



**WORKING PAPER**

**ASSEMBLY — 39TH SESSION**

**EXECUTIVE COMMITTEE**

**Agenda Item 22: Environmental Protection – International Aviation and Climate Change – Policy, Standardization and Implementation Support**

**STATES' VOLUNTARY ACTION PLANS ON CO<sub>2</sub> EMISSIONS REDUCTION ACTIVITIES**

(Presented by the Council of ICAO)

**EXECUTIVE SUMMARY**

This paper reports on the ICAO developments related to Member States' voluntary action plans for CO<sub>2</sub> emissions reduction and relevant capacity building activities since the 38th Session of the ICAO Assembly, as well as the next steps to further support States in preparing, updating and implementing action plans.

**Action:** The Assembly is invited to:

- a) acknowledge the activities undertaken and progress made by the Organization in response to the request of the 38th Session of the ICAO Assembly with respect to the preparation and submission of States' action plans on CO<sub>2</sub> emissions reduction activities;
- b) encourage Member States to make available their action plans on the ICAO public website and voluntarily submit more complete and robust data in the action plans to facilitate the compilation of global emissions data by ICAO;
- c) encourage States that already submitted their action plans to build partnerships with other Member States in order to support those States that have not yet prepared their action plans;
- d) support the continued work of the Organization in assisting States in the preparation and update of action plans, and implementation of the measures contained therein, as described in paragraph 4; and
- e) consider the information contained in this paper for the update of Assembly Resolution A38-18.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective E – <i>Environmental Protection</i> .
<i>Financial implications:</i>	The activities referred to in this paper will be undertaken subject to the resources available in the 2017–2019 Regular Programme Budget and/or from extra-budgetary contributions.
<i>References:</i>	A39-WP/28, <i>Report on the ICAO Technical Assistance Programme in the Safety, Security and Facilitation, and Environment Fields</i> A39-WP/49, <i>Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change</i>

## 1. INTRODUCTION

1.1 In accordance with Assembly Resolution A38-18, paragraph 12, States were invited to submit new or updated Action Plans for reducing CO<sub>2</sub> emissions from international aviation, on a voluntary basis, by June 2015.

1.2 As described in Resolution A38-18, paragraph 12, the action plans allow States to identify from a basket of measures, mitigation activities and the assistance needed to implement such measures. This basket of measures draws on different means to mitigate and reduce aviation CO<sub>2</sub> emissions such as, *inter alia*, aircraft related technology development, alternative fuels initiatives, improved air traffic management and infrastructure use, more efficient operations, market-based measures, and other regulatory measures. In turn, the compilation of information contained in States' action plans facilitates the assessment of progress toward the achievement of the global aspirational goals, and identifies the areas of implementation support needed by States.

1.3 In addition to the Organization's Standards and policy-setting role on environmental issues, since the 37th Session of the Assembly in 2010, the States' Voluntary Action Plan initiative has allowed ICAO to take on a more action-oriented, implementation and capacity-building role, in the spirit of the "No Country Left Behind" initiative.

## 2. DEVELOPMENTS

2.1 The States' Voluntary Action Plans initiative has become an essential pillar of the Organization's activities on the environment. They are also a vehicle for ICAO to support the United Nations Sustainable Development Goals (SDGs), in particular, SDGs 7, 10, 13, and 17. Substantial efforts in this regard were undertaken by the Organization to engage more States and the industry in this initiative.

2.2 Since the 38th Session of the ICAO Assembly, to facilitate the preparation and update of States' voluntary action plans, ICAO Doc 9988, *Guidance on the Development of States' Action Plans on Emissions Reduction* has been enhanced and updated to reflect States' needs, and to highlight the importance of the involvement and cooperation of all relevant aviation stakeholders. Building upon the work of the ICAO Committee on Aviation Environmental Protection (CAEP) on environmental benefits from operational enhancements, "Rules of Thumb" were also developed to facilitate the quantification of CO<sub>2</sub> emissions reductions resulting from the implementation of the mitigation measures selected. The "Rules of Thumb" have been automated through the ICAO Environmental Benefits Tool (EBT), and is available on the Action Plan Emissions Reduction (APER) secure website.

