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## **FRIENDS OF THE PRESIDENT INFORMAL GROUP**

**Montréal, 22 to 23 August 2016**

### **BACKGROUND INFORMATION ON A GLOBAL MARKET-BASED MEASURE (MBM) SCHEME FOR INTERNATIONAL AVIATION**

1. This paper presents background information for the Friends of the President Informal Group meeting. Appendix A provides details on the activities undertaken by the Organization in response to the request of the 38th Session of the ICAO Assembly with respect to the development of a global market-based measure (MBM) scheme. Appendix B contains proposed Assembly Resolution text that has been revised following consideration during the 13th meeting of the 208th Session of the Council of ICAO.

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## APPENDIX A

### ICAO WORK ON THE DEVELOPMENT OF A GLOBAL MARKET-BASED MEASURE (MBM) SCHEME

#### 1. ENVIRONMENT ADVISORY GROUP

1.1 Following the 38th Assembly, the ICAO Council established the Environment Advisory Group (EAG), which was composed of 17 Council Members to oversee all work related to the development of a global MBM scheme, with technical support provided by CAEP and the Secretariat. The EAG held 15 meetings from March 2014 to January 2016.

1.2 The EAG achieved initial progress using a “Strawman” approach, which started with a basic proposal for a global MBM scheme with a view to generating discussion and analyses on advantages and disadvantages of design elements thus allowing for improvements of the Strawman proposal.

1.3 The initial set of technical analyses on the Strawman proposal requested by the EAG and Council included the assessment of: volumes of future CO<sub>2</sub> emissions from international aviation and overall cost impacts to achieve the carbon neutral growth from 2020; cost impacts of using combinations of the individual operator’s growth factor of emissions and the international aviation sector’s average growth factor, for distribution of offsetting requirements; adjustments of offsetting requirements, such as for fast growers, early movers and new entrants; and technical exemptions and exemptions of routes to/from low emitting States. The CAEP completed the initial analyses and presented the related results to the EAG/7 meeting in October 2014.

1.4 Additional analyses were requested in late 2014 that focused on the assessment of various approaches for distribution of offsetting requirements, including:

- a) refinement of technical analyses presented to the EAG/7 meeting, including the use of variable (dynamic) growth factors over time;
- b) analyses of a route-based approach, including the definition of routes, using different criteria, as well as metrics for categorization of routes;
- c) analyses of an accumulative approach based on historical emissions; and
- d) comparison of various approaches for distribution of offsetting requirements.

1.5 The CAEP completed the additional analyses and presented the results of all technical analyses to the EAG/15 meeting in January 2016.

1.6 In addition, the EAG was frequently kept updated of CAEP’s work in developing recommendations on technical design elements of a global MBM scheme, namely: Monitoring, Reporting and Verification (MRV); Emissions Unit Criteria (EUC); and Registries. The CAEP/10 meeting in February 2016 accepted the recommendations, as submitted to the meeting, to be used as the basis of CAEP future work, and subject to further decisions on a global MBM scheme by the Council and the 39th Assembly.

## 2. HIGH-LEVEL GROUP AND DRAFT ASSEMBLY RESOLUTION TEXT

2.1 The EAG/15 meeting in January 2016 considered a draft Assembly Resolution text on a global MBM scheme, which was developed taking into account the progress achieved and views expressed during previous EAG deliberations.

2.2 The EAG/15 meeting recommended, and the Council endorsed, that a High-level Group on a Global MBM Scheme (HLG-GMBM) be established to facilitate the convergence of views in order to finalize draft Assembly Resolution text on a global MBM scheme, to be later considered by the Council. The Group was composed of high-level aviation and/or transport representatives of 18 Member States of the Council, taking into account geographical representation.

2.3 The High-level Group met twice (24 to 25 February and 13 to 15 April 2016) to review the draft Assembly Resolution text, and make progress towards improving and clarifying a number of provisions in the draft text. The Group recognized that paragraphs 7, 8 and 9 of draft Assembly Resolution text would be the most crucial component for which divergent views remained, and for which all States were encouraged to undertake bilateral and multilateral consultations with other States with a view to bridging the views and developing possible compromise text, to be presented to the High-level Meeting in May 2016 (see paragraph 5).

