



Agenda Item 3: Air Navigation Matters
3.3 Specific Developments in Air Navigation
• **Aerodromes**

ENHANCE RUNWAY SAFETY

(Presented by the Secretariat)

SUMMARY

Runway safety is a collective responsibility encompassing different organizations (aerodrome operator, air navigation service provider (ANSP) and airline) as well as individuals (controller, pilot, vehicle operator).

This paper provides the meeting with guidelines for the prevention and mitigation of diverse occurrences related to Runway Safety from the aerodromes point of view and the importance of gathering information from State's aerodromes to analyze current conditions at their airfields in support of the aerodromes regional project Enhance Runway Safety. A State Letter EMX0375 dated 3 May 2012, was sent to States requiring information from the aerodrome operators to fill out the questionnaire attached to this working paper and to return it to the ICAO NACC Regional Office by 16 July 2012.

References:

- ICAO High Level Safety Conference (HLSC 2010)
- ICAO Global Runway Safety Symposium (GRSS 2011)
- ICAO/FAA/IFATCA Regional Runway Safety Seminar for the NAM/CAR/SAM Regions (Miami, United States, 12-14 October 2011) (<http://www.mexico.icao.int/Meetings/Meetings.html>)
- ICAO Doc. 9870 –*Manual on the Prevention of Runway Incursion*.
- EUROCONTROL - *Airport Safety, preventing runway incursions European Action Plan for the prevention of runway incursions*
- State Letter EMX0375 dated 3 May 2012

Strategic Objective	This working paper is related to Strategic Objective A.
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1. Introduction

1.1 A wide range of factors contributes to runway incursions/excursions including less-than perfect aerodrome design, technology, procedures, training, regulations and human error. While incidents continue occurring due to runway incursions and excursions, these will have catastrophic consequences and airport authorities will need to keep their efforts towards the reduction of these occurrences.

1.2 Considering that the Regional Aviation Safety Group – Pan America (RASG-PA) includes runway excursions as part of its runway safety work programme through Safety Enhancement Initiatives (SEIs), RASG-PA leads the implementation of RSTs in Pan America. However, the GREPECAS aerodromes project F-3 – *Enhance Runway Safety* as described in this working paper provides a different approach with regard to RASG-PA work programme.

1.3 The regional project “Enhance runway safety” under the GREPECAS aerodrome programme is focused on aerodromes and not on air traffic control (ATC) factors. For example, for Runway Incursions (RI), there are three types of incidents: operational ATC, pilot deviations (PD) and vehicle/pedestrian deviations (V/PDs). This project will only focus on items under aerodrome control and not on ATC control. It has three parts consisting of: Runway Incursion/mitigation, Runway Excursion and the graded runway strip and runway end safety area (RESA). The 3 parts are interrelated as follows: before entering a runway, landing on a runway and excusing off the runway.

2. Discussion

2.1 For exhaustive analysis of current conditions at aerodrome airfields and its level of compliance with ICAO SARPS, States were required to provide the information contained in the questionnaire attached to this paper from their aerodromes and return it to ICAO NACC Regional Office by 16 July 2012 (State Letter EMX0375 dated 3 May 2012).

2.2 With regards to the work programme of the regional project Enhance runway safety and the information required in the questionnaire, Part 1 focuses on the inventory of each taxiway entrance to the runway, it also includes the geometry of the entrance taxiway and the signage, marking and lighting of the runway holding position (stop bar, runway guard lights), at the location of the runway holding position. This part also includes the daily inspection to be done by airport operators to the airside: taxiway entrances for marking, signage and lighting.

2.3 Part 2 focuses on mitigating airplane excursions by providing good surface conditions of the runway, avoid surface contamination, providing recommended longitudinal grades and changes, repaint faded markings and replacing inoperative runway lighting, as well as daily inspections. One of the F-3 project major problems for runway excursions is rubber built-up under wet conditions. In this regards the project will provide States experiences for rubber built-up removal.

2.4 Part 3 focuses on mitigating damage to airplane running off the runway by compliance of graded portion of runway strip and runway end safety areas (RESAs) with Annex 14, Vol. I. For determining non-compliant facilities, the GANDD deficiencies database will be used to gather information on what is the specific deficiency with the RUNWAY strip and RESA and to group the types of deficiencies. For example, an open ditch, brushes and other objects cause deficiencies.

2.5 For insufficient RESAs that cannot be fully corrected, the project will provide guidance material in the use of declare distances and possible installation of EMAS. ICAO Annex 14, Vol. I recognize these solutions for non-standard RESA.

2.6 The components of this programme and guidance material may help airport operator achieve airport certification. Also part 1 allows the use of SMS to rectify improper installation of signs in entrances to the runway (runway holding position) among other issues.

3. Recommendations

3.1 The Meeting is invited to:

- a) take note of the information provided in this working paper;
- b) urge E/CAR States to provide the information contained in the attached questionnaire to this working paper, in coordination with their aerodrome operators and return it back to ICAO NACC Regional Office by **16 July 2012**; and
- c) suggested actions by the meeting.

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