



ICAO

ENVIRONMENT

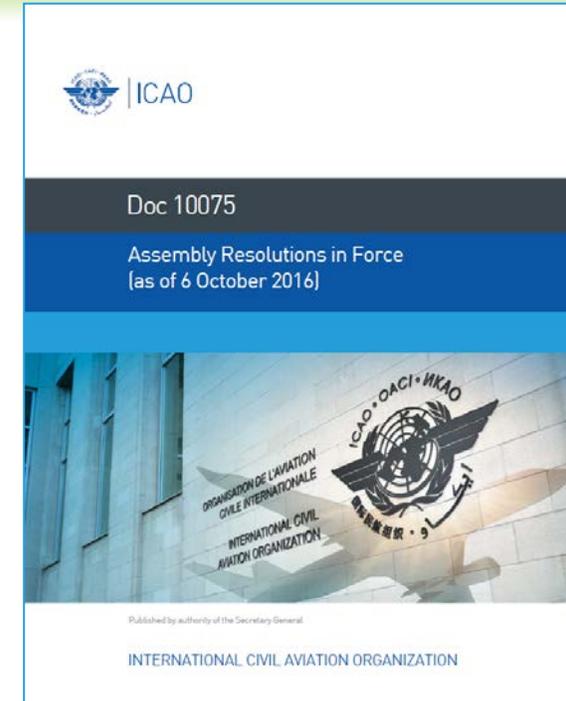
Session 1: Overview of CORSIA CORSIA Package

ICAO Secretariat





- The 39th ICAO Assembly requested the Council:
 - “to develop, with the technical contribution of CAEP, the SARPs and related guidance material for the implementation of the MRV system under the CORSIA, including simplified MRV procedures, for adoption by the Council by 2018”
- It also requested Member States:
 - “whose aircraft operator undertakes international flights to develop the necessary arrangements, in accordance with the MRV SARPs, for implementation from 1 January 2019”



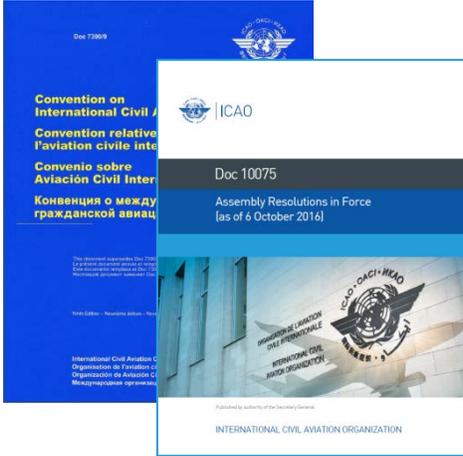
Resolution A39-3: Consolidated statement of continuing ICAO policies and practices related to environmental protection – Global Market-based Measure (MBM) scheme

Whereas Assembly Resolution A38-18 decided to develop a global market-based measure (GMBM) scheme for international aviation, for decision by the 39th Session of the Assembly;

Recalling that Assembly Resolution A38-18 requested the Council, with the support of Member States, to finalize the work on the technical aspects, environmental and economic impacts and modalities

