



ICAO

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**Thirteenth Meeting of the Regional Aviation Safety Group –
Asia and Pacific Regions (RASG-APAC/13)**

Hong Kong, China, 18-19 December 2023

Agenda Item 5: ICAO / Member State / Industry Presentations

**FLIGHT SAFETY FOUNDATION REGIONAL SAFETY ASSESSMENT –
PROGRESS REPORT AND PROPOSED FOLLOW UP ACTIONS**

(Presented by the Flight Safety Foundation)

SUMMARY

In January 2023, the Flight Safety Foundation embarked on a comprehensive Regional Safety Assessment and analysis of aviation safety issues in all sectors of aviation in the Asia Pacific region. This paper presents FSF's progress and results to date and some initial follow up action items for consideration by the meeting.

The meeting is invited to encourage States and industry to continue supporting the Flight Safety Foundation Asia Pacific Centre for Aviation Safety (AP-CAS) in its ongoing efforts in performing a comprehensive regional safety assessment in 2023 and to urge States and ICAO to refer to the FSF AP-CAS Regional Safety Assessment report and, in particular its Fact Sheets as a means to assist stakeholders in prioritizing their regional engagement and for States when preparing National Aviation Safety Plans or updating the existing Regional or National Aviation Safety Plans.

1. INTRODUCTION

1.1 In 2021/2022, the Flight Safety Foundation (FSF) performed a Global Safety Assessment that included a regional assessment of safety risks in the APAC Region. The assessment was produced in collaboration with the Association of Asia Pacific Airlines (AAPA) and examined the past safety records, the safety action plans under development, and the impact from the recent COVID-19 pandemic across several global regions, including the APAC Region. The progress and final outcomes of that project were presented at the Regional Aviation Safety Group RASG-APAC/11, APRAST/17, as well as the 41st ICAO General Assembly. The outcomes and recommendations stemming from the project were unanimously supported at the 41st ICAO General Assembly.

1.2 The outcomes of the assessment revealed the need for a further and more detailed review to help the Region better understand regional safety. In January 2023, the Flight Safety Foundation, through its newly formed Asia Pacific Centre for Aviation Safety (AP-CAS), embarked on a more comprehensive assessment and analysis of aviation safety issues to address key sectors of aviation in Asia Pacific including Air Navigation Services (ANS). The goal of this project is to assess regional aviation safety needs, highlighting risk areas and priorities that represent specific opportunities for targeted safety solutions. The analysis, conclusions, and recommendations will inform and enable aviation stakeholders, FSF and AP-CAS to prioritize their Regional engagement, including, but not

limited to, outreach, technical assistance, and training activities. While performing this work, FSF has ensured that its activities do not duplicate previous studies performed in the Region or the comprehensive work performed by ICAO APAC Regional Groups but rather complement those studies and activities.

1.3 Working Papers were presented at the ICAO Asia Pacific Regional Aviation Safety Team (APRAST) meetings in February and August 2023 (APRAST/19 and APRAST/20) outlining the objectives and methodology for the regional safety assessment. The member States and participants of APRAST meetings fully supported the regional safety assessment. The APRAST/20 meeting also encouraged participants to support FSF in its ongoing efforts in performing a comprehensive regional safety assessment in 2023, including participation at arranged workshops to review the results of the study with all stakeholders. Further, the meeting requested that FSF present its ongoing progress reports and eventually the final report and outcomes at future meetings.

1.4 During the 58th Directors General of Civil Aviation Conference (October, Dhaka), the Flight Safety Foundation reported on the progress of the Regional Safety Assessment. The Conference supported “the FSF AP-CAS ongoing efforts in performing a comprehensive regional safety assessment” and “encouraged States/Administrations to participate in a Workshop on the ‘Interactive Dashboard and Regional Safety Assessment in 2024 organized by FSF’ (DGCA Conference Action Item 58/7 refers).

2. DISCUSSION

2.1 The first deliverable for this project, which is now complete, was to collect and organize all relevant safety data that could contribute to the analysis. The information gathered took into consideration the latest/updated ICAO Global Aviation Safety Plan (GASP) and Asia-Pacific Regional Aviation Safety Plan (2023-2025) including the safety targets established in the Beijing Declaration, as well as the progress made by States in improving safety areas at a regional level. The review also considered the Asia-Pacific regional aviation safety priorities and targets and RASG-APAC Annual Safety Reports, as well as the Regional and National Aviation Safety Plans. Additionally, safety-related regional air navigation information was also gathered to help assess the progress made on resolving the safety-related deficiencies highlighted through the Asia-Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG).

2.2 A customized and interactive dashboard of the FSF Aviation Safety Network (ASN) data was also developed that displays all ASN data relative to the Region. The safety dashboard depicts the accidents and serious incidents in the APAC Region over a six-year period and provides the ability to parse and filter results by aircraft type, occurrence categories, etc. The dashboard provides information on the level of accidents and serious incidents reported by States, category of risk as well as causal factors for accidents and serious incidents. The safety dashboard for the APAC Region is being used extensively in this project and will also be made available to qualified safety practitioners in the Region through the AP-CAS website. A virtual workshop was held on 28 November 2023 to familiarize safety professionals in the use of the interactive dashboard.

