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Seventh AFI Directors-General of Civil Aviation (DGCA/7)

Niamey, Niger 20 July 2018

WP/16 - PPT

CORSIA

Monitoring, Reporting and Verification (MRV) provisions

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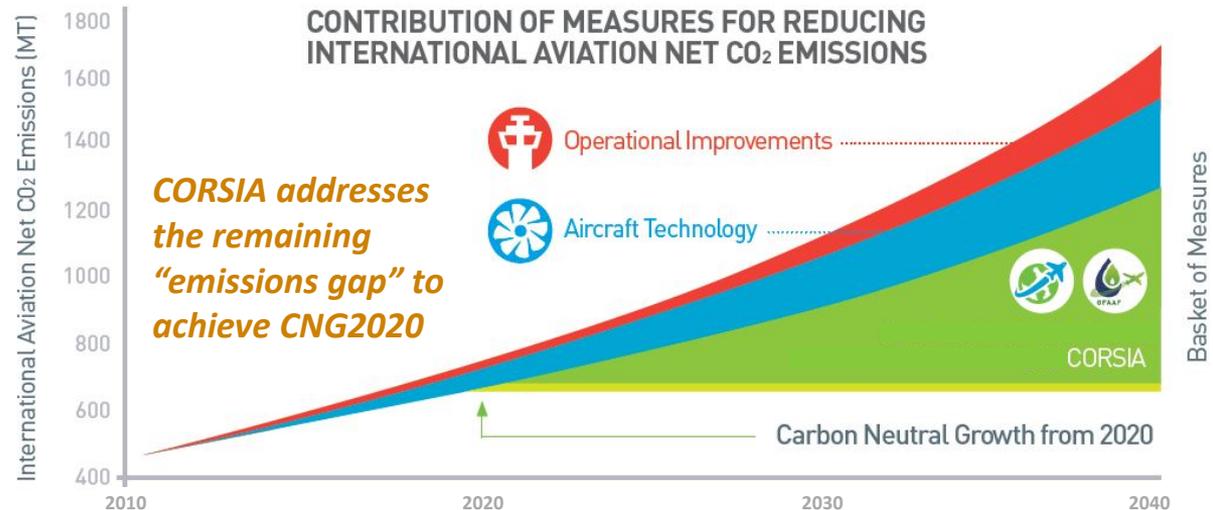


CORSIA

Adopted through Assembly Resolution 39-3 and is the **first global MBM** scheme 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





ICAO Policy



Chicago Convention
ICAO Assembly Resolutions
A39-1, A39-2 and A39-3:
Consolidated statement of continuing ICAO policies and practices related to environmental protection

ICAO Standards and Recommended Practices (SARPs)



Annex 16 - Environmental Protection:
Volume I, Aircraft Noise
Volume II, Aircraft Engine Emissions
Volume III, Aeroplane CO₂ Emissions
Volume IV, CORSIA **NEW**

ICAO Guidance



Various guidance on noise, LAQ and climate change, e.g.:
Environmental Assessment of Proposed ATM Operational Changes (Doc 10031)
Environmental Technical Manual Volume IV (Doc 9501) **NEW**



CORSIA Package

1. Standards and Recommended Practices (SARPs) – Annex 16, Volume IV
 - Mandatory actions by States and operators (the “what” and “when”) to implement CORSIA
 - Adopted in June 2018
2. Environmental Technical Manual (ETM) Volume IV
 - Guidance on the process (the “how”) to implement CORSIA
3. Implementation Elements
 - Directly referenced in Annex 16, Volume IV, and essential information for the implementation of CORSIA



Assembly Resolution A39-3

- Key design features of CORSIA:
 - Phased implementation (paragraph 9)
 - Emissions coverage: route-based approach (paragraph 10)
 - Offsetting requirements (paragraph 11)
 - New entrants (paragraph 12)
 - Technical exemptions (paragraph 13)
 - Review mechanism (paragraphs 9g and 18)
- CORSIA implementation features:
 - Monitoring, Reporting and Verification (paragraphs 15, 20a and 20b)



72 States (75.95% of international aviation activity) to participate in the pilot phase
(As of 29 June 2018)

Phased Implementation



Second phase participation criteria:

