



Session 1: Overview of CORSIA and Administrative Aspects

ICAO Secretariat

C  **RSIA**

ICAO Policies, SARPs, and Guidance

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)



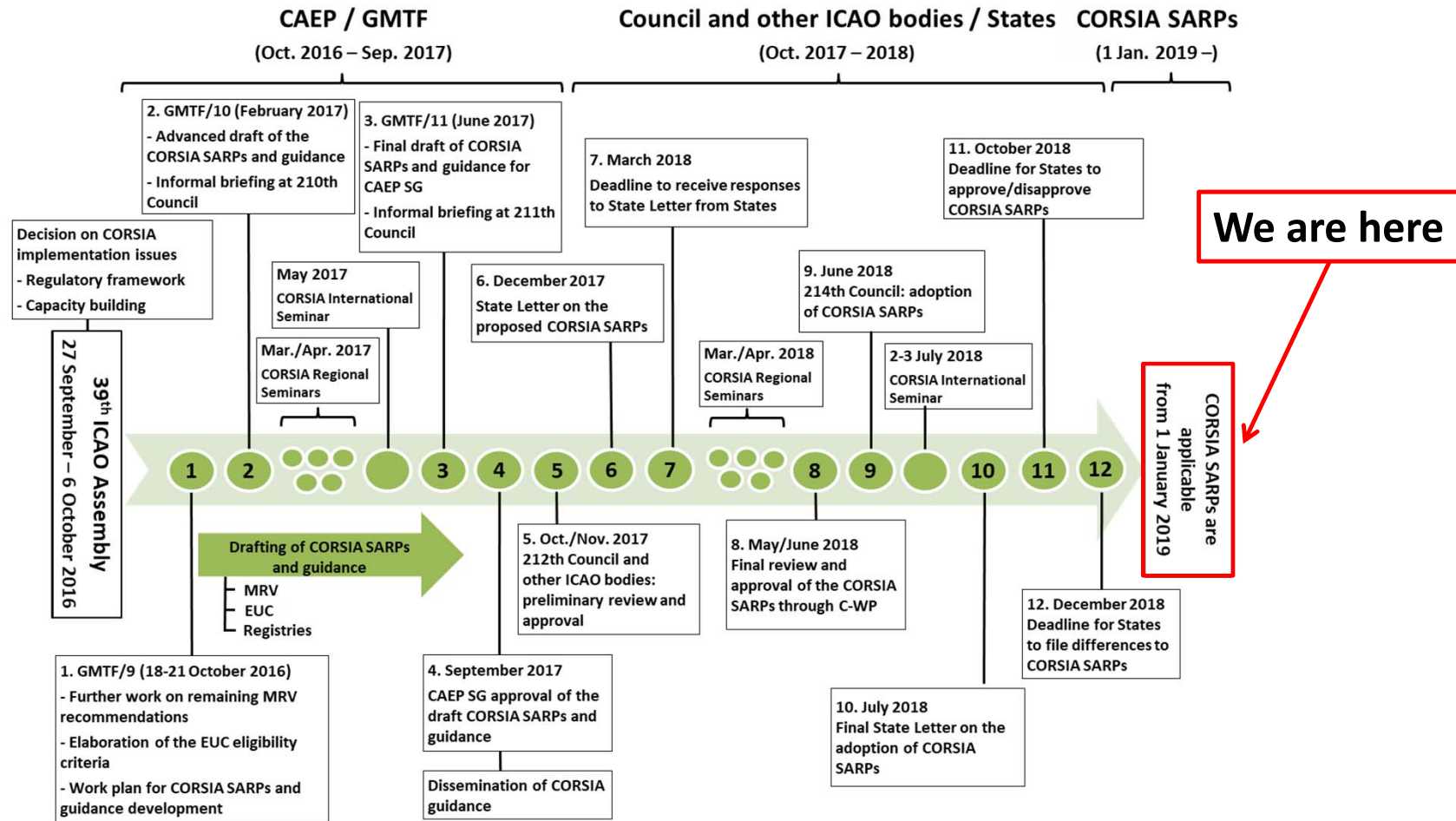
Annex 16 - Environmental Protection:
Volume I, Aircraft Noise
Volume II, Aircraft Engine Emissions
Volume III, Aeroplane CO₂ Emissions
Volume IV, CORSIA

