



International Civil Aviation Organization

Global Runway Safety Symposium ICAO's Harmonization Initiatives

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Air Navigation Bureau

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Promoting Standardization

FIGHTING RUNWAY EXCURSIONS:

RUNWAY END SAFETY AREAS AND ARRESTING SYSTEMS

Recent research programmes and evaluations of actual aircraft overruns into arresting systems have demonstrated predictable and effective safety benefits. One good example is the Engineered Material Arresting System (EMAS), which has successfully arrested several aircraft overrunning runways in recent years.



Annex 14, Volume I—*Aerodrome Design and Operations* to the Convention on International Civil Aviation, contains international Standards and Recommended Practices (SARPs) requiring the provision of RESA to reduce the risk of damage to aircraft undershooting or overrunning a runway.

Recognizing the importance of the provision of RESA and the effectiveness of an arresting system, the ICAO Secretariat, with the assistance of the Aerodromes Panel, has made an amendment proposal to Annex 14, Volume I, to strengthen the requirement for RESA and to introduce arresting systems into the Annex.

According to the proposal, all types of runways are required to be provided with RESA, including non-instrument runways with code numbers 1 and 2. The introduction of arresting systems in relation to the provision of RESA offers additional mitigating measures to address aircraft overruns.

As proposed, the length of a RESA may be reduced where an arresting system is installed with demonstrated

performance that provides a level of protection at least equivalent to the prescribed RESA.

On 3 May, 2011, the Air Navigation Commission (ANC) completed its preliminary review of the proposed amendments on RESA and arresting systems, authorizing their transmission to Member States and appropriate international organizations for comment.

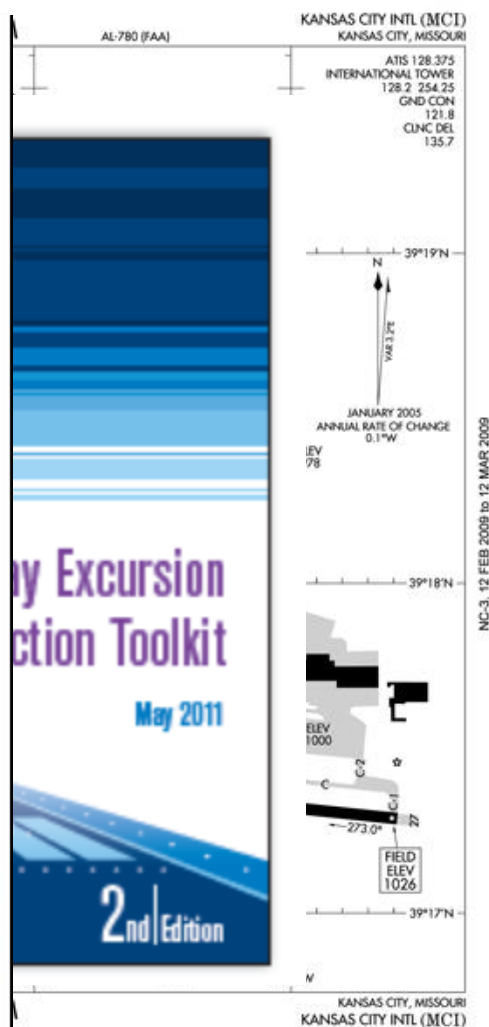
Based on the comments received and further analysis by the ICAO Secretariat, the ANC will conduct its final review of the proposed amendment on RESA and arresting systems and will submit its recommendation to Council for adoption. It is envisaged that this amendment will become applicable toward November 2012.

Associate guidance material will be included in Doc 9157—*Aerodrome Design Manual, Part 1—Runways*, after the proposed SARPs become applicable.



