



ICAO

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North American, Central American and Caribbean Office

WORKING PAPER

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(NACC/DCA/11)**

Varadero, Cuba, 28-30 June 2023

Agenda Item 7: Promotion and Implementation of Regional Actions for Environmental Protection

ICAO AND CLIMATE CHANGE

(Presented by the Secretariat)

EXECUTIVE SUMMARY

This paper provides an update on the recent ICAO progress and actions in addressing climate change, including the adoption and implementation of a long-term global aspirational goal (LTAG) for international aviation of net-zero carbon emissions by 2050, latest updates on the ICAO State Action Plans (SAP) initiative, progress on ICAO Assistance, Capacity-building and Training for Sustainable Aviation Fuels (ACT-SAF), and outreach activities paving the way toward the third ICAO Conference on Aviation and Alternative Fuels (CAAF/3).

Action:	Under paragraph 3
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Strategic Objective 5 – Environmental Protection

1. Introduction

1.1 ICAO continues to lead the global efforts to address international aviation and climate change. Close cooperation amongst all aviation stakeholders remains the key to take full advantage of innovations that are necessary for a green transition over the coming decades.

1.2 The 41st Session of the ICAO Assembly, held from 27 September to 7 October 2022, reached a historic agreement on the long-term global aspirational goal (LTAG) for international aviation of “net-zero carbon emissions by 2050” in support of the Paris Agreement’s temperature goal. ICAO and its Member States will work together with industry, civil society and other stakeholders to strive to achieve the LTAG, while recognizing that each State’s special circumstances and respective capabilities will inform the ability of each State to contribute within its own national timeframe.

- 1.3 Achieving net-zero carbon emissions by 2050 will require substantial investment and financing and putting in place concrete means of implementation for developing countries and States having particular needs. In this regard, ICAO has already launched its Assistance, Capacity-building and Training for Sustainable Aviation Fuels (ACT-SAF) programme to provide tailored support to States on SAF development and deployment and to facilitate partnerships and cooperation around the world.
- 1.4 This paper provides an update on the recent ICAO progress and actions in addressing climate change, including the adoption and implementation of the LTAG, latest updates on the State Action Plans (SAP) initiative, progress on ICAO Assistance, ACT-SAF, and outreach activities paving the way toward the third ICAO Conference on Aviation and Alternative Fuels (CAAF/3).
- 1.5 While agreeing on the 2050 net-zero LTAG, States and the industry have been implementing the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA). The Information Paper NACC/DCA/11-IP/16 provides an overview of the latest developments on CORSA.

2 Discussion

2050 Net-Zero LTAG

- 2.1 The 41st Session of the ICAO Assembly in 2022 adopted a long-term global aspirational goal for the international aviation sector of net-zero carbon emissions by 2050 ([Resolution A41-21, operative paragraph 7](#) refers) , which includes the following key features:
- **Level of Ambition:** ICAO and its Member States are encouraged to work together to strive to achieve a collective long-term global aspirational goal for international aviation (LTAG) of net-zero carbon emissions by 2050, in support of the Paris Agreement’s temperature goal, recognizing that each State’s special circumstances and respective capabilities will inform the ability of each States to contribute to the LTAG within its own national timeframe. It was also recognized that the LTAG is a collective goal and it does not attribute specific obligations or commitments in the form of emissions reduction goals to individual States;
 - **Monitoring of Progress:** The Assembly requests the Council to regularly monitor the progress on the implementation of all elements of the basket of measures towards the achievement of the LTAG, including through the ICAO stocktaking process, updates of the ICAO SAF Vision, and monitoring of State Action Plans;

- **State Action Plans:** The Assembly reiterates the important role of State Action Plans, encouraging all States to submit and update action plans to reduce CO₂ emissions from international aviation, outlining policies, actions and roadmaps, including long-term projections, and requests the Council to provide guidance and assistance, e.g., for identifying possible sources of financing for the implementation of action plans;
- **Means of Implementation:** The Assembly recognizes that various possible modalities and/or funding mechanisms could be used by ICAO and requests the Council to initiate specific measures or mechanisms for ICAO to facilitate better access to financing for developing countries and States having particular needs, and to consider the establishment of a possible finance initiative or funding mechanism under ICAO, for reporting at the 42nd Session of the Assembly. This is complementary to a robust assistance and cooperation programme for LTAG, such as the ICAO ACT-SAF programme (see below for further details), which should be extended to an ACT-LTAG programme; and
- **Actions on Technology, Operations and Fuels:** The Assembly requests specific actions for the Council and States in the areas of technology, operations and fuels, including the convening of the third ICAO Conference on Aviation and Alternative Fuels (CAAF/3) in 2023 (see below for further details).

