



## DIRECTORS GENERAL OF CIVIL AVIATION-MIDDLE EAST REGION

### Fourth Meeting (DGCA-MID/4) (Muscat, Oman, 17-19 October 2017)

#### Agenda Item 7: Environmental Protection

#### INTERNATIONAL CIVIL AVIATION AND THE ENVIRONMENT

(Presented by the Secretariat)

#### SUMMARY

This paper reports on recent developments within ICAO in the field of aviation and the environment, including the results of the 39th Session of the ICAO Assembly, held from 27 September to 6 October 2016.

Action by the meeting is in paragraph 3.

#### 1. INTRODUCTION

1.1 The 39th Session of the ICAO Assembly, held from 27 September to 6 October 2016, in Montréal, Canada adopted Assembly Resolution A39-1, *Consolidated statement of continuing ICAO policies and practices related to environmental protection – General provisions, noise and local air quality*, Assembly Resolution A39-2, *Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change*, and Assembly Resolution A39-3, *Consolidated statement of continuing ICAO policies and practices related to environmental protection – Global Market-based Measure (MBM) scheme*.

1.2 The Assembly recognized ICAO's substantial progress on environment during the last triennium, in particular in addressing CO<sub>2</sub> emissions from international aviation, by developing and facilitating the implementation of "a basket of mitigation measures" in order to achieve ICAO's global aspirational goals for the international aviation sector of improving fuel efficiency by 2 per cent per year and keeping its CO<sub>2</sub> emissions from 2020 at the same level (carbon neutral growth from 2020). The basket of measures includes the use of more fuel-efficient aircraft technology, air traffic management modernization and other operational improvements, the development and deployment of sustainable aviation fuels, and the historic agreement on the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

1.3 In addition to this landmark agreement on CORSIA by the 39th ICAO Assembly, in terms of technological improvements, in March 2017, the ICAO Council adopted the first-ever CO<sub>2</sub> emissions certification Standard for aeroplanes, and the first non-Volatile Particulate Matter (nvPM) Standard for aircraft engines.

1.4 The aeroplane CO<sub>2</sub> emissions certification Standard will ensure that the latest technologies are embedded into aeroplane designs, and will apply to new aeroplane type designs from 2020 and to aeroplane type designs that are already in-production from 2023. The nvPM Standard will apply to turbofan and turbojet engines manufactured from 1 January 2020, and is for aircraft engines with rated thrust greater than 26.7kN.

## 2. DISCUSSION

### 2.1 State Action Plans and Assistance to States

2.1.1 Pursuant to Assembly Resolution A39-2, ICAO was requested to undertake further capacity-building activities for its Member States, with respect to the development, update and implementation of voluntary State action plans to reduce aviation CO<sub>2</sub> emissions. In this regard, a series of five regional seminars on States' action plans were held, in conjunction with the seminars on the CORSIA, across the ICAO regions from 27 March to 20 April 2017. These seminars on State action plans were held. The results of the CORSIA regional seminars are provided below.

2.1.2 In total, 431 participants from 92 States and 16 international organizations attended the seminars, representing 95 per cent of international aviation revenue tonne kilometres (RTK). 16 new States that had not previously been trained on States' actions plans attended the seminars. Thus, a total of 132 States have now been trained on States' action plans since 2011.

2.1.3 The regional seminars provided national action plan focal points and aviation industry stakeholders with practical input on the calculation of the CO<sub>2</sub> emissions baseline and other quantification aspects related to States' action plans. States are encouraged to utilize the ICAO Action Plan Buddy Programme, which invites States that have already prepared and submitted their action plans to share expertise and build partnerships with other Member States that have not yet prepared their action plans.

2.1.4 The voluntary States' Action Plans initiative has become an essential pillar of the Organization's activities on the environment. By 1 May 2017, 103 Member States, representing more than 90.11 per cent of international aviation RTK voluntarily 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. Of these results, six (6) States from the Middle East Region have submitted their action plans to ICAO.

2.1.5 Progress continues to be made under the ICAO environmental partnerships with the European Union (EU), and with the United Nations Development Programme (UNDP) and Global Environmental Facility (GEF).

2.1.6 Under the ICAO-European Union (EU) Joint Assistance Project, ICAO is currently supporting the selected States to implement the mitigation measures in their action plans, including the installation of solar power systems and gate electrification equipment at international airports, and the improvement of air traffic management procedures. Furthermore, five feasibility studies on the mitigation measures identified by selected States are being undertaken. Moreover, as part of the this joint assistance project, ICAO is working with the United Nations Institute for Training and Research (UNITAR) to develop an online training course for the development of State Action Plans on Emissions Reduction. The training course will be available at no cost for all national action plan focal points through the UNITAR website (<https://unccelearn.org/>).

