

**57th CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS**

*Incheon, Republic of Korea
4 – 8 July 2022*

AGENDA ITEM 7: AVIATION AND ENVIRONMENT

**LATEST DEVELOPMENTS ON ICAO'S WORK ON
CLIMATE CHANGE**

Presented by the ICAO Secretariat

SUMMARY

This paper reports on progress made by the International Civil Aviation Organization (ICAO) since the 40th Session of the Assembly relating to international aviation and climate change, including on the feasibility of a long-term global aspirational goal (LTAG) for international aviation, on the progress related to sustainable fuels, on the ICAO State Action Plans initiative for aviation CO₂ emissions reduction, and on related assistance and capacity-building projects. Specific information on the ICAO Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) is provided in a separate paper.

The proposed actions are presented in section 5.

LATEST DEVELOPMENTS ON ICAO'S WORK ON CLIMATE CHANGE

1. INTRODUCTION

1.1 This paper reports on progress made by ICAO since the 40th Session of the Assembly relating to international aviation and climate change, including on the feasibility of a long-term global aspirational goal (LTAG) for international aviation, on the progress related to sustainable fuels, on the ICAO State Action Plans initiative for aviation CO₂ emissions reduction, and on related assistance and capacity-building projects. Specific information regarding the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) is provided in the Discussion Paper DGCA – 57/DP/7/1.

2. FEASIBILITY OF A LONG-TERM ASPIRATIONAL GOAL (LTAG) FOR INTERNATIONAL AVIATION CO₂ EMISSIONS REDUCTIONS

2.1 Following the ICAO Assembly's request to the ICAO Council to explore the feasibility of a LTAG for international aviation, the Committee on Aviation Environmental Protection (CAEP) conducted a technical analysis through a collaborative, inclusive and transparent process, and unanimously approved the technical report on the feasibility of an LTAG. Under the LTAG report, three integrated scenarios (IS1, IS2, and IS3) were developed to cover a range of readiness, attainability, and aspirations for aviation in-sector CO₂ emissions reduction. In the most ambitious IS3 scenario, CO₂ emissions could be reduced by 87% in 2050, broken down into 21% from aircraft technologies, 11% from operations and 55% from fuels.

2.2 The LTAG report was published on the ICAO public website¹ as the input for discussions by all Member States and stakeholders during the LTAG Global Aviation Dialogues (GLADs)² held in March/April 2022. The ICAO High-level meeting on the feasibility of a LTAG (HLM-LTAG)³ will be held from 19 to 22 July 2022 in Montréal, Canada as a hybrid format, and the final LTAG deliberations will be held during the 41st Session of the ICAO Assembly. The HLM-LTAG will be preceded by the 2022 ICAO Stocktaking⁴, on 18 July 2022 as a virtual event, to enable the sharing of the latest relevant information, including the latest innovations on technology, operations and fuels, and to set the scene for the subsequent HLM-LTAG. In this regard, APAC Member States are invited to actively participate in the LTAG process leading up to the 41st Session of the ICAO Assembly.

3. NEW ICAO ACT-SAF PROGRAMME

3.1 The ICAO LTAG report highlights the importance of Sustainable Aviation Fuels (SAF), Lower Carbon Aviation Fuels (LCAF) and cleaner energy sources for aviation, including hydrogen and renewable electricity. To support the further development and deployment of these fuels by States and relevant stakeholders, ICAO launched a new ICAO Assistance, Capacity-building and Training for SAF (ACT-SAF) programme⁵ on 1 June 2022. The ACT-SAF programme will support States in the development and deployment of SAF and cleaner energy sources for aviation, incorporating tailored support, which may comprise feasibility studies, policy and regulatory development, and specific SAF implementation projects, where potential green funding may be sought. Under the umbrella of ICAO coordination, ACT-SAF will facilitate the establishment of partnerships among States and relevant stakeholders, in line with the *No Country Left Behind* (NCLB) initiative, the 2050 Vision for SAF, and the three main pillars of sustainable development recognised by the United Nations. APAC Member States are invited to express interest in joining the ICAO ACT-SAF programme.

