



## CONFERENCE ON THE ECONOMICS OF AIRPORTS AND AIR NAVIGATION SERVICES

Montréal, 15 to 20 September 2008

**Agenda Item 1: Issues involving interaction between States, providers and users**

**Agenda Item 1.2: Economic performance and minimum reporting requirements**

### CHARGING AND ENVIRONMENT

(Presented by France, on behalf of the European Community and its Member States<sup>1</sup> and by the other State members of the European Civil Aviation Conference (ECAC))<sup>2</sup>.

#### SUMMARY

This paper presents a short review of ways through which environmental impact could be taken into account in airports and air navigation services performance.

The paper suggests that further work be undertaken by ICAO in this respect, in particular with regard to air navigation services charging.

Action by the Conference is in paragraph 4.

## 1. INTRODUCTION

1.1 Tackling the impacts of aviation on environment has long since become one of the major challenges facing the industry, governments and international organisations worldwide, and ICAO. The ICAO strategy for 2005-2010 ranks in third position: “*Environmental Protection - Minimize the adverse effect of global civil aviation on the environment* ». In 2001, the ICAO Assembly endorsed the concept of a "balanced approach" to **aircraft noise management** (Appendix C of Assembly Resolution A35-5). The Assembly in 2007 reaffirmed the "balanced approach" principle and called upon States to recognize ICAO's role in dealing with the problems of aircraft noise (Appendix C of Assembly Resolution A36-22). The purpose of this paper is to review a number of ways to address environmental challenges in the charging principles and related mechanisms, especially for the provision of air navigation services.

<sup>1</sup> Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and United Kingdom. All these 27 States are also Members of the ECAC.

<sup>2</sup> Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Croatia, Georgia, Iceland, Moldova, Monaco, Montenegro, Norway, San Marino, Serbia, Switzerland, The former Yugoslav Republic of Macedonia, Turkey and Ukraine.

## 2. DISCUSSION

2.1 ICAO has already devoted a considerable amount of work to studying the impact of aviation on the environment and defining directions to mitigate them. ICAO's Policies on Charges for Airports and Air Navigation Services themselves now reflect to a relatively large extent the role which such charges can play, both for mitigating the effects of noise or gas emissions around airports, and as incentives to change the behaviour of users. Such mechanisms can for example encourage users to use less noisy aircraft, including in dedicate times like night-time.

2.2 Doc 9082 contains well-developed principles on noise-related charges (paragraph 30), and Amendment 1 to Doc 9082/7 from August 2007 inserted principles on emissions-related aircraft charges to address local air quality problems (LAQ) at or around airports (paragraph 30A).

2.3 Practical advice on determining the cost basis for noise-related charges and their collection is provided in the *ICAO Airport Economics Manual* (Doc 9562). Guidance on LAQ emissions-related charges is provided in *Guidance on Aircraft Emissions Charges Related to Local Air Quality* (Doc 9884). And information on noise-related charges actually levied is provided in the *ICAO Manual of Airport and Air Navigation Facility Tariffs* (Doc 7100).

2.4 In addition, paragraph 16 of Doc 9082 recommends that States encourage their airports and air navigation service providers to develop and collect data on performance in the provision of their services (such as aspects related to safety, delay, predictability, flexibility, efficiency, availability, access, environment and cost of service). Such parameters should be used to evaluate and improve the quality of services provided. This issue is addressed in WP/5 as presented by the ICAO Secretariat and forms the subject of a separate paper presented by European Commission and Eurocontrol on the "European efforts to implement a Performance-driven system", supporting the Secretariat's proposals.

2.5 Within the European Community, the envisaged Directive on airport charges confirms the possibility to set up modulations of airport charges for issues of public and general interest, including environmental issues.

2.6 However, although environment appears in the list of performance parameters developed within ICAO, at this stage, little material expands on the ways in which they could be expressed, nor taken into account in charging for air navigation services. While the CEANS may be short of time to reach agreement on such ways, the following paragraphs should be considered.

2.7 Firstly, a question to examine would be the sharing of responsibilities between users and providers of air navigation services (ANSPs) for improving the impact of such services on the environment.

2.8 On the one hand, ANSPs and States are responsible for developing more efficient route networks, reducing flight extensions – within the territory of one given State, or in cooperation among several States and ANSPs. New navigation techniques, but not only those, may support this effort. ANSPs may also use new techniques and operational improvements to reduce the number of flight level restrictions, which are detrimental to the environmental impact of flights, either in climb or descent. Continuous Descent Approaches are an example of such improvements.

2.9 On the other hand, the users' behaviour can impact the environment either positively or negatively according to whether they make best use of all available information and possibilities such as

shortest routes, conditional routes, and thus to reduce their emissions – while saving fuel and other costs linked to time savings – or not.

2.10 ICAO could devote further work to expand on the expectations in terms of environmental performance parameters – or “performance indicators” - as quoted in paragraph 16 of Doc 9082. The presenters of this paper could support such work, in order to make their application more concrete. The outcome of this work would feed into Europe's efforts to set up and implement a performance-driven ATM system and would certainly be useful in other geographical areas of the world.

2.11 Environmental performance should be part of the overall performance targets decided and implemented at regional and/or national level. It may be reflected in the charging schemes for air navigation services through appropriate incentive mechanisms.

2.12 The efforts by the ANSPs to improve the impact of their activities on the environment could for example be rewarded through a positive financial incentive, after comparison of the achievements with performance targets determined in advance, in consultation with the users, and approved by the relevant State.

2.13 As regards the users, an initial view could be to consider that their incentive to make the best use of available operational possibilities quoted above consist primarily in the economic benefits of the savings on fuel and other operational costs. However, more discussion on this issue might be useful, and other ideas may be developed.

2.14 Further efforts should be made to explore more in-depth possible concrete ways to formulate and to measure performance of the air navigation services, and use thereof, in terms of environmental impact. The questions set in the foregoing paragraphs indicate that a number of factors could deserve such further efforts.

### **3. CONCLUSIONS**

3.1 The relevance of the gains for the environment that might be triggered and achieved through charging-related mechanisms in terms of lesser noise and/or gas emissions, and savings for the users and the travellers, justify that a consistent effort should be made and an adequate priority level be given to such further works as proposed in paragraph 2.13. Items to investigate could relate to matters sketched out in paragraphs 2.6 to 2.12. In the end, such work might result in additional guidance and/or additions to Doc 9082 on environment, for air navigation charges. It is proposed that the Conference invites the Secretariat and the States to support works in this respect.

### **4. ACTION BY THE CONFERENCE**

4.1 The Conference is invited to:

- a) give consideration to the views exposed in this paper;

- b) agree that it would be worth to initiate appropriate work to elaborate on possible environmental performance criteria for air navigation services that would deserve to be reviewed under the principles set out in paragraph 16 of Doc 9082 when implemented by States and their ANSPs; and
- c) agree on the possibility that such work should also elaborate on the possible links that could be established between the achievement of performance objectives in air navigation service provision and the charging schemes for ANSPs.

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