



WORKING PAPER

ASSEMBLY — 40TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 17: Environmental Protection – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)

UPDATE ON THE CARBON OFFSETTING AND REDUCTION SCHEME FOR INTERNATIONAL AVIATION (CORSA)

(Presented by the Council of ICAO)

EXECUTIVE SUMMARY

This paper provides a summary of ICAO's activities regarding the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) since the 39th Session of the ICAO Assembly in 2016. Specifically, it reports on the development of Annex 16, Volume IV; the *Environmental Technical Manual* (Doc 9501), Volume IV; and the CORSA Implementation Elements and next steps. This paper also reports on the ICAO outreach and capacity building activities to support the implementation of CORSA, in particular the work undertaken under the ICAO ACT-CORSA (Assistance, Capacity Building and Training for CORSA) Programme.

Action: The Assembly is invited to:

- a) acknowledge the development of CORSA-related Standards and Recommended Practices (SARPs) and guidance, and that the CORSA implementation is on track;
- b) welcome the successful ACT-CORSA (Assistance, Capacity Building and Training for CORSA) Programme, with appreciation to contributions of Member States to establish CORSA partnerships among themselves to assist CORSA implementation, while emphasizing the importance of a coordinated approach under ICAO;
- c) recognize the clear need to further develop and update CORSA-related SARPs and guidance and to maintain the ACT-CORSA Programme including CORSA partnerships among Member States;
- d) encourage more States to voluntarily participate in the CORSA from the pilot phase; and
- e) consider the information contained in this paper for the update of Assembly Resolution A39-3.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective – <i>Environmental Protection</i> .
<i>Financial implications:</i>	The activities referred to in this paper will be undertaken subject to the resources available in the 2020–2022 Regular Programme Budget and/or from extra budgetary contributions.
<i>References:</i>	Doc 10075, <i>Assembly Resolutions in Force</i> (as of 6 October 2016) A40-WP/59, <i>Consolidated statement of continuing ICAO policies and practices related to environmental protection – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)</i> A40-WP/54, <i>ICAO Global Environment Trends – Present and Future Aircraft Noise and Emissions</i>

1. **A39 REQUEST FOR CORSIA IMPLEMENTATION**

1.1 Through Resolution A39-3, the ICAO Assembly adopted the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) as the first global market-based measure (MBM) scheme for any industry sector. CORSIA is part of a broader package of mitigation measures, which also includes aircraft technology, operational improvements and sustainable aviation fuels, aiming to assist the achievement of the collective medium-term global aspirational goal of keeping the global net CO₂ emissions from international aviation from 2020 at the same level (A39-2, paragraph 6 refers).

1.2 The Assembly requested the Council, with the technical contribution of the Committee on Aviation Environmental Protection (CAEP), to develop the SARPs and related guidance material for the implementation of the Monitoring, Reporting and Verification (MRV) system under CORSIA from 1 January 2019. The Assembly also requested the Council to establish a consolidated central registry under the auspices of ICAO, for operationalization no later than 1 January 2021. The Assembly further requested the Council to decide on eligible emissions units for use by the CORSIA. In addition, the Assembly requested that ICAO and Member States take necessary action to provide capacity building and assistance, and to build partnerships for CORSIA implementation.

1.3 In November 2016, the Council endorsed the overall plan of preparatory activities for CORSIA implementation, including the development of the CORSIA-related draft SARPs, as well as the plan for providing capacity building and assistance to Member States. The CORSIA-related SARPs and guidance (also referred to as the “CORSIA package”) comprise three distinct, but interrelated components:

- a) *Annex 16 – Environmental Protection, Volume IV – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)*: provides the required actions by States and aeroplane operators to implement CORSIA;
- b) *Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the CORSIA*: provides guidance on the process to implement CORSIA; and
- c) Five CORSIA Implementation Elements: reflected in 14 ICAO documents and approved by the Council prior to their publication. These documents are directly referenced in Annex 16, Volume IV and are essential for the implementation of CORSIA.

