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ASSEMBLY — 38TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 17: Environmental Protection

UAE'S VIEWS ON AVIATION AND CLIMATE CHANGE

(Presented by the United Arab Emirates)

EXECUTIVE SUMMARY

Action: The Assembly is invited to:

- a) adopt a framework for market-based measures (MBMs) for international aviation applicable within the airspace of the implementing State without the requirement of mutual consent;
- b) agree to develop a global MBM scheme for international aviation including a roadmap and timeline;
- c) request Council to present the results of such work to its 39th Session in 2016;
- d) request Council to develop standards on monitoring, reporting and verification (MRV); and
- e) request Council to further explore alternative aircraft fuel efficiency metric.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective C – <i>Environmental Protection and Sustainable Development of Air Transport.</i>
<i>Financial implications:</i>	No financial implications. No additional resources required.
<i>References:</i>	Resolution A37-19, <i>Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change</i> HLM-ENV/09-WP/24, <i>Aviation and Emissions – Position paper</i>

1. BACKGROUND

1.1 In 2009, ICAO's High-Level Group on International Aviation and Climate Change (GIACC) suggested that the organization should look into a "framework" for market-based measures (MBMs).¹ Accordingly, GIACC recommended to the Council to establish a process to develop a framework for MBMs in international aviation, taking into account the conclusions of the High-Level Meeting on Aviation and Climate Change (HLM-ENV/09) that took place in Montreal from 7-9 October 2009, and the outcome of UNFCCC's COP15.² HLM-EVN/09 endorsed the Programme of Action on International Aviation and Climate Change.

1.2 In October 2010, the 37th Session of the ICAO Assembly (A37) adopted non-attributable, aspirational goals to reduce greenhouse gases from international aviation. These included a global annual average fuel efficiency improvement of 2 per cent until 2020 and an efficiency improvement rate of 2 per cent per annum from 2021 to 2050, calculated on the basis of volume of fuel used per revenue tonne kilometre performed,³ as well as keeping the global net carbon emissions from international aviation from 2020 at the same level (e.g. carbon neutral growth from 2020 at 2020 levels).⁴ In addition to instructing numerous tasks, A37 asked the Council to develop a framework for MBMs in international aviation,⁵ and explore the feasibility of a global MBM scheme.⁶ Similarly, the Assembly tasked Council to review the *de minimis* threshold to MBMs, taking into account the specific circumstances of States and potential impacts on the aviation industry and markets.⁷

1.3 In January 2012, as a result of A37's mandate, the President of the Council formed an Ad Hoc Working Group (AHWG) to further elaborate on the tasks entrusted to the Council by the Assembly. This group was assisted by a number of experts from different States (experts). The experts focused primarily on advancing the work relating to the feasibility of a global scheme and to further elaborate on a framework for MBMs. They presented various progress reports to the Council. In particular, the experts identified three potential options for a global scheme (e.g. mandatory offsetting, mandatory offsetting plus a revenue generating mechanism, as well as emissions trading). On 9 November 2012, the Council concluded that the three options considered by the experts were technically feasible and had the capacity to contribute to achieving ICAO's environmental goals. In addition, the Council also agreed that further quantitative analysis was required in order to develop more robust conclusions.⁸

1.4 The Council also requested the President to establish a High Level Group on Aviation and Climate Change (HGCC). HGCC was tasked with providing policy recommendations to Council on an array of aviation and climate change issues, including further elaboration on a framework for MBMs and the global scheme. HGCC met three times in December 2012, January and March 2013. HGCC suggested concentrating on two measures for the global scheme, namely, mandatory global offsetting and emissions trading.

1.5 On 3 June 2013, at its 69th Annual General Meeting (AGM) held in Cape Town, South Africa, the International Air Transport Association (IATA) overwhelmingly endorsed an industry resolution calling Member States of ICAO to adopt, at its 38th Assembly Session, "a commonly agreed,

¹ See ICAO, Group on International Aviation and Climate Change (GIACC) Final Report (9 June 2009) at 4 [hereinafter *GIACC Final Report*].

² See ICAO, Doc 9929, Report of the High-Level Meeting on International Aviation and Climate Change.

³ ICAO, Resolution A37-19 – Consolidated Statement of Continuing ICAO Policies and Practices Related to Environmental Protection – Climate Change, paragraph 4 [hereinafter *A37-19*].

⁴ *Ibid*, paragraph 6.

⁵ *Ibid*, paragraph 13.

⁶ *Ibid*, paragraph 18.

⁷ *Ibid*, paragraph 16.