## 3. GLOBAL AVIATION DIALOGUES

3.1 In response to the Assembly request to organize seminars and workshops on a global MBM scheme for international aviation (A38-18, paragraph 19 b)), the Secretariat concluded two rounds of Global Aviation Dialogues<sup>1</sup> (GLADs) during April 2015 and March-April 2016, covering all ICAO regions. The objective of the GLADs were to: share information regarding MBMs and their role in a basket of measures to address CO<sub>2</sub> emissions from international aviation; provide up-to-date information on the ICAO work to develop a global MBM scheme; familiarize participants with the draft Assembly Resolution text; provide opportunities to receive feedback from Member States and relevant organizations; and serve as preparation for the High-level Meeting (see paragraph 5) and subsequently for the 39th Assembly.

3.2 The major considerations for the design of a global MBM scheme, as identified during the 2015 GLADs, such as administrative simplicity, environmental integrity, cost effectiveness and differentiation/non-discrimination, were highlighted in the 2016 GLADs as being closely linked to specific paragraphs of the draft Assembly Resolution text, in particular paragraphs 7 (phased implementation), 8 (route-based exemptions) and 9 (distribution of offsetting requirements). Most participants indicated that the draft text would be a good basis to move forward, while further improvements and clarification of text would be needed, in particular those paragraphs specified above.

3.3 The participants also discussed the roles of different stakeholders and there was high commonality in all GLADs in their roles for various aspects of implementing a global MBM scheme, such as MRV system and Registries. There was also convergence on the need for ICAO to provide capacity building and training, as well as the need for Standards, guidance, tools, toward the full implementation of a scheme.

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<sup>1</sup> All material related to 2015 and 2016 GLADs is available at: <http://www.icao.int/meetings/GLADs-2015/Pages/default.aspx> and <http://www.icao.int/Meetings/GLADs-2016/Pages/default.aspx>, respectively.

#### 4. HIGH-LEVEL MEETING ON A GLOBAL MBM SCHEME

4.1 The High-level Meeting on a Global MBM Scheme<sup>2</sup> (HLM-GMBM) was convened in Montréal, Canada from 11 to 13 May 2016 to discuss draft Assembly Resolution text on a global MBM scheme and make recommendations to the Council. The Meeting was attended by 311 representatives from 65 Member States and 17 international organizations.

4.2 The Meeting clarified and improved a number of provisions in the draft text, while it recognized a number of concerns and possible alternative approaches and ideas, in particular for paragraph 7 (phased implementation) and paragraph 9 (distribution of offsetting requirements). The Meeting agreed to highlight the outstanding issues in relation to paragraphs 7 and 9, for further consideration by the Council.

4.3 The Meeting recognized that paragraphs 7 and 9 of the draft Assembly Resolution text would continue to be the most crucial component that remained divergent views, for which Member States were encouraged to continue bilateral and multilateral consultations to bridge their views and find possible compromise text.

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<sup>2</sup> All material related to HLM-GMBM is available at: <http://www.icao.int/Meetings/HLM-MBM/Pages/default.aspx>



## APPENDIX B

### DRAFT

#### **Draft Resolution A39-XX: Consolidated statement of continuing ICAO policies and practices related to environmental protection – Global Market-based Measure (MBM) scheme**

*Whereas* Assembly Resolution A38-18 decided to develop a global market-based measure (GMBM) scheme for international aviation, for decision by the 39th Session of the Assembly; ***{Existing text from A38-18, paragraph 18}***

*Recalling* that Assembly Resolution A38-18 requested the Council, with the support of Member States, to finalize the work on the technical aspects, environmental and economic impacts and modalities of the possible options for a GMBM scheme, including on its feasibility and practicability, taking into account the need for development of international aviation, the proposal of the aviation industry and other international developments, as appropriate, and without prejudice to the negotiations under the UNFCCC; ***{Existing text from A38-18, paragraph 19 a)}***