3.2 Work on SAF and LCAF is also ongoing in the context of CORSA⁶, with the

1 <https://www.icao.int/environmental-protection/Pages/LTAG.aspx>

2 <https://www.icao.int/Meetings/2022-ICAO-LTAG-GLADS/Pages/default.aspx>

3 <https://www.icao.int/Meetings/HLM-LTAG/Pages/default.aspx>

4 <https://www.icao.int/Meetings/Stocktaking2022/Pages/default.aspx>

5 <https://www.icao.int/environmental-protection/Pages/act-saf.aspx>

6 <https://www.icao.int/environmental-protection/CORSA/Pages/CORSA-Eligible-Fuels.aspx>

development of global life cycle assessment methodologies and sustainability criteria for these fuels. In November 2021, the ICAO Council approved an extended set of sustainability criteria for SAF, encompassing environmental and socio-economic criteria, to be applicable after the CORSIA pilot phase (from 2024). Regarding LCAF, the 12th meeting of the Committee on Aviation Environmental Protection (CAEP/12) in February 2022, agreed to recommend specific life cycle assessment methodologies and sustainability criteria for LCAF, which have been under consideration by the ICAO Council.

3.3 On a related initiative, the ICAO Global Coalition for Sustainable Aviation⁷ was established with the objective of providing a forum of stakeholders to facilitate the development of new ideas and accelerate the implementation of environmental innovative solutions. In the context of the Coalition, ICAO developed the Tracker Tools website⁸, where all the latest information on aviation CO₂ emissions reduction initiatives is updated from three streams – technology, operations and fuels, as well as on aviation net zero initiatives. As of April 2022, the Fuels trackers provides details on announced SAF offtake agreements, which add up to 26 billion litres of SAF, 47 airports that are regularly distributing SAF, and 23 SAF-supporting policies adopted or under development. The Trackers also provide details on 185 facilities that could produce SAF, many of which are in the Asia-Pacific region.

4. STATE ACTION PLANS AND ASSISTANCE

4.1 ICAO continues to work directly with Member States in order to support the development and update of State Action Plans. The State Action Plan initiative has become a key element of the Organization’s comprehensive capacity-building and assistance strategy to support Member States to implement a broad range of CO₂ emissions mitigation measures selected from the ICAO basket of CO₂ mitigation measures.

4.2 At the time of publication of this DP, 129 Member States had voluntarily submitted action plans to ICAO, representing 98.08 percent of international aviation traffic. These outcomes indicate the high level of interest and participation in this effort amongst Member States, as well as the positive impact of ICAO's assistance and capacity-building efforts.

4.3 A total of 16 of the 39 countries in the APAC region have submitted their State Action Plans (SAP) to ICAO since the start of the initiative, with seven countries having updated their action plans during the 2020-2022 triennium. Table 1 lists the States of the APAC Region that have thus far submitted their SAP to ICAO. States in the APAC Region that have not yet submitted their SAP to ICAO are invited to prepare it, in order to communicate their long-term strategy on climate change for the international aviation sector. This will also allow for the clear definition of assistance needs in the SAP, which could provide opportunities to access financial support for the implementation of innovative emissions reduction projects, including feasibility studies and pilot projects etc. The implementation of CO₂ mitigation measures in the APAC region, based on the submitted SAP, is shown graphically in Figure 1.

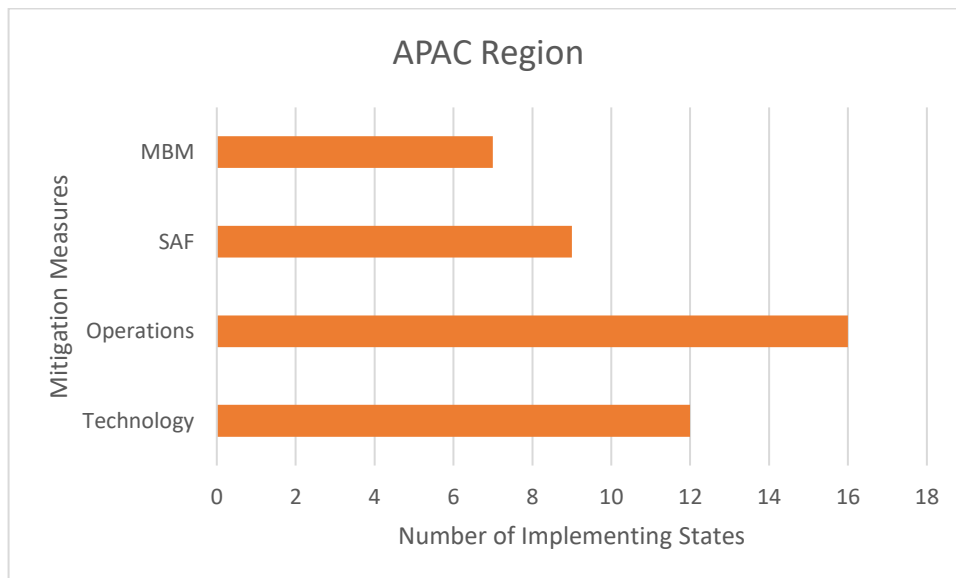
Table 1 — States in the APAC Region that submitted their SAP to ICAO

