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DIRECTORS GENERAL OF CIVIL AVIATION CONFERENCE ON A GLOBAL STRATEGY FOR AVIATION SAFETY

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Theme 1: The status of aviation safety today

Topic 1.2: The status of safety oversight

Topic 1.3: Initiatives by States and industry

RECENT EUROPEAN INITIATIVES IN FAVOUR OF AVIATION SAFETY

(Presented by the Austria, on behalf of the European Community and its Member States², other States Members of the European Civil Aviation Conference³ and by EUROCONTROL)

SUMMARY

This paper presents the status of safety oversight in Europe. In addition it presents the most important initiatives undertaken by European States and industry.

1. INTRODUCTION

1.1 The evolution of the regulatory framework has been paralleled by a number of initiatives undertaken by European States or industry. The evolving European safety regulatory framework and some recent key initiatives, to further improve safety, are briefly described in this information paper.

¹ French and Spanish provided by European Community.

² Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden and United Kingdom. All these twenty-five States are also Members of the European Civil Aviation Conference (ECAC).

³ Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Iceland, Moldova, Monaco, Norway, Romania, Serbia and Montenegro, Switzerland, The former Yugoslav Republic of Macedonia, Turkey and Ukraine.

2. STATUS OF REGIONAL SAFETY OVERSIGHT IN EUROPE (ITEM 1.2)

The European Aviation Safety Agency

2.1 The European Aviation Safety Authority (EASA) was created in 2002 to promote the highest common standards of safety and environmental protection in civil aviation; its mission is to be the centrepiece of a new, cost-efficient regulatory system in the European Community (EC) and a reliable partner for counterpart civil aviation authorities throughout the world. Its primary tasks are to:

- a) elaborate an extensive, integrated framework of common rules which ensure the consistency and the safety of the aviation system. On adoption by the European Commission, these rules, which implement those laid down in the Chicago Convention, become binding and uniformly applied throughout the European Community;
- b) certify and ensure the continuing oversight of type of products and design organizations. EASA is also responsible for certificating production and maintenance organizations located outside the European Community;
- c) standardize the procedures and practices within the Aviation Authorities of the Member States in order to provide consistent and uniform implementation of common rules. Such rules specify therefore, (Section B of the rules refers) organizational, resources and training requirements that national aviation authorities must fulfil, as well as the certification process they must follow; and
- d) assist EC Member States in fulfilling their obligations under the Chicago Convention by providing a basis for a common interpretation and uniform implementation of its provisions and by ensuring that the common rules applicable in the European Union are in line with those laid down in the Chicago Convention.

2.2 In this new regulatory framework, the EC Member States remain bound by their obligations under the Chicago Convention. However, since September 2003, EASA in its field of competence carries out, on behalf of the Member States of the European Community, functions and tasks ascribed to them by applicable international conventions, in particular the Chicago Convention.

2.3 In order to facilitate the improvement of civil aviation safety throughout Europe, European countries not members of the European Community can conclude agreements with the EC to be associated with the EASA system.

2.4 EASA is currently responsible for airworthiness and environmental protection, (i.e. Annex 8 — *Airworthiness of Aircraft* and Annex 16 — *Environmental Protection* to the Chicago Convention). To guarantee a high and uniform level of safety throughout the EC and to provide a “level playing field” for all stakeholders in the internal market, it is intended to extend the Agency’s mission to encompass eventually the entire aviation “safety chain”.

Future extensions of EASA tasks

2.5 The EC is currently discussing the extension of the remit of the agency to air operations (i.e. the field of Annex 6 — *Operation of Aircraft* to the Chicago Convention), pilot licensing (i.e. part of

the field of Annex 1 — *Personnel Licensing*) and third country airlines and aircraft oversight. To avoid disruption and unnecessary additional cost, it is anticipated that the EASA will take over current tasks of the Joint Aviation Authorities (JAA) as per 1 January 2007 and EC will use rules based on those developed thus far by the JAA, i.e. the JAR-OPS, JAR-FCL and JAR-STD. A similar approach was applied for the rules on airworthiness applicable today.

2.6 Pending this first extension of the EASA tasks, the European Commission has proposed to turn into community law a set of harmonized rules for commercial air transportation by aeroplane developed by the JAA (EU-OPS proposal). This proposal is on its way for adoption in the course of this year.

2.7 At a later stage, the European Commission will propose to extend EASA's missions to safety and interoperability regulation of air traffic management (ATM), air navigation services and airport operations. The preparatory work is being carried out in conjunction with all the stakeholders, including EUROCONTROL and the European Group of Aerodrome Safety Regulators (GASR).

Requirements for national air traffic management safety regulatory bodies in Europe

2.8 The Institutional Strategy of the European Civil Aviation Conference (ECAC) had called for a harmonized framework for ATM safety regulation. The core of this framework is a set of EUROCONTROL safety regulatory requirements (ESARRs) which form the basis of national safety oversight of ATM. Accordingly ESARR 1 – Safety Oversight in ATM – was formally approved in 2004.