- 90% of global RTK
- 0.5% of RTK

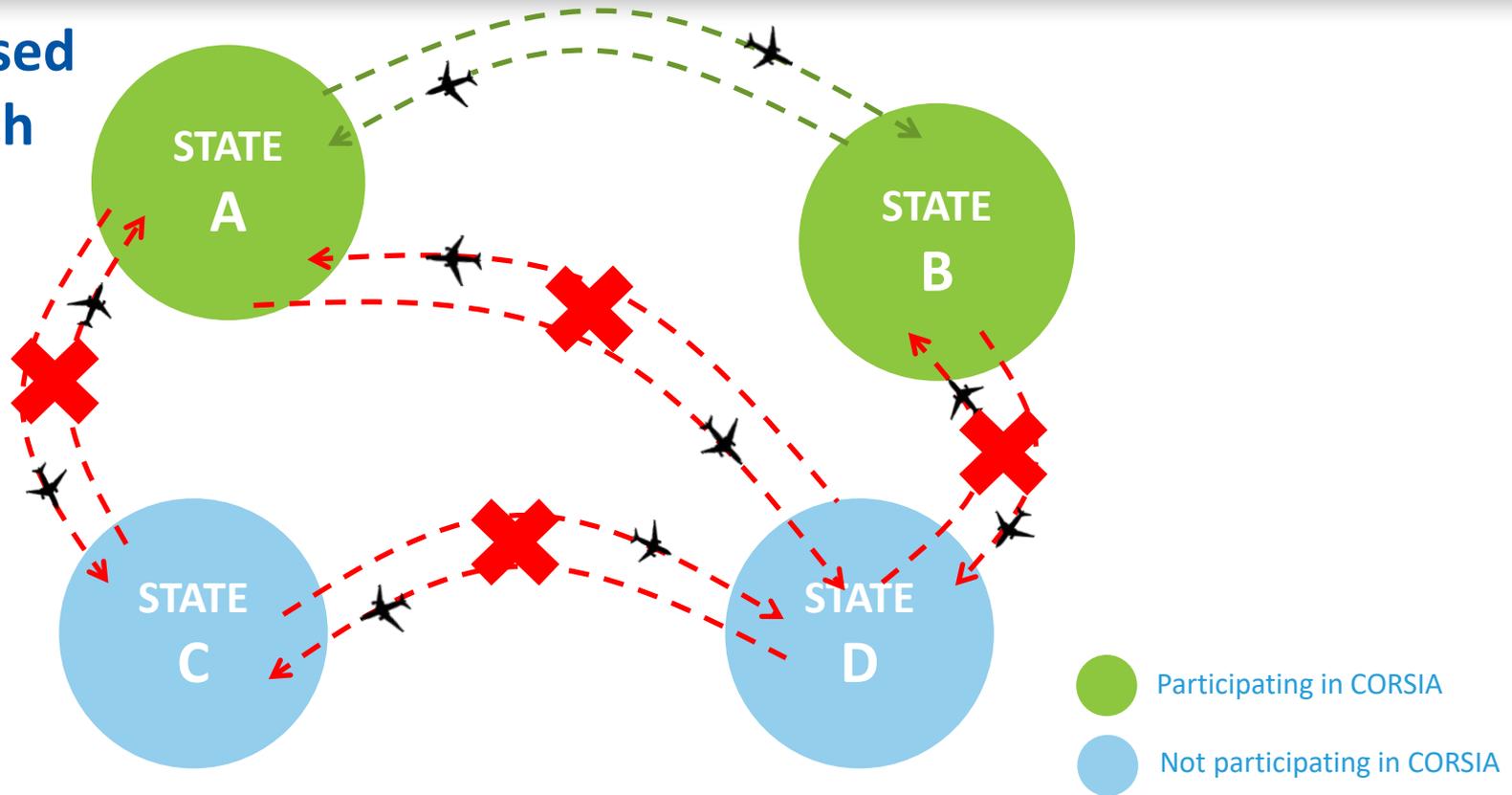
Exemptions:

- LDCs, LLDCs, SIDS

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



Route-based approach

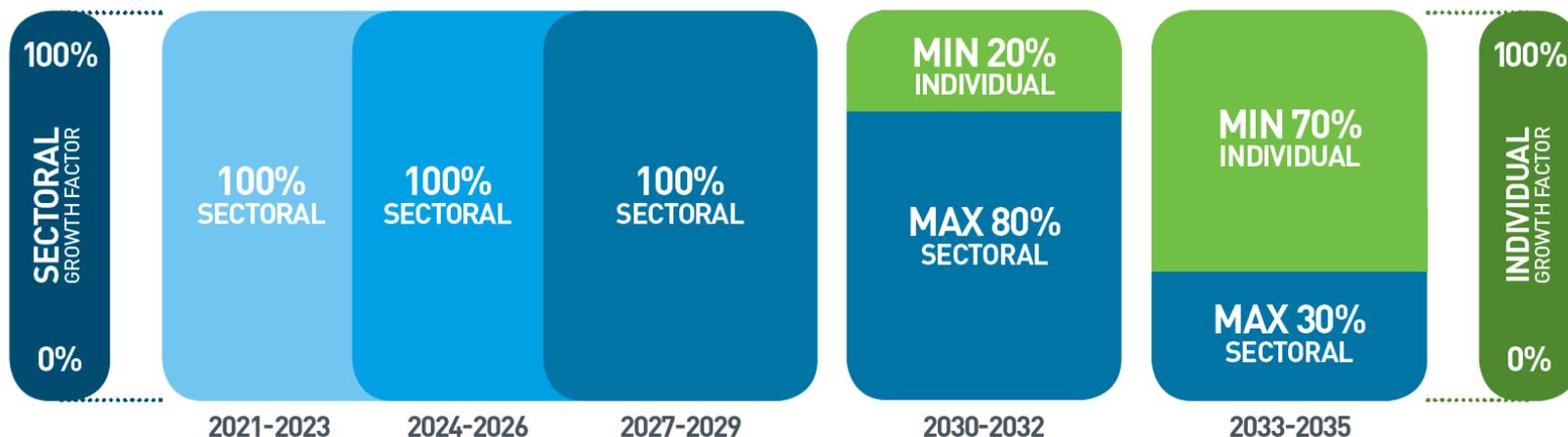




Offsetting requirements

Operator's annual emissions X Growth Factor = CO₂ offset requirements

The Growth Factor changes every year taking into account both the sectoral and the individual operator's emissions growth. The Growth Factor is the percent increase in the amount of emissions from the baseline to a given future year, and is calculated by ICAO.





Technical exemptions:

- Emissions from aeroplane operators emitting less than 10 000 metric tonnes of CO₂ emissions from international aviation per year
- Emissions from aircraft with less than 5 700 kg of Maximum Take Off Mass (MTOM)
- Emissions from humanitarian, medical and firefighting operations

New entrants:

- Exempted for the first 3 years or until their annual emissions exceed 0.1% of total 2020 CO₂ emissions from international flights, whichever comes first.



Review mechanism

Council to make informed recommendations to the Assembly on whether it is necessary to make adjustments to the next phases of the scheme

- Periodic review of the CORSIA every three years starting in 2022
- 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 <i>(voluntary, 3 years)</i>			First Phase <i>(voluntary, 3 years)</i>			Second Phase <i>(all non-exempted States, 9 years)</i>								
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



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<https://www.youtube.com/watch?v=D0tAy0apYII>