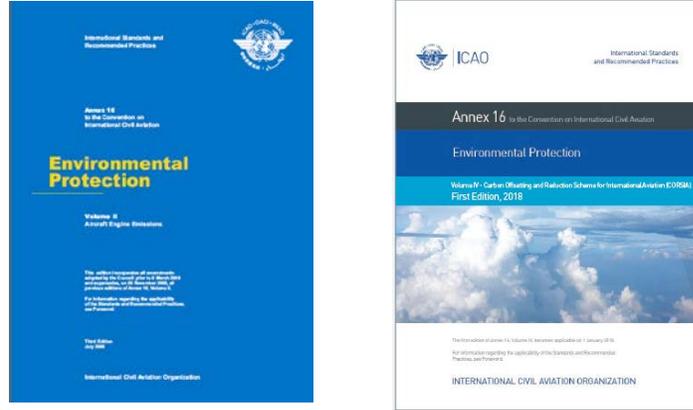


ICAO Policy



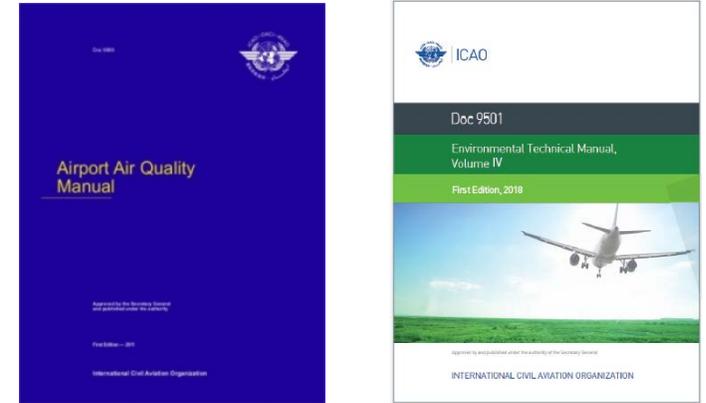
Chicago Convention
ICAO Assembly Resolutions
A39-1, A39-2 and A39-3:
 Consolidated statement of continuing ICAO policies and practices related to environmental protection

