



WORKING PAPER

TWELFTH AIR NAVIGATION CONFERENCE

Montréal, 19 to 30 November 2012

Agenda Item 1: Strategic issues that address the challenge of integration, interoperability and harmonization of systems in support of the concept of “One Sky” for international civil aviation

1.1: Global Air Navigation Plan (GANP) – performance framework for global planning

**GLOBAL IMPLEMENTATION OF “ONE SKY” FOLLOWING A
PERFORMANCE-BASED APPROACH**

(Presented by the Presidency of the European Union on behalf of the European Union and its Member States¹; by the other Member States of the European Civil Aviation Conference²; and by the Member States of EUROCONTROL)

SUMMARY

The EUROCONTROL Member States started applying a multinational performance-based approach in 1998. Today, after more than a decade of performance review experience, the Single European Sky (SES) legislation provides a supra-national regulatory framework called the *performance scheme*, in which 29 States are participating. Efforts are underway to gradually involve all States to which the ICAO EUR/NAT regional office is accredited (56 States) in a harmonised performance-based approach.

Action: The Conference is invited to agree to the recommendation in paragraph 3.

1. INTRODUCTION

1.1 Global implementation of “One Sky” will require the use of a common “language” regarding performance. This implies a coordinated approach across States and Stakeholders for data provision, collection, storage, protection, dissemination and indicator calculation; and use of the results to support the various ATM improvement processes which include R&D planning, implementation planning, business planning, performance monitoring, and regulation.

1.2 Europe’s long experience in this area, at a multinational level, is presented as a useful contribution, including for application in the ICAO context where there is no multinational regulatory framework.

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

² 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. THE EUROPEAN EXPERIENCE

2.1 The EUROCONTROL Member States started applying a multinational performance-based approach back in 1998, when the Performance Review Commission (PRC) was established³. The PRC is well known for its annual performance review reports (PRRs) and ATM Cost-Effectiveness (ACE) benchmarking reports, as well as for the publication of one-off studies on specific subjects.

2.2 Of particular interest is the *US/Europe Comparison of ATM-related Operational Performance* (2009, updated in 2012)⁴. This study was a joint effort of the FAA and EUROCONTROL. It proved that it is possible to develop and apply a common performance framework, which could serve as a sound basis for factual high-level comparisons between countries and world regions.

2.3 It is important to note that European ATM performance analysis and review greatly benefited from the availability of a number of pan-European data sets collected by EUROCONTROL.

2.4 Today, the Single European Sky (SES) legislation provides a supra-national regulatory framework called the *performance scheme*, which drives a performance planning process based on pan-European and local (national) binding targets, which apply to a common set of key performance indicators. Currently 29 States (the 27 EU States, Norway and Switzerland) participate in the performance scheme.

2.5 The SES performance scheme addresses four key performance areas (KPA's). The high level objectives and targets aim at driving the behaviour of accountable entities (Network Manager, States and ANSPs) so as to achieve at least the following in the SES KPAs:

- a) **Safety**: the aim is to maintain – and where possible improve – current safety levels in the face of growing traffic volumes and future ATM system changes;
- b) **Environment**: reduction of the ANS-induced additional CO2 emissions per flight to the extent that the pan-European amount of ANS-induced additional CO2 emissions is decoupled from traffic growth;
- c) **Capacity**: driving the timely investment in capacity, so as to ensure that demand/capacity imbalance (measured in terms of annual accumulation of ATFM delay) does not exceed the economic optimum estimated to 0.5 minute/flight (area covered by EU, Norway and Switzerland).
- d) **Cost efficiency**: reduction of the ANS provision cost per flight to ensure that pan-European ANS provision cost does not increase despite traffic growth, and if possible decreases. Targets are inter alia intended to stimulate the defragmentation of the European ATM system.

2.6 Efforts are underway to gradually involve all States to which the ICAO EUR/NAT regional office is accredited (56 States) in a harmonised performance-based approach: the SES performance scheme applicability area is expected to grow through increased EU-membership and voluntary participation of States; the larger set of EUROCONTROL States continues to be covered by performance monitoring and review of the PRC; and the EANPG is working on the definition and implementation of a performance framework (compatible with the performance scheme but without target setting) which will be applicable to the entire EUR region. More

³ The Performance Review Commission (PRC) is a Commission established by the EUROCONTROL Permanent Commission to provide advice in order to ensure the effective management of the European air traffic management system through a strong, transparent and independent performance review and target setting system. More information at www.eurocontrol.int/prc.

⁴ <http://www.eurocontrol.int/documents/useurope-comparison-atm-related-operational-performance-2010>

specifically, the EANPG Coordinating Group, COG, established a COG Performance Task Force to define a suitable EUR region performance framework (KPA and KPI) and reporting process. In its Terms of Reference the Task Force was instructed to “*avoid duplication of efforts and to use, to the maximum extent possible, existing arrangements/solutions.*”

2.7 More detail can be found in information paper AN-Conf/12-IP/19.

2.8 The SES initiative aims at improving the overall performance of aviation with a view to meeting the requirements of all airspace users. Although military operations and training are not covered, civil-military cooperation and coordination play a fundamental role in the implementation of SES. Therefore, first broad multilateral experiences regarding civil and military performance are implemented on a regional basis at Functional Airspace Block (FAB) level, such as the FAB Europe Central (FABEC, covering France, Switzerland, Belgium, Netherlands, Luxembourg and Germany) with performance measurements through a military mission effectiveness indicator. SES also foresees the measurement of the effective use of the civil-military airspace structure. While respecting national defence interests and sovereignty, the military mission effectiveness is believed to support performance gains for civil and military users.

3. RECOMMENDATIONS

3.1 The Conference is invited to:

- a) agree that the global implementation of “One Sky” will require the use of a common “language” regarding performance;
- b) note the European experience in establishing a coordinated approach across States and Stakeholders for data provision, collection, storage, dissemination and indicator calculation;
- c) invite ICAO to take into account the Single European Sky performance scheme as an element to develop a global approach to performance;
- d) request ICAO to establish a set of common ANS performance metrics and associated guidance material, building on existing ICAO documentation (e.g. Docs 9883 and 9161) as well as on the experience of regions in applying the performance-based approach;
- e) request ICAO to revise the *Manual on Global Performance of the Air Navigation System* (Doc 9883) accordingly;
- f) invite regions to document achieved and planned ANS performance using these metrics; and
- g) urge ICAO to avoid duplication of efforts and to use, to the maximum extent possible, existing arrangements/solutions.

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