



**WORKING PAPER**

**HIGH-LEVEL MEETING  
ON THE FEASIBILITY OF A LONG-TERM ASPIRATIONAL GOAL FOR  
INTERNATIONAL AVIATION CO<sub>2</sub> EMISSIONS REDUCTIONS (HLM-LTAG)**

**Montréal, 19 to 22 July 2022**

**Agenda Item 2: Means of implementation for LTAG**

**Agenda Item 4: Conclusions and Recommendations of the Meeting**

**STATE ACTION PLANS AND ROADMAPS (BUILDING BLOCK 4)**

(Presented by the ICAO Secretariat)

**SUMMARY**

This paper discusses the role of State Action Plans to Reduce International Aviation CO<sub>2</sub> Emissions and roadmaps to support the implementation and contributions of States towards the achievement of an LTAG, as well as the ICAO CO<sub>2</sub> emissions reductions projects and partnerships with States and other international organizations, building upon the past experience under the *No Country Left Behind* initiative.

Action by the Meeting is in paragraph 5.

**1. INTRODUCTION**

1.1 According to the Assembly Resolution A40-18 (HLM-LTAG-IP/1 refers), the ICAO global aspirational goals set out the international aviation sector's collective goals, without attribution of specific obligations in the form of emissions reduction goals to individual States. Member States can contribute to the achievement of collective goals by planning and implementing different sets of measures to reduce CO<sub>2</sub> emissions from international aviation.

1.2 In this regard, the Assembly Resolution A40-18, paragraphs 10 to 13 encourages Member States to submit voluntary action plans, outlining respective policies and actions, and the actions plans should include information on the basket of measures considered by States, quantified information on the expected environmental benefits of the selected measures, and information on any specific assistance needs.

**2. STATE ACTION PLANS AND ASSISTANCE<sup>1</sup>**

2.1 In response to the Assembly request in Resolution A40-18, ICAO continues to work together with Member States in order to support the development and update of State Action Plans to reduce CO<sub>2</sub>

<sup>1</sup> ICAO State Action Plans website: [https://www.icao.int/environmental-protection/Pages/ClimateChange\\_ActionPlan.aspx](https://www.icao.int/environmental-protection/Pages/ClimateChange_ActionPlan.aspx)

emissions from international aviation. This initiative has become a key element of the Organization's capacity-building and assistance strategy to support Member States in implementing a broad range of CO<sub>2</sub> emissions mitigation measures selected from the ICAO basket of measures.

2.2 As of 31 May 2022, 129 Member States, representing 98.08 per cent of international aviation traffic in Revenue Tonne Kilometres (RTK), voluntarily submitted action plans to ICAO, as illustrated in the Figure 1 below. In total, 52 States submitted an action plan for once to ICAO and 77 States updated their action plans. In 2022, 8 States has submitted their initial action plans, which is the highest number since 2016, indicating a clear signal of Member States' engagement in the action plan initiative.

2.3 The Appendix of this paper provides more details on the status of State Action Plans submitted, by ICAO regions.



*Figure 1- Map of State Action Plans submitted to ICAO (green-highlighted)*

2.4 ICAO assessed the 129 State Action Plans submitted, in terms of the quantification of their contents, which show that:

- 100 States, representing 68.31 per cent of global RTK included quantified baseline and expected emissions in the action plans;
- 13 States, representing 12.31 per cent of global RTK provided partially quantified information in the action plans; and
- 16 States, representing 17.46 per cent of global RTK did not provide data or sufficient information in the action plans to allow a quantified analysis.

2.5 Table 1 below compares the number of States that submitted action plans with data, partial data, and no data, according to the assessments made in 2018 and 2022, respectively. The results shows that the number of Member States that includes data in their action plans with the quantification of CO<sub>2</sub> reduction benefits of selected mitigating measures has increased dramatically. These results demonstrate

the high interest and engagement of Member States in this initiative, as well as the positive impact of ICAO’s assistance and capacity-building activities.

Table 1 — Quantified State Action Plans (# of States)

Quantified SAPs	By November 2018 (# of States)	By 31 May 2022 (# of States)
With data	46	100
Partial Data	7	13
No Data	58	16

2.6 Table 2 below shows the breakdown of the number of States that have selected various categories of CO<sub>2</sub> mitigation measures in the action plans. In addition to the table below, 46 of the 129 State action plans contain cleaner energy efforts.

