



## **European Contribution to the ICAO Global Runway Safety Symposium**

**Montreal, 24 – 26 May 2011**

Despite the significant efforts of regulators and industry, runway safety continues to be one of aviation safety's greatest challenges worldwide, and Europe is not an exception in this respect.



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The ICAO initiative for a global response to the threat of runway related accidents is therefore very much welcome. The Global Runway Safety Symposium is an excellent opportunity to coordinate global efforts and focus on practical measures to improve runway safety worldwide.

The European Union, its Member States and all other European States, as well as all European aviation organisations are committed to making a constructive contribution to the Symposium, and to share their experiences and suggestions on runway safety enhancement solutions.

On the attached pages you will find an outline of European proposals and commitments for the Symposium. They were jointly developed by the European Commission, Member States of the European Union and of the European Civil Aviation Conference (ECAC), the EU's European Aviation Safety Agency (EASA) and Eurocontrol. This contribution will be presented in more detail by the European speakers during the different sessions of the Symposium.

On behalf of the European Commission, I would like to wish all the Participants a successful outcome of the Symposium.



## EUROPEAN CONTRIBUTION

### TO THE ICAO GLOBAL RUNWAY SAFETY SYMPOSIUM

#### The Symposium is invited to:

##### 1. Promote a multi-disciplinary approach to runway safety:

a) ask and encourage ICAO to :

- build on the establishment of its "runway safety cell", so as to provide a mechanism to coordinate the multi-disciplinary approach to runway safety;

- further develop and disseminate materials to assist States and organisations in implementing a multi-disciplinary approach to runway safety;

b) call upon States and organisations to establish and implement runway safety programmes based on multi-disciplinary approach, including the creation of Local Runway Safety Teams (LRST);

c) reemphasize the need for harmonising requirements for runway safety technologies, and standardising their implementation/operation, to ensure a globally consistent, safe aerodrome services and interoperability;

##### 2. Improve the monitoring of runway safety through better data collection, analysis, and dissemination of lessons learned and examples of practical measures:

a) invite States to monitor runway safety under State Safety Programmes (SSP), and to promote regional safety plans and programmes addressing also runway safety;

b) ask ICAO to include runway safety as one of the Continuous Monitoring Approach (CMA) priorities, and disseminate information on runway safety enhancing solutions and safety recommendations of global concern;

c) call upon States, Regional Safety Oversight Organisations (RSOOs) and operators/service providers to promote information sharing arrangements, covering also runway safety;

d) recall to organisations the importance of monitoring runway safety events and related precursors through their Safety Management Systems/Flight Data Monitoring, and implementing appropriate training programmes;

e) support development by ICAO of tools/methodologies for runway safety data management, including of a common - ECCAIRS compatible - format for reporting of runway safety events, and a common definition and taxonomy for Foreign Object Debris (FOD);

##### 3. Focus on runway incursions and excursions:

a) invite ICAO to:

– accelerate publication of the 1<sup>st</sup> edition of the PANS-Aerodrome document and of 'Annex 14' amendments recommended by the 2<sup>nd</sup> meeting of the ICAO Aerodrome Panel;

– further develop coherent Procedures for Air Navigation (PANS) (ATM, OPS, aerodromes, training) and update guidance material with regards to the prevention and the limitation of consequences of runway excursions, runway incursions and other runway safety hazards;

b) invite operators (air operators, aerodrome operators and ATSPs) to:

– monitor runway excursion precursors, and implement training programmes as appropriate;

– mitigate runway excursions consequences, (e.g. Runway End Safety Area);



## European contribution and commitments for the Symposium:

- Intention to develop a **European Aviation Safety Programme and Plan**, with runway safety as one of the priorities;
- Development, by 2013, of **common rules on aerodrome** operators, operations, design and related oversight (<http://www.easa.europa.eu/atm/>);
- 2<sup>nd</sup> edition of the **European Action Plan for the Prevention of Runway Incursions**. To be available in the second quarter of 2011 on the Runway Safety Portal;
- **European Action Plan for the Prevention of Runway Excursions** focusing on practical measures to prevent runway excursions: estimated publication date: first quarter of 2012;
- **Runway Safety Portal** (<http://www.eurocontrol.int/runwaysafety>), with implementation tools and products, recommendations, best practices etc;
- Compilation of materials, articles, tools and statistics on runway safety available at the **SKYbrary portal**: [http://www.skybrary.aero/index.php/Runway\\_Safety](http://www.skybrary.aero/index.php/Runway_Safety)

Europe is also **ready to share information and best practices** on runway safety, including trends and analysis of safety data on runway related occurrences. Some of the trends and analysis is already available on the Runway Safety and SKYbrary portals. Europe is also **ready to assist ICAO** in the revision and development of guidance and regulatory material for the prevention of runway incursions and excursions.

## Background on conclusions and actions proposed:

### 1. Promote the multi-disciplinary approach to runway safety

Runway safety is a function of not only infrastructure, but also aircraft, air operations, air traffic control and related aerodrome procedures. Hence, it is essential that runway safety is based on a **multi-disciplinary approach**, as recognised by the 37<sup>th</sup> ICAO Assembly.

