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INTERNATIONAL CIVIL AVIATION ORGANIZATION

ASSEMBLY — 35TH SESSION

EXECUTIVE COMMITTEE

**DRAFT TEXT FOR THE REPORT
ON
AGENDA ITEM 15**

The attached material on Agenda Item 15 is submitted for consideration by the Executive Committee.

Agenda Item 15: Environmental protection

15:1 At its (to be completed) meetings, the Executive Committee considered the subject of environmental protection on the basis of a progress report by the Council on work on aircraft noise and engine emissions (WP/56) and two other Council reports: one on the application of market-based measures to limit or reduce greenhouse gas emissions from civil aviation (WP/76) and one updating the consolidated resolution on environmental protection, Resolution A33-7 (WP/77). In addition, there were 21 papers presented by States and Observers: WPs 72, 85, 95, 99, 101, 115, 123, 132, 137, 138, 139, 146, 153, 172, 174, 177, 182, 222, 223, 235 and 247 (to be completed).

15:2 The Committee noted that the Council's Committee on Aviation Environmental Protection (CAEP) and its various expert groups continued to undertake most of the Organization's environmental work and that CAEP had met in February 2004 (CAEP/6). Considerable progress had been achieved in the noise and emissions area, further details of which are given below.

Aircraft noise: general

15:3 The Council reported (WP/56) that in May 2004 it had considered amendments to Annex 16 — *Environmental Protection*, Volume I — *Aircraft Noise*, Annex 6 — *Operation of Aircraft*, Part III and Annex 14 — *Aerodromes*, Volume I which arose from the recommendations of CAEP/6. The most significant aspects of the proposed amendments are new provisions relating to documents attesting noise certification, provisions for re-certification, and references to the balanced approach to noise management. These and other Annex amendments proposed by CAEP/6 would be considered by Council for adoption, in the light of comments from States and international organizations. As requested by the 33rd Session of the Assembly (Resolution A33-7, Appendix C), ICAO guidance material had been developed to assist States in implementing the balanced approach (*Guidance on the Balanced Approach to Aircraft Noise Management*, Doc 9829) and the Council had approved further work on the guidance as part of CAEP's activities. A new edition of the *Airport Planning Manual*, Part 2 — *Land Use and Environmental Control* (Doc 9184) had been published and a new edition of the *Environmental Technical Manual on the use of Procedures in the Noise Certification of Aircraft* (Doc 9501) was expected shortly. Regarding the evolution of noise, there had been a significant improvement in the situation in terms of the population affected by noise, compared to the forecast presented at CAEP/5 (January 2001), largely due to the accelerated retirement of older aircraft and the reduction in forecast operations for large transport jets. In addition, the settlement under Article 84 of the dispute between the United States and fifteen European States, which concluded satisfactorily on 5 December 2003, had reinforced ICAO's role as a forum for mediation of aviation issues.

15:4 In WP/101, Australia suggested that the guidance material on the balanced approach (Doc 9829) could be enhanced if strategies were incorporated to address "people issues", and called for the Council to incorporate community engagement techniques into the balanced approach as part of CAEP's further work on Doc 9829 to ensure that guidance remains current and responsive to the needs of States.

15:5 In WP/247, China presented information on measures taken by and experiences of the Chinese government in dealing with aircraft noise, and proposed that consideration be given to combining the noise aspects of Resolution A33-7 with Annex 16 to produce an independent and comprehensive Annex to the Convention, which would serve as a uniform legal basis for Contracting States to follow. It also called

for further strengthening of research on aircraft noise control and a pro-active approach in addressing the airport noise problem, including developing standards and recommended practices.

15:6 India, in WP/172, expressed concerns about the impacts of night curfews that exist at airports in some parts of the world, including the need for some airports in other countries to accommodate a large volume of international operations at inconvenient hours, as well as potentially adverse effects for market access and use of traffic rights and for the growth of air transport. The continuing need for such curfews was questioned, in view of the technological progress that had been made in making aircraft quieter. The Assembly was requested to take a position on night curfews to alleviate the problems identified.