*Also recalling* that Assembly Resolution A38-18 requested the Council, with the support of Member States, to identify the major issues and problems, including for Member States, and make a recommendation on a GMBM scheme that appropriately addresses them and key design elements, including a means to take into account special circumstances and respective capabilities, and the mechanisms for the implementation of the scheme from 2020 as part of a basket of measures which also include technologies, operational improvements and sustainable alternative fuels to achieve ICAO's global aspirational goals; ***{Existing text from A38-18, paragraph 19 c)}***

*Recognizing* that ICAO is the appropriate forum to address emissions from international aviation, and the significant amount of work undertaken by the Council, its Environment Advisory Group (EAG) and its Committee on Aviation Environmental Protection (CAEP) to develop a recommendation for a GMBM scheme and its design elements and implementation mechanisms, including the analyses of various approaches for distribution of obligations; ***{New text to reflect the work since A38}***

*Further recalling* that Assembly Resolution A38-18 requested the Council, with the support of Member States, to organize seminars, workshops on a GMBM scheme for international aviation participated by officials and experts of Member States as well as relevant organizations; ***{Existing text from A38-18, paragraph 19 b)}***

*Recognizing* the convening of two rounds of Global Aviation Dialogues (GLADs) seminars held in 2015 and 2016 for all regions; ***{New text to reflect the work since A38}***

*Noting* the support of the aviation industry for a single global carbon offsetting scheme, as opposed to a patchwork of State and regional MBMs, as a cost effective measure to complement a broader package of measures including technology, operations and infrastructure measures; ***{Existing text from A38-18 preamble}***

*Recognizing* that MBMs should not be duplicative and international aviation CO<sub>2</sub> emissions should be accounted for only once; ***{Based on text from A38-18, Annex paragraph f}***

*Emphasizing* that the decision by the 38th Session of the Assembly to develop a global MBM scheme for international aviation reflects the strong support of Member States for a global solution for the international aviation industry, as opposed to a possible patchwork of State and regional MBMs; ***{Reflecting the background for a global solution compared to patchwork of MBMs}***

*Reaffirming* the concern with the use of international civil aviation as a potential source for the mobilization of revenue for climate finance to the other sectors, and that MBMs should ensure the fair treatment of the international aviation sector in relation to other sectors; ***{Based on text from A38-18, paragraph 30, and guiding principle h)}***

*Recalling* the UNFCCC and the Paris Agreement and *acknowledging* its principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances; ***{Updated to reflect Paris Agreement }***

*Also acknowledging* the principles of non-discrimination and equal and fair opportunities to develop international aviation set forth in the Chicago Convention; ***{Existing text from A38-18 preamble}***

*Welcoming* the adoption of the Paris Agreement under the UNFCCC and *recognizing* that the work related to a global MBM scheme for international aviation and its implementation will contribute to the achievement of the goals set out in the Paris Agreement; ***{Recognition of the Paris Agreement}***

*Whereas* the UNFCCC provides for market-based mechanisms and other programmes, such as the Clean Development Mechanism (CDM), and a new market mechanism under the Paris Agreement, to contribute to the mitigation of GHG emission to support sustainable development, which benefit developing States in particular; ***{New text reflecting Paris Agreement}***

*Welcoming* the cooperation between the United Nations Framework Convention on Climate Change (UNFCCC) and ICAO on the development of CDM methodologies for aviation; ***{New text on CDM methodologies}***

*The Assembly:*

1. *Resolves* that this Resolution, together with Resolution A39-YY: *Consolidated statement of continuing ICAO policies and practices related to environmental protection - General provisions, noise and local air quality* and Resolution A39-ZZ: *Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change*, supersede Resolutions A38-17 and A38-18 and constitute the consolidated statement of continuing ICAO policies and practices related to environmental protection;

1.bis *Acknowledges* the progress achieved on all elements of the basket of measures available to address CO<sub>2</sub> emissions from international aviation, including aircraft technologies, operational improvements, sustainable alternative fuels and a GMBM scheme and any other measures, and *affirms* the preference for the use of aircraft technologies, operational improvements and sustainable alternative fuels that provide the environmental benefits within the aviation sector; ***{Basket of measures and preference for non-MBM measures}***

