



WORKING PAPER

FOURTEENTH AIR NAVIGATION CONFERENCE

Montréal, Canada, 26 August to 6 September 2024

- Agenda Item 2: Timely and safe use of new technologies**
2.3: 2026-2028 Edition of the Global Aviation Safety Plan (GASP)

**STRENGTHEN THE GLOBAL RUNWAY SAFETY COLLABORATIVE FRAMEWORK
THROUGH ICAO AND INDUSTRY PARTNERSHIP**

(Presented by Brazil, Singapore, the United Kingdom, Airports Council International (ACI), Civil Air Navigation Services Organisation (CANSO), Flight Safety Foundation, International Air Transport Association (IATA), International Federation of Air Line Pilots' Associations (IFALPA) and International Federation of Air Traffic Controllers' Association (IFATCA))

EXECUTIVE SUMMARY

ICAO has established the Runway Safety Programme Partnership. The Runway Safety Programme partners' activities and deliverables complement the ICAO led policy setting as defined by the *Global Aviation Safety Plan* (GASP, Doc 10004). The Runway Safety Programme partners developed a Global Runway Safety Action Plan (GRSAP), with its second edition published in February 2024, which provides recommended actions for all runway safety stakeholders.

The Flight Safety Foundation, along with a wide coalition of industry partners, within the ICAO Runway Safety Programme, led the development and publication of the Global Action Plan for the Prevention of Runway Excursions (GAPPRE), as well as the Global Action Plan for the Prevention of Runway Incursions (GAPPRI). These documents represent the industry consensus on best practices and action opportunities for managing risk and resilience associated with runway excursions and incursions.

This paper emphasizes the need for ICAO to maintain continuous leadership in addressing runway safety and for States, in collaboration with ICAO and industry partners, to further develop provisions for the establishment and implementation of State runway safety programmes leveraging GRSAP, GAPPRE and GAPPRI.

Action: The Conference is invited to agree to Recommendation 2.3/x — Strengthen the global runway safety collaborative framework through ICAO and industry partnership in paragraph 4.

<i>Strategic Objectives:</i>	This working paper relates to the Safety Strategic Objective.
<i>Financial implications:</i>	Not applicable.
<i>References:</i>	ICAO Doc 10004, <i>Global Aviation Safety Plan</i> ICAO Runway Safety Programme – <i>Global Runway Safety Action Plan, Second Edition, February 2024</i>

	ICAO Doc 10161, <i>Global Aviation Safety Roadmap 2023-2025</i> <i>“Global Action Plan for the Prevention of Runway Excursions (GAPPRE)”</i>, Flight Safety Foundation, May 2021 <i>“Global Action Plan for the Prevention of Runway Excursions (GAPPRI)”</i>, Flight Safety Foundation, December 2023
--	---

1. INTRODUCTION

1.1 Runway safety events, particularly runway excursions and incursions, continue to rank among the top safety risk categories in civil aviation.

1.2 The *Global Aviation Safety Plan* (GASP, Doc 10004) provides the policy framework for the development of the regional, subregional and national plans, ensuring consistency, harmonization and coordination of efforts aimed at improving international civil aviation safety.

1.3 The ICAO Runway Safety Programme Partnership complements the policy established by the GASP. It provides actions and deliverables that address runway safety risk and resilience through broader global collaboration, offering best practices, specific action opportunities and implementation knowledge.

1.4 It is important that ICAO ensure the continuity of leadership in addressing runway safety, including Runway Safety Programme, and that States working with ICAO and industry, further develop provisions on the establishment and implementation of State runway safety programmes leveraging the industry consensus about runway excursion and incursion risk and resilience management reached through the [Global Runway Safety Action Plan \(GRSAP\)](#), the [Global Action Plan for the Prevention of Runway Excursions \(GAPPRE\)](#), and the [Global Action plan for the Prevention of Runway Incursions \(GAPPRI\)](#).

2. DISCUSSION

2.1 The ICAO GASP lists runway excursion and runway incursions among the five highest-risk categories of events that must be addressed to reduce the possibility of aviation fatalities.