15:7 In WP/153, ACI expressed support for ICAO's leadership role on environmental issues. It welcomed the guidance material on the balanced approach and expressed the view that there were a number of issues that needed to be further developed in the guidance to make it a more useful document for airports (including more emphasis on noise reduction at source; a realistic role for land use planning; the refinement of the noise index and contour descriptions; and more flexibility in the cost benefit analysis). ACI also called for more stringent aircraft noise standards to be incorporated in Annex 16, in order to reduce noise and facilitate airport capacity development to meet future traffic growth.

15:8 In WP/138, ECAC States drew attention to the noise situation around airports situated in densely populated areas, where the legitimate complaints from populations could have serious consequences on the air transport system by limiting the development of certain airports and therefore limiting the capacity of the entire system. The effect of a ruling in 2003 by the European Court of Human Rights is that States subject to its jurisdiction are legally obliged to strike and maintain a fair balance between the rights and interests of the aviation sector and the rights and interests of those adversely affected by the noise impact of its activities. Against this background, ECAC States supported the adoption of environmental goals as proposed by the Council, welcomed the guidance material on the balanced approach and requested the Council to promote its use. They also requested the Council to develop further measures to reduce aircraft noise at source and, in the light of the progress made in limiting or reducing the number of people affected by noise around airports, to consider whether work on new noise stringency standards should be undertaken.

15:9 In WP/72, IATA welcomed the ICAO guidance material on the balanced approach. It emphasized the importance of promoting and harmonizing noise management at and around airports, and called for States to adopt and implement this new guidance material.

15:10 Following consideration of these papers and further discussion on aircraft noise in general, the Committee expressed its appreciation for the substantial progress made since the 33rd Session of the Assembly, notably the development and publication of the *Guidance on the Balanced Approach to Aircraft Noise Management* (Doc 9829). Noting that the guidance was a "living document" and that CAEP already had plans to further develop certain aspects of it in order to remain responsive to States' needs, the Committee requested that guidance on community engagement techniques be included and other suggested additions be considered, resources permitting, and that the guidance be promoted through workshops. The Committee urged States to implement the Balanced Approach, making use of the new guidance.

15:11 The Committee also welcomed the study of the evolution of aircraft noise, and agreed on the need to continue to provide such assessments, which are useful for noise policy-making by ICAO and States.

15:12 The Committee noted that many of the proposals that had been presented were already provided for in the CAEP work programme that had recently been approved by the Council. For example, regarding the call for more stringent noise Standards in Annex 16, CAEP already had a process to consider the need for more stringent Standards, based on a comprehensive technological review and the principles contained in its terms of reference (technical feasibility, economic reasonableness and environmental benefit, and the potential interdependence of measures to control noise and to control engine emissions). In addition, the Committee encouraged States with specific proposals that were not already members of CAEP, such as China, to consider participating in CAEP so that their proposals could be reviewed at expert level.

15:13 Regarding the difficulties faced by some States as a result of noise-related curfews in other States, it was recognised that this was a delicate matter. It was noted that ICAO guidance calls for the consideration of curfews and other operating restrictions within the context of the balanced approach. The Committee concluded that this matter should be further studied by the Council, resources permitting, particularly with a view to determining the scope and scale of the problem.

15:14 In conclusion, the Committee expressed its support for the work currently being undertaken by CAEP in the noise field and the contributions of the aviation community to CAEP's work, and recommended that the Council:

- a) assign the priority and resources required to address the aircraft noise-related tasks on the CAEP work programme, including the proposals for additional work on further developing the Balanced Approach guidance and to study the issue of noise curfews; and
- b) urge States to commit the necessary efforts and resources to ensure that the CAEP work programme on aircraft noise is fully implemented.

