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Regional Aviation Safety Group - Pan America (RASG-PA)

WORKING PAPER

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Fifteenth Meeting of the Regional Aviation Safety Group – Pan America (RASG-PA/15) and Fifth RASG-PA–GREPECAS Joint Meeting (RASG-PA–GREPECAS/5)
Mexico City, Mexico, 2 to 4 March 2026

Agenda Item 10: Safety Data Sharing

STRENGTHENING RASG-PA's SAFETY INTELLIGENCE THROUGH STATES' SDCPS SHARING AND COLLABORATIVE SAFETY TEAM (CST) PARTICIPATION

(Presented by the PA-RAST)

EXECUTIVE SUMMARY

This working paper addresses the need to expand safety data intake for the PA-RAST to support a comprehensive regional safety risk profile. Currently, the regional safety intelligence pool relies on a limited set of contributors, primarily the Aviation Safety Information Analysis and Sharing (ASIAS) system and IATA. To fulfil the RASG-PA's mission of data-driven safety management, it is imperative for Pan American States to participate in the voluntary sharing of high-level safety trends from their Safety Data Collection and Processing Systems (SDCPS) and leverage the analytical capabilities of participating Collaborative Safety Teams (CSTs). Additionally, drawing on the successful "Regional Data Sharing" initiative in Asia Pacific documented in DGCA-59/DP/3/5 and DGCA-60/DP/03/03, this paper outlines a framework for voluntary regional intelligence exchange that the Pan American region is encouraged to adopt.

Action:	The Meeting is invited to approve the recommendations in Section 3
Strategic Goals 2026-2050:	• Every flight is safe and secure • Aviation is environmentally sustainable • Aviation delivers seamless, accessible, and reliable mobility for all • No country left behind
References:	• ICAO Annex 19 – Safety Management • RASG-PA Procedural Handbook (5th Ed) • RASG-PA's CST Implementation Guidance • DGCA-59/DP/3/5: Enhancing Aviation Safety through Regional Data Sharing • DGCA-60/DP/03/03: Enhancing Aviation Safety through Regional Data Sharing

1. Introduction

1.1 The mission of RASG-PA is to reduce fatality risk in commercial aviation by ensuring prioritization, coordination, and implementation of data-driven safety enhancement initiatives (SEIs) in the Pan American Region.

1.2 To achieve this, RASG-PA must develop an integrated, data-driven strategy and implement a work program that supports a regional performance framework for the management of safety risk.

1.3 Currently, the intake of safety information could be improved. The current reliance on a limited set of contributors, specifically operators contributing data through the IATA and ASIAS frameworks, results in a limited picture of the Pan American safety landscape.

2. Discussion

2.1 The Strategic Necessity of State SDCPS Sharing

2.1.1 Per ICAO Annex 19, every State is required to establish and maintain a Safety Data Collection and Processing System (SDCPS).

2.1.2 The voluntary sharing of high-level intelligence from these systems is vital for regional safety.

2.1.3 States' SDCPS primarily capture high-level operational safety trends, such as Mandatory Occurrence Reports (MORs), hazard information, and accident data.

2.1.4 These high-level trends are essential for the PA-RAST High-Risk Category (HRC) Project Teams to identify regional contributing factors from the States' perspective and validate focus with safety partners.

2.1.5 By sharing these aggregates, States complement and close the gap in the safety information already being provided by operators via ASIAS and IATA, allowing for a more robust regional risk profile.

2.2 The Value-Add of Collaborative Safety Teams (CSTs)

2.2.1 While a mature SDCPS is a technical State capability, a CST is a distinct collaborative framework that enhances safety intelligence by bridging industry and the regulator.

2.2.2 CSTs provide the mechanism for industry and Civil Aviation Authorities (CAAs) to collaboratively assess and validate safety risk information.

2.2.3 States with active CSTs can share de-identified findings already validated by national stakeholders, ensuring high-quality intelligence for regional mitigation efforts.

2.3 The Problem: Data Silos and Regional Vulnerability

2.3.1 Without an increase in safety information contributions from States, RASG-PA cannot support a complete and comprehensive data-driven strategy for the region.

2.3.2 Incomplete safety information prevents the development of a 360-degree safety risk picture, potentially leaving emerging trends in sub-regions undetected.

2.3.3 HRC Project Teams (CFIT, MAC, RS, LOC-I Teams) may lack the diverse datasets needed to identify contributing factors across different operational contexts, leading to less effective mitigation.

2.4 Strategic Value and Regional Safety Intelligence

2.4.1 Participation in regional intelligence sharing acts as an early warning system, allowing States to access aggregated risk pictures to identify hazards before they manifest locally.

2.4.2 Participating States receive validated Safety Enhancements specifically tailored to contributing factors identified through regional analysis.

2.4.3 The expected flow of safety risk information allows States to validate regional findings within their national organizations to ensure local mitigation alignment.

2.5 Model for Adoption in the Panamerican Region: The "Regional Data Sharing" Initiative

2.5.1 Through the PA-RAST/Asia-Pacific Regional Aviation Safety Team (APRAST) collaborative initiative, a proven framework for adoption in the Pan American region has been identified based on the "Regional Data Sharing" initiative implemented by Indonesia, Malaysia, the Philippines, Singapore, and Thailand. PA-RAST recognizes this as a high-value model that the Pan American region should adopt to strengthen RASG-PA's intelligence.

