

FOURTH MEETING OF THE ALLPIRG ADVISORY GROUP

(Montreal, 6 – 8 February 2001)

Agenda Item 4: Safety oversight-related issues

EUROCONTROL ACTIVITIES IN ATM SAFETY

(Presented by the European Organisation for the Safety of Air Navigation (EUROCONTROL))

SUMMARY

This paper presents a high-level overview report on the activities of EUROCONTROL in the field of ATM Safety Regulation and Management. In particular, it describes the work of the Safety Regulation Commission (SRC), which has established a comprehensive work programme addressing the definition and implementation of harmonised approaches to ATM safety regulation. The associated safety management measures being taken to complement these activities are also described.

1. INTRODUCTION

1.1 Under the revised EUROCONTROL Convention, the Safety Regulation Commission (SRC) has been established as an advisory body within the EUROCONTROL Organisation with the objective of ensuring that a harmonised ATM safety regulatory regime is established across the area of the European Civil Aviation Conference (ECAC).

1.2 The SRC's role is to advise the EUROCONTROL Commission, through the Provisional Council, on all matters related to the safety regulation of ATM, including making recommendations for safety improvements.

1.3 More specifically, the SRC contributes, via its work programme, key harmonised European elements to the three core functions of national safety regulation in ATM:-

- Rulemaking with the setting of Safety Regulatory Objectives and Requirements,

ESARR 3; and

- “ATM Services Personnel” – ESARR 5,

have already been approved and adopted by the Provisional Council and Commission of EUROCONTROL, in November 1999, July 2000 and November 2000 respectively. One further ESARR, dealing with:

- “Risk Assessment and Mitigation” - ESARR 4 (which refers to SRC Policy Document 1 setting quantified safety minima for ATM in the ECAC area),

will be submitted for approval and adoption by the Provisional Council and Commission of EUROCONTROL in April 2001.

2.1.2 In addition, work has commenced on the production of an ESARR covering “Software-Based ATM Systems” (ESARR 6), and initial development is also under way on generic Safety Regulatory Requirements for the use of GNSS (ESARR 7). This latter document will serve as a platform on which safety regulatory authorities may base approval of specific GNSS applications within national ATM systems.

2.2 **SRC rulemaking**

2.2.1 Rulemaking is an implicit and integral part of the SRC’s work. The adoption of a formal rulemaking process has been essential in the development of EUROCONTROL Safety Regulatory Requirements. The process used, however, is of an interim nature, pending the development of the EUROCONTROL Notice of Proposed Rulemaking (ENPRM) process, which will cover all regulatory functions. When the final process is in place, SRC rulemaking will be revised accordingly. In the

meantime, the SRC process used is as close as possible to the expected outcome of the EUROCONTROL-wide work.

2.3 ICAO consistency

2.3.1 During the formal requirements consultation process, the need to identify consistency between ESARRs and ICAO Standards and Recommended Practices (SARPs) was agreed. This has been discussed by the SRC and for the future, a consistency report will form part of the development process for each ESARR. Existing requirements will be re-assessed as the opportunity permits, such as during updates, though an initial review has revealed almost no overlap in subjects covered by current ESARRs and established SARPs.

2.3.2 ICAO is finalising the processing of a number of proposed amendments to Annex 11 and PANS-RAC (Doc 4444) in the area of safety management and more specifically in the area of 'Risk Assessment and Mitigation'. ESARR 3 and ESARR 4 (with its associated SRC Policy Document 1), support the implementation at ECAC level of these ICAO standards and recommendations.

2.4 Safety regulatory requirements – Implementation

2.4.1 Clearly, the effectiveness of EUROCONTROL's initiatives in the development of ESARRs is dependent upon the effectiveness and consistency of their implementation at national level. Work in that regard is going to become the prime focus of the SRC after the initial set of ESARRs has been approved, and in particular:

- a) The legal implications of setting up at national level a safety regulatory regime, which is harmonised with the overall principles agreed at European level will be essential. Experience gained in that area will need to be shared across the European safety regulatory community so that the national institutional and legislative frameworks all allow for the ESARRs to be enforced and implemented effectively and consistently across Europe;
- b) Guidance material to ATM safety regulators will also need to be produced, so that all regulators progressively achieve a common understanding of the level and type of evidence required in order to verify compliance with the ESARRs; and
- c) Support to States will also be provided so that the European implementation of ESARRs becomes effective in all part of Europe, regardless of previous experience in ATM safety regulation.

2.4.2 A programme addressing implementation is being progressed in the case of each ESARR.

2.5 Safety monitoring and oversight

2.5.1 There is a need to ensure that ECAC Member States implement ESARRs in a manner compatible with the requirements. The implementation of ESARRs therefore requires their enactment/transposition by Member States within national legal frameworks as well as their implementation within the overall principles and harmonised guidance developed by the SRC.

2.5.2 In addition, the SRC has the responsibility to “..monitor the implementation of procedures for ensuring the uniform application, by States, of safety regulatory requirements”. The mechanisms and processes for doing this are established by the SRC in agreement with Member States, and are subject to approval by the Provisional Council of EUROCONTROL. A specific element connected to this area is the extension of the ICAO Universal Safety Oversight Programme to ATS and airports, notably if and how this may be related to the SRC’s activities.