15:15 The Committee also considered aircraft noise in connection with the updating of Resolution A33-7 (see paras. 15:55 to ... below)

Aircraft engine emissions: general

15:16 The Council reported (WP/56) on its work on aircraft engine emissions, including the progress on technical and operational measures to reduce emissions and cooperation with other UN bodies in this area. CAEP/6 had recommended more stringent Standards for oxides of nitrogen (NO_x) for inclusion in Annex 16, Volume II - *Aircraft Engine Emissions*, for consideration by the Council. The new NO_x Standard, which would be 12 per cent below the current permitted levels, was approved unanimously by CAEP/6 as part of a two-step approach that includes consideration of more stringent Standards for aircraft engine emissions, especially NO_x, in light of a technology review process and the CAEP principles of technical feasibility, economic reasonableness, environmental benefit and interdependencies, aiming to complete the process for review in 2010. CAEP continued to work on assessing the available scientific information on the impact of aircraft engine emissions, both globally and at ground level, and on emissions reduction technology. Efforts continued on the development of mid and long-term goals for aircraft emissions reduction and on the need for further developing tools to determine interdependency between emissions and noise. Guidance material had been published on operational measures (*Operational Opportunities to Minimize Fuel Use and Reduce Emissions*, Circ 303) so as to enable airports, airlines and other stakeholders

that have successfully reduced emissions to share their techniques with others, and two workshops had been held to promote these practices, as requested by the Assembly (Resolution A33-7, Appendix H). Further development of models would be necessary for the assessment of CNS/ATM environmental benefits. CAEP was currently analyzing these models and the environmental-related information contained in the *Global Air Navigation Plan for CNS/ATM Systems* (Doc 9750) would be updated accordingly.

15:17 The Council report also drew attention to the growing presence of UN bodies in the CAEP process and the increasing cooperation with the UN Framework Convention on Climate Change (UNFCCC), which underscored the leadership role and responsibilities of ICAO in the field of aviation and the protection of the environment. Regular reports had been made to the UNFCCC process regarding the work in progress within ICAO on limiting or reducing greenhouse gases from aviation. At the request of the UNFCCC's Subsidiary Body for Scientific and Technological Advice (SBSTA), ICAO was cooperating in an exercise aimed at improving both the quality of data on aviation missions reported by Parties to the UNFCCC and the methodology on which this reporting is based. In this connection, ICAO had hosted two meetings of experts on emissions data and modelling, in conjunction with the UNFCCC Secretariat, and was exploring aviation emissions models that could be used to assist SBSTA.

15:18 Through WP/99, Australia provided information on research being undertaken to explore the potential for air traffic management (ATM) efficiencies that would ultimately lead to fuel and emissions savings. Results so far were in line with earlier estimates of 6 to 16 per cent savings in carbon dioxide that were made by the Intergovernmental Panel on Climate Change (IPCC) in its *Special Report on Aviation and the Global Atmosphere* (1999). The Assembly was invited to urge other States to implement similar operational measures, as outlined in the new ICAO guidance material (Circ 303), to reduce fuel consumption and hence carbon dioxide and other gaseous emissions.

15:19 ECAC States, in a paper elaborated and coordinated with EUROCONTROL (WP/146), provided information demonstrating that ATM can deliver considerable environmental performance improvements, while ensuring that safety is not compromised. This included the introduction of Reduced Vertical Separation Minima (RVSM) in 41 States (ECAC plus associated transition area), which had reduced fuel burn and emissions by up to 5 per cent in the upper atmosphere, and a number of current pan-European environmental activities. ECAC States called for the Assembly to encourage the relevant ICAO bodies to include the contribution of ATM in their work and also to encourage States to make an environmental impact analysis an integral part of their RVSM implementation programmes.

15:20 Referring to the above-mentioned IPCC report, IATA (WP/174) stressed the environmental benefits from ATM planning. It requested that ICAO - through CAEP and Regional Planning Groups, and States - through their ATS providers, assess the environmental impact of specific implementation plans and take full account of environmental benefits in CNS/ATM systems implementation.

15:21 In WP/235, the Islamic Republic of Iran proposed the development of guidance material to assist States in the design and manufacture of aircraft engines with the aim of limiting both aircraft noise and the environmental impact of engine emissions. The paper also called for a study of new types of aviation fuel that would contain less pollutants.

15:22 In WP/123, the Russian Federation expressed the view that there was no reliable evidence of the impact of greenhouse gases on the world's climate. It stressed the need for a scientifically-

substantiated approach to the introduction of measures to limit or reduce aircraft engine emissions and recommended that ICAO in its future work should concentrate attention on reducing NO_x, in view of the threat it poses to human health and the environment, and that a comparative analysis of the impact of NO_x and CO₂ emissions on the environment be undertaken.

