



# Runway Safety

ICAO has been called upon by the international civil aviation community to lead the collaborative effort required to reduce the number of runway-related accidents and incidents worldwide. Starting with the Global Runway Safety Symposium (GRSS) in 2011, we have continued to bring the community together to raise awareness and share information supporting effective solutions.

As a result of the GRSS, ICAO and its **Runway Safety Programme Partners** (listed below) have been working together to minimize the risks of runway incursions, runway excursions and other events linked to runway safety by establishing, promoting and enhancing multi-disciplinary runway safety teams at individual airports. Collaboration has also supported the development of comprehensive runway safety toolkits and the conducting of regional runway safety seminars.



Largely as a result of these collaborative efforts, in 2012 the percentage of runway safety-related accidents was reduced significantly, accounting for only 11 per cent of all fatal accidents and one per cent of all related fatalities. This represents a major decrease from the 2006–2011 baseline period.

## Runway Excursions: Runway End Safety Areas (RESA) 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.

The ICAO Council adopted an amendment proposal, as part of Amendment 11 to Annex 14, Volume I with an applicability date of 14 November 2013, to strengthen the requirement for RESA and to introduce arresting systems into the Annex. Associated guidance material will be included in Attachment A of Annex 14, Volume I and in the Aerodrome Design Manual, Part 1 — Runways (Doc 9157), projected to be available in late 2013.



## Runway Excursions: Friction Task Force

Runway contamination and related issues represent another major runway excursion risk category. On the basis of a multidisciplinary approach to address runway safety, ICAO established the Friction Task Force (FTF) in 2008. The FTF has completed phase 1 of its review related to methods used to assess and report runway friction characteristics, the use of measured friction values for flight operation purposes, and the removal of contaminants in a timely manner. It has proposed amendments to Annexes 14 and 15 which have been adopted by the Council with an applicability date of 14 November 2013. It has also delivered Circular 329—*Assessment, Measurement and Reporting of Runway Surface Conditions*.

Building on past and current initiatives by ICAO Member States, the FTF will now be looking at harmonizing terms and definitions used for promulgating information on runway surface conditions in a manner that can be easily used by flight crews when calculating aircraft takeoff and landing performance. The outcomes of this work are expected by 2014.

## Runway Incursions

ICAO's focus on runway incursion prevention efforts dates back in 2001 when the Air Navigation Commission (ANC) requested the Secretariat to launch an education and awareness campaign. This programme commenced in 2002 with a series of seminars coordinated with ICAO's Regional Offices and was followed-up with the distribution of two new runway incursion mitigation instruments: the ICAO Runway Safety Toolkit (2005); and Doc 9870 —*Manual on the Prevention of Runway Incursions* (2007).

Contemporary approaches to help prevent runway incursions include strict adherence to the radiotelephony procedures of Annex 10, Volume II—*Aeronautical Communications*, in conjunction with the relevant ATC and flight crew procedures of PANS-ATM (Doc. 4444). Significant support to the application of such procedures can be derived through use of Surface Movement Guidance and Control Systems (SMGCS) and Advanced SMGCS (A-SMGCS), including surface movement radar, ADS-B and multilateration and other possible sensors. Relevant guidance is provided in the ICAO SMGCS Manual (Doc 9476), A-SMGCS Manual (Doc 9830) and Manual of Radiotelephony (Doc 9432).

Local Runway Safety Teams have also proven highly successful at mitigating the risks of runway incursions, providing a collaborative solution which regulators, air navigation service providers, airline and airport operators and aircraft manufacturers have all positively contributed to. ICAO's new Runway Safety Team Handbook (available at: [www.icao.int/safety/RunwaySafety/Pages/Toolkits.aspx](http://www.icao.int/safety/RunwaySafety/Pages/Toolkits.aspx)) serves as a comprehensive reference document supporting this work.



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For more information on ICAO's Runway Safety efforts, please visit:

[www.icao.int/safety/runwaysafety](http://www.icao.int/safety/runwaysafety)

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