Table 2 — CO<sub>2</sub> Mitigation Measures (selected by # of States)

Mitigation measures	By 31 May 2022 (selected by # of States)
Technology	99
Operations	129
Sustainable Aviation Fuels	70

2.7 While the States Action Plans continue to be an essential tool for States to communicate their national plans of climate action for international aviation, they also serve as an important vehicle for ICAO to monitor the progress for achievement of Member States’ collective global aspirational goals (HLM-LTAG-WP/8 refers). As ICAO has been working on the feasibility of LTAG since the 40th Session of the Assembly, several States are recently developing more concrete and longer-term strategies and plans for the reduction of carbon emission from international aviation, with the use of new innovative technologies, operations, and sustainable aviation fuels.

2.8 The Assembly encouraged States that have already submitted action plans to share information contained in the action plans and build partnerships with other States in order to support those States that have not prepared action plans. In this respect, ICAO has been facilitating the establishment of buddy partnerships between States, including the development of a draft agreement of cooperation aiming to establish a model framework by which States can help other States. To date, nine partnerships have been established under the ICAO State Action Plan Buddy Programme.

2.9 To facilitate the voluntary contributions of States to reduce international aviation CO<sub>2</sub> emissions and thus to achieve collective ICAO global aspiration goals, future updates of State Action Plans should focus on the latest innovative solutions available and should also enable States to leverage potential sources of funding. With the support of States, the Secretariat aims to update the ICAO Doc 9988, *Guidance on the Development of State Action Plans on CO<sub>2</sub> Emissions Reduction Activities*, to ensure State Action Plans become more robust, more quantitative, more forward-looking, while being an effective tool for facilitating green financing through fully quantified environmental benefits of the action plans.

### 3. ICAO-EU ASSISTANCE PROJECT<sup>2</sup>

3.1 The ICAO and European Union (EU) assistance project has been a successful environmental initiative, funded by the EU and implemented by ICAO from 2014 to 2019, and it supported 14 beneficiary States in Africa and the Caribbean with the development and implementation of State Action Plans, and the establishment of CO<sub>2</sub> emissions monitoring systems for international aviation.

3.2 All the beneficiary States developed and submitted fully-quantified Action Plans, and established National Action Plan Teams with relevant stakeholders to oversee their implementation. An Aviation Environmental System (AES) was installed in each State as a tool to monitor CO<sub>2</sub> emissions from international aviation, and pilot projects for providing solar energy to power at gates at airports and the Sustainable Aviation Fuels (SAF) production feasibility studies were implemented.

3.3 Building on the successful partnership, Phase II of the ICAO-EU assistance project was launched with an implementation period from 2020 to 2023, to support an additional 10 beneficiary States in Africa on the development of their State Action Plans. As part of the Phase II project, by June 2022, all Action Plans were already developed, and a series of initiatives, such as an information session with the participation of Directors General of Civil Aviation of the beneficiary States, and an innovation seminar, were held focusing on facilitating the development and deployment of Sustainable Aviation Fuels (SAF).

### 4. ICAO-UNDP ASSISTANCE PROJECT<sup>3</sup>

4.1 The ICAO and United Nations Development Programme (UNDP) assistance project, being financed by Global Environment Facility (GEF), was also a successful environmental initiative from 2015 to 2019. As part of ICAO's efforts to provide assistance to developing countries and Small Island Developing States (SIDS) and build their capacity to implement aviation emissions reduction measures, the following four guidance documents were developed.

- guidance on sustainable aviation fuels (SAF);
- guidance on renewable energy for aviation;
- guidance on regulatory and organizational framework to address aviation emissions; and
- guidance on financing aviation emissions reductions.

4.2 The SAF guidance document provides information on the types of sustainable feedstock and relevant pathways, various factors contributing to the development of SAF, a cost-benefit analysis of fuel options taking into account national capacities and circumstances, sustainability considerations, policies necessary for the development and production of SAF, supply chain, storage and use of these fuels, testing and certification, price determination, roles of government and industry, research and investment in promoting the development and deployment of SAFs, and case studies and best practices.

4.3 The guidance on renewable energy for aviation informs States on how renewable energy can be deployed to reduce aviation CO<sub>2</sub> emissions at and around airports, and how those airport renewable energy projects can also minimize CO<sub>2</sub> from many energy consuming activities at airports beyond those that relate to aviation. The guidance document also increases the understanding of energy usage in relation to aviation activities by exploring the close link between climate change and energy policies and emphasizing the necessity to create synergies between both policies, so that their impacts are maximized.

