



WORKING PAPER

ASSEMBLY — 41ST SESSION

EXECUTIVE COMMITTEE

Agenda Item 17: Environmental Protection – International Aviation and Climate Change

BUILDING SKILLS AND TOOLS TO IMPLEMENT LTAG OPERATIONAL MEASURES

(Presented by Chile and supported by Costa Rica, Dominican Republic, Ecuador and Peru²)

EXECUTIVE SUMMARY

This paper discusses the need for ICAO to support States in building skills and tools to implement the operational measures proposed in the *Report on the feasibility of a long-term aspirational goal (LTAG) for international civil aviation CO₂ emission reductions*, and to quantify and categorize air operations for the clear purpose of reducing greenhouse gas emissions.

Action: The Assembly is invited to:

- a) consider the development of technological elements, together with relevant training requirements (knowledge), for analysing the data collected on emissions reductions achieved with operational measures;
- b) encourage the analysis of CO₂ emissions reductions for each individual operational measure, and the creation of performance indicators for those measures;
- c) urge ICAO to build the technological tools and knowledge required for prioritizing the measures that confer the greatest environmental benefit; and
- d) support developing States in implementing those operational measures identified that have the greatest environmental benefit.

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| <i>Strategic Objectives:</i> | This working paper relates to the Strategic Objectives – <i>Capacity and Efficiency</i> and <i>Environmental Protection</i> . |
| <i>Financial implications:</i> | Positive |
| <i>References:</i> | <i>Report on the feasibility of a long-term aspirational goal (LTAG) for international civil aviation CO₂ emission reductions</i> , ICAO Committee on Aviation and Environmental Protection (CAEP), March 2022 <i>Doc 10178, High-level Meeting on the Feasibility of a Long-term Aspirational Goal for International Aviation CO₂ Emissions Reduction (HLM-LTAG)</i> |

¹ Spanish version provided by Chile.

² LACAC member States.

1. INTRODUCTION

1.1 In 2019, the 40th Assembly of ICAO requested the Council of the Organization to study the feasibility of establishing a long-term aspirational climate goal for international civil aviation (LTAG)³.

1.2 Consequently, in February 2022 the 12th Meeting of the ICAO Committee on Aviation and Environmental Protection (CAEP/12) approved the *Report on the feasibility of a long-term aspirational goal (LTAG) for international civil aviation CO₂ emission reductions* indicating that CO₂ emissions reductions of between 4 and 11 per cent may be achieved by means of operational measures, on the basis of the assumptions set out in the report.

1.3 The report draws conclusions that have been duly taken into account.

2. DISCUSSION

2.1 Based on the assumptions of the aforementioned CAEP LTAG Report, the following figure describes the three CO₂ emission scenarios:

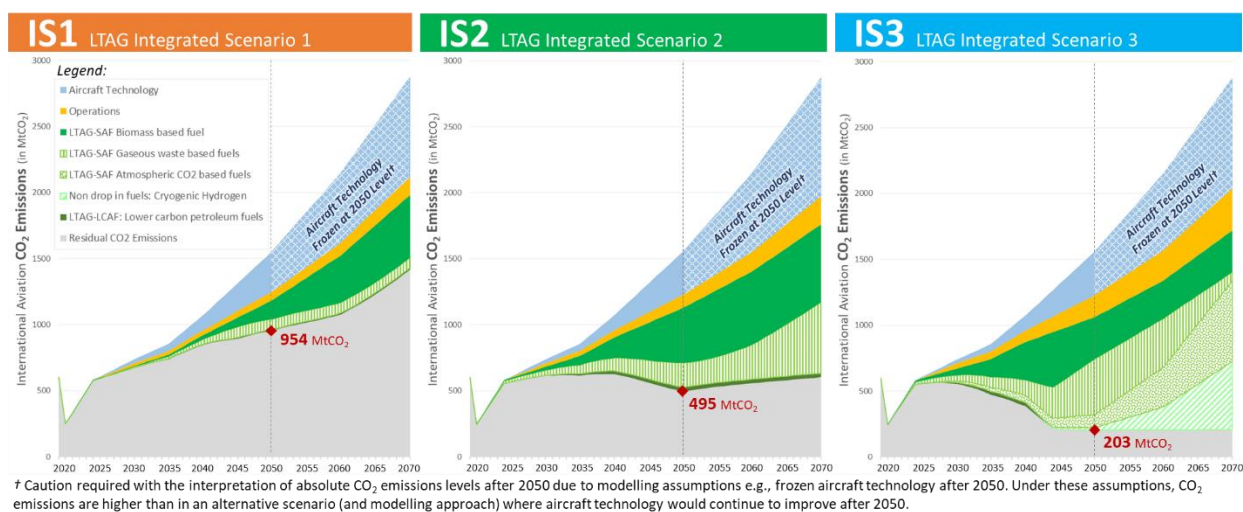


Figure 1. CO₂ emissions from international aviation associated with LTAG Integrated Scenarios

2.2 Chile believes that, as a priority, the capabilities and performance of the personnel who will do the job of verifying and managing atmospheric emissions should be developed beforehand, in order to implement the operational measures for optimizing air space design that are mentioned in paragraph 2.5 of the Report, Appendix M4 – *Operations Sub Group Report*.

2.3 Although there are presently different models for calculating atmospheric emissions from civil aviation, used mainly by developing countries that do not have their own models for understanding local emission conditions, such models use ICAO methodology. However, the data used to estimate atmospheric emissions (fuel burn, aircraft weight, etc.) are sensitive, restricted, and in some cases unavailable, even though they are essential for estimating fuel use and emissions generated.

2.4 To create an emissions calculation model, you need data and knowledge to analyse the information. To analyse the information, you must very carefully consider the interactions among the

³ ICAO Assembly Resolution A40-18, para. 9 of 2019: <https://www.icao.int/environmental-protection/Pages/LTAG.aspx>.

different gases emitted into the atmosphere, the altitude at which they are emitted, aircraft performance, meteorological and orographic conditions, to mention just a few variables.

2.5 To properly manage emissions reduction, it is necessary to have timely information and measure the effectiveness of the operational measures described in Appendix M4 to the *Report*. It is then possible for States to quantify atmospheric emissions and determine what should be done to estimate the real benefits of the measures adopted.

2.6 As a key player in the drive to reduce greenhouse gas emissions from civil aviation, ICAO assists developing States with workshops, training sessions and assessment of their work to measure and verify CO₂ emissions from international aviation. The aim is to build the technological and human capacities that will serve to quantify atmospheric emissions and categorize the proposed operational measures accordingly, thus enhancing the emission reduction benefits of those measures.

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