2.5.2 *Nature of the Initiative*: As detailed in DGCA-59/DP/3/5, this is a voluntary, State-led pilot focused on the analysis of safety data and safety information from safety occurrence reports collected by States through their respective mandatory occurrence reporting systems.

2.5.3 *Controlled Scope and Selection*: Participating States share only what they feel comfortable with, having initially agreed on seven specific categories of safety occurrences determined by their relevance to regional high-risk categories.

2.5.4 *Agreed Categories*: Per DGCA-60/DP/03/03, categories include Traffic Collision Avoidance System - Resolution Advisory (TCAS-RA), deviations from ATC assigned altitude, Ground Proximity Warning System (GPWS) or Terrain Awareness and Warning System (TAWS), severe turbulence, windshear, bird strikes, and dangerous goods incidents.

2.5.5 *Proven Technical Capability:* Between January 2023 and February 2025, the participating States shared and analyzed more than 7,000 occurrences, yielding critical insights into regional safety patterns.

2.5.6 *Strategic Benefits to Participating States*:

2.5.6.1 *Identification of Emerging Hazards*: The initiative allows States to identify emerging hazards and risks beyond accidents and serious incidents.

2.5.6.2 *Regional Early Warning System*: Sharing qualitative information, such as sightings of migratory birds, acts as a proactive measure for aerodrome safety across borders.

2.5.6.3 *Refinement of Data Collection:* Analysis of consolidated data leads participating States to refine and enhance their own national data collection methodologies.

2.5.7 Strategic Benefits to RASG-PA:

2.5.7.1 Enhanced Regional Risk Picture: The initiative facilitates the identification of regional safety trends, such as patterns in GPWS alerts as precursors to Controlled Flight Into Terrain (CFIT).

2.5.7.2 *Standardization of Safety Intelligence*: The use of standardized taxonomies (CICTT) ensures compatibility of safety data across the region.

2.5.8 *Intent for Growth and Scalability:* Participating States have confirmed their intent to evaluate the inclusion of additional categories in the future, such as runway incursions, unstable approaches, and wildlife sightings.

2.5.9 *Strict Governance Model for Adoption*: To foster the necessary trust for adoption, a robust governance framework is required, as demonstrated in the Asia-Pacific initiative:

2.5.9.1 *Memorandum of Understanding (MOU):* Signed by each participating State, this document formalizes the commitment to share data solely for safety enhancement and not for enforcement purposes

2.5.9.2 *Two-Level De-identification Protocol*: Data provided by States does not identify specific organizations or personnel, and State anonymity is preserved via a central Data Custodian responsible for data collection and storage.

2.5.9.3 *Standardized Taxonomy*: All shared data aligns with the CAST/ICAO Common Taxonomy Team (CICTT) definitions to ensure accuracy and cross-regional compatibility.

3. Suggested Action

3.1 The Meeting is invited to:

a) Acknowledge that the current safety information intake could be improve to fully support the HRC Project Teams' analytical requirements and RASG-PA's data driven mission;

b) Encourage States with mature SDCPS and/or active CSTs to provide high-level operational safety trends and hazard information to the PA-RAST;

c) Recommend and invite the Pan American States to adopt this good practice, as documented in DGCA-59/DP/3/5 and DGCA-60/DP/03/03, assisted by the PA-RAST, to foster collaboration and enhance regional safety intelligence; and

d) Adopt the Safety Information Contribution Form in Appendix A as the standardized tool for State reporting.

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APPENDIX A
SAFETY INFORMATION CONTRIBUTION FORM

Field Category	Information Requested
Reporting Period	[Quarter/Year]
Top 3 Safety Hazards	Identify the top three hazards observed in national SDCPS (e.g., TCAS RA, GPWS/TAWS, Bird Strikes)
HRC Alignment	Indicate if these hazards align with RASG-PA's HRCs: CFIT, LOC-I, RI, RE, MAC, Others
CST Participation	Is there an active State-level CST contributing to this data? [Yes/No]
Incident Trends	Brief description of emerging operational safety trends

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APPENDIX B
USE CASE – LEVERAGING ATC PRECURSORS FOR REGIONAL MITIGATION

1. **State Submission**: A State Civil Aviation Authority (CAA) identifies a recurring trend in their national SDCPS of Minimum Safe Altitude Warning (MSAW) alerts during arrival phases at a specific mountainous aerodrome. The State submits the following high-level intelligence using the standardized form:

Field Category	**Information Provided in this Use Case**
Reporting Period	Q3 2025
Top 3 Safety Hazards	1. MSAW Alerts (ATC Precursors)
HRC Alignment	**CFIT** (Controlled Flight Into Terrain)
CST Participation	**Yes** — Validated by the National Collaborative Safety Team
Incident Trends	Observed 20% increase in MSAW alerts on the RNAV RWY 18 approach; precursors to potential CFIT events

2. **PA-RAST Action**:

- **Data Correlation:** PA-RAST cross-references the State's high-level ATS precursor data with de-identified regional industry data from operators via IATA, ASIAS and RASG-PA Safety Partners.
- **Identification of Root Cause**: The combined analysis identifies that a specific obstacle in the approach path is triggering the alerts due to a lack of chart clarity regarding step-down altitudes.

3. **Result:**

- **Mitigation**: Since PA-RAST identified similar trends at other locations thanks to submissions from other States, PA-RAST develops a Regional Safety Advisory (RSA) recommending specific chart enhancements and procedural revisions.
- **Outcome**: The States receives a data-backed solution to a critical safety risk identified through their SDCPS, and the Pan American region proactively mitigates a CFIT threat before an accident occurs.

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