation (CORSI A) Implementation

## In-person Seminar

Second Phase of the ICAO Assistance Project with the EU Funding : *“Capacity Building for CO<sub>2</sub> Mitigation from International Aviation – Development of ICAO States’ Action Plans for 10 States”*

Praia, 28 & 29 July 2022  
Cabo Verde



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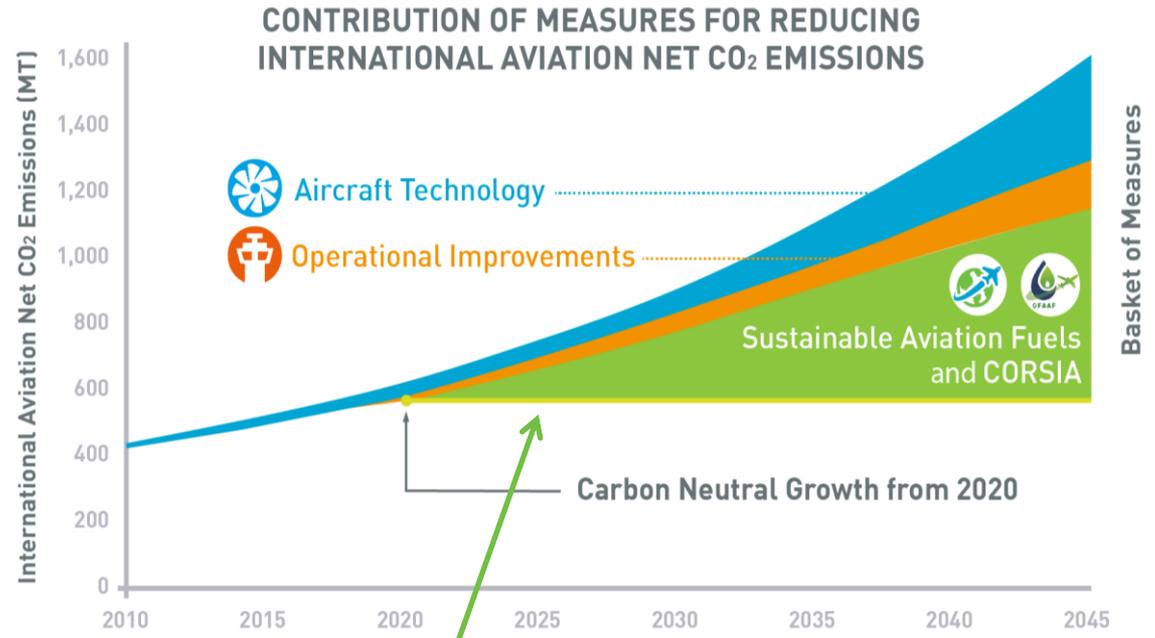
**1** CORSIA Overview



## The first global market-based measure for any industry sector

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



*CORSIA addresses the remaining "emissions gap" to achieve CNG2020*



## Context of CORSIA Agreement

- CORSIA is the harmonized global solution to prevent an inappropriate impact from a patchwork of duplicative State or regional MBMs
    - High degree of recognition as ICAO global solution to all
    - Certainty of environmental benefits to States and aeroplane operators, while keeping the simplicity of the scheme
    - Key design elements – phased implementation, route-based approach, distribution of offsetting requirements
    - Fully harmonized CORSIA CO<sub>2</sub> Monitoring, Reporting and Verification (MRV)
    - CORSIA eligible fuels and CORSIA eligible emissions units are the same to all operators
    - CORSIA to complement the CNG2020\*
- \* ICAO Member States will discuss the feasibility of a long-term aspirational goal (LTAG) at the upcoming Assembly (27 September - 7 October 2022)



## CORSIA Phased Implementation

All ICAO Member States with aeroplane operators conducting international flights are required to monitor, report and verify CO<sub>2</sub> emissions every year from 2019, independent of their participation in CORSIA



