



WORKING PAPER

**HIGH-LEVEL MEETING
ON THE FEASIBILITY OF A LONG-TERM ASPIRATIONAL GOAL FOR
INTERNATIONAL AVIATION CO₂ EMISSIONS REDUCTIONS (HLM-LTAG)**

Montréal, 19 to 22 July 2022

Agenda items : All

OVERVIEW OF ICAO WORK ON THE FEASIBILITY OF LTAG

(Presented by the ICAO Secretariat)

SUMMARY

This paper provides an overview of the ICAO work on the feasibility of an LTAG, including the descriptions of six Building Blocks to facilitate the consideration of LTAG-related topics during the Meeting.

Action by the Meeting is in paragraph 6.

1. INTRODUCTION

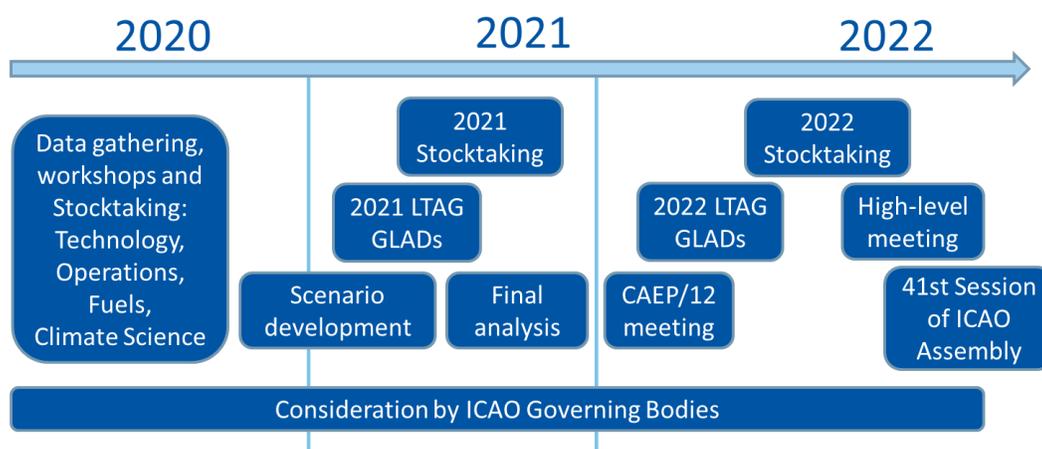
1.1 In response to the request by the 40th Session of the Assembly in Resolution A40-18, paragraph 9 (HLM-LTAG-IP/1 refers), ICAO and its Member States and other stakeholders made dedicated efforts to explore the feasibility of a long-term global aspirational goal (LTAG) for international aviation, including:

- a) data collection and information sharing;
- b) technical assessment of aviation CO₂ emissions reduction scenarios with analyses of costs and necessary investments;
- c) consultation and dialogues among stakeholders; and
- d) engagement of high-level representatives to facilitate decision (during HLM-LTAG).

1.2 The overall ICAO process and timeline related to LTAG during the triennium is illustrated in the Figure below.

1.3 This paper provides an overview of the above-mentioned ICAO activities related to LTAG, and describes the six LTAG Building Blocks which were identified during the course of such activities, with a view to facilitating the consideration of LTAG-related topics during the Meeting.

ICAO LTAG process and timeline



2. DATA COLLECTION AND INFORMATION SHARING

2.1 As part of the ICAO LTAG work, in particular for data collection and information sharing on aviation in-sector CO₂ emissions reductions, the 2020 and 2021 ICAO Stocktaking events were convened in September 2020¹ and September 2021², respectively. During these events, States, industry leaders, researchers and innovators shared their ambitious plans, solutions and policies for carbon emissions reduction from international aviation, including measures from technology, operations and fuels, as well as the latest scientific information and findings of relevance to international aviation. In addition, the 2022 ICAO Stocktaking will be held virtually on 18 July 2022, as a means to share the latest information on aviation in-sector CO₂ emissions reductions, prior to the HLM-LTAG.

2.2 Information on the recent developments in other UN bodies of relevance to international aviation and the feasibility of LTAG is also provided in HLM-LTAG-WP/3.

2.3 With a view to providing one single source of information that is frequently updated to access all the latest CO₂ reduction innovations for aviation, ICAO developed a series of Tracker Tools³, 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. More information on the level of ambition collected through the ICAO process, and the commitments by the aviation industry and other stakeholders is provided in HLM-LTAG-WP/5.

3. THE ICAO CAEP LTAG REPORT

3.1 Following the request by the 40th Session of the Assembly and subsequently by the Council, the ICAO Committee on Aviation Environmental Protection (CAEP) undertook its technical work on the feasibility study on LTAG since early 2020, focused on the attainability and readiness of aviation in-sector CO₂ reduction measures, including innovative aircraft technologies, operations and fuels, as it

¹ 2020 Stocktaking website: <https://www.icao.int/Meetings/Stocktaking2020/Pages/default.aspx>

² 2021 Stocktaking website: <https://www.icao.int/Meetings/Stocktaking2021/Pages/default.aspx>

³ ICAO Tracker Tools website: [Aviation CO₂ emissions reduction initiatives - Tracker Tool \(icao.int\)](https://www.icao.int/aviation-co2-emissions-reduction-initiatives-tracker-tool)

would be necessary to assess the in-sector CO₂ reduction potentials before considering the need and extent of any complementary measure.

3.2 The CAEP/12 meeting in February 2022 unanimously approved its technical report on the feasibility of LTAG (available on the LTAG report website⁴) including scenarios, highlighting the potential for substantial CO₂ reductions from innovative aircraft technologies, operations and fuels, with the assessment of required costs and investments. More information on the technical feasibility of various aviation CO₂ emissions reductions scenarios and LTAG report is provided in HLM-LTAG-WP/4 and IP/2.