SAFETY

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Monitoring Standardization

USOAP Audit Areas

primary aviation legislation and civil aviation regulations

civil aviation organization

personnel licensing and training

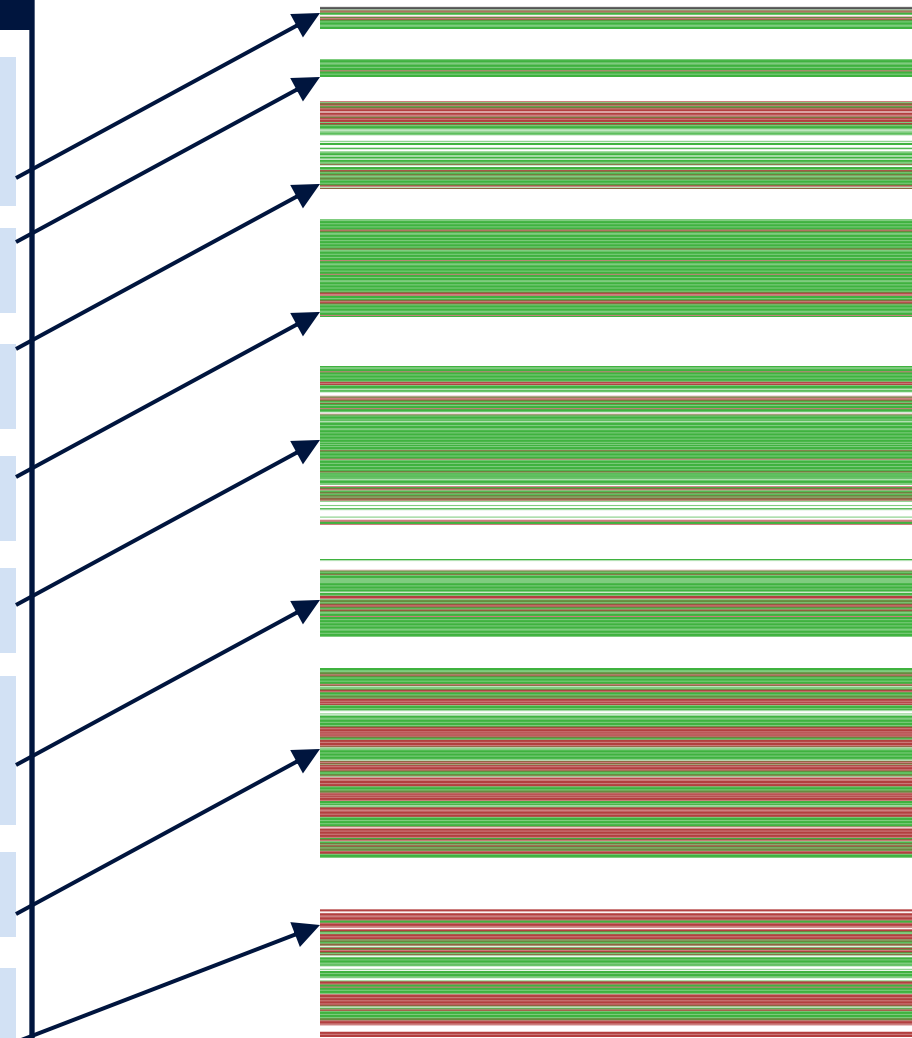
aircraft operations

airworthiness of aircraft

aircraft accident and incident investigation

air navigation services

aerodromes



Monitoring Standardization

Focus on specific areas related to Runway Safety

Air navigation services

Aerodromes

Worldwide deficiencies in implementation of ICAO Standards



Air navigation services

➤ *Air traffic management*

CAA oversight - Organization, staffing and training: 72%

➤ *Air traffic management*

Operational - Safety management: 60%

Aerodromes

➤ *Organization, staffing and training of the aerodrome regulatory authority: 69%*

➤ *Technical and administrative guidance and equipment: 72%*

➤ *Safety management systems: 76%*

Ensuring a Multidisciplinary Approach

Facilitating Information Exchange:

✈️ **Code of Conduct**

- High-level principles to ensure appropriate sharing and use of safety information

✈️ **Safety Information Protection Task Force**

- Recommendations for ICAO to ensure availability of safety information, consistent with legal / judicial requirements
- Communication and outreach strategies being developed
- Deliverables expected within 18 months

✈️ **Technical Harmonization Study Group**

- Development of common safety metrics and analysis methods
- Requirements for interoperable tools and information systems
- Work planned to begin early next year