**Second phase participation criteria:**

- 90% of global RTK
- 0.5% of RTK

**Exemptions:**

- LDCs, LLDCs, SIDS

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



## Applicability of CO<sub>2</sub> Offsetting Requirements

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



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

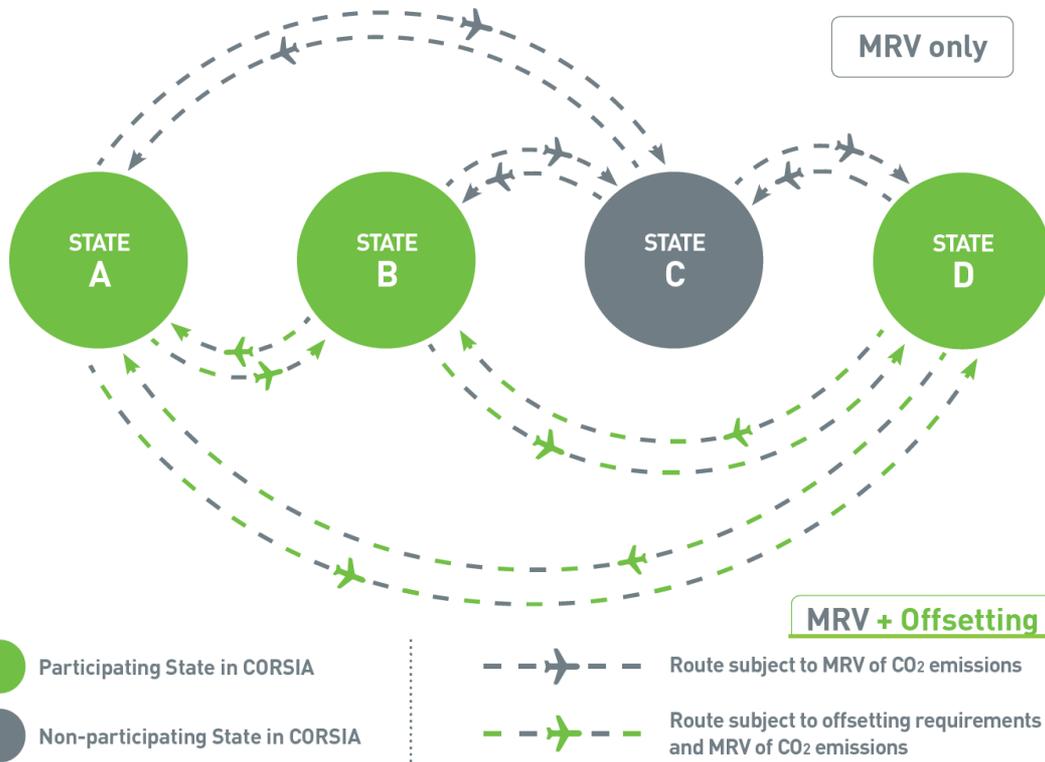


Zimbabwe
Federated States of Micronesia
Maldives
Timor-Leste
Saint Vincent and the Grenadines
Cambodia
Cuba
Iraq

**88 States for 2021** + **19 additional States for 2022** + **8 additional States for 2023**  
 making a total of **107 States** making a total of **115 States**



