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INTERNATIONAL CIVIL AVIATION ORGANIZATION

ASSEMBLY — 32ND SESSION

EXECUTIVE COMMITTEE

Agenda Item 21: Environmental protection

DEVELOPMENTS IN OTHER UNITED NATIONS ENVIRONMENTAL POLICY-MAKING BODIES WITH AN INTEREST IN CIVIL AVIATION

SUMMARY

In this paper, the Council reports on developments in three UN environmental policy-making bodies with an interest in civil aviation, with an emphasis on the Conference of the Parties to the UN Framework Convention on Climate Change. The Assembly is invited to take action as indicated in paragraph 6.

REFERENCES

A32-WP/57, *Civil Aviation and the Environment*
A32-WP/22, *Draft Consolidated Statement of Continuing ICAO Policies and Practices related to Environmental Protection*
Doc 9659, A31-EX

1. INTRODUCTION

1.1 At its 31st Session, the Assembly requested the Council to examine all aspects of ICAO's relationship with other UN policy-making bodies in the environmental field that had expressed an interest in civil aviation, notably with the UN Framework Convention on Climate Change (UNFCCC). A particular concern was the risk that States might find themselves entering into commitments in these other fora that may be inconsistent with commitments and policies agreed by States in ICAO (Doc 9659, A31-EX, paras 20:3, 20:6 and 20:13). Accordingly, in May 1996 the Council reviewed relations with several of these bodies. The Council gave guidance to the Secretariat in this regard and has subsequently monitored developments.

1.2 The UN policy-making bodies in the environmental field that have expressed an interest in civil aviation include those responsible for implementation of the following international agreements: the UN Framework Convention on Climate Change; the Montreal Protocol on Substances that Deplete the Ozone Layer; and the Convention on Long-range Transboundary Air Pollution. Each of these agreements has entered into force comparatively recently and seeks to address specific environmental problems caused by certain man-made emissions. Aviation is one of the many sources of such emissions. ICAO has observer

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status at meetings of the bodies responsible and actively participates when emissions from international civil aviation are discussed. Emphasis is placed on providing information about ICAO's mandate and activities in the emissions field, on developing co-operative relationships and on avoiding duplication of efforts. In this paper, the Council reports on developments of relevance to ICAO in each of these three environmental policy-making bodies.¹

2. UN FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

2.1 The Convention and its Kyoto Protocol

2.1.1 This Convention was opened for signature at the UN Conference on Environment and Development held in Rio de Janeiro in June 1992, came into force in 1994 and has been ratified by over 170 Parties. The Convention's principal policy-making body is the Conference of the Parties, which is supported by a number of subsidiary bodies and working groups and which often calls on the Intergovernmental Panel on Climate Change (IPCC)² for scientific and technical advice. The Convention is supported by the Climate Change Secretariat, which is based in Bonn.

2.1.2 The Convention has the objective of stabilizing greenhouse gas concentrations at a safe level within an acceptable time frame. It contains a series of commitments requiring all Parties to develop national inventories of greenhouse gas emissions; to formulate national programmes to mitigate climate change; and to promote technologies, practices and processes that control, reduce or prevent emissions in all relevant sectors, including transport. The Convention also requires that the developed countries and countries with economies in transition (the "Annex I countries"), individually or jointly, return greenhouse gas emissions to their 1990 levels by the end of the present decade, although this is expressed as a general aim rather than a binding commitment.

2.1.3 In March 1995, the First Session of the Conference of the Parties created "the Berlin Mandate", which called for the negotiation of strengthened commitments by the Annex I countries. This led to the adoption of the Kyoto Protocol to the Convention in December 1997 by the Third Session of the Conference of the Parties (COP/3). The Kyoto Protocol requires Annex I countries to reduce their collective emissions of greenhouse gases by approximately 5 per cent by the period 2008-2012, calculated as an average over these five years and with the actual reduction varying from country to country. For the three most important greenhouse gases (carbon dioxide, methane and nitrous oxide), the base-line continues to be the corresponding levels in 1990. If compared with expected emission levels for the year 2000, the total reductions would actually be about 10 per cent, because many Annex I countries have not succeeded in meeting the aim of returning their emissions to 1990 levels by the year 2000, and their emissions have in fact risen since 1990. Compared with the expected emission levels by 2010 without emissions-control measures, the Protocol target represents a 30 per cent cut. The agreed targets apply to national totals of greenhouse gases. Consequently, each Annex I country can determine how the various emission-producing sectors in its economy should be called upon to assist in achieving the country's national target.