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)

Timeline of CORSIA SARPs and Guidance Development





CORSIA Implementation Components – See Leaflet No. 1

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

Structure of Annex 16, Volume IV

Part I. DEFINITIONS, ABBREVIATIONS AND UNITS

Part II. CARBON OFFSETTING AND REDUCTION SCHEME FOR INTERNATIONAL AVIATION

CHAPTER 1. Administration

CHAPTER 2. Monitoring, Reporting and Verification

CHAPTER 3. CO₂ Offsetting Requirements and Emissions Reductions from CORSIA Eligible Fuels

CHAPTER 4. Emission Units

APPENDICES

APPENDIX 1. Administrative Processes

APPENDIX 2. Fuel Use Monitoring Methods

APPENDIX 3. CO₂ Emissions Estimation and Reporting Methods and Tools

APPENDIX 4. Emissions Monitoring Plans

APPENDIX 5. Reporting

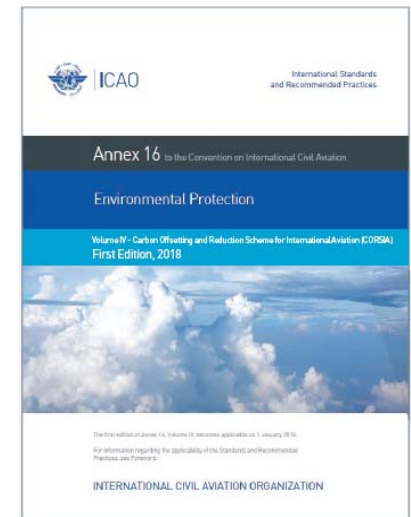
APPENDIX 6. Verification

ATTACHMENTS

Attachment A. Attribution Processes

Attachment B. Applicability of MRV Requirements to International Operations

Attachment C. Processes for Fuel Use Monitoring



CHAPTER 1. INTRODUCTION

CHAPTER 2. GENERAL GUIDELINES

- 2.1 Applicability of MRV of Annual CO₂ Emissions from an Aeroplane Operator
- 2.2 Applicability of CO₂ Offsetting Requirements

CHAPTER 3. GUIDELINES ON MONITORING, REPORTING AND VERIFICATION

- 3.1 Monitoring
- 3.2 Reporting
- 3.3 Verification

CHAPTER 4. GUIDELINES ON CALCULATION OF OFFSETTING REQUIREMENTS

- 4.1 Calculation of Offsetting Requirements During the 2021-2030 Period
- 4.2 Calculation of Offsetting Requirements During the 2031-2035 Period
- 4.3 Baseline Emissions from 2019-2020 for Calculation of Offsetting Requirement
- 4.4 Sector Growth Factor

CHAPTER 5. ADMINISTRATIVE PARTNERSHIPS UNDER CORSIA

- 5.1 Example of a Bilateral Agreement

APPENDIX 1.

STANDARDIZED EMISSIONS MONITORING PLAN AND REPORTING TEMPLATES





- The CORSIA Implementation Elements will be made available in separate documents, due to the following characteristics:
 - Nature of the information
 - Availability of the information at the time of adoption
 - Periodicity of the information updates
 - Users of the information
- Different Implementation Elements will become available at different points in time:
 - For example, the first version of the CERT is already available, while the decision on CORSIA Eligible Emissions Units are expected later
- Once completed, they are considered for approval by the Council and made available on the ICAO CORSIA webpage



Five Implementation Elements:

- Reflected in 14 ICAO documents
- Directly referenced in Annex 16, Volume IV
- Will contain material approved by the ICAO Council for publication by ICAO to support the implementation of CORSIA

3 ICAO CORSIA Implementation Elements
(Directly referenced in the SARPs)

Five ICAO CORSIA Implementation Elements will be reflected in fourteen ICAO documents directly referenced in the Volume IV of Annex 16 and will contain material to be approved by the ICAO Council for publication by ICAO to support such Annex. These publications will be made available on the ICAO CORSIA website after they are approved by the ICAO Council.