2.2 Flight Safety Foundation 2023 Safety Report identifies runway excursion as one of the most frequent accident types in aviation and runway incursion as one of the most serious safety threats to be addressed in aviation. International Air Transport Association (IATA) has also identified runway safety as one of the biggest threats to aviation safety in their 2023 Annual Safety Report. The report emphasizes that implementing proactive measures to enhance runway safety continues to be a top priority.

2.3 Runway incursion is the main precursor to be managed to prevent collision on the runway. The potential consequences of a runway collision are very serious if it involves fast, high energy jet planes moving on a relatively confined runway strip. Unlike having the airborne collision avoidance system (ACAS) as the last technological barrier in the skies, there is nothing as universally implemented to serve as the last line of defence against runway collision.

2.4 The GASP provides the policy framework for the development of regional, subregional and national plans, ensuring consistency, harmonization and coordination of efforts aimed at improving international civil aviation safety.

2.5 ICAO has established the Runway Safety Programme Partnership. The activities and deliverables of the Runway Safety Programme partners complement the policy setting led by ICAO, as defined by the GASP. Runway safety stakeholders are undertaking initiatives to raise awareness and train runway safety team (RST) members, such as the International Federation of Air Line Pilots' Associations (IFALPA) RST training program. Through its established global network, IFALPA also collects information from airline pilots on local runway conditions and deficiencies, providing an additional resource for States.

2.6 Since the first ICAO Global Runway Safety Symposium held in Montréal, Canada, in May 2011, ICAO and the Runway Safety Programme partners have been collaborating to minimize and mitigate the risks associated with runway incursions, runway excursions and other runway safety events. In January 2017, the Runway Safety Programme partners established the Runway Safety Action Plan Working Group (RSAP-WG) with the aim of reviewing the Runway Safety Programme achievements, objectives and priorities and developing a Global Runway Safety Action Plan (GRSAP).

2.7 Through a review and analysis of runway safety occurrence data and risk assessments, the RSAP-WG identified runway excursions and runway incursions as primary high-risk occurrence categories in runway safety. This GRSAP provides recommended actions for all runway safety stakeholders, aimed at reducing the global rate of runway excursions and runway incursions. Initially published in 2017, the GRSAP was reviewed and updated by the Runway Safety Programme partners in 2022, leading to the publication of a revised version in February 2024.

2.8 The GRSAP provides recommended actions for all runway safety stakeholders, including ICAO, the Runway Safety Programme partners, State civil aviation authorities (CAAs), Regional Safety Oversight Organizations (RSOOs), Regional Aviation Safety Groups (RASGs), aircraft operators, aerodrome operators, air navigation services providers (ANSPs), and the aerospace industry.

2.9 State runway safety programmes can cover a range of activities aimed at improving runway safety including, for example, the establishment of airport runway safety teams. These programmes should enable States to engage airports and industry stakeholders in addressing runway safety risks within an aviation system.

2.10 While these programmes may vary in format among different States, the ICAO Runway Safety Programme recommends that they be based on the principles of safety management systems (SMS) and include participation from relevant runway safety stakeholders. The GRSAP and the *Global Aviation Safety Roadmap 2023-2025* (Doc 10161) provide specific recommendations to States in addressing runway safety through various activities.

2.11 The RSP promotes the establishment of multidisciplinary RSTs at airports as an effective means to reduce runway-related accidents and incidents. The requirement for airports to establish an RST was one of the main outcomes of the first ICAO Global Runway Safety Symposium. Since 2011, the establishment of effective RSTs has helped to significantly reduce the runway safety related risks globally and is now included in ICAO's *Procedures for Air Navigation Services — Aerodromes* (Doc 9981) as a key responsibility of aerodrome operators.

3. GAPPRI AND GAPPRE ACTION OPPORTUNITIES

3.1 Regions and the States face unique challenges related to the risk of runway excursion and runway incursion. These challenges are addressed through their own regular risk and resilience analysis, which help to identify specific operational safety risks, sources of resilience and appropriate mitigations.