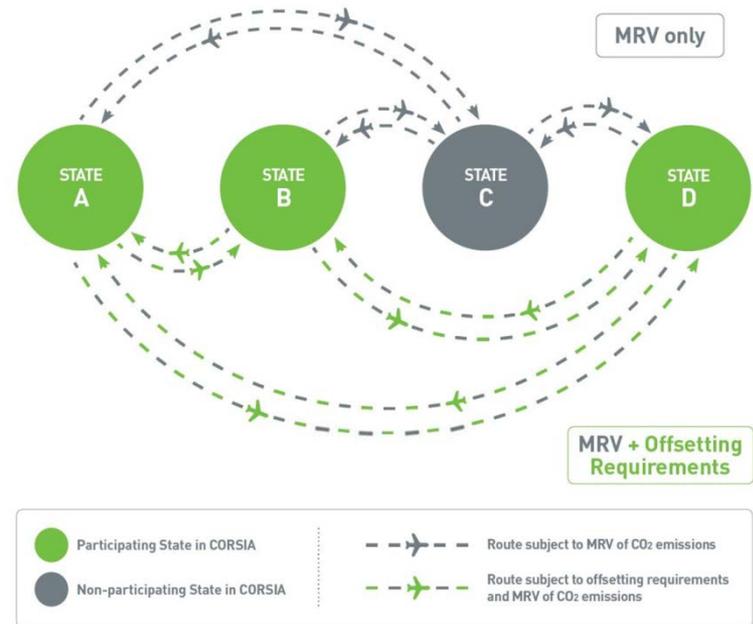


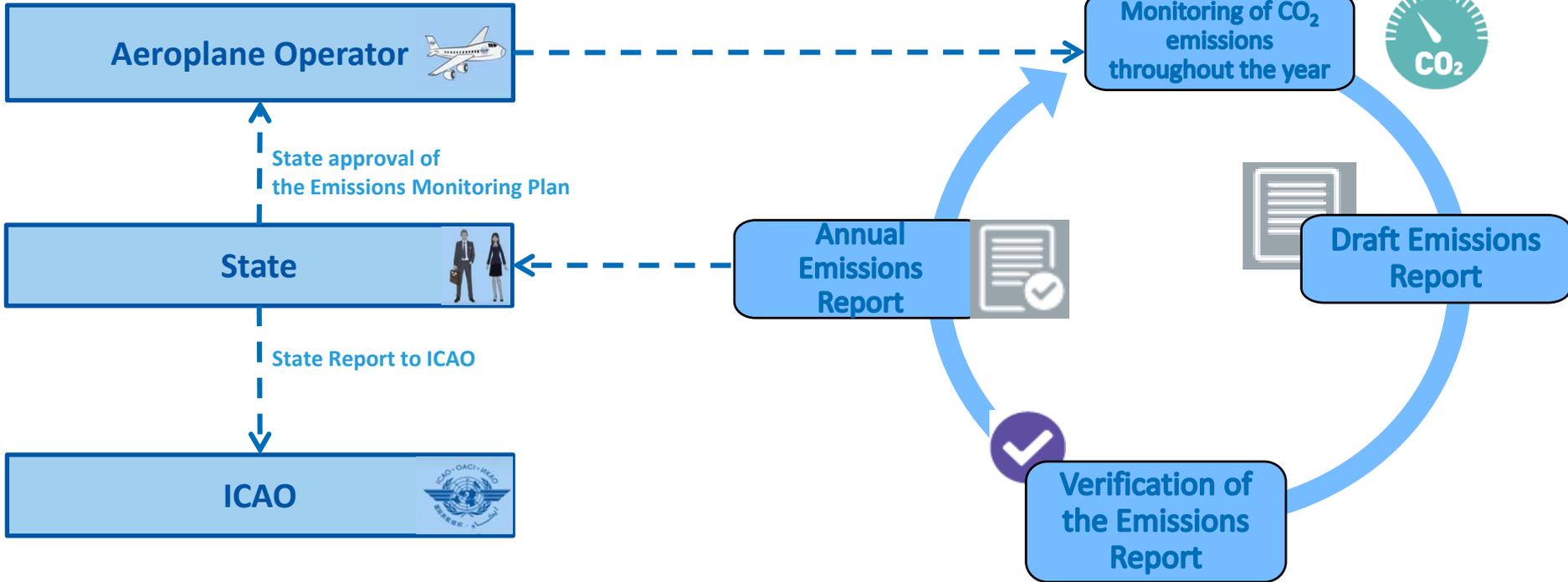
Monitoring, Reporting and Verification (MRV) is the backbone for the successful implementation of CORSIA, which requires:

- Reliable information on CO₂ emissions and on offsetting requirements

ALL ICAO MEMBER STATES with aeroplane operators conducting international flights are required to monitor, report and verify CO₂ emissions from these flights every year from 2019, independent of their participation in CORSIA.

ICAO MEMBER STATES PARTICIPATING IN CORSIA need to ensure that their aeroplane operators comply with the CORSIA offsetting requirements every three years (starting in 2021), in addition to annual CO₂ MRV.