⁸ See ICAO, C-DEC 197/6.

single global MBM mechanism to be applied to offsetting the industry's growth in emissions post-2020, which could play a complementary role with technology, operations and infrastructure measures.”⁹

1.6 On 14 June 2013, the Council considered HGCC's report.¹⁰ While observing HGCC's considerable progress, the Council noted that consensus “had not yet been reached on three specific issues which [were] considered to be essential elements of a draft 38th Assembly Resolution text: a global MBM scheme, a framework for MBMs, and the special circumstances and respective capabilities of States (SCRC).”¹¹ In order to further advance on the elaboration of the draft text and reach an agreement on the pending issues, the Council agreed to allow the President and the Secretary General the opportunity to conduct informal consultations with all delegations during the summer.¹²

1.7 Throughout this period, the President and the Secretary General held a number of informal consultations with all Council delegations. On 4 September 2013, the Council examined the result of this work. With the support of a majority of Council delegations, the Council agreed to submit to the 38th Session of the ICAO Assembly a proposal for a draft Assembly resolution on climate change.¹³

1.8 Section 2 of this paper describes some of the activities that the UAE has undertaken to promote sustainability, as well as aviation-specific initiatives to address the sector's CO₂ emissions, including some projects relating to international aviation. Section 3 sets out the views of the UAE with regard to the proposed resolution. Section 4 provides recommendations for the Assembly.

2. DISCUSSION

2.1 UAE Initiatives

2.1.1 Environmental protection and sustainable development are core elements of the UAE's policy agenda. The country is deeply engaged in the stabilization of greenhouse gases, and remains extremely active on all issues dealing with climate change. Numerous initiatives of the UAE explain its commitment in this field. In this respect, the UAE hosts the headquarters of the International Renewable Energy Agency (IRENA). IRENA's mandate is to promote sustainable use of renewable energy globally. Similarly, to diversify the country's energy mix, through Masdar Clean Energy initiative. The UAE has also invested in the development of large-scale clean energy projects, such as, wind, solar and carbon capture and storage (CCS). With the Shams 1 project, Masdar seeks to build the largest Concentrated Solar Power (CSP) plant in the world.

2.1.2 In supporting ICAO's aspirational goals, with the cooperation of its aviation stakeholders, the UAE has committed to facilitating the implementation of operational changes, improvements in the air traffic management and the airport systems. In particular, it has enhanced its airspace use for the expeditious flow of domestic and international air traffic. Initiatives such as the recent establishment of more direct air routes connecting Abu Dhabi to the Kingdom of Saudi Arabia significantly reduce flight time, fuel consumption, and carbon emissions. Attention is also being paid to ground handling operations and catering to reduce environmental impacts through recycling, waste management and community partnership. Energy saving and waste reduction measures have been introduced by airport operators across the country. Furthermore, the UAE promotes the operation of an efficient, competitive and sustainable aviation sector. Its stakeholders have also made significant investments to improve technology, infrastructure and their aircraft fleets to minimize their environmental impact.

⁹ See IATA 69th Annual General Meeting, Resolution on the Implementation of the Aviation “CNG2020” Strategy” [hereinafter *IATA resolution*].

¹⁰ See ICAO, C-WP/14030.

¹¹ See ICAO, C-DEC 199/11.

¹² *Ibid.*

¹³ See ICAO, A38-WP/34, Consolidated Statement of Continuing ICAO Policies and Practices Related to Environmental Protection – Climate Change [hereinafter *the proposed resolution*].

2.1.3 On 28 June 2012, the UAE submitted its State Action Plan to ICAO. The UAE was the first State in the Middle East Region to do so. In 2013, the UAE carried comprehensive studies to update its State Action Plan. Although this has certainly proved to be a challenging endeavour, it has also been an extremely rewarding one, for it has given the UAE the fantastic opportunity to demonstrate its great achievements towards reducing CO₂ emissions from aviation.

3. UAE VIEWS ON THE PROPOSED RESOLUTION

3.1 Framework for MBMs

3.1.1 The framework for MBMs was one of the main tasks that A37 entrusted to the Council. The UAE firmly believes that the ICAO Framework should be a set of guiding principles that would guide States in the implementation of domestic and regional MBMs, when these measures are applied to foreign aircraft operators. The framework should: i) enable the implementation of MBMs in order to achieve GHG emissions reductions, as opposed to restrict their application and serve as a dispute resolution mechanism; ii) act as building blocks towards a global MBM for international civil aviation; iii) achieve commonality and avoid duplication; iv) promote coherence between different schemes; v) seek to avoid market distortions; vi) seek to reflect all the mechanisms in use to drive GHG emissions reductions (e.g. reductions obtained through implementing ICAO's basket of measures); vii) contribute to achieving ICAO's environmental goals, as set out in A37-19; and viii) exclude participants with insignificant levels of GHG emissions, while strictly observing the principle of non-discrimination.