15:23 In WP/222, Tunisia presented the position of ACAC Members in support of the recommendation from CAEP/6 for a new, more stringent Standard for NO_x emissions which will apply as of 2008. They called on the Assembly to reflect in the updated consolidated resolution that these are production Standards and would not be used to impose operational restrictions or charges in the future on existing aircraft engines.

15:24 In WP/153, ACI emphasized that emissions, like noise, are increasingly becoming a factor that limits airport capacity expansion and the ability to meet future traffic growth. Local air quality was an increasingly important environmental issue for airports. While some market-based measures such as emissions trading offer one solution to the issue, ACI believed that reduction at source remained the only long-term credible solution. It considered that the CAEP/6 recommendation to reduce the permitted NO_x limits in Annex 16 by 12 per cent was insufficient and invited the Assembly to support a significant future increase in stringency of emissions standards in Annex 16 at an earlier date than the planned 2010. ACI also drew attention to the issue of “hazardous air pollutants” generated by aircraft operations and encouraged ICAO to take a leadership role in developing credible information on the subject.

15:25 In WP/137, ECAC States drew attention to the serious negative effects on the aviation sector worldwide if the need for a high standard of air quality at and around airports is not effectively addressed, noting that the Air Quality Guidelines of the World Health Organization (WHO) clearly describe some of the adverse effects of these pollutants on human health. While recognizing the progress made by ICAO on emissions standards and operational measures, they considered that new actions were needed to address this issue and avoid increased opposition to traffic growth. They recommended the Assembly to reflect in its resolution on environmental protection that new actions are needed to protect air quality as the contributions from aircraft engines to nitrogen dioxide and to ozone concentrations are increasing again, and to welcome the proposal by CAEP for a new standard for NO_x emissions. They also called for the Assembly to request the Council to ensure that CAEP would review the NO_x Standard by 2010; to ensure that CAEP work related to the extension of the existing certification regime for NO_x emissions to encompass all phases of flight taking into account the performance of the whole aircraft would be completed by 2007; and to study the appropriate characterization of the particulate matter emitted by aircraft engines, as proposed by CAEP, with a view to changing the existing ICAO standard for smoke emissions in light of the latest WHO recommendations.

15:26 In WP/139, ECAC States focussed on the growing concerns about aviation’s contribution to climate change and to the consequent need to limit or reduce the global environmental impact of engine emissions. They requested the Council to continue to support activities aimed at further improvements to existing technology and operations and, if possible, identify new technology and operations, that will reduce emissions and facilitate the sustainable growth in aviation.

15:27 In WP/85, IATA expressed the air transport industry’s commitment to continue its active participation in aviation’s ongoing efforts to limit or reduce greenhouse gas emissions on the understanding that these efforts should be guided by the overriding necessity of a sustainable global society to protect air

transport's ability to grow and thereby meet demand to minimize costs and to minimize competitive distortions. Expressing support for ICAO's leadership on climate change issues, IATA urged ICAO to further develop global climate change policies according to aviation's specific requirements, in order to retain the most flexible and cost-effective solutions, and to ensure that ICAO strongly represents aviation's interests and promotes aviation's accomplishments in UN debates on climate change and other global issues that can affect aviation. It called for ICAO to support the continued development of aviation as a critical element in a sustainable global society, and called on States to promote or implement infrastructure improvements, in particular through suitable CNS/ATM solutions. IATA also made some specific proposals regarding the draft consolidated statement of continuing ICAO policies and practices related to environmental protection.

