



WORKING PAPER

ASSEMBLY — 39TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 20: Environmental Protection – Aircraft Noise – Policy, Standardization and Implementation Support

Agenda Item 21: Environmental Protection – Aircraft Engine Emissions affecting Local Air Quality – Policy, Standardization and Implementation Support

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

EUROPEAN COMPREHENSIVE APPROACH TO ENVIRONMENTAL PROTECTION

(Presented by Slovakia on behalf of the European Union and its Member States¹,
and the other Member States of the European Civil Aviation Conference²)

EXECUTIVE SUMMARY

Europe has adopted a comprehensive approach to mitigating the environmental impacts of international aviation, and strongly supports the on-going efforts within ICAO as part of this approach.

Action: The Assembly is invited to endorse the following actions:

- a) support the development of a broad range of policy measures under a ‘comprehensive approach’ to effectively address environmental impacts from the aviation sector;
- b) recognize the important work undertaken by CAEP and the necessity for CAEP to operate in an as free, inclusive and transparent way as possible;
- c) prioritize the implementation of the CAEP/10 agreed and recommended standards on aeroplane CO₂ emissions and aircraft engine nvPM mass concentration, as well as the further development of the nvPM mass and number standard;
- d) support greater transparency in the ICAO decision-making process as agreed to at the CAEP/10 meeting for amendments to the Annex 16 Standards and Recommended Practices (SARPs);
- e) note the challenges in turning alternative fuels sustainable and into an operational reality, and invite ICAO States to develop measures to support their uptake, including establishing global sustainability criteria;
- f) note Europe's commitment to building capacity for environmental protection in developing countries and its invitation for others to engage in activities with the same objective;

¹ Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and United Kingdom.

² Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Iceland, Republic of Moldova, Monaco, Montenegro, Norway, San Marino, Serbia, Switzerland, The former Yugoslav Republic of Macedonia, Turkey and Ukraine.

<p>g) support the establishment of a long term goal regarding reductions of CO₂ emissions; and h) support future work to improve the understanding of the environmental impacts of international aviation, including on non-CO₂ greenhouse gas emissions.</p>	
<p><i>Strategic Objectives:</i></p>	<p>This working paper relates to the following Strategic Objectives of Environmental Protection.</p>
<p><i>Financial implications:</i></p>	<p>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.</p>
<p><i>References:</i></p>	<p>Chicago Convention and its Annex 16 A38-17 and A38-18</p>

1. COMPREHENSIVE APPROACH

1.1 Aviation faces multiple current and future environmental challenges as reported on in the European Aviation Environmental Report 2016 (see Section 6, below). Europe recognizes that a broad range of policy measures under a comprehensive approach is needed in order to effectively address the climate change, noise and local air quality impacts of aviation. Key building blocks to support this encompassing approach in Europe are the Clean Sky technology initiative³, the Single European Sky ATM Research (SESAR) programme⁴ and the European Advanced Biofuels Flightpath⁵. On the topic of CO₂-emissions reduction, the 40 European Action Plans⁶ for emissions reduction which were submitted to ICAO also illustrate this comprehensive approach.

1.2 As regards climate change, Europe believes that the adoption of a long term objective should be considered following the initiative taken by the international aviation industry for a 2050 target in the context of the global climate goals. Europe supports the implementation of the ICAO 'basket of measures', including the non-market-based measures as agreed at the 37th ICAO Assembly. The current 'basket of measures' on CO₂ represents a significant start, but will need to be revisited in the light of achievement of present and future targets. In addition, further scientific work should be encouraged in order to gain a better understanding of the climate impact of aviation emissions other than CO₂, particularly in areas where significant uncertainties over their magnitude remain.

2. TECHNOLOGY AND DESIGN

2.1 Europe welcomes the agreement at CAEP/10 and the recommendations for adoption by the ICAO Council on both the new ICAO Annex 16 Volume III aeroplane CO₂ (fuel efficiency) standard and the ICAO Annex 16 Volume II non-volatile Particulate Matter (nvPM) mass concentration standard. It is recognized that ICAO Contracting States need to integrate the amendments to the Annex 16 SARPs into their legislative framework as soon as possible in order to be ready to apply the agreed applicability requirements. With this in mind, Europe has already initiated the rulemaking task.

2.2 Europe is actively supporting the CAEP/11 work programme that includes further development of the nvPM standard for mass and number, as well as Independent Expert Technology Reviews for NO_x, PM, noise and fuel burn that will inform the timing of future standard setting processes. Development of standards for supersonic flight will also continue during CAEP/11. The 38th Assembly reaffirmed the importance of ensuring that no unacceptable situation for the public is created by sonic boom from supersonic aircraft in commercial service, and Europe continues to support this view.

