RASG-PA ESC/28 — WP/07
20/04/17

Twenty-Eighth Regional Aviation Safety Group — Pan America Executive Steering Committee Meeting (RASG-PA ESC/28)

ICAO SAM Regional Office, Lima, Peru, 4 to 5 May 2017

Agenda Item 5: **RASG-PA Team Reports**
5.2   Annual Safety Report Team (ASRT)

RASG-PA ANNUAL SAFETY REPORT (ASR)

(Presented by the Secretariat)

<table>
<tr><td colspan="2" align="center">EXECUTIVE SUMMARY</td></tr>
<tr><td colspan="2">

This working paper presents to the Twenty- Eighth Regional Aviation Safety Group — Pan America Executive Steering Committee Meeting (RASG-PA ESC/28):
- the results of the review to the Annual Safety Report (ASR), sixth edition;
- the latest decisions of the RASG-PA Executive Steering Committee (ESC) regarding subsequent editions of the report;
- the distribution of the ASR sixth edition; and
- work plan for the production of the ASR seventh edition.

</td></tr>
<tr><td>Action:</td><td>Stated in paragraph 3.1 of this working paper</td></tr>
<tr><td><i>Strategic Objectives:</i></td><td>

- Safety

</td></tr>
<tr><td><i>References:</i></td><td>

- RASG-PA/02 Meeting Report
- RASG-PA Annual Safety Report
- RASG-PA/04 Meeting Report
- RASG-PA/ESC/16 Meeting Report
- ICAO Global Aviation Safety Plan (GASP)
- ISSG Global Aviation Safety Roadmap (GASR)

</td></tr>
</table>

1.   Introduction

1.1   The last edition of the ICAO Global Aviation Safety Plan (GASP) contains the following 4 safety areas that need improvement:

> ➢ standardization
> ➢ collaboration
> ➢ investment
> ➢ information sharing

1.2 These 4 areas should be addressed first with a safety oversight approach during an estimated implementation period until 2017, when States should have developed effective safety oversight systems to reach 60% compliance in ICAO safety audits, with the industry and the States exchanging safety information. The Bogota and the Port-of-Spain Declarations both pursue the goal of achieving 80% average compliance in the SAM and CAR Regions.

1.3 Between 2017 and 2022, all States should have implemented their SSP, and the RASGs should have incorporated safety management programmes.

1.4 Between 2022 and 2027, States should reach the necessary level to be able to work with predictive safety management system models.

1.5 This vision has been the basis for the work of RASG-PA since its creation, through the adoption of a proactive and/or predictive approach to risk assessment with a view to formulating safety strategies based on the safety information gathered and analysed.

1.6 Since its very beginnings, RASG-PA concluded that an annual safety report (ASR) should be developed in a context of **collaboration** and safety **information sharing**.

1.7 This report would contain 3 sections as follows:

> ➢ reactive;
> ➢ proactive; and
> ➢ predictive

1.8 The consecutive versions of the annual safety report reflect the transition from mainly reactive information to a balance among the three sections, which shows the maturity of the Pan American Region with respect to the capture, exchange, and analysis of safety data. The safety intelligence contained in the seventh edition of the report makes it possible to identify, focus on, and prioritize areas of interest for regional safety, in order to expedite the development and implementation of mitigation measures.

1.9 It is expected that the methodology used in the annual report for analysing reactive, proactive and predictive information, being consistent with Annex 19 to the Convention on International Civil Aviation, will be replicated by State Safety Programmes (SSP) to expedite the identification of trends, support decision-making, and measure the level of maturity attained by each management system.

2. **Methodology for the development of the ASR, based on a collaborative exchange of information**

2.1. The drafting of the RASG-PA Safety Annual Report requires an active participation by team members, leading to a joint analysis of safety data provided by the different sources of information, using for the assessment the metrics specifically developed for this purpose. Likewise, this will permit the establishment of a shared vision for the identification of the main areas of interest, classifying them by their origin into reactive, proactive or predictive.