## CORSIA Route-based Approach



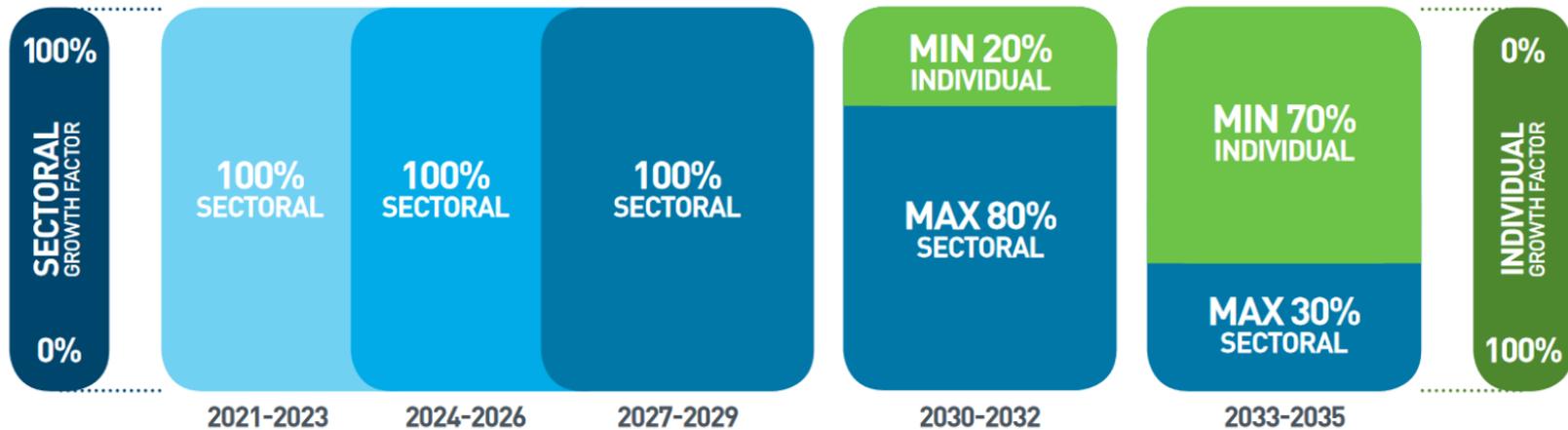
What if State C also decides to participate in CORSIA ?

All routes between State C and other participating States A, B, D (i.e. routes A-C, C-A, B-C, C-B, D-A, A-D) also become subject to CORSIA offsetting requirements



## CORSIA Offsetting Requirements

Operator's annual emissions **X** Growth Factor = **CO<sub>2</sub> offset requirements**



Cancellation of eligible emissions units to meet offsetting requirements: every 3 years



## 2 Status of CORSIA Implementation



# CORSIA Implementation Package

**Resolution A40-19: Consolidated statement of continuing ICAO policies and practices related to environmental protection. - Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)**

Whereas Assembly Resolution A38-18 decided to develop a global market-based measure (GMBM) scheme for international aviation, for decision by the 79th Session of the Assembly;

Recalling that Assembly Resolution A38-18 requested the Council, with the support of Member States, to identify the major issues and problems, including for Member States, and make a recommendation on a GMBM scheme that appropriately addresses them and key design elements, including a means to take into account special circumstances and respective capabilities, and the mechanisms for the implementation of the scheme from 2020 as part of a basket of measures which also include technological, operational improvements and sustainable aviation fuels to achieve ICAO's global aspirational goal;

Whereas Assembly Resolution A39-7 decided to implement a GMBM scheme in the form of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) as part of a basket of measures which also include aircraft technological, operational improvements and sustainable aviation fuels to achieve ICAO's global aspirational goal;

Recognizing that ICAO is the appropriate forum to address aviation from international aviation, and the significant amount of work undertaken by the Council, its Advisory Group on CORSIA (AGC), its Technical Advisory Body (TAB) and its Committee on Aviation Environmental Protection (CAEP) to support the implementation of CORSIA;

Welcoming the adoption of the first edition of Annex 16 - Environmental Protection, Volume IV - CORSIA, the provisions of which include Monitoring, Reporting and Verification (MRV) procedures for CORSIA;

Also welcoming the publication of the first edition of Environmental Technical Manual (ETM, Doc 9501), Volume IV - Procedures for demonstrating compliance with the CORSIA;

Welcoming the progress made for the development of ICAO CORSIA Implementation Elements, which are reflected in 18 ICAO documents directly referenced in Annex 16, Volume IV, containing materials that are approved by the Council, and are essential for the implementation of CORSIA;