¹In addition, ICAO has relations of a more general nature with other UN policy-making bodies in the environmental field, such as the United Nations Environment Programme (UNEP) and the Commission on Sustainable Development.

²The IPCC, which is not a policy-making body, has been established jointly by the World Meteorological Organisation and UNEP to make periodic assessments of the science, impacts and the socio-economic aspects of climate change and of adaptation and mitigation options to address it. The IPCC is also undertaking, at ICAO's request, a Special Report on Aviation and the Global Atmosphere (see paragraph 3.4 below).

2.1.4 The Kyoto Protocol also contains a number of innovative features such as a "clean development mechanism" which will enable Annex I countries to finance emissions-reduction projects in developing countries and receive credit for doing so; and an international "emissions-trading" regime which will be established to allow Annex I countries to buy and sell excess emissions credits amongst themselves. The operational details for these schemes have yet to be elaborated.

2.1.5 The Kyoto Protocol was opened for signature for one year from 16 March 1998. It will enter into force after it has been ratified by at least 55 countries representing 55 per cent of the total 1990 carbon dioxide emissions from Annex I countries.

2.1.6 While the Convention does not specifically refer to civil aviation, in principle it applies to all sources of emissions. Two aspects of particular relevance for aviation are the methodologies used for compiling national greenhouse gas inventories and a specific provision in the Kyoto Protocol referring to ICAO. Each is considered separately below.

2.2 Greenhouse gas inventories

2.2.1 In order to assist Parties in compiling their national inventories of greenhouse gas emissions, guidelines have been developed by the IPCC, with the help of the Secretariats of the Organisation for Economic Co-operation and Development and the International Energy Agency. Insofar as quantification of aviation emissions is concerned, experts from ICAO's Committee on Aviation Environmental Protection (CAEP) have contributed to the development of the methodology that is being used.

2.2.2 Once aviation emissions have been quantified, an important distinction is whether the emissions are domestic or international.³ For domestic flights, the emissions are considered to be part of the national inventory of the country concerned. However, for international flights, the difficult question arises as to how to allocate the emissions (referred to as "emissions from aviation bunker fuels" in UNFCCC terminology) to national inventories. To give an illustration of the problem, if an aircraft registered in Germany loads fuel in Montreal and flies to Frankfurt with passengers of many different nationalities, producing greenhouse gas emissions in the airspace of several countries en route, to which country's national inventory should these emissions be allocated?

2.2.3 The UNFCCC's Subsidiary Body for Scientific and Technological Advice (SBSTA) has been wrestling with this question ever since the Convention entered into force and has suggested a number of options, including:

- a) no allocation to national inventories;
- b) allocation according to the country where the fuel is sold;
- c) allocation according to the nationality of the airline or of aircraft registration; and
- d) allocation according to the country of departure or destination of the aircraft.

³There are issues in defining "domestic" and "international" (for example, in connection with a flight Ottawa-Montreal-Amsterdam) that do not appear to have been fully explored yet.

2.2.4 However, since these options can lead to very different allocations of the emissions from international aviation, there has so far been no agreement on which option to choose. In the meantime, the practice recommended to Parties is that they collect information on international aviation emissions on the basis of the fuel sold in their country and submit it to the UNFCCC Secretariat along with their national inventories, but that they keep the international aviation amounts separate and do not include them in calculating their national totals of greenhouse gas emissions. International marine emissions are dealt with in a similar manner.