ICAO is commended for the establishment of a multi-disciplinary runway safety cell, and is encouraged to **assist States and organisations in implementing such an approach** and develop the necessary materials including procedures for air navigation (PANS). **European legislation** requires aerodrome operators to establish arrangements with other organisations whose activities or products may have an effect on aerodrome safety.

A practical example of multi-disciplinary approach, widely implemented in Europe, is the **Local Runway Safety Team** concept (LRST). LRSTs are aerodrome centric, multi-organisational groups of experts providing practical suggestions to resolve runway incursion causal factors. More than 100 LRSTs have been established at European airports, as a consequence of which, the safety of runway operations has increased although incidents continue to be reported. This is also a successful example of a **regional approach to runway safety**, which could be replicated in other regions of the world.

### 2. Improving the monitoring of runway safety and dissemination of lessons learned and examples of practical measures

**The transition by ICAO to Continuous Monitoring Approach (CMA)** and by States and industry to the SSP/SMS environment, offers a unique opportunity to better monitor runway safety issues and to verify the effectiveness of actions taken in response to the risks identified.



This transition also offers an opportunity to **promote regional approaches, including on runway safety**. European experience shows that regional approaches help to achieve greater standardisation, harmonisation and economies of scale, in addition to facilitating the sharing of best practices and lessons learned (e.g. European Commercial Aviation Safety Team – ECAST). In Europe, the effort now is focused on **development of a comprehensive European Aviation Safety Plan**, with runway safety identified as one of the key risk areas.

Finally, although considerable information on runway safety is available, there is a need to increase its quality and focus on dissemination of lessons learned. ICAO can lead in providing standardised methodologies and tools, rather than collecting large amounts of data on runway safety itself. Such **data should be collected, analysed and exchanged at local, national and regional levels in the first place**, with ICAO focusing on trends and issues at a higher level of aggregation, especially as the CMA matures.

### 3. Focus on runway excursions and incursions

Runway incursions and excursions – each of them with **different precursors and consequences** - continue to be a frequent accident category. **Regulation, while essential, is not enough** to reduce these incidents, and significant improvements will require better standardisation, awareness, training, procedures, new technologies, with greater consideration of human factors.

In Europe, a Working Group for Runway Safety, comprising experts from all disciplines and organisations is working on developing measures to prevent runway excursions and limit their consequences, including a deeper understanding of the contributory factors. This work will result in a **European Action Plan for the Prevention of Runway Excursions** (in addition to the existing **European Action Plan for the Prevention of Runway Incursions**). Work is also ongoing on development of **common rules on aerodrome safety**, to be in place in 2013.

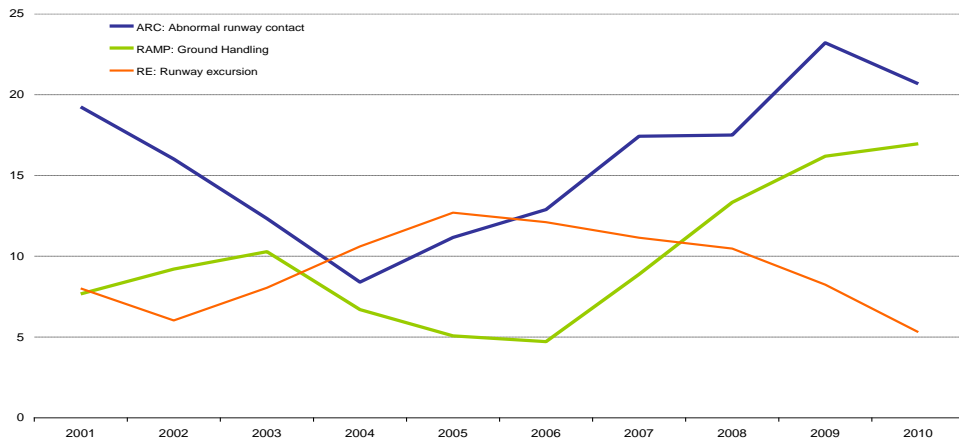
At the global level, there is a need to **accelerate work on Annex 14 amendments** recommended by the 2<sup>nd</sup> Aerodrome Panel, and relating to, amongst other issues, common methodology for assessing and reporting runway conditions, or clarification of safety objectives of Runway End Safety Area (RESA). ICAO should also give a **high priority to the development of the PANS-Aerodrome** document, as more standardisation in aerodrome operations management is urgently needed.

More **guidance material** on the risk of **un-stabilised approaches** is also needed, in addition to **revision of ATCO training material** and **ATC procedures** to address this common precursor of runway excursions. It is also crucial that **air operators** monitor through their SMS, but also flight data monitoring (FDM), runway safety events and related precursors and implement adequate **training programmes**.

