



WORKING PAPER

ASSEMBLY — 38TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 17: Environmental Protection

ADDRESSING AIRCRAFT NOISE AND LOCAL AIR QUALITY IMPACTS

(Presented by the United States)

EXECUTIVE SUMMARY

ICAO and its member States have committed to limit or reduce the number of people affected by significant aircraft noise, and to limit or reduce the impact of aviation emissions on local air quality. ICAO and its member States have taken significant steps to reduce noise and local air quality impacts through policy, standards and guidance. The United States wishes to recognize the progress in each of these areas and encourage further efforts to reduce noise and local air quality impacts.

Action: The Assembly is invited to:

- a) fully encourage the Council to adopt the proposed Chapter 14 noise standard and recognize it as a significant step toward reducing aircraft noise at the source;
- b) support the recommendation from the Committee on Aviation Environmental Protection urging States not to introduce operational restrictions on aircraft that comply with the proposed noise certification Standard of Annex 16 Volume I, Chapter 4 and/or 14, once adopted by the Council;
- c) reaffirm commitment to the Balanced Approach, including the Balanced Approach Guidance (Doc 9829), recognizing that operating restrictions should not be applied as a first resort and only after consideration of each of the other elements; and
- d) recognize the progress and ongoing work to address the impact of emissions on local air quality and to support further work on developing a non-volatile PM certification.

<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 additional resources requested.
<i>References:</i>	

1. INTRODUCTION

1.1 ICAO and its member States have committed to limit or reduce the number of people affected by significant aircraft noise, and to limit or reduce the impact of aviation emissions on local air quality. ICAO and its member States have taken significant steps to reduce noise and local air quality impacts through policy, standards and guidance. The United States wishes to recognize the progress in each of these areas and encourage further efforts to reduce aviation noise and local air quality impacts.

2. REDUCING NOISE IMPACTS

2.1 In February 2013, the Committee on Aviation Environmental Protection (CAEP) recommended the adoption of the “Chapter 14” aircraft noise standard. After undertaking an analysis of benefits and cost-effectiveness, consistent with the CAEP terms of reference, CAEP recommended adopting a new standard that will result in a reduction of 7 Effective Perceived Noise Decibels (EPNdB) below the current Chapter 4 standard. The United States strongly endorses the Chapter 14 standard proposal for ICAO Council adoption.

2.2 In taking the decision to recommend the Chapter 14 noise standard, the CAEP also recommended that States should be urged not to introduce operational restrictions on aircraft that comply with noise certification Standard of Annex 16 Volume I, Chapter 4 and 14. The United States supports this recommendation and recommends the adoption of the following language: that “States be urged not to introduce operational restrictions on aircraft that comply with the noise certification Standard of Annex 16 Volume I, Chapter 4 and/or 14,” once Chapter 14 is adopted by the ICAO Council.

2.3 In 2001, ICAO adopted the Balanced Approach to aircraft noise management. Since then, the Balanced Approach has consistently been reaffirmed by ICAO member States as the appropriate policy for reducing aircraft noise and is reflected in 2010 Resolution A37-18. The Balanced Approach is comprised of four principal elements: 1) reduction of aircraft noise at source; 2) land-use planning and management measures; 3) noise abatement operational procedures; and 4) operating restrictions. The proposed Chapter 14 standard is an example of a measure that addresses the first element of the Balanced Approach by reducing noise at the source.

2.4 The Balanced Approach calls for a tailored airport-by-airport approach to addressing noise and each of the elements should be considered equally. However, it should be noted that, as agreed at the 33rd Assembly in 2001 and reaffirmed since, operating restrictions should not be applied as a first resort but only after consideration of the benefits to be gained from the other elements.

2.5 Through legislation and regulation, the United States fully applies the Balanced Approach in addressing aircraft noise. The FAA Noise Compatibility Planning Program (14 CFR Part 150) is a regulatory program under which airports develop plans to manage and address aircraft. Separately, in order to obtain an operating restriction, airports must make an application to the FAA, under 14 CFR Part 161, and demonstrate a number of factors, including that the restriction is reasonable, cannot be achieved through less burdensome means, and is not a burden on interstate commerce. The United States encourages other ICAO States to continue to support the Balanced Approach and consistently apply it in addressing noise. In particular, States should not focus solely on operating restrictions as a means to reduce noise, but should look to all principles of the Balanced Approach.

3. **REDUCING IMPACT OF EMISSIONS ON LOCAL AIR QUALITY**

3.1 Addressing the potential local air quality impacts from aircraft engine emissions is an important element of reducing the impacts of aviation on the environment. Aircraft engine emissions from oxides of nitrogen (NO_x) and particulate matter (PM) have the potential to impact local air quality. While emissions from aircraft are just one source of the total contributions to local air quality, it is important to develop an improved scientific understanding of aviation's impacts and to take measures to reduce the impacts of these emissions.

3.2 In 2010, ICAO adopted a new NO_x standard for aircraft engines. This standard will enter into force on December 31, 2013, and is an improvement on the existing standard by up to 15 per cent. Given the impending implementation of the new NO_x standard, the United States does not recommend re-evaluating the standard in the near-term, but emphasizes the need to periodically assess future NO_x emissions and new technology.

3.3 ICAO is in the process of addressing PM emissions from aircraft engines. PM emissions have two components, non-volatile and volatile PM. There is ongoing work in CAEP to conduct further assessments of non-volatile PM and to develop methodologies to characterize non-volatile PM emissions from aircraft engines and to develop certification requirements for non-volatile PM emissions. This is expected to lead to a new ICAO non-volatile PM emissions engine standard for both mass and number. The United States and others have contributed time and resources to further work on PM, but continued support and additional resources are necessary from a broader range of countries in order to ensure further work can be conducted.

4. **CONCLUSION**

4.1 The ICAO environmental commitments to reduce the number of people affected by significant noise and to reduce the impact of emissions on local air quality continue to be key environment commitments. The United States wishes to recognize progress in addressing noise and local air quality, including the proposed Chapter 14 noise standard, as well as the need to make further progress, such as through further work addressing PM emissions