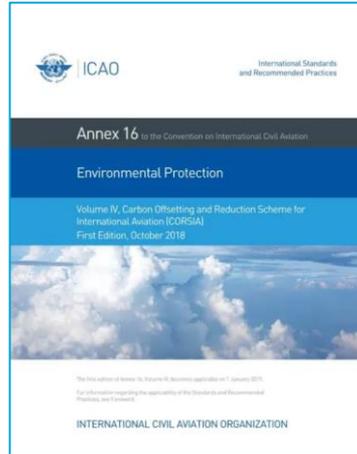
Also welcoming the establishment by the Council of the Technical Advisory Body (TAB), with the mandate to make recommendations to the Council on the CORSIA flight emissions unit;

Recognizing the importance of a coordinated approach for capacity building activities by ICAO and its Member States, in cooperation with the aviation industry, to support the implementation of CORSIA, in particular through the ICAO Aviation, Capacity Building and Training for CORSIA (ACT CORSIA) programme that includes the organization of seminars, development of outreach materials, and establishment of CORSIA partnerships among States;

Welcoming the increasing number of announcements by Member States of their intention to voluntarily participate in CORSIA in the pilot phase from 2021;

Recognizing that strong capacity building activities can facilitate the decision of Member States to voluntarily participate in CORSIA.

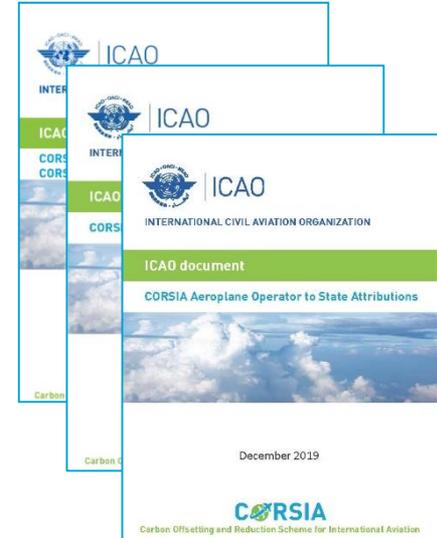
Assembly Resolution A40-19



Annex 16, Volume IV (CORSIA SARPs)



Doc 9501 (ETM), Vol. IV (CORSIA) (2nd edition)



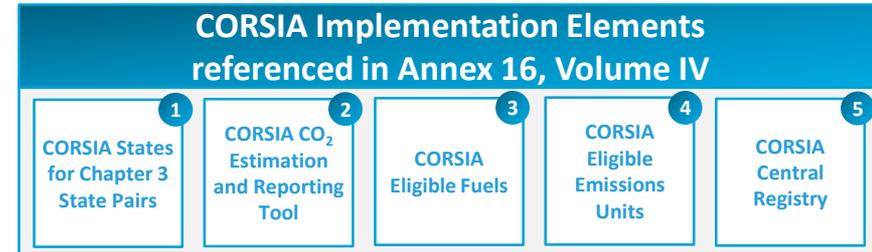
CORSIA Implementation Elements (ICAO documents)



## CORSIA Implementation Elements

- 5 CORSIA Implementation Elements...
- ... reflected in 14 ICAO documents

- Directly referenced in Annex 16, Volume IV
- Contain material approved by the ICAO Council for publication by ICAO to support Annex 16, Volume IV, and essential for the implementation of CORSIA