3. ATM AND OPERATIONS

3.1 Europe welcomes the proposed ICAO Circular on "Community Engagement for Aviation Environmental Management" based on stakeholder best practices, and the analysis of environmental benefits from the Aviation Safety Block 0 Upgrades (ASBU). We will continue to actively support the CAEP's future work, including on community engagement and the analysis of ASBU Block 1 upgrades.

³ <http://www.cleansky.eu/>

⁴ <http://www.sesarju.eu/>

⁵ <https://ec.europa.eu/energy/en/topics/biofuels/biofuels-aviation>

⁶ <https://www.ecac-ceac.org/action-plans-publicly-available>

3.2 A further key mechanism in delivering the Single European Sky (SES) environmental performance targets is that of the Network Manager who is tasked to coordinate between operational stakeholders with the aim of optimizing the European aviation system. The flight efficiency initiative, launched in 2013, offers operators the most efficient routes on each day of operation. Nevertheless, in the proximity of airports, implementing the most efficient routes may be restricted by noise and emissions constraints. While SES environmental performance indicators are currently focused on flight efficiency from a fuel burn perspective, additional indicators including noise and emissions are currently being considered for Reference Period 3 (2020-2025).

4. NOISE AT AIRPORTS

4.1 European legislation on the introduction of noise-related operating restrictions at airports within the 'Balanced Approach' was updated during 2014.⁷ This update includes the collection of noise performance information that will improve the quality of the aircraft noise source data, and that of individual aircraft noise characteristics. Reduction of aircraft noise at source is an important measure that is contained in the balanced approach, and future reviews of noise stringency levels should remain a key priority. In the absence of continuing efforts, local environmental impacts may impose significant constraints on the future development of air traffic.

5. SUSTAINABLE ALTERNATIVE FUELS

5.1 While the uptake of sustainable alternative fuels in the aviation sector is still in its infancy, it is assumed that some of these fuels have the potential to play a significant role in reducing aviation greenhouse gas emissions in the coming decades. Future work should seek to identify the most efficient and sustainable pathways.

5.2 Substantial analytical work has recently been undertaken by CAEP on the possible contribution of alternative fuels to CO₂ reduction targets. However, the CAEP environmental trends analysis states that insufficient data are available to confidently predict their availability, and that the supply of sustainable alternative fuels is far from being sufficient to achieve carbon neutral growth in 2021 or shortly after. Results of scenarios for longer term contributions (2050) remain inconclusive and uncertain. In addition, the contribution of alternative fuels to GHG emission reductions will critically depend on their carbon footprint. Work on global sustainability criteria should therefore be continued to ensure their climate benefits while allowing for market predictability. The challenges in ensuring that alternative fuels are sustainable, and turning them into an operational reality, are significant. Without concrete policy responses it remains at this juncture rather unlikely that sustainable alternative fuels will play a significant role in the near future. Europe supports the work of AFTF in CAEP, and encourages States to develop incentive mechanisms to increase the availability of sustainable alternative fuels to ensure sufficient volumes are available in the medium to longer-term.

6. EUROPEAN AVIATION ENVIRONMENTAL REPORT

6.1 Effective coordination is required to support a comprehensive approach on aviation environmental protection. The European Aviation Environmental Report (available at

⁷ EU Regulation 598/2014, which entered into force on 13 June 2016.

www.easa.europa.eu/eaer) was established to support this objective by monitoring and reporting on the environmental performance of the European aviation sector in an objective, consistent and clear manner.

7. CAPACITY BUILDING

7.1 Europe welcomes ICAO's efforts to build capacity for environmental protection in developing countries. From 2013 to 2017, the European Commission is financing the project 'Capacity building for CO₂ mitigation from international aviation' to help less developed countries address emissions from international aviation. The EUR 6.5 million project, implemented by ICAO in 14 African and Caribbean countries, builds capacities to track, manage and reduce aviation emissions. It thereby contributes to countries meeting the 2010 ICAO Assembly call for establishing State Action Plans for reducing aviation CO₂ emissions through the collection of emissions inventories and piloting new ways of reducing fuel consumption. Europe remains committed to building capacities for environmental protection around the world, and invites others to also provide such support.

8. IMPORTANCE OF THE WORK OF CAEP

8.1 Europe welcomes the achievements of CAEP, and especially the significant agreements and recommendations at the CAEP/10 meeting in February 2016, which has also increased the level of transparency behind decisions on Annex 16 SARPs. The CAEP/10 Report provides greater insight into the decision making process, and has increased the efficiency of rulemaking processes within ICAO Contracting States to implement the changes to SARPs into legislative frameworks.

8.2 Europe fully understands the need to protect certain sensitive CAEP information from being disseminated to the broader public. However, the future success of CAEP work will depend on facilitating an exchange of information among experts that is as free, inclusive and transparent as possible while ensuring an adequate level of data protection. Europe remains open to further develop the respective rules and procedures in order to ensure efficient working practices.

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