2.3 Pulling together all safety information as reflected in Para 2.1 along with the dashboard information as reflected in para 2.2 provided AP-CAS with the ability to perform an analysis of the information collected thus far. This included performing correlations between accidents/serious incidents and effective implementation (EI) of Universal Safety Oversight Audit Programme (USOAP) results, including the results stemming from the Basic Building Blocks (BBBs) as well as correlations with air navigation (AN) deficiencies. The preliminary results provided AP-CAS with the ability to identify and/or confirm new or emerging risk areas in the Region as well as an understanding of the information collected with greater context to better understand past activities and their impact on safety. “Fact Sheets” have been developed which correlate and summarize the initial results relative to high-risk categories of accidents and serious incidents in the Region.

2.4 Based upon the analysis, “Fact Sheets” were prepared addressing the following risk categories listed in order of total number of accidents and serious incidents reported in the APAC Region in the period 2017-2022.

- a) Runway Excursions (RE)
- b) System Component Failure- non power plant (SCF-NP)
- c) Abnormal Runway Contact (ARC)
- d) Turbulence (TURB)
- e) Runway Incursions (RI)
- f) Ground Collision and Ramp (GCOL & RAMP)
- g) Loss of Control inflight (LOC-I)
- h) Controlled Flight into Terrain (CFIT)

2.5 AP-CAS has actively been surveying the perspectives and views of relevant aviation stakeholders such as AAPA, ACI, CANSO and IATA in the Asia Pacific Region as essential inputs into the safety assessment, in particular the Fact Sheets. Stakeholder engagement in this project is essential to ensure that the conclusions and recommendations are relevant and appropriate to the needs of the Region. Additionally, FSF has coordinated closely with the ICAO APAC Regional Office to ensure coordination and engagement with States to which the Office is accredited.

2.6 The Regional Aviation Safety Plan (RASP) and the National Aviation Safety Plans (NASPs) submitted thus far identified precursors/contributing factors and documented action plans to address the high-risk areas in the Region. The above-mentioned fact sheets synthesize all the precursors documented in the RASP and across all the NASPs in the APAC Region submitted to ICAO to date for each high-risk area. As mentioned above, the preliminary results of the regional safety assessment have identified and/or confirmed new or emerging risk areas in the Region. The precursors/contributing factors and action plans to address the new or emerging risks may be different than those already identified and have also been included in the fact sheets to supplement the existing plans. Finally, the fact sheets are being used as tools to engage with stakeholders in the Region to seek input on additional causal factors contributing to the risks and additional actions to address the risks that have not been identified within the GASP, AP-RASP or the NASPs that have been prepared in the Region.

2.7 The results of information gathered in the fact sheets will be validated and supplemented by engaging with States and industry through workshops during the fourth quarter of 2023 and first quarter of 2024. Thus far, two workshops have been held with the Asia Pacific airline community through a collaborative effort with AAPA and IATA (APAC Office). These workshops were well attended by a broad cross section of airlines in the APAC Region. Additional workshops are scheduled to be conducted with the APAC airport community in conjunction with ACI and with States in conjunction with ICAO prior to the RASG-APAC/13 Meeting. A final workshop will be held with the air navigation service provider community in conjunction with CANSO in January 2024. The highlights of each fact sheet together with the inputs of AAPA, ACI, CANSO and IATA, as well as the participants from the workshops conducted thus far are available at <https://flightsafety.org/foundation/ap-cas/>. These documents provide a summary of action plans to address previously identified high risk areas, as well as the new or emerging risks. This version of the fact sheets does not provide information related to effective implementation or air navigation deficiencies.

2.8 As mentioned above, emerging risks have been identified through this study. It is notable that the combination of system/component failure, non-powerplant (SCF NP) and powerplant (SCF PP) occurrences comprise the greatest number of fatal/non-fatal accidents/serious incidents in the region during the analysis period (2017 to 2022). While these occurrences have been largely non-fatal,

the RASG may wish to consider further study based upon this information. It is also notable that according to the ASN dashboard data, “unknown” ranks as the 7th highest occurrence category in the region, which is considered a high number when this information should be used to account for risk in the region. According to FSF data, during the period of 2017 to 2019, approximately 35% of all accidents and serious incidents did not finalize and release a report to the public. In 2020, 40%, 2021 57% and 2022 90%.

2.9 The final report of the Regional Safety Assessment will be made freely available to all States and stakeholders in the APAC Region, following the above-mentioned workshops, and as early as possible in the first quarter of 2024. The final report will include updated fact sheets. However, information related to effective implementation USOAP results and air navigation (AN) deficiencies will be de-identified in the report. However, FSF suggests that the fact sheets with specific information related to EI, as well as air navigation deficiencies, be made available to States through the ICAO APAC Regional Office upon request by States. The availability of this information would inform and enable the aviation stakeholders to prioritize their regional engagement, including, but not limited to, outreach, technical assistance, and training activities.

2.10 Finally, thus far fifteen States have submitted their NASPs. The information contained in the fact sheets could assist those States that have not yet completed their NASPs and could be a valuable tool to assist RASG-APAC and States to update their existing plans.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

- a) encourage States and the industry to download and review the draft fact sheet highlights provided by the Flight Safety Foundation;
- b) encourage further analysis of occurrences related to SCF NP and SCF PP, as well as those occurrences categorized as unknown; and
- c) recommend that the ICAO APAC Office make the finalized fact sheets that include specific information related to EI and air navigation deficiencies, available to RASG, subgroups as well as States upon request, on a secure site, as means to assist stakeholders in prioritizing their regional engagement and for States when preparing National Aviation Safety Plans or updating the existing Regional or National Aviation Safety Plans.

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