



Fifth Meeting of the Programmes and Projects Review Committee (PPRC/5)
 Mexico City, Mexico, 16 to 18 July 2019

Agenda Item 9: Other business

NEW GLOBAL REPORTING FORMAT FOR RUNWAY CONDITIONS

(Presented by the Secretariat)

EXECUTIVE SUMMARY

The new ICAO GLOBAL REPORTING FORMAT (GRF) for reporting runway conditions is a comprehensive standardized report relating to runway surface condition(s) and its effect on the aeroplane landing and take-off performance that was developed by ICAO and adopted by its Council for global implementation by November 2020.

This paper aims to raise awareness of these new provisions, its challenges and related resources for States and Industry to successfully implement and get the benefits of this harmonized format that aims to reduce runway excursions.

<i>Strategic Objectives:</i>	<ul style="list-style-type: none"> • Safety
<i>References:</i>	<ul style="list-style-type: none"> • <i>ICAO Global Aviation Safety Plan (GASP)</i> • <i>ICAO Global Runway Safety Action Plan</i> • <i>ICAO Annex 3 — Meteorological Service for International Air Navigation</i> • <i>ICAO Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes and Part II — International General Aviation — Aeroplanes</i> • <i>ICAO Annex 8 — Airworthiness of Aircraft</i> • <i>ICAO Annex 14 Vol. I – Aerodromes</i> • <i>ICAO Annex 15 — Aeronautical Information Services</i> • <i>ICAO PANS-AIM — Doc 10066</i> • <i>ICAO PANS-ATM — Doc 4444</i> • <i>ICAO PANS-Aerodromes — Doc 9981</i> • <i>ICAO CIR 355</i>

1. Introduction

1.1 The GASP has acknowledged that Runway Safety still is the main accident category for all regions, so, Runway Safety is considered a global safety priority. Within Runway Safety, Runway Excursion (RE) is identified as the highest risk category.

1.2 An analysis by ICAO on the Accident/Incident Reporting (ADREP) statistics indicated that on a 10-year period, from 1995 to 2005, there have been nearly 200 cases of reported overrun in which in many cases inadequate runway friction characteristics was the primary cause or at least a contributing factor. Due to this, the Friction Task Force, a multidisciplinary task force supported by several organizations and technical bodies, was created on 2008 to focus on this task.

1.3 In the Pan-America Region, the results of the regional aviation safety data continue to show that RE is on the top categories to focus safety enhancement initiatives. In addition, the latest Regional Aviation Safety Group – Pan America (RASG-PA) Annual Safety Report shows that poor braking action still accounts as a top contributing factor to RE.

1.4 In response to this global problem, the Friction Task Force developed a globally-harmonized methodology for runway surface condition assessment and reporting as a mitigation measure to reduce excursions globally. A World-wide implementation was agreed to be applicable by November 2020.

2. The new provisions

2.1 ICAO, through State Letter *AN 4/1.2.26-16/19*, from April 2016, informed States on the adoption by the Council of Amendment 13 to the International Standards and Recommended Practices, *Aerodromes — Aerodrome Design and Operations* (Annex 14, Volume I to the Convention on International Civil Aviation).

2.2 When adopting the amendment, the Council resolved that provisions related to an enhanced global reporting format for assessing and reporting runway surface conditions would become applicable on 5 November 2020 (Amendment 13-B)

2.3 The amendment concerning enhanced global reporting format for assessing and reporting runway surface conditions is designed to report runway surface conditions in a standardized manner such that flight crew are able to accurately determine aeroplane take-off and landing performance, resulting in a global reduction in RE incidents/accidents. The proposal provides a solution to a long outstanding issue of relating aeroplane performance to runway state information in a more objective way.

2.4 When implementing the provisions concerning the enhanced global reporting format, it is essential that these changes be made in close coordination with those to:

- *Annex 3 — Meteorological Service for International Air Navigation,*
- *Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes and Part II — International General Aviation — Aeroplanes,*
- *Annex 8 — Airworthiness of Aircraft,*
- *Annex 15 — Aeronautical Information Services,*
- *Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066),*
- *Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM, Doc 4444), and*
- *Procedures for Air Navigation Services — Aerodromes (PANS-Aerodromes, Doc 9981).*

3. Stakeholder Responsibilities

3.1 Based on the ICAO provisions, different players have not the same responsibilities:

- **Aerodrome operators** assess the runway surface conditions, including contaminants, for each third of the runway length, and report them by means of a uniform Runway Condition Report (RCR)
- **Air Traffic Services (ATS)** convey the information received via RCR and/or Special Air-Reports (AIREP) to end users (voice communications, ATIS, CPDLC)
- **Aeronautical information services (AIS)** provide the information received in the RCR to end users (SNOWTAM)
- **Aircraft operators** utilize the information in conjunction with the performance data provided by the aircraft manufacturers to determine if landing or take-off operations can be conducted safely and provide runway braking action special air-reports (AIREP)
- **Aircraft Manufacturers** provide the necessary performance data in the aeroplane flight manual

4. Methodology – Runway Condition Report (RCR)

4.1 The methodology for assessing and reporting runway surface conditions is focused around RCR. The RCR is basically a comprehensive standardized report related to runway surface condition(s) and its effect on the aeroplane landing and take-off performance.

