



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

(Bonn, 25 October - 5 November 1999)

At the previous SBSTA Session (June 1999), ICAO reported on the substantial activities underway to respond to the role identified for it under Article 2.2 of the Kyoto Protocol<sup>1</sup>. This provision requires Annex I Parties to pursue limitation or reduction of emissions of greenhouse gases from aviation bunker fuels, *working through ICAO*.

The highest body of ICAO, the ICAO Assembly, had adopted a resolution in September/October 1998, calling for its subsidiary bodies to “study policy options to limit or reduce the greenhouse gas emissions from civil aviation, taking into account the findings of the IPCC Special Report on Aviation and the Global Atmosphere and the requirements of the Kyoto Protocol” and to report back to the next meeting of the Assembly in September/October 2001<sup>2</sup>. With this clear mandate, the expert group within ICAO that focuses on environment (the Committee on Aviation Environmental Protection, CAEP) had initiated actions aimed at providing the technical and policy basis for decisions on limiting or reducing greenhouse gases that could be taken by the Council of ICAO or at the next Assembly meeting.

Since the SBSTA Session in June, there has been a meeting of the CAEP Steering Group and a number of meetings on emissions at working group or expert level. Today’s report will focus on the progress that has been made in developing an Action Plan on aircraft engine emissions and in exploring market-based options as a means of limiting greenhouse gas emissions.

### **Draft Action Plan**

Substantial progress has been made towards developing an Action Plan on aircraft engine emissions that would consolidate the various activities taking place within CAEP and would provide a road map of tasks and targets over the next few years. In view of the interest expressed in ICAO’s work plans at the last SBSTA session, the latest version of the [Draft Action Plan](#) is attached to this Statement. While it continues to evolve and has yet to be formally approved by the CAEP process, it is in a sufficiently advanced stage to enable SBSTA to see how CAEP is tackling these difficult issues.

The Draft Action Plan addresses all aspects of aircraft engine emissions, both at ground level and at a global level. However, particular emphasis is placed on greenhouse gas emissions, including the development of policy options for consideration by the ICAO Assembly in late 2001.

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<sup>1</sup> Accessible on the ICAO web site, [www.icao.int](http://www.icao.int) under Environmental Protection.

<sup>2</sup> Appendix F to Resolution A32-8, *Consolidated statement of continuing ICAO policies and practices related to environmental protection* (also available on the ICAO web site).

The Draft Action Plan commences with background material on aircraft engine emissions, identifies the principles that guide CAEP's work on emissions, and then describes the tasks that are being undertaken by three working groups. These are focussed on three areas:

- ➔ further development of technology and related world-wide standards;
- ➔ reducing fuel burn through improved operational measures; and
- ➔ analysing the use of market-based options.

Wherever possible, the Draft Action Plan includes an indication of the expected time-frame.

### **Market-based options**

Since the last SBSTA session, progress has been made in all three areas, and especially towards identifying and evaluating the potential role of market-based options. Consideration is being given to the use of market-based options including emission-related levies, emissions trading and voluntary agreements, as a means of limiting greenhouse gas emissions. However, the use of market-based options raises a number of important economic, environmental, legal and administrative issues that must be fully evaluated.

As the IPCC Special Report has indicated, there are several different emissions from aircraft engines that play a role in climate change. However, this tends to complicate the design and evaluation of market-based options. It has therefore been decided to focus on CO<sub>2</sub> emissions only at this stage, while leaving open the possibility of accommodating other emissions later, if appropriate.

In order that different types of market-based options can be evaluated on a consistent basis, an initial set of common assumptions has been developed:

- ➔ Initially, two targets for emission reductions will be examined. Starting with a business-as-usual scenario, one target would reflect the average emission reduction required of all developed countries in the Kyoto Protocol for the first commitment period (5% below the chosen base year), while a second target would reflect a reduction of half the projected aviation growth rate in that period.
- ➔ Two alternatives for geographic scope will be examined, one assuming implementation on a world-wide basis, the other assuming developed countries only (as defined by Annex B to the Kyoto Protocol).

On this basis, the initial set of specifications for the various market-based options were developed.

As regards **emission-related levies**, the initial options to be evaluated are:

- ➔ A fuel tax, with revenue being used by governments to offset other taxes.

- A revenue-neutral charge based on aircraft efficiency, with higher charges on less fuel-efficient aircraft offset by lower charges on more fuel-efficient ones.
- An en-route emissions charge, with revenues recycled to the aviation sector (for example, to defray the costs of the harmful effects of emissions and to support air traffic modernisation, early retirement of aircraft, and research and development activities).
- An en-route emissions tax, with revenues being used to offset other taxes.

For **emissions trading**, three types of system are being evaluated:

- An open system, in which emissions from all aviation sources (domestic and international) are treated identically to other emissions, and trading may take place between the aviation sector and other sectors.
- A closed system, in which international aviation emissions may only be traded within the aviation sector, with a fixed cap. This would leave domestic emissions subject to whatever national emissions trading rules are introduced in the flexible mechanisms framework agreed by the Conference of the Parties. International emissions would be ring-fenced and treated separately.
- A third system envisages trading of emissions based on an initial distribution of permits in relation to optimised efficiency criteria for the international fleet and the assumption that all additional permits would be bought from the open market.

The **voluntary agreements** under evaluation would be between industry (airlines and aircraft manufacturers) and authorities (individual governments, groups of governments or international organisations). They would aim for a reduction in specific emissions (that is in grams of CO<sub>2</sub> per unit of traffic), with various options depending on the parties involved and the emissions reductions sought.

CAEP will also consider hybrid options drawing on elements from each of the three approaches under consideration (levies, trading and voluntary agreements).

Now that an initial set of market-based options have been specified, analysis will begin on the associated economic impacts and environmental benefits. Meanwhile, work will continue on refining these options and assessing administrative and legal issues. The assessment and option refinement process will continue over the next several months and beyond, leading to the preparation of an assessment report in time for the next full CAEP meeting in early 2001.

## Summary

ICAO's Committee on Aviation Environmental Protection (CAEP) is making progress in studying policy options to limit or reduce the greenhouse gas emissions from civil aviation, in preparation for the next ICAO Assembly session in 2001. We hope that SBSTA finds this report useful and confirm ICAO's willingness to explore ways to further strengthen the exchange of information between ICAO and SBSTA, as envisaged by the SBSTA session in June.

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