



**WORKING PAPER**

**HIGH-LEVEL MEETING ON INTERNATIONAL AVIATION  
AND CLIMATE CHANGE**

**Montréal, 7 to 9 October 2009**

**Agenda Item 1: Aspirational goals and implementation options**

**A GLOBAL SECTORAL APPROACH FOR AVIATION**

(Presented by the Airports Council International (ACI), Civil Air Navigation Services Organisation (CANSO), International Air Transport Association (IATA) and International Coordinating Council of Aerospace Industries Associations (ICCAIA))

**SUMMARY**

Governments are encouraged to build on the positive GIACC outcome to ensure that emissions from aviation are addressed in the post-Kyoto framework through a global sectoral approach, guided by the targets and principles outlined in this paper. Governments are further urged to give their full backing and explicitly state their support for ICAO as the appropriate United Nations body for setting and administering aviation-specific standards and targets to address CO<sub>2</sub> emissions from aviation and for advocating these elements as part of a global sectoral approach for aviation in the Copenhagen climate negotiations (COP 15).

Action by the HLM-ENV is in paragraph 5.

**1. INTRODUCTION**

1.1 The aviation sector recognizes the growing and urgent need for society to address the global challenge of climate change. It also emphasizes that aviation plays a vital role in promoting sustainable development and should remain safe, affordable and accessible in order to ensure mobility on an equitable basis to all sectors of society.

1.2 The international community thus has a common responsibility to ensure that aviation can continue to deliver vital social and economic benefits, while addressing the impact of its CO<sub>2</sub> emissions. The Copenhagen process presents a unique opportunity for broader cooperation between governments and the aviation sector to address this challenge. ICAO must continue to play a key role leading up to and beyond the Copenhagen meeting.

1.3 As early as 2007, the global aviation community adopted a four-pillar strategy, subsequently endorsed by the ICAO General Assembly, which promotes and drives efforts in four key areas: improved technology, efficient operations, effective infrastructure and positive economic measures. In 2008, the airlines, manufacturers, air navigation service providers and airports signed a commitment to a pathway to carbon-neutral growth.

## 2. BUILDING ON THE GIACC OUTCOME

2.1 Discussions in ICAO's Group on International Aviation and Climate Change (GIACC), although difficult at times, succeeded in taking a positive first step towards a consensus view on a global framework to further address CO<sub>2</sub> emissions from aviation.

2.2 In this context, the aviation sector draws particular attention to the GIACC discussions regarding:

- a) aviation's continued progress on fuel efficiency as the basis for near-term industry goals through 2020, with fuel efficiency remaining a central part of aviation's environmental strategy in the medium and long terms thereafter;
- b) ICAO continuing to consider goals of "greater ambition" for the medium-term, which might include a carbon neutral growth concept, and for the longer term, which might include emissions reductions;
- c) various measures may be employed for aviation to achieve the goals and ICAO should continue to develop relevant guidance on such measures;
- d) ICAO should establish a process to develop a framework for market-based measures;
- e) ICAO should collect annual traffic and fuel consumption data from States; and
- f) ICAO should seek to develop a CO<sub>2</sub> standard for new aircraft types.

2.3 Building on the positive momentum created by the GIACC recommendations presented to the ICAO High-Level Meeting (HLM-ENV) that acknowledge the principles of common but differentiated responsibilities (CBDR) and non-discrimination and equal and fair opportunities, the aviation sector urges governments to work towards a more conclusive and comprehensive set of recommendations from ICAO to UNFCCC as how to best address CO<sub>2</sub> emissions from aviation as part of a global framework.

## 3. A GLOBAL SECTORAL APPROACH FOR AVIATION

3.1 Aviation is the ultimate global activity: it provides an interconnected network of air services spanning the entire globe, with aircraft – and their emissions – crossing continents and national jurisdictions on a daily basis. Even flights that are purely within a State's boundaries can have implications for international aviation, as domestic flights often serve as critical feeders for the international network. To avoid a patchwork of conflicting and potentially overlapping national and regional policies, a framework for measures addressing CO<sub>2</sub> emissions from aviation must be developed at a global level.

3.2 Further, although aviation is a relatively homogenous sector in terms of technology and efficiency levels, it is also a highly competitive, R&D-intensive sector, largely characterized by low entry barriers, thin revenue margins and high risk exposure. Policy measures applied in other sectors may not necessarily translate to aviation. While the aviation sector has many characteristics that make the development of policy mechanisms to further reduce emissions more challenging than for other fossil fuel consuming sectors, it has an unparalleled record of fuel and CO<sub>2</sub> efficiency improvements.