2.3 Pursuant to Resolution A38-18, paragraph 13, ICAO launched the "Buddy Programme"<sup>1</sup>, whereby States that have submitted action plans are encouraged to build partnerships with Member States that have not yet prepared action plans, in order to provide support and share experiences and knowledge. By June 2016, 3 such partnerships have been established, multiplying the environmental benefits of States' Action Plans.

2.4 In response to Resolution A38-17, paragraph 6, in 2014 and 2015, eight environmental seminars were conducted back-to-back with hands-on workshops on action plans, across the ICAO regions and at ICAO headquarters, welcoming participants from 78 States. Since 2010, over 700 experts from 116 States, representing 93 per cent of global international air traffic were trained<sup>2</sup>.

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<sup>1</sup> More information on the action plans is available on the ICAO public website at: <http://www.icao.int/environmental-protection/Pages/ActionPlan-Questions.aspx>

<sup>2</sup> Reference material on States' voluntary action plans is available on the ICAO public website at: <http://www.icao.int/Meetings/a39/Pages/documentation-reference-documents.aspx>

2.5 The Secretariat has also been working directly with individual States and national action plan focal points to provide tailored, individual assistance to facilitate the preparation of action plans. Since September 2014, 400 contacts were made with national action plan focal points. Additional reference material on the State voluntary action plans has been made available on the ICAO 39th Assembly website.

2.6 By 8 June 2016, 94 Member States, representing 88.05 per cent of global international air traffic, prepared and submitted action plans to ICAO. These successful results demonstrate the high level of interest and engagement of Member States in this initiative, as well as the impact of ICAO's assistance and capacity-building activities, including the establishment of partnerships with other international organizations, such as those developed with the European Union (EU), and with United Nations Development Programme (UNDP) and the Global Environment Facility (GEF). These partnerships have facilitated access to financial resources as requested by Resolution A38-18, with the overarching objective of contributing to international, regional and national efforts to address emissions from international aviation (refer to A3-WP/xx, *Report on the ICAO Technical Assistance Programme in the Safety, Security and Facilitation, and Environment Fields*). The best practices and lessons learned from both assistance projects will serve as important feedback for the development of action plans in other States and are critical to the implementation of the mitigation measures included in the action plans.

2.7 The ICAO-EU joint assistance project, *Capacity Building for CO<sub>2</sub> Mitigation from International Aviation*, is a project to assist fourteen selected States from Africa and the Caribbean in the development of voluntary action plans, setup Aviation Environmental Systems (AES) to establish emission inventories and monitor CO<sub>2</sub> emissions from aviation, and implement measures to reduce aviation emissions. As of April 2016, two Caribbean States and nine African States had submitted action plans to ICAO. The AES, a monitoring, reporting and verification (MRV) resource developed under the project and installed in the selected States, has been useful in supporting the automated collection and monitoring of data. The AES has also enabled the establishment of CO<sub>2</sub> inventories to capture emissions from international aviation, and in turn, has facilitated the reporting process to ICAO. ICAO is currently supporting the selected States in the implementation of the mitigation measures by establishing pilot projects designed to reduce fuel consumption and emissions. In light of the success of the project, many other Member States have shown interest in this initiative, and have requested ICAO to integrate the AES into their existing monitoring systems as soon as possible, for which additional funding would be required. Extra-budgetary contributions would be required to accommodate these requests.

2.8 The ICAO-UNDP joint assistance project, financed by the GEF, *Transforming the Global Aviation Sector: Emissions Reductions from International Aviation* is a global project that includes the development of guidance documents and supporting mechanisms to assist the identification and implementation of measures to reduce aviation CO<sub>2</sub> emissions. This joint assistance project entails a practical pilot project in Jamaica, consisting of the implementation of a renewable energy project that could be replicated in other States.

### 3. AREAS OF IMPROVEMENT

3.1 The work undertaken by the Organization in connection with the preparation of States' voluntary action plans and the active involvement and cooperation by ICAO Member States and other stakeholders, has been extensive. However, challenges remain for enhancing the quantification of environmental benefits from the action plans received.

3.2 An initial assessment of the voluntary action plans illustrate that:

- 43 States representing 42.53 per cent of global RTK included quantified baseline and expected emissions through 2050;
- 3 States, representing 10.34 per cent of global RTK provided partially quantified information; and

- 38 States, representing 35.18 per cent of global RTK did not provide data or sufficient information to allow a quantified analysis.