15:28 In addition to the above-mentioned papers, the UNFCCC Secretariat made a statement to the meeting, in which he drew attention to developments which had taken place in the last few days that increased the likelihood of the Kyoto Protocol coming into force in the near future. Article 2.2 of the Kyoto Protocol stated that Parties included in Annex I to the UNFCCC shall pursue limitation or reduction of greenhouse gases from aviation, working through ICAO. He acknowledged the excellent work of ICAO on emissions from international aviation, noting that aviation is a significant source of emissions. It was important to base policies and practices to control emissions from aviation on a good factual basis. The UNFCCC and ICAO had therefore been cooperating on methodological work related to greenhouse gases inventories and the Convention's SBSTA had invited ICAO to explore opportunities for examining and improving the quality of data reporting and comparability. ICAO had provided regular updates to SBSTA on its activities, and had organized a side event from ICAO on emissions from aviation at SBSTA/20 in June, where ICAO reported the preliminary results of an aviation data comparison between the UNFCCC inventories and the results from three models being used by CAEP. He also noted that the IPCC's work on revising their emissions inventory guidelines was benefiting from ICAO's inputs. All these developments illustrated the constructive contribution ICAO was making toward the improvement of inventories of greenhouse gases emissions from aviation.

15:29 In the ensuing discussions, the Committee underlined the importance of ICAO's leadership role on emissions-related issues, and welcomed the excellent cooperation between ICAO and other UN bodies, notably the UNFCCC process. In this connection, it was noted that it was important not only to report on ICAO's environment-related activities, but also to ensure that aviation's role in economic and social development worldwide is not overlooked.

15:30 The Committee recognized the growing concerns regarding aircraft engine emissions both at the local and global level. It welcomed CAEP's work on emissions and the progress achieved by CAEP/6, notably the recommendation for a new NO_x standard. As in the case of noise, it was noted that many of the matters raised in the discussions were already covered in the new work programme of CAEP.

15:31 Regarding the scientific aspects of aviation's contribution to climate change, the Committee was reminded that the IPCC *Special Report on Aviation and the Global Atmosphere* (1999) had recognised that the effects of some types of aircraft emissions were well understood and the effects of others are not, and had identified a number of key areas of scientific uncertainty (see Assembly Resolution A33-7, Appendix H). The Committee noted that CAEP had a process for considering the new scientific findings since the publication of the IPCC report through its focal point on research, and emphasised the importance of ensuring that the work of ICAO and States in this field has a reliable scientific basis.

15:32 With regard to operational measures to limit or reduce emissions, the Committee expressed its appreciation for the development of the guidance material contained in *Operational Opportunities to Minimize Fuel Use and Reduce Emissions* (Circ 303) and welcomed the promotion of this material through workshops. The Committee recognized that ATM has a significant role to play in alleviating air transport's environmental impact and encouraged States that had not already done so to explore the possibilities offered by ATM to reduce fuel use and emissions. The Committee also called for ICAO, through CAEP in cooperation with other relevant bodies such as the Planning and Implementation Regional Groups (PIRGs), to develop appropriate tools to assess emissions reductions associated with implementation of ATM measures. States were encouraged to provide ATM experts to support CAEP in these activities.

15:33 In conclusion, the Committee expressed its support for the work currently being undertaken by CAEP in the emissions field and recommended that the Council:

- a) assign the priority and resources required to address the aircraft emissions-related tasks on the CAEP work programme;
- b) urge States to commit the necessary efforts and resources to ensure that the CAEP work programme on aircraft engine emissions is fully implemented; and
- c) continue to cooperate closely with other UN bodies involved in emissions, notably the UNFCCC process and the IPCC, and to be responsive to their requests for information.

15:34 The Committee also considered aircraft engine emissions in connection with the updating of Resolution A33-7 (see paras 15:55 to ... below)

Aircraft engine emissions: market-based measures

15:35 In WP/76, the Council reported on its work in response to the Assembly's request "to continue to develop guidance for States on the application of market-based measures aimed at reducing or limiting the environmental impact of aircraft engine emissions, particularly with respect to mitigating the impact of aviation on climate change", and "to evaluate the costs and benefits of the various measures with the goal of addressing aircraft engine emissions in the most cost-effective manner" (Assembly Resolution A33-7, Appendix I).

15:36 This work had focussed on voluntary measures (under which industry and governments would agree to a target and/or a set of actions to limit or reduce emissions), emissions trading (a system whereby the total amount of emissions would be capped and allowances in the form of permits to emit could be bought and sold to meet emission reduction objectives), and emission-related levies. While aircraft engine emissions have a potential impact both at a local level and globally, this work had focussed on the global impact. It had been assumed that the market-based measures would target CO₂ emissions, while leaving open the possibility of later extending this work to other greenhouse gas emissions from aviation.