2. **ANNEX 16, VOLUME IV AND ETM (DOC 9501), VOLUME IV**

2.1 The proposed First Edition of Annex 16, Volume IV was circulated to all States for their review and comments (State letter AN 1/17/.14–17/129). The Air Navigation Commission considered all comments submitted by States and forwarded a revised version of Annex 16, Volume IV to the Council during its 214th Session. The Council adopted the First Edition of Annex 16, Volume IV in June 2018, which became effective on 22 October 2018 and applicable as of 1 January 2019.¹

2.2 Following the Council’s decision during its 212th Session, the First Edition of the *Environmental Technical Manual (Doc 9501), Volume IV* was issued under the authority of the ICAO Secretary General in August 2018,² to make the most recent information available to administrating authorities, aeroplane operators, verification bodies and other interested parties, aiming at achieving the highest degree of harmonization possible.

¹ <https://www.icao.int/environmental-protection/CORSIA/Pages/SARPs-Annex-16-Volume-IV.aspx>

² <https://www.icao.int/environmental-protection/CORSIA/Pages/ETM-V-IV.aspx>

3. CORSIA IMPLEMENTATION ELEMENTS

3.1 CORSIA States for Chapter 3 State Pairs

3.1.1 This CORSIA Implementation Element is the list of States participating in CORSIA offsetting requirements and will be used to define route-based emissions coverage every year from 2021 onwards. Following the notification deadline from States by 30 June 2020, the first edition of this document, to be updated annually, is expected to become available by 1 August 2020. As of June 2019, 80 ICAO Member States have notified ICAO of their intention to voluntarily participate in CORSIA offsetting requirements from 2021, which has increased from 65 States in October 2016.

3.2 ICAO CORSIA CO₂ Estimation and Reporting Tool (CERT)

3.2.1 The CERT has been developed and updated in response to the Assembly request for simplified procedures (Resolution A39-3, paragraphs 10 b), 10 c), 20). It aims to simplify the estimation and reporting of CO₂ emissions from international flights for those operators with low levels of activity to fulfil their monitoring and reporting requirements under CORSIA. In June 2018, the Council approved the 2018 version of the CERT and its technical methodologies.³ Subsequent versions of the CERT are being developed. The 2019 version, to become available in mid-2019, will provide necessary output data to be incorporated into the operator's annual Emissions Report from 2019. The 2021 version of the CERT will provide additional features to identify those international flights that are subject to the CORSIA offsetting requirements or not, so that the CERT output data will enable an operator to report its annual emissions on the basis of CORSIA route-based coverage.

3.3 CORSIA Eligible Fuels

3.3.1 The Council has been considering recommendations by CAEP on CORSIA eligible fuels, in response to the request of the Assembly to provide a methodology to reduce an operator's offsetting requirement through the use of such fuels under CORSIA (Resolution A39-3, paragraph 6). The Council agreed on two themes of sustainability criteria for CORSIA eligible fuels to be applied during the pilot phase of CORSIA by 2023, and requested CAEP to develop further proposals on strengthened sustainability criteria by the end of 2023.

3.3.2 Further recommendations from the eleventh Meeting of CAEP (CAEP/11, February 2019) are under consideration by the Council, including the means to obtain the life-cycle emissions reduction benefits accrued from the use of CORSIA eligible fuels: both "default life-cycle emission values" of fuels produced from various feedstocks and conversion processes; and methodologies for calculating "actual life-cycle emissions values". Other CAEP recommendations address eligibility framework and requirements for sustainability certification schemes (SCS), as well as a process to evaluate such SCSs in light of the eligibility framework and requirements. The evaluation will result in a list of eligible SCS, for consideration by the Council in due course.

3.4 CORSIA Eligible Emissions Units

3.4.1 Consistent with Resolution A39-3, paragraph 20 d), the Council agreed at its 215th Session to initiate a process to establish a Technical Advisory Body (TAB) with the objective of making recommendations to the Council on eligible emissions units for use under CORSIA. Subsequently, at its 216th Session, the Council agreed on a list of 19 TAB members, and approved the Terms of Reference (TOR) for the TAB. The Council also approved the Emissions Units Criteria (EUC) to be used by the TAB in undertaking its tasks to assess emissions units programmes (and potentially project types) against the EUC. The TAB has since initiated its work; the results of its assessment and recommendations are expected by March 2020. Further information on the TAB and EUC is available on the CORSIA website.⁴

³ <https://www.icao.int/environmental-protection/CORSIA/Pages/CERT.aspx>

⁴ <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Emissions-Units.aspx>

3.5 **CORSIA Central Registry (CCR)**

3.5.1 The Central Registry (CCR) is being developed in line with Resolution A39-3, paragraph 20 g). The CCR is an information management system that will allow the input and storage of CORSIA-relevant information reported by States, as well as calculations and reporting by ICAO, in accordance with Annex 16, Volume IV. In June 2018, the Council approved the functional requirements for the CCR. Using these functional requirements as the basis, a winning bidder was identified in December 2018 after an open procurement process. The CCR is currently in its development phase, and ICAO aims to have the CCR operationalized in 2020, which is aligned with the timing when States are to submit 2019 CO₂ emissions data to ICAO for the first time.