3.3 Given the nature of the aviation sector, plus the fact that its emissions cannot easily be attributed to any particular economy, it is recommended that multilateral collaborative action by all States through a global sectoral approach, encompassing all air transport operators, be endorsed by the HLM-ENV as the most appropriate mechanism to effectively address CO<sub>2</sub> emissions from aviation in the post-Kyoto framework.

3.4 To be effective, however, regulatory efforts to limit or reduce CO<sub>2</sub> emissions from aviation should address all parts of the aviation supply chain. In addition to aircraft operators this includes for example aircraft manufacturers, fuel suppliers, air navigation service providers and airports, who directly influence aviation's environmental performance through the design and deployment of the products and services they supply.

3.5 Lastly, governments have a responsibility to establish the right legal and fiscal frameworks to facilitate and increase investment in cost-effective CO<sub>2</sub> emissions reduction measures, including new aircraft and engine technologies, more efficient ATM infrastructure and low-carbon sustainable alternative jet fuels, and to enable the full and unrestricted access of the aviation sector to the global carbon market and use of available mitigation measures outside the sector.

#### 4. PROPOSED TARGETS AND GUIDING PRINCIPLES

4.1 The aviation sector urges governments to give their full backing and explicitly state their support for ICAO as the appropriate United Nations body for setting and administering aviation-specific standards and targets to further address CO<sub>2</sub> emissions from aviation and for advocating these elements as part of a global sectoral approach for aviation in the Copenhagen climate negotiations (COP 15).

4.2 It is further proposed that the development by ICAO of the global sectoral agreement for aviation is based on the following targets and guided, inter alia, by the following principles:

- **Targets** — In line with GIACC recommendations, a collective CO<sub>2</sub> efficiency target should be established for the near-term through 2020. The aviation sector recommends that a target to improve CO<sub>2</sub> efficiency by an average of 1.5 per cent per annum (on a CO<sub>2</sub> emissions per revenue tonne kilometre (RTK) basis) be established. This target takes into account the effects of the current economic crisis on revenues and load factors, which has a direct impact on the rate at which airlines can replace their fleets. Furthermore, infrastructure and ATM efficiency improvements are dependent on direct government investments over which the industry has little visibility and little control.

In line with concepts discussed at GIACC, a mid-term target to stabilize net CO<sub>2</sub> emissions from aviation from 2020 onward (carbon-neutral growth), subject to critical aviation infrastructure and technology advances achieved by the industry and government, should also be adopted. A long-term aspirational goal would be to

reduce aviation net carbon emissions by 50 per cent in 2050, compared to 2005 levels. Therefore States are urged to request ICAO to develop a framework and mechanisms to monitor and support delivery of these targets and longer term goals for submission to COP16 in 2010.

- **Accounting for aviation emissions** — Aviation CO<sub>2</sub> emissions should be addressed through a global sectoral approach and accounted for in the global emissions inventory, not at a regional or national level. It is essential that emissions from aviation are accounted for only once, whether from domestic or international activities and that any market-based measures addressing aviation emissions are not duplicative. The establishment of a global sectoral approach will ensure this by replacing local, national and/or regional measures with a single, global framework for aviation.
- **Geographic coverage** — Due to the global, interconnected nature of air transport, the sectoral agreement should apply equally to both domestic and international aviation emissions, without distinction.
- **Interdependencies of measures** — The key CO<sub>2</sub> abatement opportunities for the aviation sector are the implementation of new technologies, including low fuel burn aircraft and engine technologies, alternative fuels with reduced life-cycle CO<sub>2</sub> emissions, and ongoing improvements in operational efficiency and ATM systems and processes. While the aviation sector continues to explore and exploit the full range of available abatement opportunities, it is important to consider the interrelationships between the various mitigation measures. For example, some actions to reduce flight track lengths in the vicinity of airports can adversely affect noise management procedures such as preferred runway usage, flight tracks that avoid populated areas and many other noise abatement procedures. Therefore regulators, when formulating actions to address CO<sub>2</sub> emissions from aviation, must carefully consider and balance the overall possible impacts of such actions. But whatever the approach, all adopted measures should be technologically feasible, economically reasonable, and environmentally beneficial. The aviation sector believes that ICAO is uniquely qualified to provide guidance and technical expertise to develop CO<sub>2</sub> mitigation measures and ensure that they do not adversely impact on other sensitive aviation environmental areas such as noise and local air quality.
- **Cost-effective economic measures** — Economic measures to address CO<sub>2</sub> emissions from aviation must be cost-effective and non-discriminatory. These measures should be implemented globally and on the basis of consensus. They should also provide full and open access to the global carbon market and must be developed and agreed through ICAO. Further, economic measures must not create ‘carbon leakage’ where emissions transfer between countries or carriers lead to market distortions and negate environmental benefits. The aviation industry reiterates that taxes, levies and charges targeted at air transport are environmentally ineffective and not cost efficient; they severely undermine the sector’s ability to invest in further emissions reduction technology, operations and infrastructure measures.
- **Use of revenues** — Any eventual revenues from economic measures under a global scheme to address aviation emissions should be clearly earmarked for aviation and environmental purposes. Such revenues should be prioritized for re-investment in