15:37 With respect to voluntary measures, a Template Agreement - Memorandum of Understanding that States and other parties concerned could use, along with associated guidance on voluntary measures to limit or reduce CO₂ emissions, had been developed and approved by the Council. As part of its future work, CAEP would monitor implementation.

15:38 Regarding emissions trading, in 2001 the Assembly had endorsed the development of an open emissions trading system for international aviation and requested the Council, as a matter of priority, to develop guidelines. CAEP had enlisted the assistance of consultants in exploring a number of different emissions trading options and, in the light of the consultants' work, CAEP/6 had recommended – and the Council had since approved – that further work should focus on two approaches. Under one approach, ICAO would support the development of a voluntary emissions trading system that interested States and international organizations might propose; under the other approach, ICAO would provide guidance for use by States, as appropriate, to incorporate emissions from international aviation into States' emissions trading schemes consistent with the UNFCCC process.

15:39 With respect to emission-related charges, in 2001 the Assembly had recognized the continuing validity of a policy developed by the Council in 1996 (State letter AN 1/17.9-97/62 dated 11 June 1997), one of the key points of which is that any such levies be in the form of charges rather than taxes. In response to the Assembly's request, CAEP had attempted to develop further guidance to address issues that could arise if some States were to implement a CO₂ emissions charge, but had been unable to arrive at a consensus because of a number of outstanding issues, including cost-effectiveness and various legal, policy and implementation aspects (listed in more detail in WP/76). The Council recognized that resolving these issues was likely to be a difficult task and had also noted that some possible new approaches had been identified by CAEP, although these ideas were not mature at present and would need further elaboration. Further studies of outstanding issues were needed, and their exact nature would be identified after the Assembly. In these circumstances, the Council was proposing to the Assembly a revised version of Assembly Resolution A33-7, Appendix I – *Market-based measures regarding aircraft engine emissions*, in which States would be discouraged from imposing such charges. However, a group of European States had expressed a minority view, insisting that scope for action consistent with the current ICAO policy be retained.

15:40 In WP/123, the Russian Federation stressed the need for a scientifically substantiated approach to the introduction of market-based measures. Such measures should be further studied before being introduced and, in the meantime, unilateral action should be avoided.

15:41 In WP/177, Canada, Mexico and the United States invited the Assembly not to support the implementation of CO₂ charges at this time as ICAO guidance was not sufficient and the approach had not been shown to be cost-effective. They were of the opinion that further studies needed to be undertaken to resolve the outstanding legal, policy and economic issues with respect to CO₂ charges. They expressed their support for the continued development of guidance for voluntary measures and open emissions trading to mitigate aviation's climate change impact. Finally, they encouraged States who wished to pursue CO₂ charges to enter into a voluntary agreement with like-minded States on a reciprocal basis.

15:42 In WP/115, ACAC Members recalled that in the context of the UNFCCC and the Kyoto Protocol, developing countries were excluded from obligations to reduce or limit greenhouse gas emissions. As such, market-based measures, as envisaged by ICAO, should not be imposed on developing countries, as this would further deteriorate their economic situation.

15:43 In WP/132, member States of the African Civil Aviation Commission (AFCAC), recalling the outcome of CAEP's work, noted that there was no consensus within ICAO on the use of the framework for guidance on the application of emissions-related charges. They expressed concerns regarding the need

to protect the economic interests of developing States and to ensure that actions taken are consistent with their commitments under the UNFCCC process.

15:44 ACI, in WP/153, expressed its support for the continuing work of ICAO on market-based measures, including emissions trading, emissions charges (with the exception of levies such as taxes) and voluntary agreements, noting that these measures should offer measurable and accepted goals of absolute emissions reduction.

15:45 In WP/139, ECAC States emphasized their obligations under the UNFCCC and under the Kyoto Protocol. They called on ICAO to promote policies that would assist Contracting States parties to the UNFCCC to take precautionary measures to combat climate change, and reiterated European opposition to any prohibition on greenhouse gas emission-related charges. In a related paper (WP/223 and Corr. No. 1), ECAC States proposed a series of amendments to the draft Appendix I presented by the Council.

