

ELEVENTH AIR NAVIGATION CONFERENCE

Montreal, 22 September to 3 October 2003

Agenda Item 2: Safety and security in air traffic management (ATM)
2.1: Safety management systems and programmes

RUNWAY SAFETY ISSUES IN EUROPE — THE PREVENTION OF RUNWAY INCURSIONS

(Presented by the European Organisation for the Safety of Air Navigation
(EUROCONTROL) on behalf of its Member States and those of ECAC¹)

SUMMARY

Runway safety is a vital component of aviation safety as a whole. The predicted growth of air traffic implies that the actual numbers of incidents may rise, unless held in check by preventative actions such as those recommended in the European Action Plan for the Prevention of Runway Incursions, the result of the combined efforts of a joint initiative led by the EUROCONTROL.

The main issues emerging from that work are discussed and recommendations made for appropriate action in the ICAO context.

Suggested action by the Conference is in paragraph 3.

*French, Spanish and Russian versions provided by EUROCONTROL.

¹ The ECAC Member States are: **Albania**, Armenia, **Austria**, Azerbaijan, **Belgium**, Bosnia and Herzegovina, **Bulgaria**, **Croatia**, **Cyprus**, **the Czech Republic**, **Denmark**, Estonia, **Finland**, **France**, **Germany**, **Greece**, **Hungary**, Iceland, **Ireland**, **Italy**, Latvia, Lithuania, **Luxembourg**, **Malta**, **Moldova**, **Monaco**, **the Netherlands**, **Norway**, Poland, **Portugal**, **Romania**, Serbia and Montenegro, **the Slovak Republic**, **Slovenia**, **Spain**, **Sweden**, **Switzerland**, **The former Yugoslav Republic of Macedonia**, **Turkey**, Ukraine and **the United Kingdom**).

The 31 Member States of EUROCONTROL appear in **bold**

1. INTRODUCTION

1.1 Following a survey of pilots and air traffic controllers (ATCOs) conducted in 2001 regarding specific runway safety issues, and analysing the available data, runway incursions were identified as one of the most serious safety issues in airport operations. The survey revealed that there may be one incursion every three or four days in the ECAC Member States area.

1.2 In 2002, the EUROCONTROL Agency hosted an international workshop where the survey findings were discussed and action to formalise the resulting recommendations for the prevention of runway incursions was supported.

1.3 The resulting European Action Plan for the Prevention of Runway Incursions consists of these recommendations with supporting material and is in the process of being formally distributed via the national aviation safety authorities. An extract of the Action Plan is attached.

1.4 The Action Plan is the result of the combined efforts an initiative led by the EUROCONTROL Agency in partnership with the Joint Aviation Authorities (JAA) and the Group of Aerodrome Safety Regulators (GASR). Other participating organisations are acknowledged in the Attachment.

2. EUROPEAN EXPERIENCE OF RUNWAY SAFETY

2.1 Over recent years there have been a number of runway incursions across Europe, which resulted in two actual collisions, with a significant loss of life. A snapshot of European experience of runway safety was captured through the survey of Pilots and ATCOs in 2001, just prior to the Milan Linate runway accident.

2.2 In the light of runway safety situation in the ECAC Member States area, the runway operations community — consisting of regulators, air navigation service providers, aircraft operators, aerodrome operators and professional bodies and organisations — agreed that measures needed to be put in place urgently to accelerate the pace of work in order to prevent further runway occurrences.

2.3 A survey was needed because, at the time, little data existed about runway safety occurrences. The collection of data on actual runway incursions within Europe proved to be a difficult exercise, due to the lack of a harmonised, worldwide definition of what constitutes a “Runway Incursion”.

2.4 The diverse reporting systems operating across Europe are typically not capturing the detailed information necessary to determine trends in runway occurrences. The need to introduce a harmonised and consistent approach to the collection and analysis of data is key to sharing safety-related information and reducing the risks of runway incursions. The ECAC Member States are being urged to report runway safety occurrences in accordance with Chapter 8, Accident Prevention Measures of Annex 13 — *Aircraft Accident and Incident Investigation*.

2.5 Although the data collection exercise was difficult, sufficient information was collected to clearly identify the causal and contributory factors that lead to runway incursions. These factors include failing to implement existing ICAO provisions contained in Annex 14 — *Aerodromes* relating to signage, lighting and marking and the use of non-standard phraseologies and other communications practices, resulting in flight crew confusion. Additionally, a significant number of incursions involved vehicles where inadequate driver training had been provided in aerodrome procedures and communication techniques. Consequently, States are being urged

to prepare for the ICAO Safety Oversight Programme, due to commence in 2004, by reviewing their own application of the ICAO provisions in relation to runway safety.

2.6 At the practical level of inspection and audit, Air Traffic Control is primarily governed by Annex 11 that refers to Safety Management Programmes, whereas Aerodromes are inspected against Annex 14 provisions requiring Safety Management Systems. The resulting differing institutional arrangements at aerodromes showed that where there is more than one organisation responsible for any facet of runway operations, there is a lack of a common understanding about how to apply safety management practices. This issue can be significant within Europe and highlights the need to harmonise and unify the ICAO approach to safety management.

2.7 As runway safety issues are not peculiar to Europe, but are recurring around the world, as demonstrated at the ICAO conference held in Mexico in October 2002, an essential element of the enhancement of runway safety is the global harmonisation of all practices and procedures associated with runway operations. Through the European work on this subject, close contact has been established with other States and Organisations, e.g. the United States' Federal Aviation Administration (FAA) and Transport Canada, who were also undertaking runway safety initiatives. Although the work between the various groups is similar, those differences that exist establish the requirement for a global manual on the subject of the prevention of runway incursions, to be co-ordinated by ICAO.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

- a) note the accelerated pace of work conducted in the ECAC Member States area on the prevention of runway incursions;
- b) recommend that ICAO develop a formal definition for a "runway incursion";
- c) urge States to report runway occurrences in accordance with Chapter 8, Accident Prevention Measures, Annex 13 — *Aircraft Accident and Incident Investigation*;
- d) encourage States to prepare for the ICAO Safety Oversight Programme relating to airports, due to commence in 2004, by reviewing their own application of the ICAO provisions in relation to runway safety;
- e) recommend that ICAO consider the inclusion in Annex 1 of a requirement for formal communications and airside driver training for drivers and other personnel who operate on or near the runway;
- f) recommend a review of the provisions related to Safety Management Systems referred to in Annex 14, and Safety Management Programmes as contained in Annex 11, with a view to harmonising the approach to runway safety; and
- g) call for the development of an ICAO manual for the Prevention of Runway Incursions, using the appropriate elements from the European Action Plan for the Prevention of Runway Incursions.