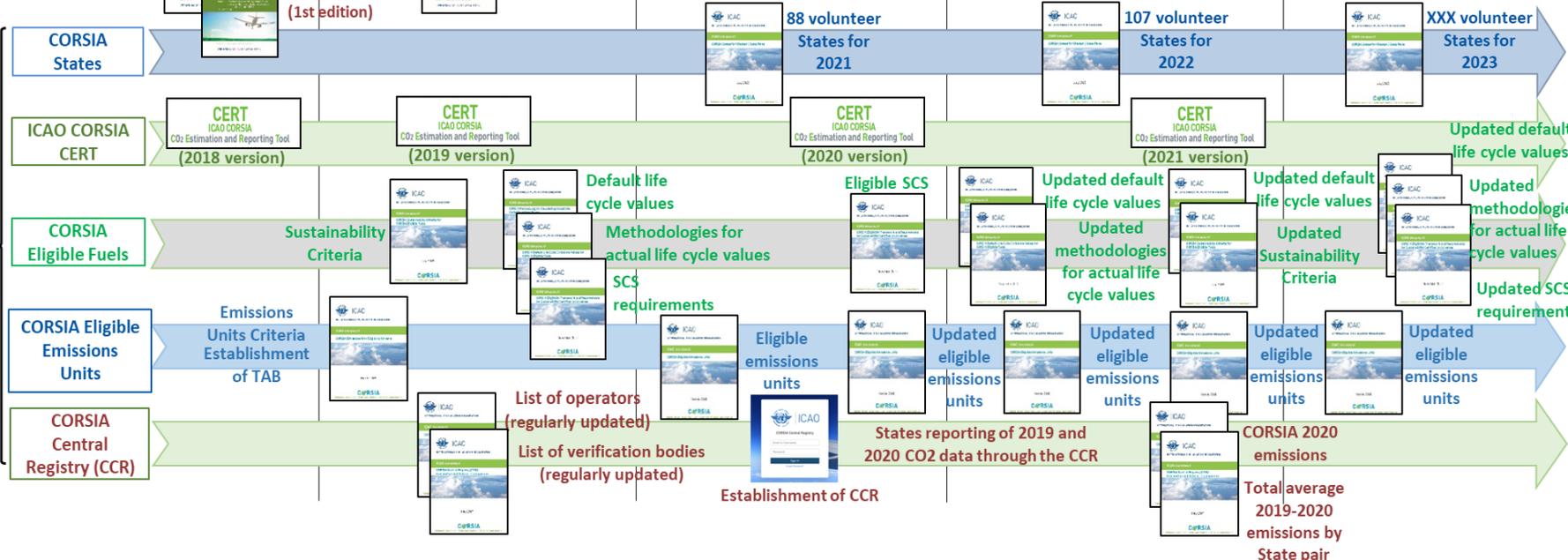


2018 → 2019 → 2020 → 2021 → 2022 →

CORSIA MRV started on 1 January 2019 → CORSIA Pilot Phase (2021 to 2023)

CORSIA SARPs (Annex 16, ETM, Volume IV) | Annex 16, Vol. IV (1st edition) | ETM, Vol. IV (1st edition) | ETM, Vol. IV (2nd edition) | Updates of Annex 16, Vol. IV and ETM, Vol. IV under review

CORSIA Implementation Elements



**CORSIA Implementation is On Track!**



## ESAF/WACAF States' CORSIA Voluntary Participation for 2023

Benin	Botswana	Burkina Faso
Cameroon	Côte d'Ivoire	Democratic Republic of the Congo
Equatorial Guinea	Gabon	Gambia
Ghana	Kenya	Madagascar
Mali	Namibia	Nigeria
Rwanda	South Sudan	Uganda
United Republic of Tanzania	Zambia	Zimbabwe

21 ESAF/WACAF States volunteered to join CORSIA for 2023



## ESAF/WACAF States' reporting to CORSIA CCR

### Status as of 19 July 2022

- 43 ESAF/WACAF Member States have nominated CORSIA Focal Points with CCR accounts
- 21 ESAF/WACAF Member States have submitted 2019 CO<sub>2</sub> emissions data
- 17 ESAF/WACAF Member States have submitted 2020 CO<sub>2</sub> emissions data
- 19 ESAF/WACAF Member States have reported 2021 aeroplane operators
- 1 ESAF/WACAF Member States have reported 2021 accredited verification bodies

2 States are reporting the 2021 CO<sub>2</sub> emissions data  
Deadline for submission is 31 July 2022



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## Capacity Building for CORSIA Implementation



## 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

Seminars, Online Tutorials

Brochures, Leaflets, Videos

Frequently Asked Questions

CORSIA Monthly  
Newsletters



[www.icao.int.corsia](http://www.icao.int.corsia)