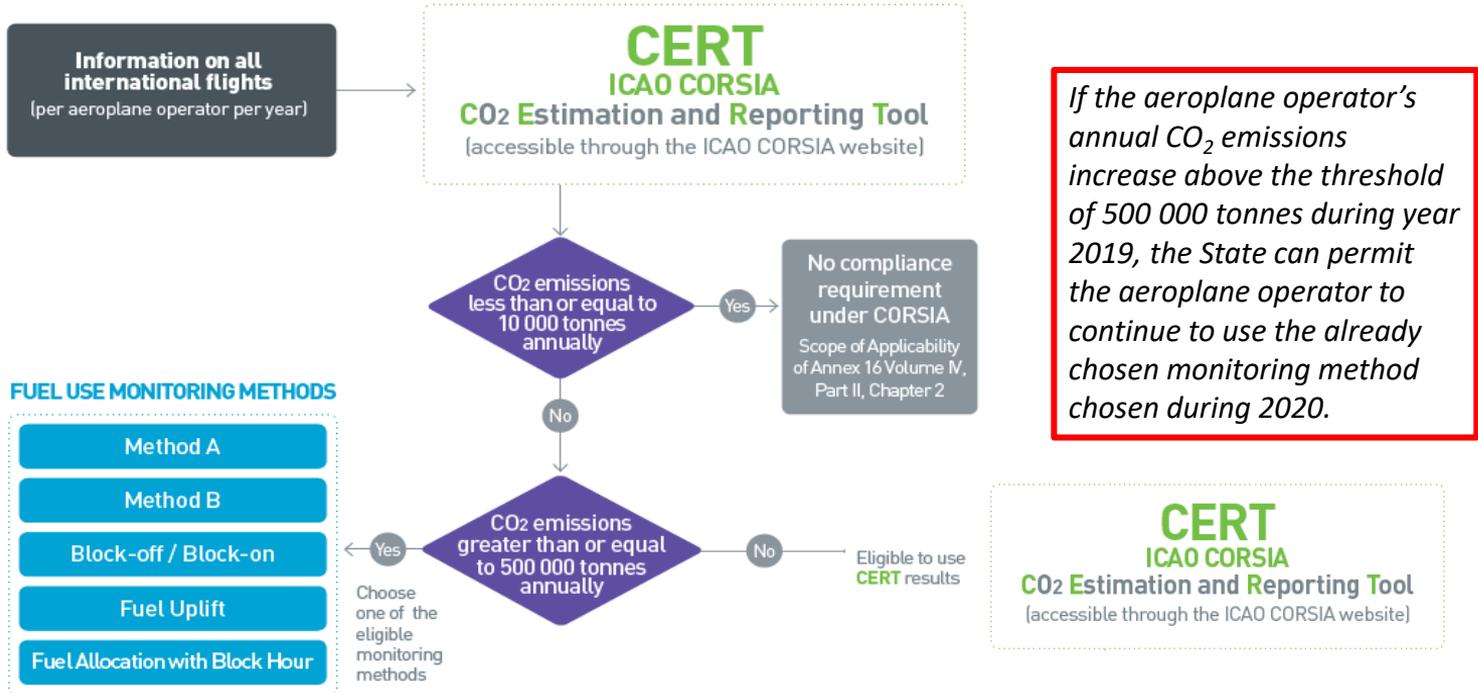


Monitoring of CO₂ Emissions – Emissions Monitoring Plan

- An Emissions Monitoring Plan (EMP) is a collaborative tool between the State and the aeroplane operator.
- The EMP identifies how to monitor and report CO₂ emissions information which the State requires.
- An aeroplane operator shall submit an EMP to the State to which it is attributed for approval.