2. *Also acknowledges* that, despite this progress, the environmental benefits from aircraft technologies, operational improvements and sustainable alternative fuels may not deliver sufficient CO<sub>2</sub> emissions reductions to address the growth of international air traffic, in time to achieve the global aspirational goal of keeping the global net CO<sub>2</sub> emissions from international aviation from 2020 at the same level; ***{Recognition of not achieving CNG 2020 by non-MBM measures}***

3. *Emphasizes* the role of a GMBM scheme to complement a broader package of measures to achieve the global aspirational goal, without imposing inappropriate economic burden on international aviation; ***{Complementary role of GMBM to achieve CNG 2020}***

4. *Decides* to implement a GMBM scheme in the form of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) to address any annual increase in total CO<sub>2</sub> emissions from international civil aviation (i.e. civil aviation flights that depart in one country and arrive in a different country) above the 2020 levels, taking into account special circumstances and respective capabilities; ***{GMBM is Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)}***

4.bis *Determines* that the CORSA is to be the market-based measure applying to CO<sub>2</sub> emissions from international aviation; ***{No duplicative application of MBMs beyond CORSA}***

5. *Requests* the Council to continue to ensure all efforts to make further progress on aircraft technologies, operational improvements and sustainable alternative fuels be taken by Member States and reflected in their action plans to address CO<sub>2</sub> emissions from international aviation, and to monitor and report the progress on implementation of action plans, and that a methodology should be developed to ensure that an operator's offsetting requirements under the scheme in a given year can be reduced through the use of sustainable alternative fuels, so that all elements of the basket of measures are reflected; ***{Further progress on non-MBM measures}***

6. *Acknowledges* special circumstances and respective capabilities of States, in particular developing States, in terms of vulnerability to the impacts of climate change, economic development levels, and contributions to international aviation emissions, among other things, while minimizing market distortion; ***{Recognition of special circumstances of States}*** – **Support Differentiation**

7. *Decides* the use of a phased implementation for the CORSA to accommodate the special circumstances and respective capabilities of States, in particular developing States, while minimizing market distortion, as follows: ***{Phased implementation}*** – **Support Differentiation**

- a) First implementation phase applies from 2021 to the States that either have an individual share of international aviation activities in Revenue Tonnes Kilometers (RTKs) in year 2018 above 1.0 per cent of total RTKs, or whose cumulative share in the list of States from the highest to the lowest amount of RTKs reaches 80 per cent of total RTKs;
- b) Second implementation phase applies from 2026 to additional States that either have an individual share of international aviation activities in RTKs in year 2018 above 0.5 per cent of total RTKs, or whose cumulative share in the list of States from the highest to the lowest amount of RTKs reaches 95 per cent of total RTKs;
- c) the CORSA does not apply to States which are classified as the Least Developed Countries (LDCs), Small Island Developing States (SIDS) or Landlocked Developing Countries (LLDCs), unless those States meet criteria in sub-paragraphs a) or b) above; ***{Exemptions of LDCs, SIDS and LLDCs}***
- d) States that are exempted or not included in the provisions above are strongly encouraged to voluntarily participate in the scheme, in particular those States that are members of a regional economic integration organization. States included in the second implementation phase are also strongly encouraged to participate in the first implementation phase; ***{Voluntary participation}***

8. *Decides* that the CORSA shall apply to all aircraft operators on the same routes between States with a view to minimizing market distortion, as follows:

- a) all international flights on the routes between States, both of which are included in the CORSA by paragraph 7 above, are covered by the offsetting requirements of the CORSA;