4.4 The guidance on regulatory and organizational framework to address aviation emissions includes possible steps that States could take to integrate an environmental unit within their administration to achieve aviation related environmental objectives. The added value provided by the guidance document

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<sup>2</sup> ICAO-EU Assistance Project: <https://www.icao.int/environmental-protection/Pages/Assistance.aspx>

<sup>3</sup> ICAO-UNDP Assistance Project: [https://www.icao.int/environmental-protection/Pages/ICAO\\_UNDP.aspx](https://www.icao.int/environmental-protection/Pages/ICAO_UNDP.aspx)

is to identify policies that can serve as pilot initiatives to create capacity on environmental policies at the level of the civil aviation authorities.

4.5 The guidance on financing aviation emissions reductions contains a valuable resource for States in search of financial support, as it provides a directory of public financing programmes for mitigating aviation emissions. An analysis of the available funds shows that a significant amount of financial resources are being directed toward programmes associated with climate change mitigation and that these programmes are closely tied to public climate financing through the United Nations, multinational development banks, non-governmental organizations, and various private partners and stakeholders.

## 5. ACTION BY THE HLM-LTAG

5.1 The HLM-LTAG is invited to:

- a) recognize the continued importance of the State Action Plans for communicating national plans of climate action for international aviation to ICAO, while enabling ICAO to monitor the progress for achievement of States' collective global aspirational goals and to facilitate the provision of assistance and financial resources identified in the action plans as appropriate;
- b) request ICAO to facilitate the dissemination of studies and best practices, including regarding innovative technologies and cleaner energy sources and information on possible sources of finance to CO<sub>2</sub> emissions reduction measures, in cooperation with financial and other relevant international organizations, and provide guidance and other assistance for preparation and implementation of State Action Plans;
- c) request States to update and submit to ICAO action plans to reduce CO<sub>2</sub> emissions from international aviation, outlining respective policies, actions and roadmaps, every three years; and
- d) use the information contained in this paper, in particular on the roles of State Action Plans and ICAO assistance projects in partnerships with other organizations, for consideration of possible outcomes of the HLM-LTAG related to the LTAG Building Block 4: *State Action Plans and Roadmaps*.

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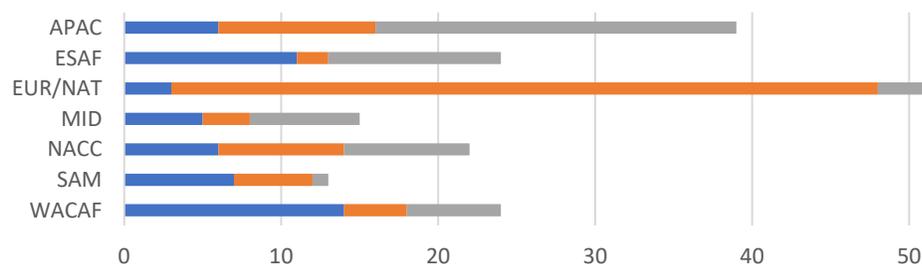
## APPENDIX

### STATUS OF STATE ACTION PLANS SUBMISSION

The table and chart below lists the State Action Plans submitted, by ICAO regions, as of 31 May 2022. For each region, it indicates the number of States that have submitted an Action Plan, the number of States that have submitted an Action Plan with data that could be aggregated, and the corresponding percentage of global international RTK, based on 2015 RTK data.

	WACAF	SAM	NACC	MID	EUR/NAT	ESAF	APAC	TOTAL
<b>Total number of States accredited to each Regional Office</b>	24	13	22	15	56	24	39	<b>193</b>
<b>Number of States that submitted an Action Plan</b>	18	12	14	8	48	13	16	<b>129</b>
<b>Corresponding percentage of global international RTK</b>	0.07%	2.94%	14.09%	13.98%	34.19%	1.51%	31.31%	<b>98.08%</b>

#### Action Plan Submissions by Region



	WACAF	SAM	NACC	MID	EUR/NAT	ESAF	APAC
■ States Submitted Once	14	7	6	5	3	11	6
■ States Updated	4	5	8	3	45	2	10
■ States left to submit	6	1	8	7	8	11	23

■ States Submitted Once   ■ States Updated   ■ States left to submit