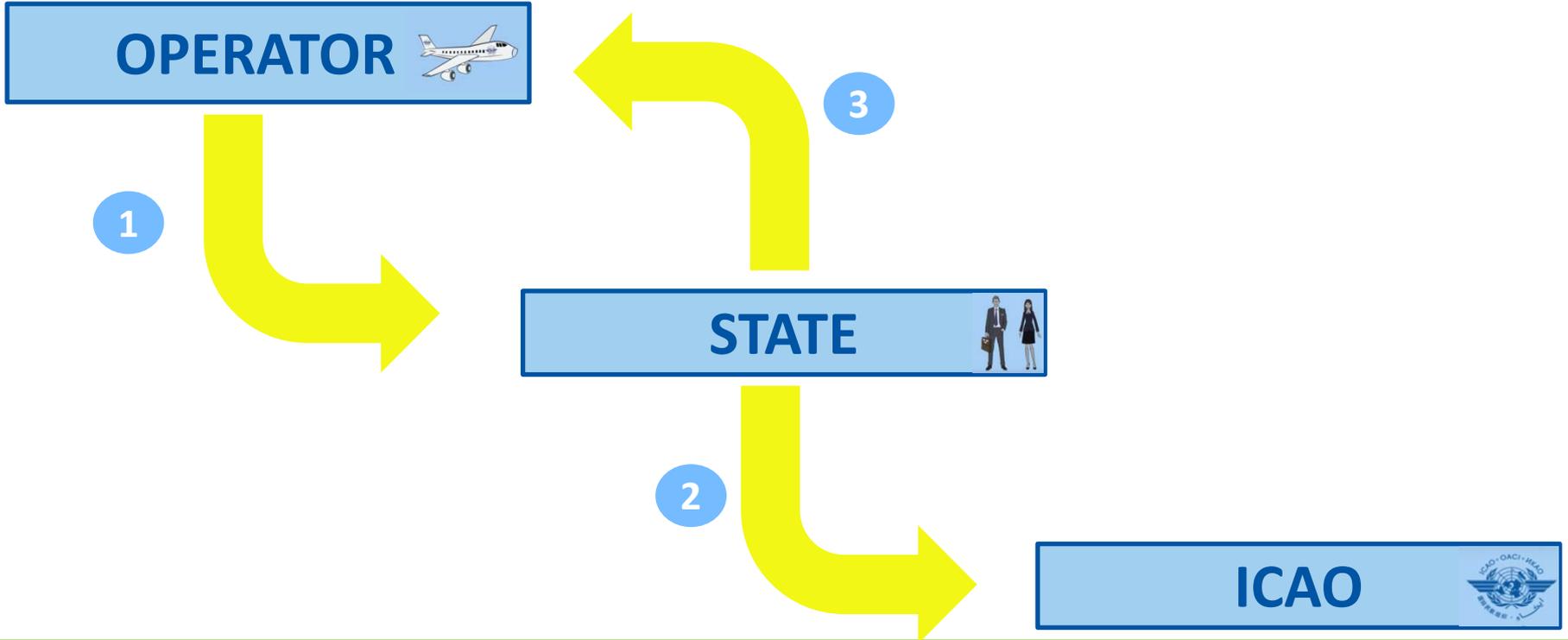


Emissions Monitoring Options (for 2019 & 2020)





Reporting of CO₂ Emissions





Reporting of CO₂ Emissions

- CORSIA requires aeroplane operators conducting international flights^(*) to report on related CO₂ emissions information
 - First reporting year: **2020** (for data related to 2019 international flights)
 - Frequency of reporting: on an annual basis
 - Reporting format: **Emissions Report**
 - Reporting recipient: State

