Statement from the International Civil Aviation Organization (ICAO)
to the Twenty-Seventh Session of the UNFCCC
Subsidiary Body for Scientific and Technological Advice (SBSTA)

(Bali, 3-11 December 2007)

The International Civil Aviation Organization (ICAO) appreciates this opportunity to bring the SBSTA up-to-date on its work regarding aircraft engine emissions. This year has been extremely active for ICAO in the area of aircraft engine emissions and their impact on the environment.

IPCC Report

ICAO would, firstly, like to congratulate the IPCC on its Fourth Assessment Report, in the preparation of which ICAO cooperated. Particularly interesting to ICAO was progress regarding the resolving of uncertainties concerning the influence of contrails and aerosols on cirrus cloud formation. ICAO notes the revised findings that international aviation contributed 2% of the anthropogenic global carbon dioxide production and accounted for approximately 3% of the radiative forcing.

CAEP/7 Meeting

As already reported to your 26th Session, ICAO's Committee on Aviation Environmental Protection (CAEP), which advises the Organization on matters relating to aviation and the environment (noise and aircraft engine emissions), held its seventh meeting (CAEP/7) in February 2007. A major achievement at CAEP/7 was the definition of mid and long-term technology goals for emissions of nitrogen oxides (NO_x) from jet engines. These goals, for 10 and 20 years into the future, were developed by an independent panel of experts, and the Committee agreed to undertake a similar process to establish mid and long-term goals for engine fuel burn. The Committee also continued to develop operational means of reducing fuel consumption, among them the refinement of aircraft arrival and departure procedures at airports and implementation of modern air traffic management systems to shorten air routes and avoid in-flight delays. An initial assessment of the models and databases in use to estimate aircraft emissions locally and globally was undertaken and will continue. CAEP recognized that a large effort was still required to refine these models and other tools. Collection of the required data to use with the models remains a problem in some parts of the world. Market-based measures, including emissions trading, were also discussed and the meeting agreed on guidelines for incorporating aviation emissions into national emissions trading schemes. The Committee agreed to an extensive list of future work items. Since then, the Committee has been actively pursuing its work, and a meeting of its Steering Group was held from 26 to 30 November 2007 in Zurich.

Colloquium on Aviation Emissions

In May, ICAO hosted the Colloquium on Aviation Emissions at which experts in the various technical fields involved gave up-to-date assessments of the technological advancement in their disciplines in preparation for the 36th Session of the ICAO Assembly. The Colloquium had wide regional representation, and provided the latest developments on the assessment of aviation emissions and highlighted possible solutions to address aviation emissions' impacts.

ICAO Environmental Report

In September, ICAO's first Environmental Report was published. The Report provides information on ICAO's achievements in the areas of both noise and aircraft engine emissions and contains articles on recent developments in the field. This first report of its kind contains transparent and comprehensive information on aviation and the environment and is freely available for public use on ICAO's website. It is intended that this Environmental Report will be published every three years.

The ICAO Assembly

The 36th Session of the ICAO Assembly was held from 18 to 28 September 2007. The Assembly is ICAO's major policy-making body; and normally meets every three years to review the Organization's achievements and direct its activities for the next three years. As in recent sessions, aviation and the environment was a major topic of discussion at the 36th Session. The Assembly unanimously endorsed the achievements of the Organization in the technical and operational areas of engine emissions reduction and the planned future work. The Assembly's main discussions however were focussed on market-based measures to limit or reduce the impact of aircraft engine emissions on the environment. These measures included voluntary measures, emissions-related charges and emissions trading. Of these topics, the majority of discussions centred on emissions trading.

Emissions Trading

There was general agreement at the Assembly on the importance of emissions trading as a major tool, together with the reduction of emissions at source and operational measures, for controlling the impact of aviation emissions on the environment. However, the Assembly had difficulty reconciling the concept of common but differentiated responsibilities contained in the Framework Convention with the concept of non-discrimination contained in the Convention on International Civil Aviation. Of particular concern among the majority of States was the inclusion of operators from other States providing services to a State or region, in an emissions trading scheme being operated by that State or region, which would be applied to all emissions from the flight, even those emissions that were created outside the boundaries of that State or region. These States considered that participation in an emissions trading scheme should only be on the basis of mutual consent. An Assembly Resolution (A36-22) was consequently developed which contained this element of mutual consent. Forty-two European States (which comprise approximately 20% of ICAO's member States) reserved their position regarding this aspect of the resolution.

ICAO Programme of Action on International Aviation and Climate Change

The 36th Session of the Assembly acknowledged the significant progress made in the international aviation sector, with aircraft today being about 70% more fuel efficient on a passenger-kilometre basis than they were 40 years ago; with some airlines achieving net reductions in emissions over the past several years despite a simultaneous increase in operations; and the commitment of the international airline industry to achieving a further 25% fuel efficiency improvement during the next fifteen years. The Assembly recognized, nevertheless, that overall emissions from aviation were increasing due to the growth in air traffic and further recognized that the continued growth in air traffic was essential to the growth of developing countries in particular, as well as to countries with remote regions readily accessible only by air. The importance of aviation to the tourism industry and the prominence of this

industry in the world economy were particularly noted. It consequently developed a plan of action which included, among other things, the following elements:

a) the regular assessment of the impact of aviation on the environment and the continued development of tools for this purpose;

b) the vigorous development of policy options to limit or reduce the environmental impact of aircraft engine emissions and the provision of advice as soon as possible to the Conference of the Parties of the UNFCCC on technical solutions and market-based measures, taking into account the potential implications of such measures for developing as well as developed States;

c) the continued development and updating through CAEP, of standards and guidance for Contracting States, on the application of measures aimed at reducing or limiting the environmental impact of engine emissions; and

d) the formation of a new group on International Aviation and Climate Change composed of senior government officials representative of all ICAO regions, with the equitable participation of developing and developed States, for the purpose of developing and recommending to ICAO an aggressive Programme of Action on International Aviation and Climate Change, based upon consensus.

Carbon Calculator

ICAO is in the process of developing a methodology for the calculation of the carbon dioxide emissions attributable to air travel. It is intended that this calculator should be used as the primary tool for calculating aviation emissions for use in the UN's Climate Neutral Initiative. It would also be a source of data for use in carbon offset programmes.

Concluding Remarks

The Assembly emphasized the importance of ICAO continuing to demonstrate its leadership role in all civil aviation matters related to the environment. This was essential for establishing a well-structured, long-term, globally-acceptable approach which would allow the continued growth of aviation while managing the associated environmental impacts. This approach includes fostering cost-effective solutions based upon international consensus and consequently requires the cooperation of all Member States and the aviation industry. To this end, ICAO will continue its fruitful cooperation with the UNFCCC Secretariat and assist the SBSTA and IPCC with methodological issues as required; and will also continue the vigorous development of technical and market-based solutions to minimize the effects of aviation emissions on the environment.

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