ICAO State Action Plans Initiative¹

- 2.2 As of April 2023, 136 States representing more than 98% of global international aviation traffic in revenue tonne kilometres (RTK) have voluntarily submitted their State Action Plans (SAPs) to ICAO.
- 2.3 In line with Resolution A41-21, operative paragraphs 10 to 13, all States are encouraged to update and submit quantified SAPs to ICAO as soon as possible, preferably by the end of June 2024, encompassing innovations in technologies and cleaner energies, outlining respective policies, actions and roadmaps, including long-term projections, and ensuring the use of the best available data as supported by ICAO guidance and tools.
- 2.4 Following the adoption of LTAG, fully quantified SAPs will be useful as part of the information to monitor the achievement of the LTAG (Resolution A41-21, paragraph 9 refers). By leveraging the LTAG integration into SAPs, Member States and all national stakeholders are expected to develop a clear roadmap for planning and investing in new technologies and infrastructure that can help reduce aviation CO₂ emissions, as a contribution to the achievement of the LTAG.
- 2.5 In order to provide additional guidance for States to incorporate their long-term emissions reduction initiatives into SAPs and to facilitate the monitoring of LTAG progress with data contained in SAPs, ICAO is working on the update of ICAO Doc 9988, *Guidance on the Development of States' Action Plans on CO₂ Emissions Reduction Activities*. The update will include guidance for the enhancement of engagement with States to support

¹ [State Action Plans and Assistance \(icao.int\)](https://www.icao.int)

more robust, quantitative, and forward-looking SAPs, the continuous exploration of means to facilitate States' access to financial resources through new possible partnerships, and an updated Action Plan Emissions Reduction (APER) website to facilitate the CO₂ emissions reductions quantification process.

ICAO ACT-SAF Programme²

- 2.6 In June 2022, prior to the 41st Session of the Assembly, the ICAO Assistance, Capacity building and Training for Sustainable Aviation Fuels programme was launched, to provide tailored support for States in various stages of SAF development and deployment, facilitate partnerships and cooperation on SAF initiatives under ICAO coordination, and serve as a platform to facilitate knowledge sharing and recognition of all SAF initiatives around the world.
- 2.7 The activities envisaged under the ACT-SAF include training programmes, feasibility studies, support for SAF certification and policy development, as well as the implementation of specific SAF projects, and the establishment of partnerships amongst States and other stakeholders. In this regard, the ICAO ACT-SAF platform has been developed and is accessible on the ICAO website.
- 2.8 As of May 2023, 75 States and 39 organizations have formally joined the ACT-SAF programme and are recognized on the ICAO website. ICAO is in the process of identifying the needs and roles of all States and organisations under ACT-SAF, and ICAO had conducted more than 60 individual exploratory interviews. These interviews serve to collect information on the state of play of each ACT-SAF Partner in terms of expertise, policy and industrial development for SAF production.
- 2.9 In the context of the exploratory interviews conducted with ACT-SAF Partner States and organizations, States have expressed a strong need to receive conceptual training on SAF. In order to address this important request, ICAO has launched the ACT-SAF Series, a set of monthly ACT-SAF training sessions on an array of important SAF-related topics, with contributions from ACT-SAF partner States and Organizations as appropriate. As of April 2023, four sessions have been conducted, with the most recent session on SAF policies gathering interest from over 150 participants. Four more sessions are planned which may include additional topics to be covered, taking into account feedback from partner States.
- 2.10 Under ACT-SAF, a template for SAF feasibility studies is currently being developed, with a harmonized structure on SAF feasibility study outcomes, which will ensure coherence across studies, enable better comparability between results, and facilitate its outreach. The template will also highlight the need for relevant information from SAF feasibility studies, such as techno-economic analysis from feedstock/conversion pathways or equivalent, which can support future investment decisions.