3.2 Given the global nature of civil aviation and the limited local learning opportunities, the efficiency and timeliness of local risk and resilience analysis can only be ensured when supported by a broader, global knowledge management. This approach keeps States and regions informed about the global spectrum of potential risk scenarios, action opportunities and proven best practices.

3.3 Due to the complexity of the risk factors, which involve various segments of the aviation industry – including aircraft operators, aerodrome operators, aircraft manufacturers and ANSPs – preventing runway excursions and incursions requires a synchronised approach, involving commitment of and coordination among numerous stakeholders.

3.4 To respond to the challenges arising from the local specificity of the risk and resilience profile, the necessity for broad, global knowledge management, and the need for a synchronized approach, the collaborative framework established through the ICAO Runway Safety Programme Partnership has been further strengthened by the development of new industry initiatives such as GAPPRE and GAPPRI, which synthesise the current industry consensus on risk and resilience action opportunities and best practices.

3.5 The Flight Safety Foundation, along with a wide coalition of industry partners, within the ICAO Runway Safety Programme, led the development and publication of the GAPPRE, and the GAPPRI. This collaborative approach involved participation from aircraft operators, ANSPs, aerodrome operators, aerospace industry manufacturers, research and development organizations, and regulators. All these stakeholders were actively involved in the development the GAPPRI and GAPPRE.

3.6 Over 200 professionals from more than 80 organizations participated in sub-working groups led by the key partners including IATA, Airports Council International (ACI), the United States' Federal Aviation Administration (FAA), Civil Air Navigation Services Organisation (CANSO), European Organisation for the Safety of Air Navigation (EUROCONTROL), the United Kingdom CAA and the Flight Safety Foundation.

3.7 The approach adopted by the working group was knowledge-based and data-driven. Utilizing “Learning from All Operations”, a strategy pioneered by the FSF, the group expanded its focus from merely hazardous events to include learning from best practices.

3.8 The resulting GAPPRI and GAPPRE are a comprehensive, collaborative effort to enhance aviation safety. They are consensus-based documents, encompassing synchronized action opportunities and best practices that extend beyond mere regulatory compliance. They acknowledge the diversity in risk profiles and resilience among stakeholders and encourage the sharing of successful strategies. Additionally, they provide guidance and robust implementation roadmaps for various time horizons, ensuring adaptability to evolving aviation needs.

3.9 By addressing risk and resilience holistically, these action plans empower aviation stakeholders worldwide to proactively mitigate the risk of runway excursions and incursions, thereby fostering a safer and more resilient global aviation ecosystem. In this respect, States are invited to assess the relevance of the recommendations in the GRSAP, GAPPRE and GAPPRI against the local conditions and specific contexts, and, in consultation with the relevant runway safety stakeholders, develop requirements and activities aimed at improving runway safety through State runway safety programmes.

4. CONCLUSION

4.1 In light of the above, the Conference is invited to agree to the following recommendation:

Recommendation 2.3/x — Strengthen the global runway safety collaborative framework through ICAO and industry partnership

That States:

- a) note the progress made in the ICAO Runway Safety Programme in collaboration with the Runway Safety Programme Partners, including the publication of the second edition of the Global Runway Safety Action Plan (GRSAP);
- b) note the initiatives taken by the industry in the publication of the Global Action Plan for the Prevention of Runway Excursions (GAPPRE) and the Global Action Plan for the Prevention of Runway Incursion (GAPPRI), under the framework of the ICAO Runway Safety Programme Partners; and
- c) assess the relevance of the recommendations in the GRSAP, GAPPRE and GAPPRI against the local conditions and specific contexts, and, in consultation with the relevant runway safety stakeholders, develop requirements and activities aimed at improving runway safety through State runway safety programmes;

that ICAO:

- d) promote through various means of communication and engagement, the ICAO Runway Safety Programme Partnership, including GRSAP, GAPPRE and GAPPRI;
- e) ensure the continuity of leadership in addressing runway safety, including runway incursion and runway excursion, leveraging the collaborative ICAO Runway Safety Programme Partnership; and
- f) working with States and industry, further develop provisions on the establishment and implementation of State runway safety programmes.

— END —