4.2 The RCR has been designed to report runway surface condition in a standardized manner. A common language/phraseology among all stakeholders is used to avoid confusion. This RCR will allow flight crews to calculate their landing and take-off performance based on more comprehensive runway surface condition assessment by the aerodrome operator and guidance from manufacturers.

4.3 The RCR is also important for aerodrome operators to remove contaminants as quickly as possible before assessing and reporting. However, depending on the geographical locations, States may not need to use the full reporting format, as there are two scenarios:

- not be exposed to snow and ice and thereby have no need to use the full global reporting format other than for water; or
- be fully prepared to use the global reporting format (fully equipped, fully trained).

4.4 Further detailed information on the RCR, is given on the references section of this paper.

5. ICAO Strategy

5.1 It has been identified that challenges for implementation will be mostly on the airports, due to the complex set of stakeholders, language, culture, among others.

5.2 Also, this will impact most States, as for some this is a relative new topic, especially for States without “winter conditions” (snow, ice, frost, etc.). The implementation experiences in the USA and Canada have shown that it can be difficult to reach all stakeholders and bring them on board (each has a wide range of airports, large and small, in a variety of locations and with differing local conditions).

5.3 In order to support implementation, ICAO has developed a strategy that included the generation of Standards and Recommended practices, along with guidance material (including training guidance) to support States. A list of related resources can be found on **Appendix A** to this paper.

5.4 On March 2019, ICAO deployed its Global GRF Symposium at ICAO HQ in Montreal, with the participation of over 350 delegates from around the World. This Global Symposium aimed to increase awareness and knowledge of the GRF, understand the ICAO SARPS, PANS training needs, awareness of the implementation challenges and exchange of best practices. More information and the presentations delivered at the symposium are available at <https://www.icao.int/Meetings/grf2019/Pages/default.aspx>.

5.5 ICAO Strategy included a series of Regional events as a follow-up of the global event. The ICAO SAM regional office is organizing one of these events to be held at Lima in August 21-22 with the support of ACI-LAC, CANSO, FAA and AIRBUS. Registration is open at: <https://www.icao.int/SAM/Pages/MeetingsDocumentation.aspx?m=2019-GRF>.

5.6 To support implementation, ACI in coordination with ICAO has developed a computer based training course, which is available (only in English) online at: <https://www.olc.aero/product/icao-global-reporting-format/>

5.7 Finally, at the SAM Regional level, the SRVSOP (Regional Safety Oversight Organization) has prepared model regulation and guidance material for operators based on ICAO provisions, which was reviewed on the latest Regional Aerodrome Experts Panel on Brasilia, Brazil in late May. After the corresponding review phases this documentation will be finalized and distributed to SRVSOP member States. Draft versions of these documents could be found on the SRVSOP public website under working papers 19 and 20 (in Spanish only) at: https://www.srvsop.aero/paneles_de_expertos/decimotercera-reunion-del-panel-de-expertos-en-aerodromos-rpeaga-13/.

5.8 ICAO will continue supporting the new reporting format implementation with an enhanced implementation workshop planned for 7-9 April 2020 in the ICAO NACC Regional Office and based on best practices and existing guidance material will assist states/airports in its implementation.

APPENDIX RESOURCES

- *Annex 3 — Meteorological Service for International Air Navigation,*
- *Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes and Part II — International General Aviation — Aeroplanes,*
- *Annex 8 — Airworthiness of Aircraft,*
- *Annex 15 — Aeronautical Information Services,*
- *Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066),*
- *Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM, Doc 4444), and*
- *Procedures for Air Navigation Services — Aerodromes (PANS-Aerodromes, Doc 9981).*
- Global GRF Symposium website: <https://www.icao.int/Meetings/grf2019/Pages/default.aspx>
- SAM Regional GRF event website: <https://www.icao.int/SAM/Pages/MeetingsDocumentation.aspx?m=2019-GRF>
- ACI-ICAO global reporting format online course: <https://www.olc.aero/product/icao-global-reporting-format/>
- SRVSOP Expert Panel Meeting 13, Working papers 19 and 20: https://www.srvsop.aero/paneles_de_expertos/decimotercera-reunion-del-panel-de-expertos-en-aerodromos-rpeaga-13/



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