2.9 ESARR 1 addresses the minimum elements of a robust ATM safety oversight function. It is focused on the safety oversight processes (e.g. audits and safety assessment of changes) that will be complied with by national safety regulatory bodies. It is fully compatible with States' obligations under the Single European Sky (SES) EC legislation. Its principles are applicable to the other aviation domains.

2.10 The Requirement also includes provisions intended to harmonize the capabilities of the safety oversight function, notably those related to the levels of resources available and the qualification and training of safety oversight personnel (and auditors or inspectors).

2.11 ESARR 1 is applicable to all the EUROCONTROL Contracting Parties and must be incorporated into their regulatory frameworks by 2007. Furthermore, under the SES legislation, it will be transposed like all ESARRs into EC law.

2.12 The development of ESARR 1 took into full consideration the model (8 critical elements) of the *Safety Oversight Manual, Part A — The Establishment and Management of a State's Safety Oversight System* (Doc 9734). As a result, ESARR 1 includes arrangements to address the process-based critical elements which do not contain legislative or rulemaking elements. This correspondence will facilitate the task of the Universal Safety Oversight Audit Programme (USOAP) when auditing the ATM safety oversight framework of States. ESARR 1 also, includes requirements to support the USOAP and other activities conducted under international agreements to audit the safety oversight frameworks by States. ESARR 1 is the only regulatory requirement document applying to the regulatory bodies themselves and their professional staff. The generic nature of its design and contents makes most of its provisions especially suitable for application also to other aviation domains.

Rationalization of safety audits in Europe

2.13 Today ECAC Member States Civil Aviation Authorities can be audited by ICAO USOAP, by the International Aviation Safety Assessment (IASA) programme of the United States' Federal Aviation Administration (FAA), by ECAC (for security), and by EUROCONTROL ESARR Implementation Monitoring and Support (ESIMS) Programme. EC States are also inspected by EASA and in the future they may be subject to SES "peer reviews".

2.14 EASA has therefore, defined a Memorandum of Cooperation (MoC) with ICAO in order to synchronize schedules and exchange data, and also relieve States from being audited for tasks transferred to EASA itself; in such cases USOAP will audit EASA (first audit took place in 2005). Also EUROCONTROL and ICAO have signed a MoC for USOAP and ESIMS audits to be alternated in order to ensure consistent and complementary approaches. Information of mutual interest is to be shared so as to minimize the amount of auditing needed and to maximize scarce auditing resources.

2.15 Both EASA and EUROCONTROL can provide auditors to ICAO USOAP. Audit findings are mapped against well identified audit protocols, all traceable to applicable international Standards/requirements. In the future, further rationalization of audits in Europe is foreseen.

Technical assistance provided to other regional cooperation initiatives

2.16 The European Community and its Member States experienced that the establishment of regional organizations has great potential to assist States in complying with their obligations under the Chicago Convention through resources pooling, economies of scale and the promotion of widespread uniformity. Therefore the development of such organizations worldwide is supported both financially and technically (i.e. providing experts). Its experience in developing the legal and institutional elements required to make regional authorities sustainable can possibly be exploited by ICAO Contracting States.

2.17 The European Commission is already a major donor to the ICAO cooperative development of operational safety and continuing airworthiness programme (COSCAP) in Asia, Latin America and Africa which are managed by the ICAO Technical Co-operation Bureau (TCB). Concurrently European States provide the largest contribution collected by ICAO through the International Financial Facility for Aviation Safety (IFFAS).

2.18 The European Commission has recently established an expert group on technical cooperation with the objective to exchange information on project development at the national and EU level in order to identify possible synergies and avoid potential duplication of efforts between projects.

2.19 The EC and its Member States have also established bilateral programmes in favour of regional cooperation, for instance in Central America (for the Central American Aviation Safety Agency, ACSA), in Africa (for the African and Madagascar Civil Aviation Authorities, AAMAC and the Africa and Madagascar Air Navigation Safety Agency, ASECNA) as well as in Central, South and South-East Asia. The funds committed for these activities by the EC alone amount to more than 50 Million Euro during the last five years. The JAA, EUROCONTROL and industry have already contributed technical assistance in their field of expertise whilst EASA is progressively participating as well.

3. INITIATIVES TAKEN IN EUROPE TO FURTHER IMPROVE AVIATION SAFETY (ITEM 1.3)

Exchange of information on accidents and incidents

3.1 Since 2003 new legislation also requires Member States of the European Community to set up national mandatory occurrences reporting systems to collect, analyse, process and store safety-related information. The European Commission developed a set of IT applications called ECCAIRS (European Co-ordination Centre for Aviation Incident Reporting Systems) to provide Member States with the necessary tools to comply with these requirements. This system is based on the ICAO Accident/Incident Data Reporting (ADREP) taxonomy and allows exchange of information with existing automated information systems such as pre-existing national mandatory reporting schemes, EUROCONTROL specific applications or airlines' internal safety data bases.