3.5.2 While ICAO has been working on the development of the CCR, an online spreadsheet was created as a temporary means in 2018 and 2019 to facilitate the reporting by States of information on aeroplane operators attributed to them and on the verification bodies accredited in them. ICAO will continue to maintain the CCR, and provide instructions and training to CORSIA focal points for the operationalization of the CCR and its electronic interface with Member States.

4. **CORSIA OUTREACH AND CAPACITY-BUILDING**

4.1 **CORSIA Regional Seminars and Workshops**

4.1.1 During the current triennium, priority has been the implementation of the MRV system, in particular the development/approval of Emissions Monitoring Plans and national regulatory frameworks, in light of the SARPs' applicability to undertake CO₂ emissions monitoring from 1 January 2019. In this regard, ICAO organized CORSIA regional seminars and workshops in 2017, 2018 and 2019 to build capacity in States for the development of their MRV systems, in light of the progress of work on the CORSIA-related SARPs and guidance.⁵

4.1.2 In 2019, the regional workshops focused on the specific monitoring, reporting and verification aspects of Annex 16, Volume IV, including the approval of Emissions Monitoring Plans by States by 30 April 2019, as well as on reporting and verification requirements of CO₂ emissions from international aviation to support States in complying with the related provisions of the CORSIA SARPs. The 2020 regional workshops are expected to be critically important as they will be closer to the first deadline for CO₂ emissions reporting from States to ICAO in mid-2020.

4.2 **ICAO ACT-CORSIA Programme**

4.2.1 During its 214th Session, the Council endorsed the ACT-CORSIA (Assistance, Capacity building and Training for the CORSIA) programme, emphasizing the importance of a coordinated approach under ICAO to harmonize and bring together all relevant actions and promote coherence to capacity building efforts related to CORSIA implementation. By June 2019, buddy partnerships under ACT-CORSIA have been established, involving 15 donor States and 98 recipient States. Approximately 80 recipient States had received training, while follow-up activities have also been undertaken, regarding the finalization and approval of emissions monitoring plans of their aeroplane operators, and the establishment of appropriate national regulatory frameworks. Weekly updates on buddy partnerships are made available on the ICAO website⁶ (Refer to the appendix for CORSIA buddy partnerships and on-site training activities).

4.2.2 Building upon the successful first phase of buddy partnerships, the Secretariat is facilitating the establishment of the second phase of buddy partnerships, which will focus on upcoming CO₂ reporting and verification requirements.

⁵ <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Seminars.aspx>

⁶ <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Buddy-Partnerships.aspx>

4.2.3 In addition, the Secretariat has continued its public outreach efforts by: providing recent news and developments on the ICAO CORSIA public website (www.icao.int/corsia); updating the Frequently Asked Questions (FAQs), including those related to Annex 16, Volume IV⁷; and updating its outreach materials, including brochures, videos, and leaflets.

4.3 ICAO Training Course on CORSIA Verification

4.3.1 In cooperation with Global Aviation Training (GAT) Office, ICAO developed a three-day CORSIA Verification Course that provides training on how to verify CO₂ Emissions Reports that have been prepared by aeroplane operators, in accordance with Annex 16, Volume IV⁸. The course is targeted to professionals with experience in the verification of CO₂ emissions using the ISO standard 14064-3:2006, who want to get involved in the verification of aeroplane operators' CO₂ Emissions Reports under CORSIA, with a view to facilitating more availability and accessibility of accredited verification bodies to aeroplane operators. In cooperation with the International Accreditation Forum (IAF), the course will also be offered to representatives of national accreditation bodies.