additional measures to further improve the emissions profile of aviation, for instance by supporting the development and deployment of more fuel-efficient aircraft, engines, infrastructure, low carbon sustainable jet fuels and investment in ATM technologies.

- **Use of carbon market instruments** — For a sectoral approach for aviation to be effective it must have an open architecture, i.e. aviation should have unrestricted access to carbon market instruments to meet its obligations, on a par with other sectors. The full integration of aviation sector CO<sub>2</sub> emissions in the global emissions inventory should make this possible.
- **Administration** — Effective administration of the global sectoral agreement requires implementation, management and oversight of the following processes: target setting, CO<sub>2</sub> monitoring and reporting, compliance and enforcement. Administration should be undertaken by the organization(s) able to do so in the most efficient and cost-effective manner and could involve both government and industry bodies. As the designated United Nations body for international aviation, ICAO should have a central oversight role in this process. As is currently already the case with regard to aviation noise and non-CO<sub>2</sub> emissions, ICAO should create and maintain a robust aviation CO<sub>2</sub> emissions inventory, available on an equal access basis.
- **Equal treatment and common but differentiated responsibilities** — The aviation sector believes that, with some political leadership and innovative solutions, the principles of equal treatment between airlines and differentiated responsibilities for States are completely consistent in the context of aviation. ICAO has traditionally recognized and accommodated states with special needs that have difficulty complying with standards or recommended practices, either through technical and financial support or via differentiated timelines for the implementation of measures. A global sectoral approach is the best way of achieving this, bearing in mind the need to minimize competitive distortions.

## 5. ACTION BY THE HIGH-LEVEL MEETING

5.1 In regards to the anticipated actions for Agenda items 1 and 2, the aviation sector invites the HLM-ENV to:

- a) recognize the necessity to adopt a global sectoral approach, encompassing all air transport operators, as the most appropriate approach for effectively addressing CO<sub>2</sub> emissions from aviation in the post-Kyoto framework;
- b) support ICAO as the appropriate United Nations body for setting and administering aviation-specific standards and targets to further address CO<sub>2</sub> emissions from aviation and instruct it to develop a framework and mechanisms to monitor and support delivery of the targets and longer term goals described in Section 4 of this paper;
- c) recommend that the development of the global sectoral approach for aviation is based on: a target to improve CO<sub>2</sub> efficiency by an average of 1.5 per cent per annum (on a CO<sub>2</sub> emissions per revenue tonne kilometre (RTK) basis), an interim target to

stabilize net CO<sub>2</sub> emissions from aviation from 2020 onward (carbon-neutral growth) subject to critical aviation infrastructure and technology advances achieved by the industry and government, and a long-term aspirational goal to reduce aviation net carbon emissions by 50 per cent in 2050 compared to 2005 levels, guided, inter alia, by the principles outlined in paragraph 4.2; and

- d) urge States to carefully consider the interdependency of measures, including noise management issues, when developing and implementing the global sectoral approach or other projects to address emissions from aviation.

5.2 In regards to the anticipated actions for Agenda item 5, the aviation sector invites the HLM-ENV to:

- a) recommend that ICAO, in its Observer role to UNFCCC proceedings, advocate that the global sectoral approach identified in paragraph 5.1 above be accepted at COP15;
- b) urge ICAO Contracting States to support acceptance at COP15 of the global sectoral approach identified in paragraph 5.1 above; and
- c) recommend the development by ICAO, as the appropriate United Nations body, of a global sectoral agreement for aviation, for submission to COP16 in 2010.

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