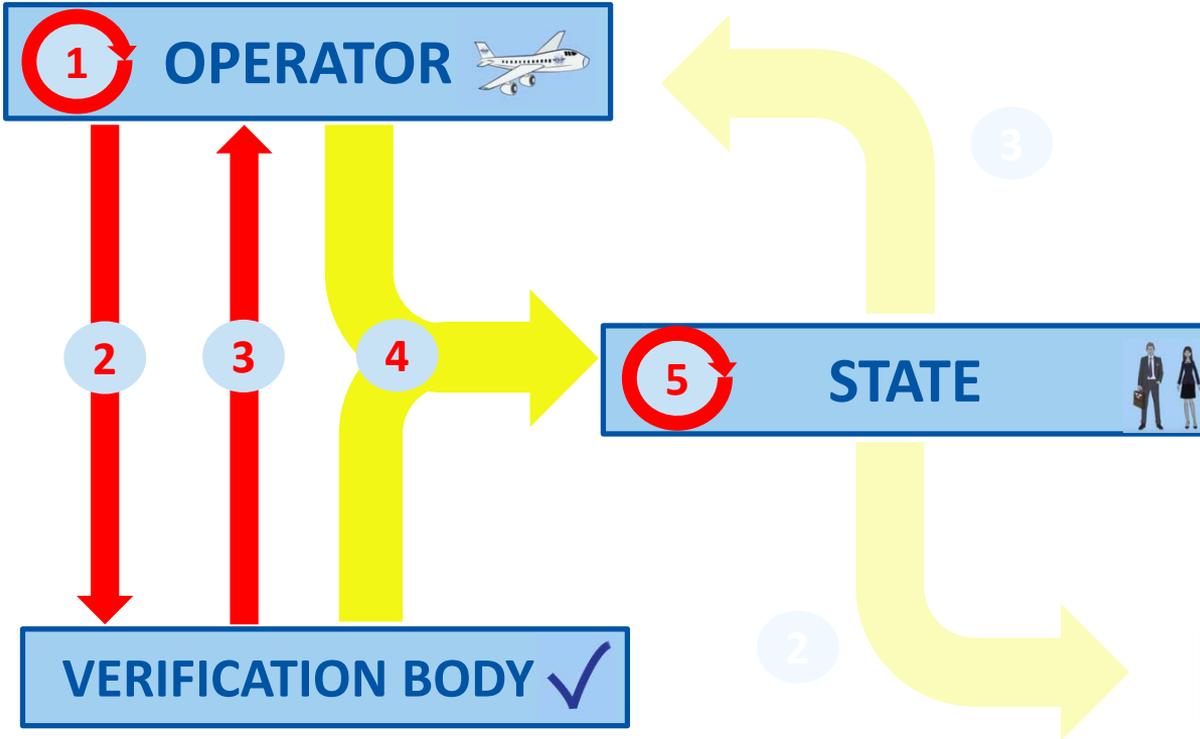
(*) aeroplane operators that produce annual CO₂ emissions greater than 10 000 tonnes from international flights conducted by aeroplanes with a maximum certificated take-off mass greater than 5 700 kg (with the exception of humanitarian, medical and firefighting flights)