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**

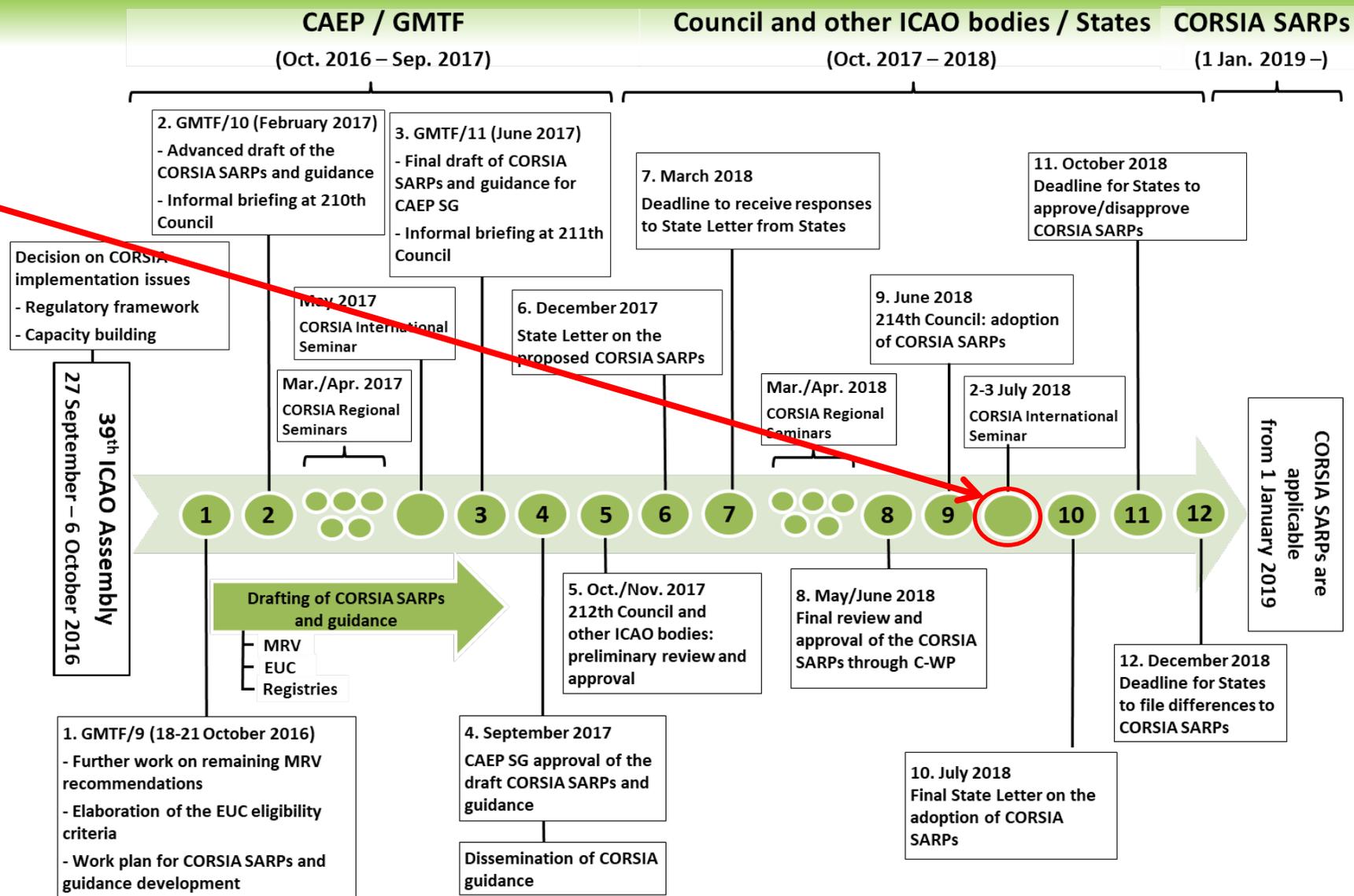
ICAO Guidance



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**



We are here!





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



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

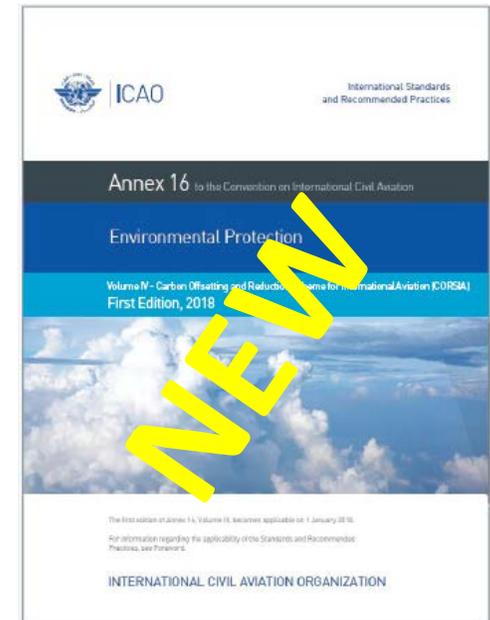
APPENDIX 6. Verification

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 will become available in 2018, while the decision on CORSIA Eligible Emissions Units are expected later
- Once completed, they will be 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

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.
- **Expected 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 / values for new fuels and 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.



ICAO ENVIRONMENT

CORSIA AT A GLANCE SERIES

CORSIA IMPLEMENTATION COMPONENTS

In order to implement CORSIA, a series of components are being developed to provide stakeholders with the necessary information. The **Standards and Recommended Practices (SARPs) in Annex 16 Volume IV** provide the mandatory actions by States or operators (the "what" and "when") to implement CORSIA, while the **Environmental Technical Manual (ETM) Volume IV** provides the guidance on the process (the "how") to implement CORSIA.

Due to CORSIA specific characteristics, **Implementation Elements** are also being developed as another component of the CORSIA structure, which do not require mandatory actions by States or operators, but contain essential information for implementation of CORSIA.

1 SARPs Annex 16 Volume IV

Mandatory Actions



Part I. DEFINITIONS, ABBREVIATIONS AND UNITS
Part II. CARBON OFFSETTING AND REDUCTION SCHEME FOR INTERNATIONAL AVIATION (CORSIA)

CHAPTER 1. Administration and Verification
CHAPTER 2. Monitoring, Reporting and Verification
CHAPTER 3. CO₂ Offsetting Requirements and Emissions Reductions from Sustainable Aviation Fuels
CHAPTER 4. Emission Units

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2 ETM Volume IV

Guidance Material



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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 upcoming 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 when they are completed and may only be amended by the ICAO Council.

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The information on actions for CORSIA implementation contained in this document is based on the proposal for the First Edition of Annex 16, Volume IV (Standards and Recommended Practices relating to CORSIA) and related materials, as made available to States by means of ICAO State letter AN 17/14 – 17/129. The proposed First Edition of Annex 16, Volume IV and related materials are expected to be considered for adoption by the ICAO Council in June 2018 and subject to any changes arising from this process. 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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www.icao.int/corsia

THANK YOU