2.2. From 6 to 17 June 2016, the team in charge of developing the ASR met at the ICAO South American Regional Office in Lima to work on the drafting of the ASR seventh edition. From 29 to 31 May 2017 the meeting of the ASR team has been programmed. Currently, the seventh edition is in the drafting phase, awaiting for the completion of mortality risk and accidents registered by Boeing for North America, and IATA data on TEM analysis by accident category, IOSA results and FDX data, estimating the final version will be available during the second quarter of 2017.

2.3. Boing informed that they have already finished classifying 2016 accidents (last April, during JIMDAT/CAST), which will make possible updating CAST global database and be in good foot to produce the regional accidents chart to include in the ASR seventh edition, while IATA indicated that the information is presently duly processed and validated for its incorporation into the report.

2.4. For the drafting of the seventh edition of the ASR, data provided by ICAO, Boeing, IATA, CARSAMMA, and the SRVSOP was used for the different sections of the report. The maturity of the safety data capture and analysis systems in the Pan American Regional considers new challenges, consistent with the information validation mechanisms optimization, in order to manage adequately safety data.

2.5. The seventh edition of the ASR shows that the main safety categories of interest in the Region are still Loss of control in flight (LOC-I), Runway excursions (RE), Controlled flight into terrain (CFIT), and Near miss collision/mid-air collision (MAC), showing a decreasing trend during the analysed periods, in accordance with the respective sources of reactive, proactive and predictive information used in each case.

2.6. Specifically, the reactive section contains valuable information on accident statistics for the period 2006-2015, showing the importance of LOC-I, CFIT and RE as the three main categories in the Region, and MAC as an emerging category, based on the mortality risk analysis.

2.7.   Regarding the section on proactive information, the assessment of compliance by States of ICAO standards and procedures based on the USOAP Programme shows that the average effective implementation increased from 65.2% in 2010 to 71.8% in November 2016, and that 10 States in the Pan American Region maintain an effective implementation (EI) of ICAO SARPs below 60%. The EI associated to the qualification and training of technical personnel continues to be the critical element with the lowest level of compliance, together with air navigation services surveillance (ANS) and ground aerodromes (AGA).

2.8.   One of the latent conditions identified in 2015 accidents registered by IATA is related to regulatory aspects. Though no direct relation was observed with USOAP most common findings, it would be interesting to conduct a specific study to improve safety decision making

2.9.   SRVSOP IDISR programme noticed that most common findings regarding platform inspections were maintenance activities. It appears to be interesting to explore possible correlation with latent conditions identified by IATA, regarding SOPs and verifications during maintenance operations, especially in CAR and SAM regions.

2.10.   In the other hand, the section on predictive information showed that precursors of RE, CFIT and MAC categories presented a decreasing trend during the assessed period, while the events related with bank angle and stall warning and manoeuvring being presently evaluated as LOC-I precursors showed a plane trend during the same period.

2.11.   In accordance with ICAO Annex 13, near miss collisions requiring an avoidance manoeuvre are considered serious incidents. However, comparing TCAS RA predictive data with States reporting following Annex 13, significant differences were observed. Therefore, it would be interesting to determine if such differences are related to States investigation and reporting policies and if they are eventually correlated to USOAP critical elements in the OPS and AIG areas.

2.12.   The report provides precise guidelines and an evolution structure to better represent the safety reality in the Region. Thus, the ASR team continues trying permanently to optimise the interaction among the different sources of reactive, proactive and predictive information, and the "safety intelligence" concept with a view to better supporting safety-related decisions.

2.13.   Due to the particular variables for the exchange and integration of information contained in the Annual Report, up to this working paper date the final version of the ASR seventh edition is not available. This condition could be considered to be an opportunity to provide more dynamism to the Annual Report if a biannual analysis is done, meaning to establish metrics for the period 2007-2016 and to compare them directly with those corresponding to the period 2006-2015.

2.14.   However, the commitment and active participation of the different actors in the development and publication of the Safety Annual Report is fundamental for the adequate and timely information flow.

3.   Suggested action

3.1   The RASG-PA ESC/28 is invited to:

a)   take note of the information provided in this working paper; and

b)   take note of the seventh edition of the RASG-PA ASR;

c)   authorise the remodelling of the seventh edition of the RASG-PA Annual Safety Report in order to contain comparative metrics between periods 2007-2017 and 2006-2015, and to issue a biannual content publication.

— END —