| | | | |
|--|------------|--------------------|-----------|
| Australia | Indonesia* | New Zealand | Singapore |
| China | Japan* | Pakistan | Sri Lanka |
| Fiji | Malaysia* | Philippines | Thailand* |
| India* | Nepal | Republic of Korea* | Viet Nam* |
| *: States updated their SAP in 2020-2022 triennium | | | |

7 ICAO Coalition: <https://www.icao.int/environmental-protection/SAC/Pages/learn-more.aspx>

8 ICAO Tracker Tools website: [Aviation CO₂ emissions reduction initiatives - Tracker Tool \(icao.int\)](https://www.icao.int/environmental-protection/CAEP/12/Pages/Aviation-CO2-emissions-reduction-initiatives-Tracker-Tool.aspx)

Figure 1 — Implementation of CO₂ Mitigation Measures in the APAC Region (based on submitted SAP)



4.4 In relation to the ICAO State Action Plan Buddy Program⁹, Assembly Resolution A40-18 encourages States who have previously submitted action plans to share information contained in them and develop partnerships with other Member States in order to assist States that have not yet developed action plans. In this respect, ICAO has been working with Member States to facilitate and support the establishment of these partnerships, including the development of a draft cooperation agreement which aims to establish a model framework by which ICAO Member States can help other Member States to prepare and submit a State Action Plan. To date, nine partnerships have been established under the Buddy Programme. States in the APAC Region that have developed and updated their SAPs are encouraged to establish buddy partnership with other States in the region who have not yet developed SAP.

4.5 While State Action Plans remain an important tool for communicating national plans on climate action for international aviation, they also serve as a key tool for ICAO to assess Member States' progress toward achieving their collective global aspirational goals. Some States have recently developed more concrete long-term strategies and plans to reduce carbon emissions from international aviation with the use of new innovative technologies, operations and sustainable aviation fuels, since ICAO has been working on the feasibility of LTAG. Future updates and submissions of State Action Plans should focus on the latest innovative solutions available, while also enabling States to tap into potential funding sources, in order to facilitate States' voluntary contributions to reduce international aviation CO₂ emissions.

4.6 To support States, ICAO activities also included the implementation of two assistance and capacity-building projects, namely: the ICAO assistance project on Capacity Building for CO₂ Mitigation from International Aviation with European Union (EU) funding (Phase I and Phase II); and the ICAO-United Nations Development Programme (UNDP) assistance project on Transforming the global aviation sector, with funding from the Global Environment Facility (GEF). These projects have included the development of guidance documents, the elaboration of training material, installation of the ICAO Aviation Environmental System (AES), the development of SAF feasibility studies, the design of tools and the implementation of CO₂ mitigation measures, such as the installation of solar panel arrays and airport gate electrification.

⁹ <https://www.icao.int/environmental-protection/pages/BuddyPartnerships.aspx>

5. ACTION BY THE CONFERENCE

5.1 The Conference is invited to:

- a) Note the ICAO report on the feasibility of a long-term aspirational goal (LTAG) for international civil aviation as the technical basis for deliberations at the ICAO High-level Meeting on LTAG (HLM-LTAG) and the 41st Session of the ICAO Assembly;
- b) Encourage States to attend the 2022 ICAO Stocktaking (18 July 2022) and the ICAO High-level Meeting on LTAG (HLM-LTAG, 19 to 22 July 2022);
- c) Invite States in the APAC Region to consider their interest and how best they could engage in the ICAO Assistance, Capacity building and Training for Sustainable Aviation Fuel (ACT-SAF) programme and communicate their interest back to ICAO to further facilitate the development and deployment of SAF and cleaner energy sources for aviation;
- d) Encourage States in the APAC Region to develop and update State Action Plans (SAP) in order to communicate their long-term strategy to address CO₂ emissions from international aviation, including the assistance needed for the implementation of identified action, for submission prior to the 41st Session of the ICAO Assembly; and
- e) Encourage States in the APAC Region which already submitted and updated their SAP to establish buddy partnership with other States to develop SAP.

— END —