3. SAFETY MEASUREMENT AND IMPROVEMENT

3.1 The SRC has a defined role to monitor the safety levels achieved by ATM in the ECAC area; it prepares annual reports summarising the number and severity of ATM-related safety occurrences over the reporting year. The year-on-year trends in air traffic volumes and ATM safety occurrences are presented.

3.2 This process allows, to the extent made possible by the data, a view to be formed on the overall safety performance of the ATM system in the ECAC area, whether overall improvements in ATM safety are being achieved, and which matters demand attention to resolve identified safety issues.

3.3 The lack of availability of consistent ATM Safety data within ECAC, and its potential consequences, has resulted in the establishment and approval in 1999, as a matter of urgency, of the EUROCONTROL Safety Measurement and Improvement Programme.

3.4 The initial measures of this programme comprise the EUROCONTROL Safety Regulatory Requirement (ESARR 2), dealt with above, a Severity Classification Scheme for ATM Occurrences, and a joint Agency/SRC Policy dealing with States’ concerns over publication and confidentiality issues.

3.5 To support these measures further, the SRC and the Agency’s Safety, Quality and Standardisation Unit (SQS) have jointly developed a number of supporting measures and methods for the harmonised identification, assessment and reporting of air navigation shortcomings and deficiencies. These measures include guidance material on best practices, a software-based occurrence analysis tool, and a database system enabling consistency with European Commission and ICAO databases covering wider aviation issues, and into which the EUROCONTROL work will provide a valuable input.

3.6 Further measures include *inter alia* the development of an awareness campaign, including the design and introduction of specific training courses, and workshops for national experts.

4. SAFETY MANAGEMENT

4.1 EUROCONTROL, in its roles of provider and developer of regional air traffic services and managing agency on behalf of ECAC for the European Air Traffic Management Programme (EATMP), has clear safety management responsibilities. Although the SRC has a role in the co-ordination and harmonisation of the safety regulatory aspects of the twenty-two constituent programmes of EATMP, the EUROCONTROL Agency is responsible for ensuring that the safety management systems are in place to meet the regulatory requirements. Within EATMP, for example, this is encompassed in a joint working process which focuses primarily upon the formal safety plans and deliverables, such as safety cases, and on the steps to be taken by both parties in progressing issues raised.

4.2 Furthermore, again within the EATMP framework, the Agency has been promoting and supporting, since 1995, the implementation of safety management systems by ANS Providers. This is centred on staff being given responsibility for their own actions and managers being held responsible for the safety performance of their organisations.

4.3 This EATMP Safety Management initiative supports the implementation of ESARRs by ANS Providers in three main areas:

- Development of guidance material and support to the implementation of Safety Management Systems by ANS Providers, in accordance with ESARR3 requirements;
- Harmonisation of the safety occurrence investigation process, support to the establishment of reporting schemes, development of mechanisms for safety data exchange and lesson dissemination, in relation to ESARR2 implementation and the EUROCONTROL Safety Measurement and Improvement Programme;
- Development of a safety assessment methodology for assessing the impact on safety of new systems or changes to operational systems, in support of ESARR4 implementation. This methodology also supports the safety assessment activities undertaken in individual EATMP Programmes.

5. EXTERNAL INTERFACES

5.1 The SRC's interfaces with aviation bodies outside EUROCONTROL have continued to increase in number and scope. Some key developments are in the area of the Joint Aviation Authorities (JAA), where in addition to the CNS/ATM Steering Group, and Occurrence Reporting Group, participation in a number of aspects of the JAA's Safety Strategy Initiative has been an essential part of a total aviation system approach to safety.

5.2 Involvement with the European Association for Civil Aviation Equipment manufacturers (EUROCAE) WG52 and WG53 has also continued, as has the interface with the ECAC Group of Accident Investigation authorities, with particular emphasis on the need to implement the harmonised approach, defined in ESARR 2, for the reporting and analysis of safety occurrences having an ATM contribution.

5.3 Liaison with ICAO has been key to the success of the work, not only concerning the specific issues connected with safety occurrence reporting in ATM, but on the wider topic of ATM Safety regulation.

6. OTHER ISSUES

6.1 Within the EUROCONTROL internet and intranet systems, the SRC now has its own web-site with associated pages giving details of the role and operation of the Commission, its Work Programme and deliverables. This includes the ability to access requirements documents to supplement formal consultation processes. The web site address is:

<http://www.eurocontrol.be/src/en/index.html>

7. ACTION BY ALLPIRG

7.1 The meeting is invited to note that:-

- a) the EUROCONTROL SRC has developed Safety Regulatory Requirements in the areas of “Safety Management System” (ESARR 3) and “Risk Assessment and Mitigation” in ATM (ESARR 4), which allow the implementation at ECAC level of proposed amendments to Annex 11 and PANS-RAC (Doc 4444) in those areas;
- b) the extension of the ICAO Universal Safety Oversight Programme to ATS and airports is related to the SRC’s activities for the ECAC area, the SRC having the responsibility to *uniform application, by States, of safety regulatory requirements*”; and
- c) the lack of availability of consistent ATM Safety data within ECAC, and its potential consequences, has resulted in the establishment and approval in 1999 of the EUROCONTROL Safety Measurement and Improvement Programme, including a Safety Regulatory Requirement, ESARR 2 “Safety Occurrence Reporting and Investigation in ATM” as well as measures supporting the harmonised identification, assessment and reporting of safety occurrences in air navigation;
- d) EUROCONTROL is promoting the implementation of safety management systems in ATM in the ECAC States to ensure that safety regulatory requirements are met.

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