Reference: Annex 16, Volume IV, Part II, Chapter 2, 2.3.1



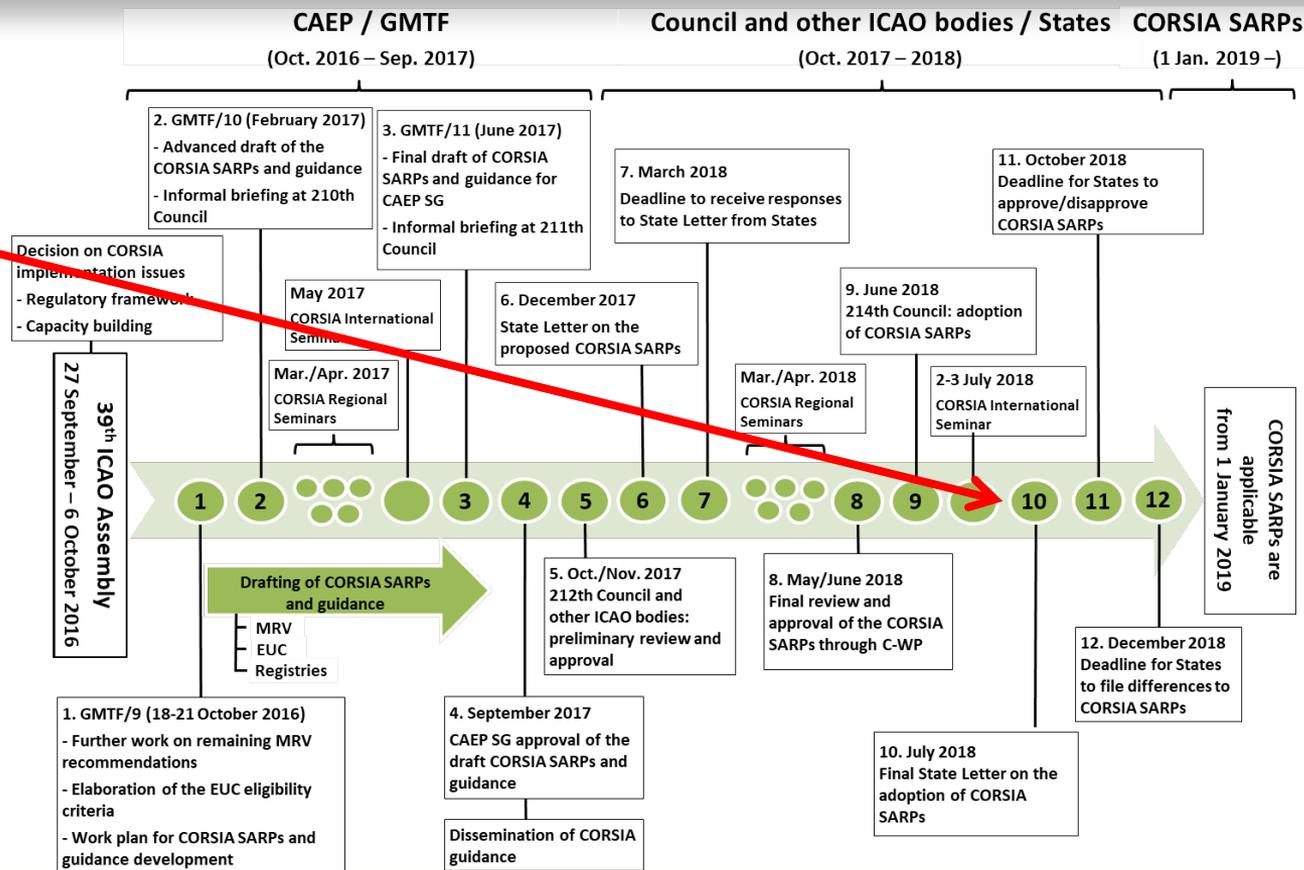
Verification of CO₂ Emissions

- 1 Internal pre-verification
- 2 Aeroplane operator submits Emissions Report to an accredited verification body
- 3 Verification body produces Verification Report
- 4 Aeroplane operator and verification body submit Emissions Report and Verification Report to State
- 5 State's order of magnitude check of Emissions Report





We are here!





Progress on Capacity Building

ICAO events related to CORSIA since 39th Assembly

- 2017 ICAO Regional Seminars on CORSIA (5 seminars, March – April 2017)
- 2017 ICAO HQ Seminar on CORSIA (Montréal, 10-11 May 2017)
- Additional CORSIA seminars, with support by AFCAC (Nigeria and Zambia, August 2017)
- ICAO Seminar on Carbon Markets (Montréal, 7-9 February 2018)
- 2018 ICAO Regional Seminars on CORSIA (5 seminars, March – April 2018)
- 2018 ICAO HQ Seminar on CORSIA (Montréal, 2-3 July 2018)



Next steps: ACT-CORSIA

- CORSIA-related SARPs are adopted by the ICAO Council on 27 June 2018 - it's time to ensure that all States will be ready to implement
- ICAO Assistance, Capacity-building and Training on **CORSIA (ACT-CORSIA)** programme – Launched on 2 July 2018!



[ENV Homepage](#)[CORSIA Homepage](#)[CORSIA IMPLEMENTATION](#)[ACT CORSIA](#)

Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)

CORSIA»» IMPLEMENTATION

- Assembly Resolution A39-3
- SARPs - Annex 16 Volume IV
- Environmental Technical Manual - Volume IV
 - » Templates
- 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)

Additional Material for CORSIA Implementation



ACT »» CORSIA

- CORSIA Buddy Partnerships
- Example Regulatory Framework
- Frequently Asked Questions
- Brochure and Leaflets
- Videos
- Seminars
- Online Tutorials
- Background information





ACT-CORSIA: Focus Areas

- 1) Development and approval of Emissions Monitoring Plans**
 - 2) Establishment of national/regional regulatory frameworks**
- ICAO coordinated initiative
 - Different cooperation modalities/agreements to be undertaken amongst ICAO Member States for capacity-building and assistance under the umbrella of ICAO



ACT-CORSIA: Next Steps

- Council endorsed a plan to provide direct and tailored assistance on CORSIA implementation to States across regions
- States are in different stages of readiness to implement CORSIA
- Some States are ready to support other States
- Buddy partnerships among States are crucial!
 - Assistance to approximately 90 States (subject to financial and/or in-kind contributions from donor States - State letter ENV 1/1.1 - 18/60)
 - Technical experts, either offered by donor States or hired by ICAO, will be trained in ICAO and work with CORSIA focal points of the support receiving States to provide on-site training and close follow-up (Sep 2018 to early 2019)



ACT-CORSIA: Summary

- Capacity-building and assistance are the backbone of the CORSIA Implementation success
- Not only States need to be ready but also operators need further assistance to prepare for the CORSIA MRV requirements from 1 January 2019
- ICAO and IATA are in continuous cooperation to provide capacity-building



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Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



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