3.3 Voluntary action plans provide invaluable information on States' strategies to address CO<sub>2</sub> emissions from international aviation. They are key to understand States' priority actions under each of the elements of the ICAO "Basket of Measures". In particular, aircraft technology developments, (including fleet renewal) and the improvement of Air Traffic Management are critical to achieving the aspirational goal of 2 per cent annual fuel efficiency improvement from 2020. 53 States representing 69.3 per cent of global RTK included aircraft technology developments as part of the international aviation CO<sub>2</sub> emissions mitigation actions, while all States included Air Traffic Management improvement measures, thus setting a clear path towards ICAO fuel efficiency aspirational goal.

3.4 In relation to the other elements of the "Basket of Measures", 59 States representing 79.2 per cent of global RTK indicated that they will pursue investments in sustainable alternative fuels for aviation. 37 States representing 34.8 per cent of global RTK intend to engage in clean and renewable energy use at airports. The development of alternative energy sources in aviation is a major breakthrough that requires adequate policies and regulatory frameworks. 35 States representing 54.8 per cent of global RTK included market-based measures.

3.5 Of the 61 voluntary action plans received during the previous triennium (2010-2013), 25 have been updated. The environmental benefits related to the development and implementation of action plans can only be fully realized when action plans are updated on a regular basis.

3.6 With regard to the transparency of information contained in States' voluntary action plans, 46 States have decided to make their action plans publically available on the ICAO website<sup>3</sup>, as encouraged by Resolution A38-18, paragraph 14.

## 4. NEXT STEPS

4.1 Building on the experience since 2010, maintaining momentum and keeping States engaged in the action plan initiative is instrumental in realizing the benefits to be gained from the development of voluntary actions plans, and to understand how States' implementation of mitigation measures can be leveraged.

4.2 The results of the pilot projects are practical examples of concrete actions to reduce CO<sub>2</sub> emissions for all States. Specific earmarked funds from States and international organizations would assist ICAO to replicate these projects in other States that are requesting assistance to implement action plans and to establish robust emissions monitoring systems through the AES. Doing so would allow such States to also benefit from these capacity building activities and tools which have proven successful in increasing awareness on environmental issues and in triggering important synergies at the national level to undertake efforts for the reduction of CO<sub>2</sub> emissions. Moreover, an important next step will be to enhance the capabilities of the AES to capture the necessary data required to support a global market-based measure scheme for international aviation, and subsequently extend the implementation of the AES to other States as soon as possible.

4.3 In light of the best practices and lessons learned from the previous phases of the action plan process, Doc 9988 and the APER interactive website will need to be updated during the coming triennium to ensure that the information being collected through States' voluntary action plans is streamlined and harmonized. The use of tools developed by ICAO (e.g. ICAO Fuel Savings Estimation Tool (IFSET), EBT) should be further encouraged to address data collection needs.

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<sup>3</sup> <http://www.icao.int/environmental-protection/Pages/action-plan.aspx>

4.4 The establishment of National Action Plan Teams is crucial for States to gain maturity in the reporting of aviation CO<sub>2</sub> emissions. These teams highlight the opportunity provided by the process of developing the action plan for international aviation, to also assess the benefits linked to domestic aviation. In turn, this helps States to streamline reporting to ICAO on international aviation emissions and to the United Nations Framework Convention on Climate Change (UNFCCC) on domestic aviation emissions. Any duplication of effort is thus avoided and synergies between international and domestic aviation are developed, while respecting both organizations' mandates.

4.5 In order for ICAO to compile the information relating to the achievement of the global aspirational goals for consideration by the 40th Session of the ICAO Assembly, the information will need to be available by mid-2018.

4.6 In parallel, ICAO will continue to facilitate access to financial resources, through continued partnerships with the EU, the UNDP and GEF, and through possible new partnerships. Such projects contribute to the ICAO *No Country Behind Left Behind* initiative, and helps to identify beneficiaries as potential knowledge-sources in the regions. It is also envisaged that ICAO will conduct regional hands-on training seminars, in cooperation with Member States and regional organizations, during the next triennium to provide further support to States in the preparation and update of voluntary action plans with quantified data, and to encourage States that already submitted their action plans to build partnerships with other Member States in order to support those States that have not yet prepared their action plans.

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