2.2.5 In Kyoto, COP/3, in its Decision 2/CP.3, urged SBSTA to further elaborate on the inclusion of international aviation and marine emissions in the overall greenhouse gas inventories of Parties.

2.3 Control of aviation emissions

2.3.1 In April 1995, the First Session of the Conference of the Parties decided that the Conference's subsidiary bodies, taking fully into account ongoing work in governments and international organizations, including ICAO, should address the issue of the allocation and control of emissions from international bunker fuels. The fact that this decision referred not only to "allocation", but also to "control", was brought to the attention of the Council during its 145th Session. The Council's subsequent report to the 31st Session of the Assembly recognized the need for ICAO to contribute where appropriate to the UNFCCC process, while seeking to ensure that insofar as the control of emissions is concerned, the UNFCCC process does not duplicate the work of CAEP.

2.3.2 In its May 1996 review, the Council noted that concerns raised about aviation's contribution to climate change need to be properly addressed and, if necessary, appropriate action would need to be taken to mitigate the problem. It was therefore essential that States reach a common understanding about how these concerns would be addressed, taking into account the respective mandates of ICAO and the UNFCCC process, the skills and resources available in each case, and the need to avoid duplication of efforts. In these circumstances, the Council confirmed its willingness to co-operate with the UNFCCC process and requested the Secretary General to liaise with the Convention Secretariat with a view to reaching a common understanding on the respective roles of ICAO and the UNFCCC process in this regard. Shortly thereafter, in July 1996, at the Second Session of the Conference of the Parties (COP/2), the President of the Council made a statement outlining the Council's position.

2.3.3 At the Third Session of the Conference of the Parties in Kyoto, international aviation emissions were not included in the agreed targets, because of the difficulties that had arisen over the methodologies for allocating these emissions (see paragraph 2.2.4 above). The question of how international aviation emissions would be treated was considered in the context of discussions on policies and measures that might be pursued by the Annex I countries. Prior to COP/3, proposed policies and measures included some to address international aviation, working through ICAO, and some countries also wished to see specific details on certain aspects such as aviation fuel taxation. ICAO's views were made known in Kyoto and the Protocol finally adopted includes text on international aviation which refers to "working through ICAO" but which does not single out any specific measures. The relevant text (Article 2, paragraph 2 of the Kyoto Protocol) reads as follows:

"The Parties included in Annex I shall pursue limitation or reduction of emissions of greenhouse gases not controlled by the Montreal Protocol from aviation and marine bunker fuels, working through the International Civil Aviation Organization and the International Maritime Organization, respectively."

2.4 The way forward

2.4.1 The text in the Kyoto Protocol provides a welcome clarification of the respective roles of ICAO and the Conference of the Parties to the UNFCCC. It is now clear that ICAO is the forum where emissions from international aviation are to be addressed. While ICAO is already active in addressing greenhouse gases from aviation, this development faces ICAO with the challenge of finding appropriate means of limiting or reducing greenhouse gas emissions from international aviation or, failing that, of explaining to the COP why this cannot be achieved.

2.4.2 When the Council's Committee on Aviation Environmental Protection (CAEP) met in April 1998, it agreed on a revised work programme on emissions that takes the Kyoto outcome fully into account (see A32-WP/57). CAEP has set up groups on both the technical aspects and the operational aspects of emissions, and will study market-based options for emissions reduction. CAEP has also established a Focal Point on Liaison, provided by the Secretariat and assisted by working group rapporteurs, with the task of continuing to liaise with the UNFCCC process and of initiating reports on progress made to limit or reduce greenhouse gases from aviation. There will also be continuing liaison with SBSTA regarding the allocation question, which could now take on a greater significance for ICAO.

2.4.3 In the light of these developments, the Council is proposing in a separate working paper (A32-WP/22) that the present Resolution A31-11, *Consolidated statement of continuing ICAO policies and practices related to environmental protection*, be amended to reflect the Kyoto outcome and the need for CAEP to study policy options to limit or reduce the greenhouse gas emissions from aviation.

3. MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER

3.1 The Montreal Protocol was originally concluded in 1987 as a protocol to the Vienna Convention for the Protection of the Ozone Layer. It has set target dates for the phasing out of most ozone-depleting substances (such as chlorofluorocarbons and halons). Its principal policy-making body is the annual Meeting of the Parties and it is supported by the Nairobi-based Ozone Secretariat, which is provided by UNEP.

3.2 Article 6 of the Montreal Protocol requires the Parties to assess control measures concerning substances that deplete the ozone layer, on the basis of available scientific, environmental, technical and economic information. Assessments were undertaken in both 1991 and 1994 and the latter included a chapter devoted to aircraft emissions. This primarily focused on what impact a fleet of second generation supersonic aircraft might have, but also considered the impact of the current subsonic fleet. In December 1995, the Parties to the Montreal Protocol requested their Scientific Assessment Panel "to work as appropriate" with ICAO on the subject of aircraft emissions.

3.3 When the Council reviewed the situation in May 1996, it noted that while the Montreal Protocol process has so far limited itself to the scientific assessment of aviation's impact, some form of co-operation with the Montreal Protocol process is likely to be necessary to help CAEP develop appropriate emissions standards for the next generation of supersonic transport aircraft. The Council therefore requested the Secretary General to continue to liaise with the Ozone Secretariat with a view to expanding co-operation to address concerns regarding international civil aviation's contribution to stratospheric ozone depletion.

3.4 In late 1996, the Scientific Assessment Panel agreed to collaborate with the IPCC in the preparation of the Special Report on Aviation and the Global Atmosphere that is being prepared at ICAO's request.

3.5 More recently, in September 1997, when the tenth anniversary Meeting of the Parties to the Montreal Protocol took place at ICAO Headquarters, the President of the Council made a statement in which he emphasized the need for ICAO and the Montreal Protocol process to work together on the environmental acceptability of a possible new generation of supersonic aircraft.

4. CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION (LRTAP)

4.1 The LRTAP Convention (1979) aims at preventing acid rain and photochemical smog. It is open to accession by member States of the UN Economic Commission for Europe (ECE) as well as States having consultative status with the ECE, and most European States, Canada and the United States are parties to the Convention. A number of optional protocols are in force. One of these protocols (Sofia, 1988) seeks to control emissions of nitrogen oxides (NO_x), while another protocol addresses volatile organic compounds (VOCs) such as unburned hydrocarbons. The Convention's principal policy-making body is its Executive Body, which is supported by the Geneva-based ECE Secretariat.

4.2 Recent initiatives by the Executive Body have focussed on updating the protocols to the Convention, one aspect being to include more information on specific abatement measures for mobile sources such as aircraft. ICAO has been consulted during this work and, under instructions from the Council, the Secretariat co-operates with the Convention's Executive Body, while seeking to ensure that any action taken is consistent with ICAO's work in this field and that any duplication of activities is avoided.

5. CONCLUSIONS

5.1 While ICAO has been involved in the control of aircraft engine emissions for many years (the Standards in Annex 16, Volume II were first adopted in 1981), there are now a number of other UN policy-making bodies with a legitimate interest in the emissions generated by civil aviation. Under the Council's guidance, ICAO has developed co-operative relationships with those bodies which seem most relevant. The most significant is the Conference of the Parties to the United Nations Framework Convention on Climate Change, which in December 1997 included a provision in the Kyoto Protocol to the Convention that underlines ICAO's role with regard to control of greenhouse gas emissions. While States seem to recognize that ICAO is the most appropriate forum to address emissions from international civil aviation, there is a need for ICAO to respond to the concerns expressed in these other UN bodies, otherwise States may look elsewhere for the necessary solutions, with the risk that such solutions could adversely affect civil aviation. The work programme of the Council's CAEP has therefore been revised to take into account relevant developments in other UN bodies such as the Kyoto Protocol.

6. ACTION BY THE ASSEMBLY

6.1 The Assembly is invited to note this report and provide the Council with any additional guidance it considers necessary.