3.1.2 As long as the MBM is in compliance with the ICAO framework, mutual consent should not be required. Otherwise, there is no point in having a framework at all. It is noteworthy that the framework does not impose an obligation to adopt an MBM. This will continue to be on a voluntary basis only. Given that the proposed resolution follows the airspace approach, the framework should not dictate which aircraft operators should be excluded from it. This contravenes the long-standing principle of exclusive sovereignty over a State's airspace.

3.2 Global Scheme

3.2.1 A37 acknowledged that the aspirational goal of 2 per cent annual fuel efficiency improvement would be "unlikely to deliver the level of reduction necessary to stabilize and then reduce aviation's absolute emissions contribution to climate change, and that goals of more ambition will need to be considered to deliver a sustainable path for aviation."¹⁴ International aviation continues to grow at rate of 4-5 per cent per year. This implies that greenhouse gases from international aviation grow exponentially at a rate of 3-4 per cent per year. In spite of the tremendous efforts made by industry and governments, operational and technological measures will not be sufficient to offset the sector's net growth in emissions. The development of alternative fuels is at the initial phase. As such, implementing a global MBM scheme is of utmost importance, at least in the interim, to achieve ICAO's aspirational goal. Without MBMs the latter is simply unachievable.

3.2.2 UAE has always supported the idea of a sectorial, global MBM scheme for international aviation. It is imperative that A38 agrees to develop a global scheme with a roadmap and timeline to be presented for consideration to the 39th Session of the ICAO Assembly. At IATA's 69th AGM, the airline industry made it unequivocal its readiness for a global MBM scheme. ICAO Member States must be up to this challenge.

3.2.3 The Need to Examine the Legal Vehicle through which the Global Scheme will be Adopted

3.2.3.1 One of the key issues in developing a global MBM scheme deals with the legal mechanism that will be required to implement it. There is an inherent presumption that a global scheme

¹⁴ See A37-19, *supra* note 3, preambular clauses.

may be carried through an Assembly resolution. However, thus far, ICAO has not examined the issue in detail. This needs to be one of the tasks that A38 entrusts the Council with.

3.2.4 The Need to Further Specify the Concept of “Key Design Elements”

3.2.4.1 Paragraph 21 bis b) of the proposed resolution tasks Council with making a recommendation on the design elements of a global MBM. The provision should clearly establish those elements. At present, the concept remains imprecise.

3.2.5 The Need to Accommodate CBDR

3.2.5.1 Bearing in mind the special nature of international aviation, the global MBM scheme must accommodate the CBDR principle. CBDR is not the stumbling block that halts the advancement of the organization’s work on MBMs, but rather the enabler that will induce participation and active involvement within its membership. At present, this has yet to be achieved.

3.2.5.2 We do not conceive CBDR, as applied to international aviation, as meaning that airlines from Annex 1 countries will bear mitigation obligations, but airlines from non-Annex 1 will not. This is simply unworkable with the Chicago Convention’s principle of non-discrimination. We believe that CBDR and non-discrimination can and should be reconciled to take into account the special needs of developing countries. These principles are not necessarily mutually exclusive. This should be done through a route-based approach in different phases. A38 should clearly instruct Council to address this issue, while mandating the principle that aircraft serving the same route should be subject to the same rules. This issue can no longer be ignored. It is imperative to provide clear guidelines.

3.3 ICAO to Develop MRV standards

3.3.1 At present, there is a lack of uniformity when reporting, monitoring and verifying emissions from international aviation. Data provided to ICAO is – at best – insufficient. In light of this, since the HGCC process, the UAE has strongly advocated the need for the organization to develop to a common set of ICAO standards for monitoring, reporting, and verification (MRV) for measuring GHG emissions from international aviation.

3.3.2 This does not necessarily mean developing a completely new set of MRVs. It may well mean adopting MRVs which are already in existence and which other organizations have already developed (e.g. UNFCCC, IPCC, EU). A38 should instruct Council to develop and adopt these MRVs through ICAO’s standard setting process, as stipulated in the Chicago Convention. These should apply to aircraft operators not States.

3.3.3 The text of the proposed resolution marginally addresses MRVs in paragraph 29. However, this stems from previous text developed by GIACCC almost 5 years ago. It does not in any way task the Council to develop standards on MRVs.