- 1 CORSIA STATES FOR CHAPTER 3 STATE PAIRS**
 - **Description:** States' participation in CORSIA, to define route-based emissions coverage every year from 2021.
 - **Expected availability:** 30 July 2020.
 - **Periodicity of updates:** updated annually.
- 2 ICAO CORSIA CO₂ ESTIMATION AND REPORTING TOOL (CERT)**
 - **Description:** ICAO tool for simplified monitoring, reporting and verification (MRV) procedures.
 - **Availability:** 2018 (estimation functionality only).
 - **Periodicity of updates:**
 - 2019 version (reporting function to be added).
 - 2021 version (reporting by route-coverage).
- 3 CORSIA ELIGIBLE FUELS**
 - **Description:** Information related to CO₂ emissions reduction from CORSIA Eligible Fuels.
 - **Expected availability:** No later than 2021.
 - **Periodicity of updates:** as needed (e.g., updates of default life-cycle methodologies/ default life cycle values for new fuels and new eligible certification schemes).
- 4 CORSIA ELIGIBLE EMISSIONS UNITS**
 - **Description:** Emissions units criteria and eligible emissions units programmes.
 - **Expected availability:** No later than 2021.
 - **Periodicity of updates:** Periodic updates of the list of eligible programmes.
- 5 CORSIA CENTRAL REGISTRY (CCR)**
 - **Description:** Information to be made available from the CORSIA central registry, to allow implementation of CORSIA.
 - **Expected availability:** 2020.
 - **Periodicity of updates:**
 - From 2020, annual update of total CO₂ emissions data.
 - From 2025, triennial update of information on emissions units and compliance.

The information on actions for CORSIA implementation contained in this leaflet is based on the First Edition of Annex 16, Volume IV (Standards and Recommended Practices relating to CORSIA) that became applicable on 1 January 2019, and the First Edition of the Environmental Technical Manual (Doc 9561), Volume IV. All reasonable efforts have been made to ensure accuracy, but ICAO makes no warranties in relation to the information contained herein and assumes no responsibility or liability arising in connection with its use or misuse.



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ICAO Regional Workshop on CORSIA

CORSIA Administration – Annex 16, Part II, Chapter 1

The CORSIA logo, where the letter 'O' is replaced by a green globe with a blue aircraft flying over it. The letters 'C', 'R', 'S', 'I', and 'A' are in a bold, blue, sans-serif font.

CORSIA

Annex 16, Volume IV, Part II, Chapter 1 and Appendix 1:

- 1.1 Attribution of international flights to aeroplane operators
- 1.2 Attribution of an aeroplane operator to a State
- 1.3 State – Administrative Partnerships
- 1.4 Record keeping
- 1.5 Compliance periods and timeline (Appendix 1)



- Ensure completeness
 - Identify all applicable international flights
 - Emissions from all applicable international flights must be reported
- Avoid duplication
 - Each international flight is allocated to a single aeroplane operator
 - Each aeroplane operator is allocated to a single State

Attribution of International Flight to Operator

Attribution based on information in the flight plan form (see Doc 4444, ICAO model flight plan item 7 – Aircraft identification):

- ICAO designator, or
- Registration marks



If none of the above, attribution to the aeroplane owner

Reference: Annex 16, Volume IV, Part II, Chapter 1, paragraph 1.1.3

ICAO model flight plan form

FLIGHT PLAN PLAN DE VOL	
PRIORITY Priorité FF	ADDRESSEE(S) Destinataire(s)
FILING TIME Heure de dépôt	ORIGINATOR Expéditeur
SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR Identification précise du(des) destinataire(s) et/ou de l'expéditeur	
3 MESSAGE TYPE Type de message (FPL)	7 AIRCRAFT IDENTIFICATION Identification de l'aéronef
9 NUMBER Nombre	8 FLIGHT RULES Règles de vol
13 DEPARTURE AERODROME	10 EQUIPMENT Équipement
TIME	WAKE TURBULENCE CAT. Cat. de turbulence de sillage

Attribution of an aeroplane operator based on:

- ICAO designator, or
- Air operator certificate, or
- Place of juridical registration