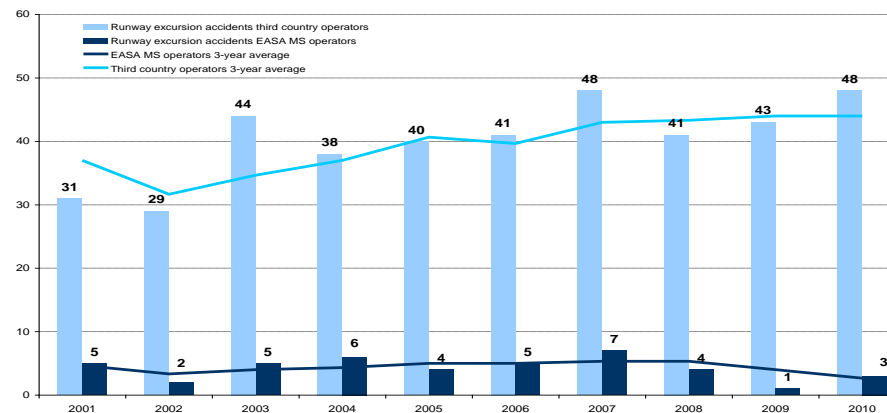
Finally ICAO and States should put more emphasis **harmonizing requirements for runway safety technologies**, and standardising their implementation and operation to ensure globally consistent services and interoperability, including at joint use civil-military aerodromes. A flight crew should not be left to interpret the intention of a locally developed system (for example: aerodrome visual aids). Standardised procedures are also needed for systems involving actions from several aerodrome stakeholders (e.g. FOD detection systems). Industry should also increase its consideration of **human factors when developing new technologies** to be used in aircraft operations at aerodromes.



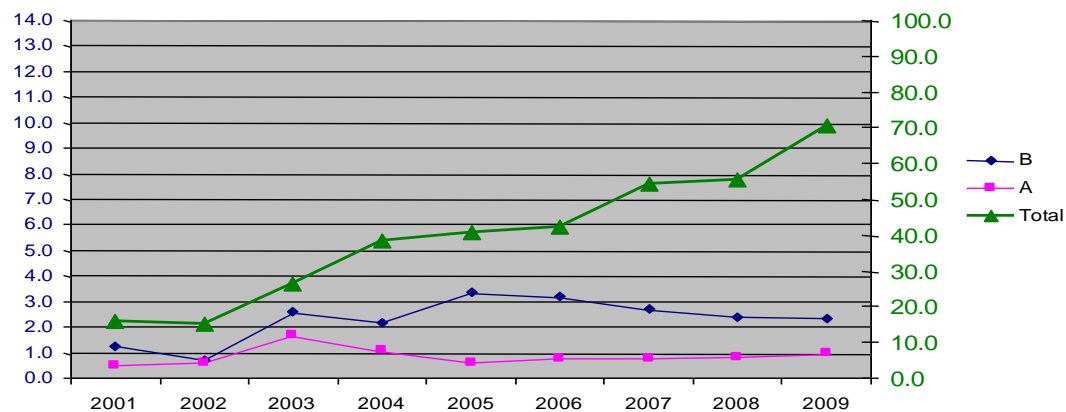
## European Runway Safety Statistics



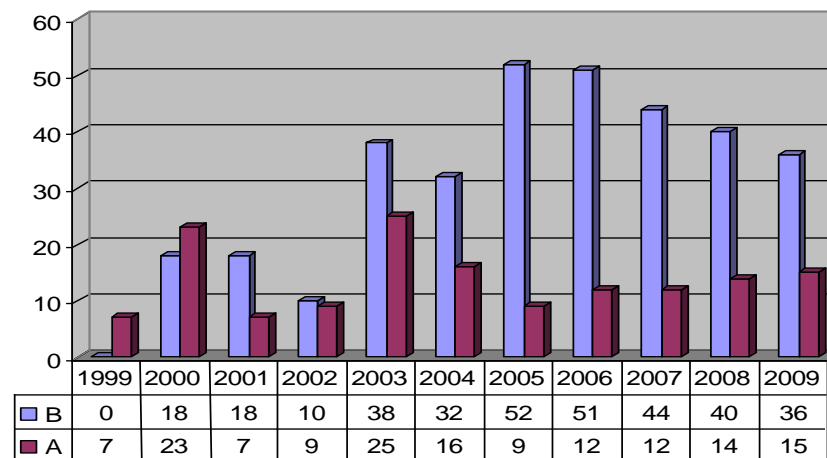
Percentage of accidents under RE, RAMP and ARC from total. Accidents in commercial air transport, fixed wing, MTOM over 2 250kg by State of Operator. Operators established in EASA participating States); (Source: EASA Annual Safety Review 2010)



Number of runway excursions and 3-year moving average. Accidents, commercial air transport, fixed wing aircraft, MTOM 5,700kg and above, by State of Operator; (Source: EASA Annual Safety Review 2010)



Runway incursions in Eurocontrol Member States (occurrence per million aircraft movements and severity according to ICAO classification); (Source: Eurocontrol)



Absolute numbers of Runway Incursions of severity A and B (according to ICAO classification) reported by Eurocontrol Member States; (Source: Eurocontrol)