4. **LTAG GLOBAL AVIATION DIALOGUES (GLADS)**

4.1 As part of the consultative process on LTAG among States and stakeholders, ICAO organized the LTAG Global Aviation Dialogues (GLADs) as a series of five regional events both in May 2021⁵ and March/April 2022⁶, with the aim of sharing information and raising awareness on the LTAG process and technical analyses, as well as allowing for the exchange of views and expectation to facilitate further LTAG work and decision-making.

4.2 Prior to the 2022 GLADs, the LTAG report (paragraph 3 above refers) was made available as input and the dialogue sessions enhanced overall understanding of the technical report among the participants. To support the well-informed deliberations at the HLM-LTAG and the subsequent 41st Session of the Assembly, the GLADs participants also exchanged views on possible building blocks for LTAG considerations, such as: scientific understanding and context, expected potential contribution of technology, operations and fuels, and the level of LTAG ambition. The participants also discussed on possible means of implementation, expected support to States with action plans and roadmaps, and ways of monitoring progress. Further information on the 2022 LTAG-GLADs is provided in HLM-LTAG-IP/3.

5. **LTAG BUILDING BLOCKS**

5.1 Following the consideration of the LTAG report and other relevant information as preparation for the HLM-LTAG, the ICAO Council and its subsidiary bodies, with the support of the Secretariat, identified the following six LTAG Building Blocks to structure and facilitate discussion of LTAG-related topics:

- 1) Scientific understanding (Building Block 1);
- 2) Technical feasibility of LTAG scenarios (Building Block 2);
- 3) Level of LTAG ambition (Building Block 3);
- 4) States action plans and roadmaps (Building Block 4);
- 5) Means of implementation (Building Block 5); and
- 6) Means of monitoring progress (Building Block 6).

5.2 In this regard, with the aim of providing relevant background information and facilitating the discussion and decision-making during the HLM-LTAG, the following six working papers that

⁴ ICAO LTAG report website: <https://www.icao.int/environmental-protection/LTAG/Pages/LTAGreport.aspx>

⁵ 2021 GLADs website: <https://www.icao.int/Meetings/2021-ICAO-LTAG-GLADS/Pages/default.aspx>

⁶ 2022 GLADs website: <https://www.icao.int/Meetings/2022-ICAO-LTAG-GLADS/Pages/default.aspx>

correspond to the above-mentioned six LTAG Building Blocks have been prepared, and summarized in the table below.

WPs	Titles (Building Blocks) and Descriptions
HLM-LTAG-WP/3	<p>Title: Scientific understanding (Building Block 1)</p> <p>Description: This paper presents the recent developments in other UN bodies of relevance to international aviation and in particular to the feasibility of LTAG, such as the latest scientific findings by the Intergovernmental Panel on Climate Change (IPCC), and outcomes of the United Nations Framework Convention on Climate Change (UNFCCC).</p>
HLM-LTAG-WP/4	<p>Title: Technical feasibility of LTAG scenarios (Building Block 2)</p> <p>Description: This paper presents the ICAO work on the feasibility of LTAG since the 40th Session of the Assembly, with a focus on the CAEP technical assessment on the feasibility of various aviation in-sector CO₂ emissions reductions scenarios.</p>
HLM-LTAG-WP/5	<p>Title: Level of LTAG ambition (Building Block 3)</p> <p>Description: This paper presents the ICAO work on the feasibility of LTAG since the 40th Session of the Assembly, with a focus on the level of ambition through the information sharing and consultative process by the ICAO Stocktaking and Global Aviation Dialogues (GLADs), as well as the commitments by the aviation industry and other stakeholders.</p>
HLM-LTAG-WP/6	<p>Title: State action plans and roadmaps (Building Block 4)</p> <p>Description: This paper discusses the role of State Action Plans to Reduce International Aviation CO₂ Emissions and roadmaps to support the implementation and contributions of States towards the achievement of LTAG, as well as the ICAO CO₂ emissions reductions projects and partnerships with States and other international organizations, building upon the past experience under the <i>No Country Left Behind</i> initiative.</p>
HLM-LTAG-WP/7	<p>Title: Means of implementation (Building Block 5)</p> <p>Description: This paper discusses possible means of implementation (e.g. capacity building, financing and technology transfer), including the launch of the ICAO Assistance, Capacity-building and Training programme to support State's aviation decarbonisation efforts and possible establishment of partnerships for the undertaking of feasibility studies, development of national policies, and specific implementation projects related to Sustainable Aviation Fuels (SAF), Lower Carbon Aviation Fuels (LCAF) and other cleaner energy sources and technologies, as well as the associated Secretariat activities.</p>
HLM-LTAG-WP/8	<p>Title: Means of monitoring progress (Building Block 6)</p> <p>Description: This paper discusses possible means for regularly monitoring progress towards the achievement of LTAG, including through the ICAO Stocktaking process, further assessment of the CO₂ emissions reductions benefits and cost impacts, and complementary information from State Action Plans to Reduce International Aviation CO₂ Emissions.</p>

6. ACTION BY THE HLM-LTAG

6.1 The HLM-LTAG is invited to:

- a) consider information in this paper regarding the overview of the ICAO work on the feasibility of an LTAG, as well as the descriptions of six LTAG Building Blocks which intend to facilitate the consideration of LTAG-related topics during the Meeting; and
- b) use general information contained in this paper, as well as specific information contained in the other six HLM-LTAG-WP/3 to WP/8 that correspond to the six LTAG Building Blocks, for consideration of possible outcomes of the HLM-LTAG.

— END —