3.3.4 It is noteworthy that, in its submission to A38, the aviation industry expressly urges ICAO to develop “standard for the monitoring, reporting and verification of emissions, and agree on the principle that each operator should report its emissions to one State only.”¹⁵

3.3.5 In light of the foregoing, the UAE proposes that the following language be added to the proposed resolution: **“The Assembly requests Council to develop ICAO standards for monitoring, reporting, and independent verification (MRV) with respect to greenhouse gases from aircraft operators engaged in international aviation.”**

¹⁵ See ICAO, A38-WP/68 at 4.

3.4 ICAO to Further Explore Alternative Aircraft Fuel Efficiency Metric

3.4.1 In addition to actively supporting the implementation of fuel saving operational practices throughout its aviation industry, UAE is taking further steps to measure and monitor the subsequent impact on aircraft fuel efficiency. The UAE is of the view that the proposed resolution, similar to A37-19, does not provide an appropriate definition of fuel efficiency. This could therefore be broadly interpreted.

3.4.2 A37-19 provided for a metric which is based on revenue ton kilometres (RTKs). This metric is equally applicable without special conditions to all types of aviation business (e.g. ferry flights, flights operated in executive or business configurations, low-cost flights, short-haul and long-haul passenger flights, cargo flights) and rewards any improvement in fuel management. The RTK-based metrics are driven by the commercial aspects – through load factor. Thus, all the operations involving positioning flights (cargo flights, leased business aircraft flights, maintenance flights), commercially empty flights (deliveries, demonstration flights, training flights), as well as low load factor flights that scheduled carriers have to operate, are seen as not efficient. However, the aircraft itself and the way to fly it might be fuel efficient.

3.4.3 The RTK-based metric is therefore not a tool that allows the operators to closely monitor their fleet's fuel efficiency behaviour and proactively adjust it. The efforts in implementing fuel savings procedures or in renewing the fleet are overshadowed by the commercial aspects. Conversely, any inefficient operations are not highlighted and, subsequently, potential improvements are avoided.

3.4.4 Furthermore, the RTK-based metric is not suitable for operators having different types of aviation operations. An operational improvement impacting all aircraft, whatever configuration and mission, is not visible at the fleet level which prevents the operator from correctly indicating good results or progress.

3.4.5 From a global market-based scheme perspective, the efficiency misinterpretation arising from the use of RTK-based metrics may lead to inappropriate allocation of allowances, should emissions trading be the MBM to be adopted. In order to build a fair and non-competition distorting global MBM, there is a necessity to define a metric that focuses only on efficiency.

3.4.6 Ambitious aspirational goals for fuel efficiency have been set by ICAO and the member States are committed to achieve them. However the current definition of “fuel efficiency” is not clear. In addition, the UAE is of the view that RTK-based metric is inappropriate. In the present context of implementing MBM schemes based on the fuel efficiency reporting, the importance of defining suitable tools is essential. Defining robust, simple and easy-to-implement aircraft fuel efficiency metric, representative of all types of operations, rewarding fuel saving practices and also giving incentive to operators to improve their daily operations, is the first step towards achieving sustainability.

3.4.7 Therefore, the UAE proposes that A38 requests the Council to examine, through its technical advisory body, whether ICAO should adopt an alternative fuel efficiency metric.

3.5 The Need to Move Away from the *De Minimis* Concept

3.5.1 At A37, the UAE strongly opposed the adoption of paragraph 15 in A37-19. This set out a “*de minimis* threshold of international aviation activity” representing “1 per cent of total revenue ton kilometres”, where “commercial aircraft operators of States below [such] threshold should qualify for an exemption for application of MBMs that are established on national, regional, and global levels.”¹⁶ At the time, the UAE explained at length that this was in conflict with ICAO's long-standing principle of non-discrimination. Moreover, the UAE pointed out that the *de minimis* was simply not feasible to implement. The paragraph in question received an unprecedented 57 reservations.¹⁷ Later, in 2011, as part of the

¹⁶ See A37-19, *supra* note 3, paragraph 15.

¹⁷ See ICAO, Reservations to A37-19

http://www.icao.int/Meetings/AMC/Assembly37/Documents/ReservationsResolutions/10_reservations_en.pdf

mandate received from A37 to review the adequacy of the *de minimis*, the Secretariat tasked MVA Consultancy to examine the provision.