## ACT-CORSIA Buddy Partnerships

- Cornerstone of ACT-CORSIA to support States to prepare for CORSIA implementation
- No expertise or resources for training available at the start of CORSIA
- Technical experts from supporting States voluntarily helping CORSIA Focal Points of requesting States, by providing on-site training and closely monitoring the required actions
- Considerations on languages, time-zones/locations, existing relations





# ACT-CORSIA Buddy Partnerships

## 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 (April 2020 - 2021): 16 supporting States and 118 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 <sup>Phase III</sup> Assistance, Capacity-building and Training on CORSIA	
<b>AUSTRALIA</b>	<b>KENYA</b>
1. BRUNEI DARUSSALAM	1. RWANDA
2. INDONESIA	2. SEYCHELLES
3. MAURITIUS	3. SOUTH SUDAN
4. PAPUA NEW GUINEA	4. UGANDA
5. SRI LANKA	
6. THAILAND	<b>NEW ZEALAND</b>
	1. FIJI
<b>BRAZIL</b>	2. SAMOA
1. ANGOLA	3. SOLOMON ISLANDS
2. CAIRO VERDE	4. VANUATU
3. MOZAMBIQUE	
4. SAO TOME AND PRINCE	<b>NIGERIA</b>
	1. GAMBIA
<b>CANADA</b> (Facilitated by CASSO)	2. GHANA
1. ANTIGUA AND BARBUDA	3. LIBERIA
2. BARBADOS	4. SIERRA LEONE
3. GUYANA	5. SUDAN
4. HAITI	
5. JAMAICA	<b>REPUBLIC OF KOREA</b>
6. SURINAME	1. LAO PEOPLE'S D. R.
7. TRINIDAD AND TOBAGO	2. MONGOLIA
	3. PAKISTAN
<b>CANADA / FRANCE</b>	4. PHILIPPINES
1. BENIN	5. VIETNAM
2. BURKINA FASO	
3. BURUNDI	<b>QATAR</b>
4. CAMEROON	1. SAUDI ARABIA
5. CENTRAL AFRICAN REPUBLIC	2. IRAN
6. CHAD	3. KUWAIT
7. CONGOS	4. KUWAIT
8. CONGO	5. LIBYA
9. DJIBOUTI	6. OMAN
10. D. R. OF CONGO	
11. GABON	<b>SINGAPORE</b>
12. GUINEA	1. COOK ISLANDS
13. MADAGASCAR	2. KIRIBATI
14. MALI	3. MARSHALL ISLANDS
15. MAURITANIA	4. PALAU
16. MAURITIUS	5. TONGA
17. NIGER	6. TUVALU
18. SENEGAL	
19. TOGO	<b>SOUTH AFRICA</b>
	1. BOTSWANA
<b>FRANCE</b> (Facilitated by ACAD)	2. ESWATINI
1. ALGERIA	3. LESOTHO
2. COTE D'IVOIRE	4. MALAWI
3. MOROCCO*	5. NAMIBIA
4. SAUDI ARABIA*	6. ZAMBIA
5. TUNISIA*	7. ZIMBABWE
<b>GERMANY</b>	<b>SPAIN</b> (Facilitated by COCESNA)
1. ALBANIA	1. BELIZE*
2. ARMENIA	2. BOLIVIA
3. AZERBAIJAN	3. COSTA RICA*
4. BELARUS	4. CUBA
5. GEORGIA	5. EL SALVADOR*
6. KAZAKHSTAN	6. EQUATORIAL GUINEA
7. NORTH MACEDONIA	7. GUATEMALA*
8. REPUBLIC OF MOLDOVA	8. HONDURAS*
9. SERBIA	9. MEXICO
10. TAJIKISTAN	10. NICARAGUA*
11. TURKMENISTAN	11. PERU
	12. URUGUAY
<b>ITALY</b>	
1. BAHAMAS	<b>USA</b>
2. COLOMBIA	1. ARGENTINA
3. ERITREA	2. DOMINICAN REPUBLIC
4. ETHIOPIA	3. ECUADOR
5. PAKISTAN	4. PANAMA
6. SOMALIA	
7. UNITED REPUBLIC OF TANZANIA	
<b>JAPAN</b>	
1. AFGHANISTAN	
2. BANGLADESH	
3. BRITAIN	
4. CAMBODIA	
5. MALAYSIA	
6. MYANMAR	