3.2 Moreover, the European Commission, the Aviation Authorities of the EC Member States and EASA exchange any safety-related information available to them. Entities entrusted with the investigation of civil aviation accidents and incidents, or with the analysis of occurrences have access to that information.

Information on safety assessment of foreign aircraft (SAFA)

3.3 Under EC legislation enacted in April 2004, foreign aircraft using EC airports may be subjected to ramp inspections when it is suspected that they do not comply with international safety Standards, i.e. those contained in the relevant Annexes to the Chicago Convention. If an inspection finds that an aircraft poses an immediate safety problem, it must be grounded until the defect is corrected.

3.4 These inspections are based on the harmonized procedures and the central data base established by the ECAC SAFA programme. All information on discrepancies vis-à-vis the international safety Standards are collected and stored and all ECAC States have access to it.

3.5 The management of this programme, including the exchange of information between Member States, will be transferred from JAA to EASA from January 2007. In order to maintain the pan-European dimension of this programme, specific arrangements will be established with ECAC countries not Members of the EC.

European Community list of carriers subject to a ban

3.6 The EC approved in December 2005 a new regulation which allows for the adoption of safety measures (refusal, suspension or revocation of an air carrier's operating authorization as well as operating restrictions) at the EC level. These measures, which concern air carriers whose safety is not guaranteed, are adopted on the basis of objective, transparent and exclusively safety-related common criteria. The decisions are transparent and based on effective consultation of the parties affected. The right of air carriers concerned to be heard are guaranteed.

3.7 In considering whether an air carrier should be totally or partially banned, it will be assessed whether the air carrier is complying with the relevant safety standards. For third country carriers, these Standards are the international safety Standards contained in the Chicago Convention and its Annexes. Therefore, the new mechanism is without prejudice to international agreements and conventions to which European Community Member States or the EC itself are contracting parties and fully

compatible with the Chicago Convention, including its Article 33: *Recognition of certificates and licenses*.

3.8 The safety measures are directly and simultaneously applicable in all EC Member States. Other ECAC States may decide to adopt similar measures on a voluntary basis.

3.9 The air carriers concerned are identified on a European Community list which is published. The list is updated, in order to add or withdraw carriers, as necessary.

European ATM safety Programme

3.10 Following the accidents at Linate and Überlingen, (2001 and 2002), EUROCONTROL launched the strategic safety action plan (SSAP) to improve ATM safety regulation and management in Europe. The focus was on areas where the most benefits would be gained in the shortest timescale.

3.11 Studies, by independent consultants, assessed the maturity of ATM safety frameworks in ECAC (both ATM regulators and service providers). The first (2002), used as benchmark, highlighted that development across ECAC was uneven. In some cases there was lack of commitment to allocate the necessary resources. A later study (2004) showed that awareness had increased and more States had the necessary structures in progress. Maturity levels overall had improved significantly.

3.12 SSAP much improved ATM safety in ECAC States, but a sustained effort is required to maintain momentum, particularly in light of the traffic growth and the safety challenges presented by SES. Hence a new European ATM (proactive) safety programme is being launched over the next three years.

3.13 In the wake of the Überlingen accident studies showed that guidance material for the airborne collision avoidance system (ACAS) was unclear and in some instances misleading. This was addressed by ICAO and through the SSAP. State Regulators (including JAA), aircraft operators and air navigation services providers (ANSP) have now reviewed their procedures and amended their operating manuals. It was also found that Standards for ground-based safety nets were lacking. Standards are now being developed by EUROCONTROL and are expected to be promulgated during 2006.

3.14 The problem of Runway Incursions has been addressed by a European Action Plan for the Prevention of Runway Incursions. The majority of major airports have now established runway safety teams and the indications are that the trend for serious runway incursions is downwards. Cooperation between EUROCONTROL and GASR will improve synergism among all actors on the airport airside.

3.15 Progress on the collection of data from incidents, allowing drawing lessons and launching prevention programmes, remains slow. A major obstacle is the fear for legal impediments by the reporter, being either a controller or pilot. In many States, a "Just Culture" on incident reporting is not in place yet.

3.16 The volume of air traffic is steadily increasing on a global scale and there is a need to explore new ways to analyze the safety of flight operations and air traffic management in an integrated way. In view of the implementation of the Single European Sky regulations and the related ATM operational concepts, several European States and EUROCONTROL have taken initiatives to study new approaches to safety assessment and management with the objective to support ICAO in developing a global standard.

3.17 Although considerable progress has been made in ATM safety in ECAC, over the past three years much remains to be done. Availability of resources within States remains an issue, which is exacerbated by lack of safety trainers. Over the last few years, increased efforts have been made to enhance safety expertise by means of training in both safety management and safety regulation. The European regional approach allows pooling resources for a sustained effort in the long term.

4. **CONCLUSION**

4.1 The Conference is invited to note:

- a) the present status of safety oversight in Europe and its planned evolution (item 1.2);
and
- b) the initiatives taken in Europe by States and industry to further improve aviation safety (item 1.3).

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