5. CORSIA AS THE GLOBAL MBM FOR INTERNATIONAL AVIATION

5.1 In light of developments since the 39th Session of the ICAO Assembly, concerns were expressed at the ICAO Council against the establishment of national and regional measures, applying to CO₂ emissions from international aviation, and their possible duplicative nature *vis-à-vis* CORSIA. It was noted that IATA, at its 75th Annual General Meeting in June 2019, approved a resolution which also expressed concerns on this matter⁹.

5.2 During the discussion, the Council members expressed full support to the CORSIA and its implementation. However, in light of the above-mentioned developments, a significant majority of Council members expressed the need for further clarity in the Assembly Resolution text to align with the formulation contained in relevant preambular paragraphs, while some members preferred the text to remain unchanged.

5.3 The result of this discussion, as decided by the Council, is reflected in the wording of operative paragraph 18 of the updated *Consolidated statement of continuing ICAO policies and practices related to environmental protection – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)*, presented in the appendix to A40-WP/59. This paragraph is a revision of operative paragraph 19 in Resolution A39-3, on the basis of wording used in preambular paragraphs 7, 8 and 9 of Resolution A39-3.

⁷ <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-FAQs.aspx>

⁸ <https://www.icao.int/training/Pages/CORSIA.aspx>

⁹ <https://www.iata.org/pressroom/pr/Pages/2019-06-02-04.aspx>

APPENDIX

CORSIA Buddy Partnerships (as of June 2019)

 CORSIA ^{Phase I} Assistance, Capacity-building and Training on CORSIA	
AUSTRALIA 1. BRUNEI DARUSSALAM 2. INDONESIA 3. NAURU 4. PAPUA NEW GUINEA 5. SRI LANKA 6. THAILAND	
CANADA / FRANCE 1. BURKINA FASO 2. CAMEROON 3. CHAD 4. COMOROS 5. CONGO 6. COTE D'IVOIRE 7. D. R. OF CONGO 8. DJIBOUTI 9. GABON 10. HAITI 11. MADAGASCAR 12. MALI 13. MAURITANIA 14. MAURITIUS 15. NIGER 16. SENEGAL 17. TOGO	
CANADA / FRANCE / SPAIN 1. ALGERIA 2. EGYPT 3. IRAQ 4. JORDAN 5. MOROCCO 6. SAUDI ARABIA 7. TUNISIA	
GERMANY 1. JAMAICA 2. TAJIKISTAN 3. TRINIDAD & TOBAGO	
GERMANY/ ECAC 1. ALBANIA 2. ARMENIA 3. AZERBAIJAN 4. REPUBLIC OF MOLDOVA 5. SERBIA 6. NORTH MACEDONIA 7. TURKEY	
ITALY 1. ANTIGUA AND BARBUDA 2. BAHAMAS 3. ERITREA 4. ETHIOPIA 5. GUYANA 6. SOMALIA 7. SURINAME 8. UNITED REPUBLIC OF TANZANIA	
ITALY & BRAZIL 1. ANGOLA 2. CABO VERDE 3. COLOMBIA 4. MOZAMBIQUE 5. PARAGUAY 6. SAO TOME AND PRINCIPE	
JAPAN 1. AFGHANISTAN 2. BANGLADESH 3. BHUTAN 4. CAMBODIA 5. MALAYSIA 6. MYANMAR	
KENYA 1. RWANDA 2. SEYCHELLES 3. SOUTH SUDAN 4. UGANDA	
MEXICO / SPAIN / USA 1. BELIZE 2. COSTA RICA 3. EL SALVADOR 4. GUATEMALA 5. HONDURAS 6. NICARAGUA	
NEW ZEALAND 1. FIJI 2. SAMOA 3. SOLOMON ISLANDS 4. VANUATU	
NIGERIA 1. GAMBIA 2. GHANA 3. LIBERIA 4. SIERRA LEONE 5. SUDAN	
REPUBLIC OF KOREA 1. LAO PEOPLE'S D. R. 2. MONGOLIA 3. PAKISTAN 4. PHILIPPINES 5. VIETNAM	
SOUTH AFRICA 1. BOTSWANA 2. LESOTHO 3. MALAWI 4. NAMIBIA 5. ZAMBIA 6. ZIMBABWE	
SPAIN 1. BOLIVIA 2. CUBA 3. PERU 4. URUGUAY	
USA 1. ARGENTINA 2. DOMINICAN REPUBLIC 3. ECUADOR 4. PANAMA	
	
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CORSIA Buddy Partnerships: On-site Training Activities

