In a statement to the Second Session of the Conference of the Parties (COP/2, July 1996), the President of the Council of ICAO confirmed ICAO’s willingness to co-operate with the Conference of the Parties and emphasized the need for States to reach a common understanding on the respective roles of ICAO and the COP in addressing concerns regarding aviation’s contribution to climate change. The provision on aviation bunker fuels in Article 2.2 of the Kyoto Protocol therefore provides a welcome clarification.

A question has since arisen in the aviation community as to whether this provision is intended to cover emissions from international aviation only, or from both international and domestic aviation. ICAO’s mandate under the Convention on International Civil Aviation does not extend to domestic aviation. However, ICAO’s Standards, Recommended Practices and Procedures in many circumstances have a de facto application domestically.

The message from Kyoto has been well received by the Council of ICAO, by its Committee on Aviation Environmental Protection (CAEP), and most recently by the ICAO Assembly:

- On 11 December 1997, the President of the Council when informing the Council of the successful outcome of the Kyoto negotiations, noted that Article 2.2 of the Protocol gives impetus to ICAO’s work in addressing greenhouse gas emissions and stressed that it places a substantial responsibility upon ICAO.

- The fourth Meeting of the Committee on Aviation Environmental Protection (CAEP/4, 6-8 April 1998) revised its programme of future work on emissions to take the Kyoto outcome into account.

- The 32nd Session of the Assembly of ICAO (22 September - 2 October 1998) underlined the importance of the Kyoto Protocol and, in a resolution¹, requested the Council (through CAEP) 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 to the next ordinary session of the Assembly in September/October 2001.

The main thrust of ICAO’s work related to greenhouse gas emissions falls into three categories, namely technology and standards, operational measures and market-based options. Each is briefly summarized below, including the main developments since ICAO’s statement to COP/3 in Kyoto and the focus of future work.

**Technology and standards** — ICAO has been considering to what extent technology can help, through improved engine or airframe design. The present ICAO Standards for aircraft engine emissions (contained in Volume II of Annex 16 to the Convention on International Civil Aviation), which were originally designed to respond to concerns regarding air quality in the vicinity of airports, establish

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¹Appendix F to Resolution A32-8, Consolidated statement of continuing ICAO policies and practices related to environmental protection. Full text is accessible on the ICAO website (www.icao.int).
limits for emissions of oxides of nitrogen (NO\textsubscript{X}), carbon monoxide and unburned hydrocarbons during an aircraft’s landing and take-off cycle.

Since Kyoto, the principal development has been a consensus recommendation by CAEP to make the ICAO NO\textsubscript{X} Standard more stringent. This represents a significant breakthrough on an issue that had proved difficult in the past and was welcomed by the ICAO Assembly as a first step. In accordance with the usual practice for amendments to annexes to the Convention, States have recently been formally consulted on the proposed NO\textsubscript{X} Standard, prior to final consideration by the Council early in 1999.

In its future work, CAEP will be studying the development of a new emissions parameter which could cover climb and cruise emissions and include CO\textsubscript{2} as well as NO\textsubscript{X}.

**Operational measures** — ICAO has been considering to what extent operational measures might help to reduce the amount of emissions produced, for example through more direct routings, or to reduce their impact.

Since Kyoto, the Council of ICAO has agreed to draw the attention of States to the environmental benefits that would accrue from early implementation of satellite-based communications, navigation, surveillance and air traffic management (CNS/ATM) systems, in terms of reducing fuel consumption and avoiding unnecessary emissions.

In its future work, CAEP will be identifying a methodology to quantify the emissions savings associated with CNS/ATM and exploring other operational measures that might reduce fuel consumption.

**Market-based options** — ICAO is also considering the use of market-based options such as emission-related levies (charges or taxes) and emissions trading.

Since Kyoto, CAEP has presented a progress report on emission-related levies. Four options have been considered and a preliminary analysis shows that a route or fuel levy would be most effective in addressing global problems. However, many practical problems need to be addressed before any firm policy conclusions can be reached and there is a need to harmonize many different views that exist among States.

In its future work, CAEP will be identifying a range of market-based options, assessing their limitations, identifying their environmental effects, considering the application of revenues or credits that might be accrued, and considering the implementation mechanisms which might be employed. CAEP will also explore the scope for using emission trading concepts in an aviation context. The Assembly has requested that the development of further guidance to be given to States on emission-related levies be completed before the Assembly next meets in 2001. The Assembly also agreed on the need to inhibit unilateral action in the meantime.

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Finally, ICAO would like to bring to the attention of Subsidiary Body for Scientific and Technological Advice (SBSTA):—

In Kyoto, the Conference of the Parties, in its Decision 2/CP.3, urged SBSTA to further elaborate on the inclusion of international aviation emissions in the overall greenhouse gas inventories of Parties. The recent ICAO Assembly considered how ICAO might be able to
contribute. It agreed on the need for continued co-operation with the Climate Change Secretariat on this issue, and endorsed further immediate work by ICAO on the effects of the various options that have been suggested by SBSTA. Such activities would be in close liaison with SBSTA to make proposals for a suitable methodology for allocation.