15:46 IATA, in WP/85, urged States to refrain from any local, national or regional measures, such as taxes or charges, that could jeopardize operational and voluntary measures. In WP/95, IATA expressed its support for the Council's proposed revision of Appendix I to Resolution A33-7, and stressed that the interests of airspace users should be taken into account when carrying out further studies on emissions-related charges.

15:47 In WP/182, LACAC States voiced their opposition to any form of emissions charges that could be imposed on developing countries, be it at the domestic, regional or global level.

15:48 The Committee noted that discussions on the use of market-based measures were taking place in a context of consensus as to the general objectives that were pursued by States regarding the need to address aviation's impact on climate change, and recognized the leadership role that ICAO had to play in this regard. However, diverging views existed on the pace and methods which should be used to reach these objectives, as reflected below. There was also general agreement that the issue of emissions from aircraft engines should be dealt with in a comprehensive manner, combining technical, operational and economic measures, and that trade-offs between noise and emissions, and between CO₂ and NO_x should be taken into account.

15:49 The Committee welcomed the progress made since the 33rd Session concerning voluntary measures and emissions trading. It also took note of the fact that some voluntary measures were being implemented or would be in the near future. Regarding the future development of an international aviation open emissions trading system, the Committee endorsed the plans of the Council for conducting further studies and developing appropriate guidance, on the basis of two identified approaches.

15:50 Turning to the more difficult issue of emission-related charges, the Committee took note of the work undertaken since the 33rd Session, and of the diverging opinions. A majority of States supported the draft revision of Appendix I to Assembly Resolution A33-7 presented by the Council. In their view, the application of charges would not be the most cost-effective option and there remained fundamental questions about the scientific basis for such a charge and about its legitimacy if applied at a global level. In view of all the outstanding issues that were not resolved, as reflected in the Council report, there was an evident need for further studies, some of them possibly involving the ICAO Legal Committee. These States felt that no unilateral measures should be imposed but that solutions should rather be pursued at a multilateral level.

Finally, they stressed that the focus should primarily be put on technical and operational measures, rather than on market-based measures. In view of their economic difficulties, developing States had serious concerns that such measures could possibly be applied to them while they had no obligations under the current international climate change instruments; they consequently expressed a strong opposition to emission-related levies and requested to be exempted from them.

15:51 The Committee was also reminded that the issue of allocation of greenhouse gas emissions from international aviation to national greenhouse gas inventories had not yet been resolved in the UNFCCC process. Since allocation could be done in different ways, it might be premature for States to introduce any CO₂ charges which could prove to be inconsistent with their legal obligations under the UNFCCC process.

15:52 An opposing view, which was held by European States and some others, stressed the need for flexibility. They needed to keep all options for market-based measures open, since one of the options selected, emissions trading for example, may not be sufficient in itself to deal completely with the problem. They considered that removing the possibility of introducing charges would be a retrograde step for ICAO and that it could undermine ICAO's credibility in the emissions field. They felt that scientific uncertainty should not be used as a means of avoiding action, referring to the precautionary principle recommended in the Rio Declaration (1992) and the UNFCCC (Article 3.3) and to the polluter-pays principle. They also put forward the need for those States that had accepted commitments under the UNFCCC process, and more especially under the Kyoto Protocol expected to enter into force shortly, to take action that was consistent with this framework, while taking into account the concerns of developing States, in a context of common but differentiated responsibilities. Finally, they clarified that the issue of emission-related charges should not be confused; there were two types of emissions-related charge. One type addressed local air quality and was already in effect in a few European States. The other type was global in nature and aimed at greenhouse gases; although studies were being undertaken on them in Europe, at this stage there were no imminent plans to introduce them.

15:53 The Committee recognized that States have commitments under the UNFCCC and that ICAO has special responsibilities in this process, particularly now that the Kyoto Protocol seemed likely to enter into force. It agreed that future work on CO₂ emissions charges should address and attempt to resolve the outstanding issues that had been identified in the Council's report and during the Committee's discussions, and noted that the Council would be considering how such studies would be conducted in the light of the Assembly's consideration of this matter. The views expressed would help the Council in its future deliberations.

(to be completed)