- b) all international flights on the routes between a State that is included in the CORSIA and another State that is not included in the CORSIA by paragraph 7 above are exempted from the offsetting requirements of the CORSIA, while retaining simplified reporting requirements; and – **Support Differentiation**
- c) all international flights on the routes between States, both of which are not included in the CORSIA by paragraph 7 above, are exempted from the offsetting requirements of the CORSIA, while retaining simplified reporting requirements; *{Minimize market distortion}* – **Support Differentiation**
9. *Decides* that the amount of CO<sub>2</sub> emissions required to be offset by an aircraft operator in a given year from 2021 is calculated every year as follows:
- a) *amount of offsets = an operator's emissions covered by CORSIA in a given year × sector's growth factor in the given year;*
- b) *where the sector's growth factor = (total emissions covered by CORSIA in the given year – total emissions over three-year average of 2018 to 2020) / total emissions covered by CORSIA in the given year;*
- c) *the operator's emissions and the total emissions covered by CORSIA in the given year do not include emissions exempted from the scheme in that year; and*
- d) *the scope of emissions in paragraph 9 b) above will be recalculated at the start of the second implementation phase to take into account routes to and from all States that will be added in the second implementation phase; {Distribution with 100% sectoral rate, without adjustments for fast growers or early movers} – **Support Differentiation***
10. *Decides* that a new entrant<sup>3</sup> is exempted from the application of the CORSIA for three years or until the year in which its annual emissions exceed 0.1 per cent of total emissions in 2020, whichever occurs earlier. From the subsequent year, the new entrant is included in the scheme and treated in the same way as the other operators. *{New entrants}* – **Support Differentiation**
11. *Decides* that, notwithstanding with the provisions above, the CORSIA does not apply to low levels of international aviation activity with a view to avoiding administrative burden: aircraft operators emitting less than 10,000 metric tonnes of CO<sub>2</sub> emissions from international aviation per year; aircraft with less than 5,700 kg of Maximum Take Off Mass (MTOM); or humanitarian, medical and firefighting operations; *{Technical exemptions}*
12. *Decides* that the emissions that are not covered by the scheme, as the results of phased implementation and exemptions, are not assigned as offsetting requirements of any operators included in the scheme; *{No redistribution of exempted emissions}* – **Support Differentiation**
13. *Notes* the work of the Council, with the technical contribution of CAEP, on: a) the monitoring, reporting and verification (MRV) system; b) recommended criteria for emissions units to be purchased by aircraft operators that take into account developments in the UNFCCC process; c) and registries under the CORSIA, and *requests* the Council, with the technical contribution of CAEP, to complete its work as

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<sup>3</sup> A new entrant is defined as any aircraft operator that commences an aviation activity falling within the scope of the scheme on or after its entry into force and whose activity is not in whole or in part a continuation of an aviation activity previously performed by another aircraft operator.

soon as possible including the provision of capacity building and assistance, so as to enable the full implementation of the CORSIA from 2020; *{MRV, EUC, Registries – CAEP recommendations }*

14. *Decides* a three year compliance cycle, starting with the first cycle from 2021 to 2023, for aircraft operators to reconcile their offsetting requirements under the scheme, while they report the required data to the authority designated by the aircraft operator's State of registry every year; *{Compliance cycle}*

15. *Decides* on the need to provide for safeguards in the CORSIA to ensure the sustainable development of the international aviation sector and against inappropriate economic burden on international aviation, and *requests* the Council to decide the basis and criteria for triggering such action and identify possible means to address these issues; *{Cost safeguard}*

16. *Decides* that a periodic review of the CORSIA is undertaken by the Council every three years from 2022 to contribute to the sustainable development of the international aviation sector and the effectiveness of the scheme, for consideration by the Assembly. This will involve, inter alia:

- a) assessment of: progress towards achieving the ICAO's global aspirational goal; the scheme's market and cost impact on States and aircraft operators and on international aviation; and the functioning of the scheme's design elements;
- b) consideration of the scheme's improvements that would support the purpose of the Paris Agreement, in particular its long-term temperature goals; and update the scheme's design elements to improve implementation, increase effectiveness, and minimize market distortion, taking into account the consequential impact of changing the scheme's design elements, e.g., to MRV requirements; and
- c) a special review by the end of 2032 on termination of the scheme, its extension or any other improvements of the scheme beyond 2035, including consideration of the contribution made by aircraft technologies, operational improvements and sustainable alternative fuels towards achieving the ICAO's environmental objectives; *{Duration and Review}*

17. *Requests* the following actions be taken, with a view to establishing necessary mechanisms for implementation of the CORSIA from 2020:

Regarding the implementation of the MRV system,

- a) the Council to develop, with the technical contribution of CAEP, the SARPs and related guidance material for the implementation of the MRV system under the CORSIA, for adoption by the Council by June 2017; *{MRV rules development}*
- b) all Member States whose aircraft operator undertakes international flights to develop the necessary arrangements, in accordance with the MRV SARPs, for pilot implementation and testing of the MRV system from 1 January 2018, followed by the full implementation from 1 January 2020; *{MRV rules implementation}*

Regarding the Emissions Unit Criteria (EUC),

- c) the Council to develop, with the technical contribution of CAEP, the SARPs and related guidance material for Emissions Unit Criteria (EUC) to support the purchase of appropriate emissions units by aircraft operators under the scheme, taking into account relevant developments in the UNFCCC and Article 6 of the Paris Agreement, for adoption by the Council as soon as possible

but not later than 2018; *{EUC guidance development}*

- d) the Council to establish, with the technical contribution of CAEP, a standing technical advisory body on the Emissions Unit Criteria (EUC) to make recommendations to the Council on the eligible emissions units for use by the CORSIA; *{Eligible programmes}*
- e) the Council, with the technical contribution of CAEP, to periodically review the EUC SARPs and related guidance material, as appropriate, to promote compatibility with future relevant decisions under the Paris Agreement; *{EUC review}*

Regarding the establishment of Registries,

- f) the Council to develop, with the technical contribution of CAEP, policies and related guidance material to support the establishment of registries under the scheme, for adoption by the Council by 2018; *{Registry guidance development}*
- g) the Council to establish a consolidated central registry under the auspices of ICAO, for operationalization no later than 1 January 2021; *{Central registry establishment }*
- h) Member States to develop necessary arrangements for the establishment of their own registries or group registries established by groups of States, or to arrange for participation in other registries, in accordance with the ICAO guidance; *{Registry establishment for States}*

Regarding the governance of the CORSIA,

- i) the Council to oversee the functioning of the CORSIA, with support provided by the standing technical advisory body and CAEP as needed; *{Governance}*

Regarding the regulatory framework,

- j) Member States to take necessary action to ensure that the necessary national policies and regulatory framework be established for the compliance and enforcement of the scheme by 2020. *{Regulatory framework}*

18. *Decides* that ICAO and Member States take all necessary actions in providing the capacity building and assistance and building partnerships for implementation of the CORSIA from 2020, including: – **Support Differentiation**

Regarding the implementation of the MRV system,

- a) the Council to take necessary action to expand the provision of capacity building and assistance for the preparation and implementation on Member States' action plans, in order to accommodate capacity building and assistance for implementation of the MRV system by Member States from 1 January 2018, including organization of seminars and training in all regions from 2017, and facilitation of financial support where needed; *{Capacity building on MRV}*
- b) Member States to build partnerships among themselves to cooperate on the implementation of the MRV system; *{Partnerships on MRV}*

Regarding the establishment of Registries,

- c) the Council to take necessary action to expand the provision of capacity building and assistance for the preparation and implementation on Member States' action plans, in order to accommodate capacity building and assistance for establishment of registries by States, including organization of seminars and training in all regions from 2017, and facilitation of financial support where needed; *{Capacity building on Registry }*
- d) Member States to build partnerships among themselves to cooperate on the establishment of their own registries or group registries established by groups of States, and possible pilot implementation; *{Partnerships on Registry}*

19. *Decides* that the CORSIA will use emissions units that meet the Emissions Unit Criteria (EUC) in paragraph 17 above, and *requests* the Council to promote the use of emissions units generated from programmes that benefit developing States, including emissions units generated from the CDM, new market mechanisms or other programmes under the UNFCCC, and *encourages* States to develop domestic aviation-related projects; *{Further actions on the use of emissions units}* – **Support Differentiation**

20. *Requests* the Council to explore further development of aviation-related methodologies for use in offsetting programmes, including mechanisms or other programmes under the UNFCCC, and *encourages* States to use such methodologies in taking actions to reduce aviation CO<sub>2</sub> emissions, which could further enable the use of credits generated from the implementation of such programmes by the CORSIA, without double-counting of emissions reduction; *{Further actions on aviation-related methodologies }*

— END —