² ICAO ACT-SAF website: <https://www.icao.int/environmental-protection/Pages/act-saf.aspx>

- 2.11 ICAO is currently working with the European Commission to conduct feasibility studies in ten partner States on the development and deployment of SAF. This will constitute the first steps towards developing a SAF market in these partner States, through the identification of viable SAF feedstock/conversion technologies, estimates on costs for SAF production facilities, policy options and long-term roadmaps, which may be incorporated into the State Action Plans. With the financial resources available, ICAO is also exploring the possibility of translating existing ACT-SAF initiatives (e.g. ACT-SAF training series) into other ICAO languages.

Environmental Regional Seminars (April / May 2023)

- 2.12 As part of the preparatory activities for CAAF/3 to be held in November 2023 (see below for further details), ICAO organized a series of in-person regional seminars in April and May 2023, to raise awareness on the results of the 41st Session of the ICAO Assembly and the progress of work related to SAF, lower carbon aviation fuels (LCAF) and other aviation cleaner energy, as well as to exchange views of States on the expectations for CAAF/3, with the following dates and venues:

- 13 and 14 April Regional seminar for EUR/NAT regions (Netherlands);
- 18 and 19 April Regional seminar for ESAF and WACAF regions (Kenya);
- 24 and 25 April Regional seminar for NACC/SAM regions (Dominican Republic);
- 3 and 4 May Regional seminar for APAC region (Thailand); and
- 7 to 8 May Regional seminar for MID region (Egypt).

- 2.13 Each regional seminar started with an opening and setting-the scene session, followed by the dialogues among States and other participants under four topics of: 1) supporting policies to promote the development and deployment of cleaner energy for aviation – opportunities and challenges; 2) assistance, capacity-building and training for cleaner energy, including ICAO ACT-SAF programme; 3) financing cleaner energy; and 4) exchange of views on the expectations for CAAF/3. Substantial material was provided for participants to support them in better preparing for their engagement during the seminars, including a self-testing questionnaire for the participants (ref: Appendix A).

Pre-CAAF/3 Outreaching Events (July / September 2023)*July 2023 – ICAO LTAG Stocktaking and Pre-CAAF/3 Policy/Finance Consultation*

- 2.14 The 2023 ICAO LTAG Stocktaking on aviation in sector CO₂ emissions reductions and Pre-CAAF/3 policy and finance consultations will be held from 11 to 13 July 2023 as a hybrid format in Montréal, Canada.
- 2.15 The event will begin with the 2023 Stocktaking, building upon the continued success of annual ICAO Stocktaking events and in light of Assembly Resolution A41-21, operative paragraph 9 on the monitoring of LTAG progress. The Stocktaking will cover all aviation in-sector CO₂ reduction measures, including the latest developments and innovations from technologies, operations, fuels and cleaner energies. In the lead up to CAAF/3, the focus this year will be on fuel-related approaches and solutions, showcasing the latest information from States, industry and other stakeholders.
- 2.16 The Stocktaking will be followed by a pre-CAAF/3 initial consultation among States, focusing on policy and finance matters, with involvement of public and private financial institutions and other relevant stakeholders, to consider relevant elements of a global framework for aviation cleaner energy, bearing in mind that it will not be a decision-making event.
- 2.17 A simultaneous exhibition will be held on site at ICAO Headquarters, which will include different sections associated with the various stages of the SAF supply chain, such as feedstock, processing, distribution and certification, providing participants with a practical and current view of the innovations in this area. In addition, broader concepts related to technology, operations and fuels will also be presented during the exhibition, to foster a deeper understanding and wider view on the basket of measures to support the achievement of net-zero carbon emissions by 2050.
- 2.18 The green innovations brought forward through the ICAO Global Coalition for Sustainable Aviation will help to enable the 2023 ICAO LTAG Stocktaking. Since 2019, this Global Coalition has continued to provide a forum for stakeholders within and beyond the aviation sector to facilitate the development of new ideas and accelerate the implementation of solutions that will further reduce aviation emissions at source³.