**16 SUPPORTING STATES**  
**118 REQUESTING STATES**



## ACT-CORSIA Buddy Partnerships – ESAF/WACAF

Kenya	Nigeria	South Africa	Angola
Cabo Verde	Mozambique	Sao Tome and Principe	Benin
Burkina Faso	Burundi	Cameroon	Central African Republic
Chad	Comoros	Congo	Côte d'Ivoire
Democratic Republic of the Congo	Djibouti	Gabon	Guinea
Madagascar	Mali	Mauritania	Mauritius
Niger	Senegal	Togo	Eritrea
Ethiopia	Somalia	United Republic of Tanzania	Rwanda
Seychelles	South Sudan	Uganda	Gambia
Ghana	Liberia	Sierra Leone	Botswana
Eswatini	Lesotho	Malawi	Namibia
Zambia	Zimbabwe	Equatorial Guinea	

3 States are participating as supporting States  
 44 States are participating as requesting States



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## The Way Forward



## CORSIA - Timeline and Actions (2022)

Timeline	Responsibility	Action
1 May 2022 to 31 July 2022	State	Conduct order of magnitude check of verified Emissions Report
31 July 2022	State	Submit aggregate 2021 CO <sub>2</sub> emissions data to ICAO through the CCR
1 August 2022	State	Obtain and use the ICAO document entitled “ <i>CORSIA States for Chapter 3 State Pairs</i> ” applicable for the 2023 compliance year
31 October 2022	State	Obtain and use the Sector’s Growth Factor (SGF) for 2021 from the ICAO document entitled “ <i>CORSIA Annual Sector’s Growth Factor (SGF)</i> ”
30 November 2022	State	Submit to ICAO through the CCR: <ul style="list-style-type: none"><li>- List of operators attributed to the State</li><li>- List of verification bodies accredited in the State</li></ul>
30 November 2022	State	Calculate and inform operators of offsetting requirements for 2021
31 December 2022	ICAO	Publish list of aeroplane operators and list of verification bodies



## CORSIA Periodic Review

- Periodic review of the CORSIA every three years starting in 2022
- Periodic review will allow the Council to make informed decisions on whether it is necessary to make adjustments to the next phases of the scheme
- Special review by the end of 2032 on termination of the scheme, its extension or any other improvements of the scheme beyond 2035

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Phases	Pilot Phase (voluntary, 3 years)		First Phase (voluntary, 3 years)			Second Phase (all non-exempted States, 9 years)									
Compliance cycles	Cycle 1 (3 years)		Cycle 2 (3 years)			Cycle 3 (3 years)			Cycle 4 (3 years)			Cycle 5 (3 years)			
Periodic reviews		Review 1			Review 2			Review 3			Review 4	Special			Review 5
Assemblies		A41			A42			A43			A44				A45



## 2022 CORSIA Periodic Review

- **In June 2020, the Council decided to safeguard against inappropriate economic burden on aeroplane operators**
  - During the CORSIA pilot phase, to use 2019 emissions values for 2020 emissions, for CORSIA design features, including the CORSIA baseline.
- **In March 2021, the Council agreed on the process and TOR for 2022 CORSIA periodic review**
  - SL consultation followed to collect States' experiences regarding CORSIA implementation
- **Information on COVID-19 impacts and 2022 CORSIA periodic review are keep updated on the dedicated website**
  - <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-and-Covid-19.aspx>

➔ The 2022 Assembly will consider the outcome of the 2022 CORSIA periodic review, including the definition of the CORSIA baseline after the pilot phase



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THANK YOU