Harmonizing & sharing information

SECTION A: INITIAL NOTIFICATION

OCCURRENCE

FILING

State Reporting: *	▼	State File #:	
Reporting Org.:		Date (dd/mm/yyyy):	
Scope of Investigation:			
Report Moderator:			
Telephone:		Email:	*

CLASSIFICATION

Occurrence Class*: <input type="radio"/> Accident <input type="radio"/> Serious Incident <input type="radio"/> Incident <input type="radio"/> Not Determined	Occurrence Category (choose where applicable, min. 1 category)*: <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> ARC</td> <td><input type="checkbox"/> RAMP</td> <td><input type="checkbox"/> LOC-G</td> <td><input type="checkbox"/> EVAC</td> </tr> <tr> <td><input type="checkbox"/> BIRD</td> <td><input type="checkbox"/> RE</td> <td><input type="checkbox"/> TURB</td> <td><input type="checkbox"/> SEC</td> </tr> <tr> <td><input type="checkbox"/> CFIT</td> <td><input type="checkbox"/> RI-A</td> <td><input type="checkbox"/> FUEL</td> <td><input type="checkbox"/> CABIN</td> </tr> <tr> <td><input type="checkbox"/> CTOL</td> <td><input type="checkbox"/> RI-VAP</td> <td><input type="checkbox"/> ADRM</td> <td><input type="checkbox"/> AMAN</td> </tr> <tr> <td><input type="checkbox"/> F-NI</td> <td><input type="checkbox"/> SCF-NP</td> <td><input type="checkbox"/> LALT</td> <td><input type="checkbox"/> LOLI</td> </tr> <tr> <td><input type="checkbox"/> GCOL</td> <td><input type="checkbox"/> SCF-PP</td> <td><input type="checkbox"/> F-POST</td> <td><input type="checkbox"/> UIMC</td> </tr> <tr> <td><input type="checkbox"/> LOC-I</td> <td><input type="checkbox"/> USOS</td> <td><input type="checkbox"/> WSTRW</td> <td><input type="checkbox"/> GTOW</td> </tr> <tr> <td><input type="checkbox"/> MAC</td> <td><input type="checkbox"/> ATM</td> <td><input type="checkbox"/> ICE</td> <td><input type="checkbox"/> EXTL</td> </tr> <tr> <td></td> <td></td> <td></td> <td><input type="checkbox"/> UNK</td> </tr> </table>	<input type="checkbox"/> ARC	<input type="checkbox"/> RAMP	<input type="checkbox"/> LOC-G	<input type="checkbox"/> EVAC	<input type="checkbox"/> BIRD	<input type="checkbox"/> RE	<input type="checkbox"/> TURB	<input type="checkbox"/> SEC	<input type="checkbox"/> CFIT	<input type="checkbox"/> RI-A	<input type="checkbox"/> FUEL	<input type="checkbox"/> CABIN	<input type="checkbox"/> CTOL	<input type="checkbox"/> RI-VAP	<input type="checkbox"/> ADRM	<input type="checkbox"/> AMAN	<input type="checkbox"/> F-NI	<input type="checkbox"/> SCF-NP	<input type="checkbox"/> LALT	<input type="checkbox"/> LOLI	<input type="checkbox"/> GCOL	<input type="checkbox"/> SCF-PP	<input type="checkbox"/> F-POST	<input type="checkbox"/> UIMC	<input type="checkbox"/> LOC-I	<input type="checkbox"/> USOS	<input type="checkbox"/> WSTRW	<input type="checkbox"/> GTOW	<input type="checkbox"/> MAC	<input type="checkbox"/> ATM	<input type="checkbox"/> ICE	<input type="checkbox"/> EXTL				<input type="checkbox"/> UNK
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Local Date (dd/mm/yyyy):	*		Local Time (hh:mm):
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Location of Occurrence: Near					
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Longitude: Deg		/ Min	/	<input type="radio"/> East	<input type="radio"/> West

Improving reporting
and information
sharing techniques

North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montreal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Office
Bangkok



Thank you