³ Webpage including the report of Coalition partners' initiatives:
<https://www.icao.int/environmental-protection/SAC/Pages/learn-more.aspx>

September 2023 – Pre-CAAF/3 Outcomes Consultation Event

- 2.19 The second pre-CAAF/3 event in September 2023 will intend to undertake consultation among States on possible CAAF/3 outcomes for a global framework for aviation cleaner energy, with a focus on relatively less contentious technical areas and identifying remaining differences of views with a possible way forward to bridge them, to pave the way for a smoother discussion at CAAF/3 in November 2023.

ICAO CAAF/3 (November 2023)

- 2.20 CAAF/3 will be convened from 21 to 24 November 2023 in Dubai, U.A.E., as an in-person event with the following agenda:
- Setting the scene – Latest developments in cleaner energy technology for international aviation and its contribution to the Long-Term Aspirational Goal;
 - Supporting policies to promote the development and deployment of cleaner energy for aviation;
 - Assistance and capacity building for cleaner energy;
 - Financing cleaner energy; and
 - Reviewing the 2050 ICAO Vision for SAF, including LCAF and other cleaner energy for aviation, in order to define a global framework.

3 Actions

- 3.1 That the NACC States / NACC-DGCA / ICAO Regional Director, North American, Central American, and Caribbean are invited to:
- a) support the LTAG implementation, in particular further engagement in the ICAO ACT-SAF programme to promote the development and deployment of SAF within and outside the NACC region, through close coordination under ICAO;
 - b) submit updated and quantified State Action Plans to ICAO preferably by the end of June 2024, encompassing innovations in technologies and cleaner energies, outlining respective policies, actions and roadmaps, including long-term projections, and ensuring the use of the best available data as supported by ICAO guidance and tools; and
 - c) support and actively participate in the CAAF/3 preparatory process, including the ICAO LTAG Stocktaking and pre-CAAF/3 Policy/Finance Consultation events from 11 to 13 July 2023, and the pre-CAAF/3 Outcomes Consultation event in September 2023, toward a robust ICAO global framework for aviation cleaner energy to be agreed at CAAF/3.

APPENDIX
LIST OF SUPPORTING MATERIAL AND WEBPAGES FOR REGIONAL SEMINARS

No	Description	Link
1	2023 ICAO Environmental Regional Seminars main page	https://www.icao.int/Meetings/RS2023/Pages/default.aspx
2	Pre-seminar self-test	https://docs.google.com/forms/d/e/1FAIpQLSdpCJfZsyfIS1A9BEJzWrsTWy6G1Lkqzmi8TOKGsfIRzMF0g/viewform
3	<u>Setting the scene</u> – Overview on the 41 st Session of the Assembly results, including the LTAG agreement, and the importance of cleaner energy	https://www.icao.int/Meetings/RS2023/Documents/Setting%20the%20Scene.pdf
4	<u>Session 1</u> – Supporting policies to promote the development and deployment of cleaner energy for aviation – opportunities and challenges	https://www.icao.int/Meetings/RS2023/Documents/1%20-%20Supporting%20Policies.pdf
5	<u>Session 2</u> – Assistance, capacity-building and training for cleaner energy, including ICAO ACT-SAF programme	https://www.icao.int/Meetings/RS2023/Documents/2%20-%20Assistance%2c%20Capacity%20building%20and%20Training%20for%20cleaner%20energy.pdf
6	<u>Session 3</u> – Financing cleaner energy	https://www.icao.int/Meetings/RS2023/Documents/3%20-%20Financing%20cleaner%20energy.pdf
7	<u>Session 4</u> – Exchange of views on the expectations for CAAF/3	https://www.icao.int/Meetings/RS2023/Documents/4%20-%20Exchange%20of%20views%20on%20expectations%20for%20CAAF3.pdf

- Summary of fuels-related information from ICAO LTAG analysis:
<https://www.icao.int/environmental-protection/LTAG/Pages/LTAG-and-Fuels.aspx>
- ICAO Guidance on Potential Policies and Coordinated Approaches for the deployment of SAF:
https://www.icao.int/environmental-protection/Pages/saf_guidance_potential_policies.aspx
- ICAO “Rules of Thumb”, estimates related to SAF costs, investment needs and production capacity of facilities:
https://www.icao.int/environmental-protection/Pages/SAF_RULESOFTHUMB.aspx
- ICAO ACT-SAF programme webpage:
<https://www.icao.int/environmental-protection/Pages/act-saf.aspx>