3.5.2 In a thorough study which was presented to the Council on 20 January 2012, MVA Consultancy concluded that the “modelling results revealed there will be substantive market distortions between carriers who are subject to a MBM (non-*de minimis* carriers) and carriers who are not subject to the MBM (*de minimis* carriers). For example, under the State-based *de minimis* threshold for the global departure levy: the levy would amount to a USD 13.3 billion loss for non-*de minimis* carriers and a USD 9.5 billion gain for *de minimis* carriers on an annual basis); demand for international air travel will be reduced by 3.6 per cent for *de minimis* carriers but 5.3 per cent for non-*de minimis* carriers; and there will be inconsistency in the regional impacts of MBMs. The analysis also revealed that emission reductions can be compromised by a *de minimis* threshold, as exempt carriers will have no incentive to reduce emissions and non-exempt carriers will reduce less as a result of competitive distortions.”¹⁸ The MVA Consultancy study confirmed what many States already knew at A37: a *de minimis* threshold of international aviation activity based on 1% of RTKs inexorably leads to substantial market distortions. To this end, it cannot be implemented.

3.5.3 Notwithstanding the foregoing, during the very late stages of the negotiations of the proposed resolution, *de minimis* language was – once again – included in the text. Paragraph 18 of the proposed resolution now “resolves” that a State implementing an MBM “should grant exemptions for application of MBMs on routes to and from developing States whose share of international civil aviation activities is below the threshold of 1% of total revenue ton kilometers of international civil aviation activities, until the global scheme is decided.”¹⁹

3.5.4 As long as the principle of non-discrimination is fully observed, the UAE does not oppose excluding those participants with insignificant level of emissions. This certainly eases the administrative burden of any MBM scheme. However, as it stands, paragraph 18 of the proposed resolution is problematic for a number of reasons. First, the drafting is neither precise nor appropriate. It is not clear whether it seeks to exempt States or aircraft operators. Second, there is no assurance that aircraft flying on the same route will be subject to the same rule. The provision may lead to significant market distortions and put some aircraft operators to a considerable disadvantage. Arguably, this is in direct conflict with Art. 11 of the Chicago Convention. Third, the use of the word “resolve” is highly inappropriate when suggesting a given action from Member States. Generally, reflecting the non-binding nature of ICAO Assembly resolutions, it is the organization’s long standard practice to “urge” States to take certain action. Fourth, there is no technical, legal or environmental justification to adopt such *de minimis*. Fifth, *de minimis* exclusion is out of context with the geographical scope adopted in paragraph 17 of the proposed resolution.²⁰ The Chicago Convention recognizes that each State has complete and exclusive sovereignty over its airspace.²¹ Therefore, as long as the geographical scope of a given MBM is restricted to the airspace of the implementing State, such State cannot be mandated to exclude certain participants from its scheme on the basis of an artificial threshold. By impinging upon the principle of State sovereignty, the adoption of the *de minimis*, as contemplated in the proposed resolution, may constitute a nefarious precedent for other aviation-related issues. Sixth, *de minimis* will prejudice any future exclusion threshold for the global scheme.

3.5.5 For the foregoing reasons, the UAE strongly suggests deleting *in totum* paragraph 18 of the proposed resolution.

3.6 Alternative Fuels

3.6.1 The UAE recognizes the important and potential role of alternative fuels, including biofuels for international civil aviation. Where biofuels are used, they could achieve significant overall emissions reductions and meet strict sustainability principles, including non-competitiveness with food and

¹⁸ See ICAO, WP/13798 at 3.2.4 & 3.2.5

¹⁹ See Proposed Resolution, *supra* note 13, paragraph 18.

²⁰ *Ibid.*, paragraph 17.

²¹ See *Convention on International Civil Aviation* (Chicago Convention), Art. 1.

freshwater resources. ICAO should serve as a platform to exchange information on the development of alternative fuels. ICAO should not be a standard-setting organization with respect to alternative fuels.

3.7 Other Issues

3.7.1 In page A-2, the proposed resolution introduces a new paragraph which makes reference to the fact that aircraft produced today are 80% per cent more fuel efficient per passenger kilometre than those built in the 1960s. Although the statement may be technically correct, it is misleading, for it may suggest that with technical measures international aviation will be able to offset its growth and achieve ICAO's environmental goals. This is certainly not the case. Therefore, any such reference should be linked to the fact that net emissions have also grown exponentially during that period, in spite of the important technological efficiencies introduced.

4. CONCLUSIONS

4.1 In light of the foregoing explanations, the UAE would like to invite the Assembly to:

- a) adopt a framework on MBMs applicable within the airspace of the implementing State without the requirement of mutual consent;
- b) agree to develop a global MBM scheme for international aviation including a roadmap and timeline;
- c) request Council to present the results of such work to the 39th Session in 2016;
- d) request the Council to develop ICAO **standards for monitoring, reporting, and independent verification (MRV) with respect to greenhouse gases from aircraft operators engaged in international aviation; and**
- e) request the Council to further explore alternative aircraft fuel efficiency metric.

— END —