Reference: Annex 16, Volume IV, Part II, Chapter 1, paragraph 1.2.4

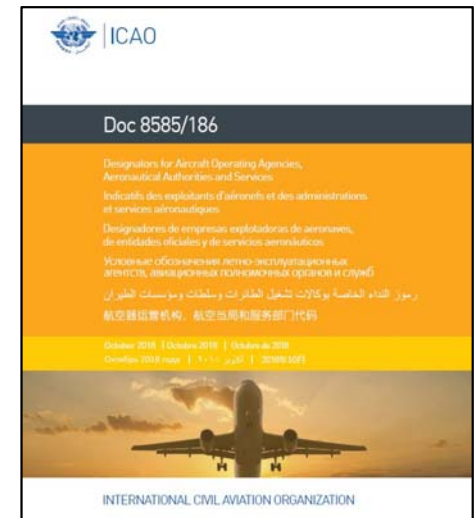
Each State shall submit to ICAO a list of aeroplane operators which are attributed to it – update regularly, as necessary

Reference: Annex 16, Volume IV, Part II, Chapter 1, paragraph 1.2.7

Recommendation: The State should use the ICAO document entitled “CORSIA Aeroplane Operator to State Attributions”

Reference: Annex 16, Volume IV, Part II, Chapter 1, paragraph 1.2.3

ICAO Doc 8585





- Delegation of administrative processes
 - A State may delegate administration processes to another State through an Administrative Partnership based on a bilateral agreement among the respective States.
 - A State shall **not** delegate enforcement of the requirements in this Volume, or their administrative tasks towards ICAO, to another State.

Reference: Annex 16, Volume IV, Part II, Chapter 1, paragraph 1.3.2



- **Aeroplane Operator**
 - Keep relevant records for a period of 10 years

Recommendation: The aeroplane operator should keep records relevant to its CO₂ emissions per State pair during the 2019-2020 period in order to cross-check its offsetting requirements calculated by the State during the 2030-2035 compliance periods.

- **State**
 - Keep records relevant to the Aeroplane Operator's CO₂ emissions per State pair during the period of 2019-2020 in order to calculate the Aeroplane Operator's offsetting requirements during the 2030-2035 compliance periods.

Reference: Annex 16, Volume IV, Part II, Chapter 1, paragraphs 1.4.1, 1.4.2, 1.4.3

Compliance Periods and Timeline

- Five 3-year compliance periods starting in 2021:
 - 2021-2023
 - 2024-2026
 - 2027-2029; 2030-2032; 2033-2035
- Appendix 1 on timelines:
 - Summarizes administrative roles and responsibilities of the stakeholders involved
 - Provides a list of activities and the associated dates by which the activities shall be completed



Reference: Annex 16, Volume IV, Part II, Chapter 1, 1.5 and Appendix 1



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National Regulatory Framework for CORSIA Implementation

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- National regulation forms the basis for State-level SARPs implementation
 - What does it mean for a State to comply?
 - » Compliance with a SARP includes:
 - Establishment
 - » Issuance of national regulations
 - » Issuance of national guidance material
 - Implementation
 - » Provision of facilities
 - » Personnel and equipment
 - » Enforcement mechanisms
 - » Guidance material on the implementation of regulations



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Home » How government works » Treaties, laws and regulations » Canada Gazette » Publications » Part II: Vol. 152 (2018) » November 28, 2018

Regulations Amending the Canadian Aviation Regulations (Parts I and X — Greenhouse Gas Emissions from International Aviation — CORSIA): SOR/2018-240

Canada Gazette, Part II, Volume 152, Number 24

Registration

SOR/2018-240 November 9, 2018

AERONAUTICS ACT

P.C. 2018-1390 November 8, 2018

Her Excellency the Governor General in Council, on the recommendation of the Minister of Transport, pursuant to section 4.9 and paragraphs 4.9(w) 7.6(1)(a) and (b) of the Aeronautics Act, makes the annexed Regulations Amending the Canadian Aviation Regulations (Parts I and X — Greenhouse Gas Emissions from International Aviation — CORSIA).