2.1.7 The objectives of the ICAO-UNDP-GEF Project include identifying and facilitating the implementation of measures to reduce international aviation emissions. To this end, a series of policy instruments will be developed, including guidance papers and studies on a number of key issues, such as the use of renewable energy at airports. In addition, an important element of this project is a one million USD practical pilot project at two airports in Jamaica, consisting of the implementation of a CO<sub>2</sub> reduction measure that could be replicated in other States. The pilot project is ongoing and the implementation is expected to be finalized in the fourth quarter of 2017.

2.1.8 The Secretariat continues to receive requests for support from States in the preparation and implementation of action plans, and is currently exploring means and partnerships to support Developing States and Small Islands Developing States (SIDS) in Africa, and the Asia and Pacific region. With respect to the exploration of new sources of funding to support action in this area, ICAO has applied for accreditation as an Implementation Entity under the Green Climate Fund (GCF).

## 2.2 Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)

2.2.1 The 39th Assembly adopted Assembly Resolution A39-3 on a global market-based measure (MBM) scheme for international aviation, in the form of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA). The CORSA reflects the spirit of cooperation and three years of intensive efforts by ICAO and its Member States, in cooperation with the aviation industry and other stakeholders. It also represents the strong support for a global solution for the international aviation sector, as opposed to a possible patchwork of different measures.

2.2.2 To ensure the successful implementation of CORSA by Member States, ICAO will convene a series of five regional seminars throughout March and April 2017, in conjunction with the State Action Plan Seminars (paragraph 2.1.1, refers). Additionally, a sixth Seminar on CORSA was held in Montréal, Canada from 10 to 11 May 2017.

2.2.3 The regional seminars served to share information on CORSA's design elements and implementation aspects, and to provide States an opportunity to share their existing readiness for CORSA implementation, with the assessment of further assistance needs. The objectives of the Seminar on CORSA held in Montréal, Canada were expanded to discuss the outcomes and lessons learned from the regional seminars, to seek commonality in terms of the expected next steps.

2.2.4 To further support Member States to prepare for the implementation of CORSA, ICAO developed the CORSA online tutorial, and distributed ICAO State letter ENV 6/6 – SL 17/79, requesting States to indicate, by means of a questionnaire, their readiness to implement CORSA, as well as areas where further assistance is required. The Appendix to this paper illustrates the state of readiness to implement CORSA in the Middle East region.

2.2.5 In addition, the ICAO Committee on Aviation Environmental Protection (CAEP) is currently working to develop CORSA-related Standards and Recommended Practices (SARPs) and corresponding guidance material, as well as an ICAO tool for the estimation and monitoring of CO<sub>2</sub> emissions under CORSA, which taken together will establish a robust MRV system for CO<sub>2</sub> emissions from international aviation. The anticipated timeline for the adoption of this proposed SARPs material by the ICAO Council is June 2018, with an applicability date of 1 January 2019. This applicability date of January 2019 will allow States to calculate the CORSA baseline emissions (based on CO<sub>2</sub> emissions of the international aviation sector in 2019 and 2020), and the offsetting requirements of individual airlines from 2021. ICAO will also determine eligible emissions units, or carbon credits, which airlines will have to purchase in order to meet the offsetting requirements under CORSA.

2.2.6 As of 23 August 2017, 72 States, representing 87.7 per cent of international aviation RTK, have volunteered to participate in CORSA from its outset. To date, 3 States in the Middle East region have expressed their intention to voluntarily join CORSA from 1 January 2021. More States are strongly encouraged to voluntarily participate in CORSA. In this regard, regional meetings can serve as valuable opportunities to connect Member States with one another at a high-level, to promote regional dialogue on CORSA and its implementation, and encourage additional States to voluntarily participate from the outset.

2.2.7 To ensure that sufficient resources continue to be available to support the various activities being undertaken in relation to the implementation of CORSA, State letter ENV 1/1.1 - 17/52, dated 5 May 2017, was circulated to all Member States requesting contributions of additional resources to support the planned activities in this regard.

## 2.3 Sustainable Aviation Fuels

2.3.1 The second ICAO Conference on Aviation and Alternative Fuels (CAAF/2) will be held from 11 to 13 October 2017 in Mexico City, Mexico. In preparation for the CAAF/2, the ICAO Alternative Fuels Seminar was held in Montréal, Canada, from 8 to 9 February 2017. In total, 238 participants from 48 Member States, and 8 international organizations attended the event.

2.3.2 The seminar addressed the state of global activities on the use of aviation alternative fuels, life-cycle analysis methodologies and sustainability criteria, financing and assistance programmes, and the legal and regulatory frameworks supporting the development and deployment of these fuels in aviation. These discussions will serve as a basis for CAAF/2.

2.3.3 CAAF/2 seeks to bring together delegates from States and international organizations with the aim of developing specific recommendations to the Council on an ICAO Vision on Aviation Alternative Fuels, which will be crucial to further facilitating the progress in this area. Additional information is available at: <http://www.icao.int/Meetings/CAAF2>.