Regulations Amending the Canadian Aviation Regulations (Parts I and X — Greenhouse Gas Emissions from International Aviation — CORSIA)

Amendments



Training Material on Model Regulations

- Training Material on Model Regulations to Assist States in the establishment of national regulatory framework for CORSIA implementation
 - The training material contains an example of what national regulation for CORSIA MRV could look like
 - Available on the CORSIA Regional Workshop webpage in all languages

TRAINING MATERIAL ON MODEL REGULATIONS TO ASSIST STATES IN THE IMPLEMENTATION OF CORSIA

August 2018

Table of Contents

INTRODUCTION.....	1
Background and Purpose of the Training Material	1
Scope of the Training Material and Guidance for its Use	1
MODEL REGULATIONS	2
Definitions.....	2
Chapter 1: General Provisions.....	3
Chapter 2: Monitoring of CO ₂ Emissions.....	5
Chapter 3: Reporting of CO ₂ Emissions and Emissions Report.....	8
Chapter 4: Verification Requirements.....	11
Appendix 1: Content of an Emissions Monitoring Plan.....	14
Appendix 2: Fuel Use Monitoring Methods.....	19
Appendix 3: Content of an Emissions Report from Aeroplane Operator to State.....	24
Appendix 4: Supplementary Information to an Aeroplane Operator’s Emissions Report if Emissions Reductions from the Use of Each CORSIA Eligible Fuel Being Claimed.....	27
Appendix 5: Emissions Report from a State to ICAO for 2019 and 2020	30
Appendix 6: Emissions Report from a State to ICAO Annually after 2021.....	31
Appendix 7: CORSIA Eligible Fuels Supplementary Information to the Emissions Report from a State to ICAO	32
Appendix 8: Requirements for Conducting the Verification.....	33
Appendix 9: Requirements for a Verification Body.....	38



- Purpose of the Training Material
 - Illustrative, not definitive
 - States will differ in their approaches
 - Does not expand, nor lessen, any requirements included in Annex 16, Volume IV

TRAINING MATERIAL ON MODEL REGULATIONS TO ASSIST STATES IN THE IMPLEMENTATION OF CORSIA

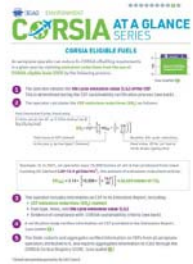
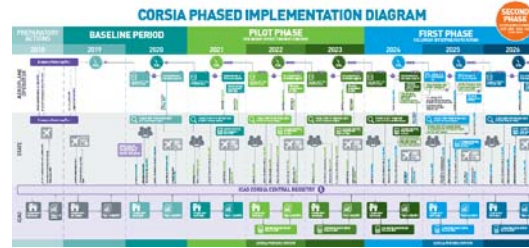
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- Other useful resources for establishment of national regulatory framework for CORSIA implementation
 - ETM, Volume IV
 - CORSIA FAQs
 - Suite of outreach materials

The screenshot shows the ICAO ENVIRONMENT website interface. At the top, there is a search bar and a navigation menu with items: About ICAO, Global Priorities, Meetings and Events, Information Resources, Careers, and Subscribe. Below the menu, the page title is 'Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)'. A sidebar on the left contains a menu with 'ENV Homepage', 'CORSIA Homepage', 'CORSIA IMPLEMENTATION', and 'ACT CORSIA'. The main content area features a news item dated '19-25 Jan 2019' titled 'Trinidad & Tobago and Jamaica received training under the ACT-CORSIA Buddy Partnership with Germany'. Below the news item are two columns of resource links: 'CORSIA >>> IMPLEMENTATION' and 'ACT >>> CORSIA'. The 'IMPLEMENTATION' column lists links for 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, and CORSIA Central Registry (CCR). The 'ACT >>> CORSIA' column lists links for CORSIA Buddy Partnerships, Model Regulations, Frequently Asked Questions, Brochure and Leaflets, Videos, Seminars, Online Tutorials, and Background Information. At the bottom, there is a 'CORSIA' logo and a circular logo for 'ACT >>> CORSIA Assistance, Capacity-building and Training'.



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

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)

Additional Material for CORSIA Implementation



ACT CORSIA

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



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