2.3.4 Given the size and importance of the fuel industry in the region, it is in a prime position to expand into the green fuel sector. Work on aviation alternative fuels is ongoing in the Middle East Region on a range of issues, including the development of sustainable feedstock and the use of alternative fuel to power aircraft. States from the region are encouraged to participate in the CAAF/2 to see how the region can continue its efforts in this area, and contribute to the achievement of the ICAO Vision for Aviation and Alternative Fuels, by 2050.

## 2.4 Green Airports

2.4.1 Pursuant to Assembly Resolutions A39-1 and A39-2, the ICAO Seminar on Green Airports will be held in Montréal, Canada from 29 to 30 November 2017. The Seminar will facilitate discussions and encourage the exchange of best practices on topics that reflect the diverse range of airport activities including ground handling, land/air-side mobility, renewable energy, community engagement and sustainability reporting, always focusing on best practices to reduce environmental impacts. New business models and financing of environmental projects and mitigation measures will also be explored, in line with the *No Country Left Behind* initiative. Additional information is available at: <https://www.icao.int/Meetings/greenairports/Pages/default.aspx>.

## 2.5 Coordination with other UN organizations

2.5.1 Cooperation has continued with other international organizations, notably with the United Nations Framework Convention on Climate Change (UNFCCC).

2.5.2 The UNFCCC process will continue discussions on the establishment of a new market mechanism as per the Paris Agreement.

2.5.3 As requested by ICAO Assembly Resolution A39-2, paragraph 16, ICAO and its Member States need to continue to “express a clear concern, through the UNFCCC process, on the use of international aviation as a potential source for the mobilization of revenue for climate finance to the other sectors, in order to ensure that international aviation would not targeted as a source of such revenue in a disproportionate manner”.

## 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

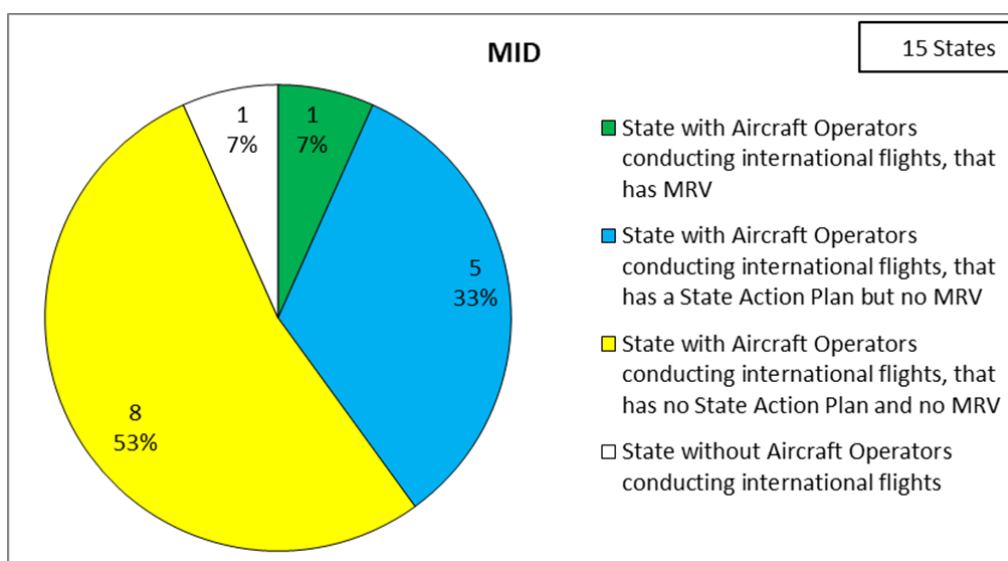
- a) encourage States in the region to develop, update and submit their action plans as soon as possible, and consider participation in the ICAO State Action Plan Buddy Programme;
- b) promote the use of regional events as opportunities to connect Member States with one another to establish a regional dialogue on CORSIA, and encourage States to voluntarily participate in CORSIA from its outset;
- c) encourage States to build partnerships and invest on sustainable aviation fuel research, development, and deployment; and
- d) request States to continue to inform the UNFCCC process of the work being undertaken by ICAO to address emissions from international civil aviation.

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APPENDIX

**CURRENT STATE OF READINESS FOR THE IMPLEMENTATION OF THE CORSIA  
MRV SYSTEM**

1.1 Figure 1 illustrates the current situation for the state of readiness to implement the CORSIA Monitoring, Reporting and Verification (MRV) System in the Middle East region. The information contained in Figure 1 is extrapolated from the results obtained from the responses to the questionnaire circulated during the ICAO Regional Seminars on CORSIA, and responses received to ICAO State letter 17/79. These questionnaires are used to assess the levels of States' experience and readiness in the monitoring, reporting and verification (MRV) of aviation CO<sub>2</sub> emissions, and better plan ICAO's capacity building and assistance to States for CORSIA implementation.



**Figure 1. States' Current Readiness - Monitoring, Reporting, Verification (MRV)**

1.2 Those States without State Action Plans and without MRV are considered a priority in terms of providing additional support for CORSIA implementation, and will be the main focus of future outreach activities in this regard. As of 23 August 2017, eight States in the Middle East region fit into this category of States.