

**58th CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS**

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AGENDA ITEM 3: AVIATION SAFETY

**FLIGHT SAFETY FOUNDATION REGIONAL SAFETY
ASSESSMENT - PRELIMINARY FINDINGS**

[Presented by Flight Safety Foundation, co-sponsored by Singapore, Association of Asia Pacific Airlines (AAPA), and International Federation of Air Traffic Controllers' Associations (IFATCA)]

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 with a target to complete the project by 31 December 2023.

The conference 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 when preparing National Aviation Safety Plans or updating the existing Regional Aviation Safety Plan.

FLIGHT SAFETY FOUNDATION REGIONAL SAFETY ASSESSMENT – PRELIMINARY FINDINGS

1. INTRODUCTION

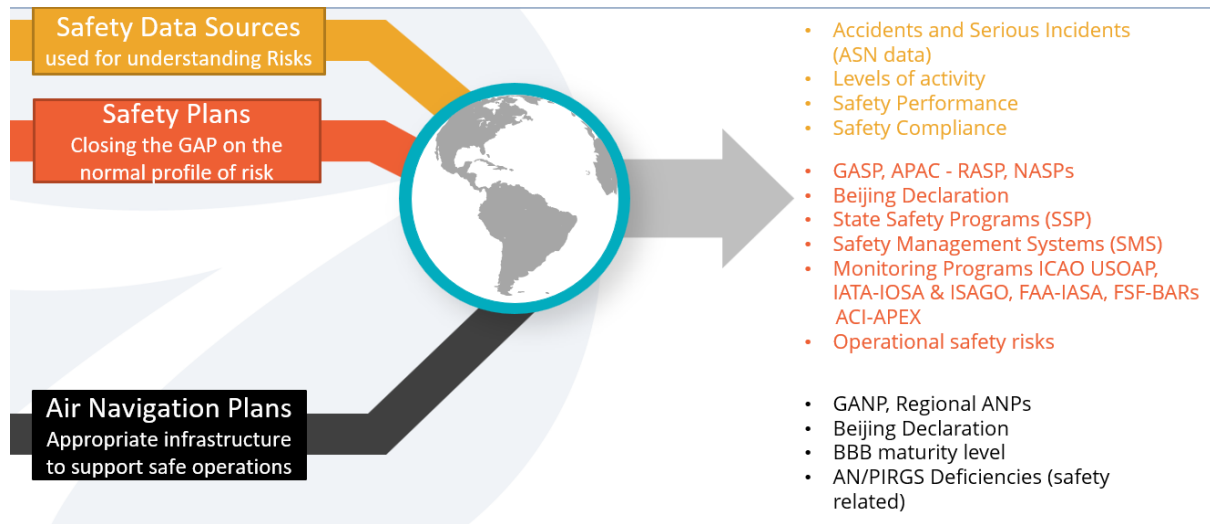
1.1 In 2021/2022, the Flight Safety Foundation performed a Global Safety Assessment that included a regional assessment of safety risks in the APAC region. The assessment was produced in collaboration with the Association of Asia Pacific Airlines and examined the past safety records, the safety action plans under development, and the impact from the recent COVID-19 pandemic across several global regions, including the APAC region. The assessment helped to identify the extent to which existing safety management systems and state safety programs worked to prepare for the safety challenges during significant operational changes and hazards affecting the traveling public, employees and regulatory authorities. 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, specifically Personnel Licensing and Training (PEL), Airworthiness of Aircraft (AIR), Aircraft Operations (OPS), Aircraft Accident and Serious Incidents Investigations (AIG), Aerodromes and Ground Aides (AGA), as well as 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, findings, recommendations, and conclusions will inform and enable the 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 will ensure that its activities will 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 results and outcomes at future meetings.

2. DISCUSSIONThe 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, including 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). The figure below

summarizes the collection and analysis of the safety information used to derive the outcomes of this project.



2.2 **Creation of an interactive dashboard.** A customized and interactive dashboard of the FSF Aviation Safety Network (ASN) data has been created 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 (e.g., turboprop versus jet), 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. A similar dashboard (global level) was presented to the ICAO GASP Study Group (GASP-SG) comprised of members from States, international organizations, industry, as well as ICAO secretariat to ensure the information was not only accurate but relevant. 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.

2.3 **Data collection and analysis –** 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. Draft “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 **Preliminary results.** Based on the preliminary results thus far, Fact Sheets are being 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) Mid Air Collision (MAC)
- f) Runway Incursions (RI)

- g) Ground Collision and Ramp (GCOL & RAMP)
- h) Loss of Control inflight (LOC-I)
- i) Controlled Flight into Terrain (CFIT)

2.5 AP-CAS has actively been surveying the perspectives and views of relevant aviation stakeholders such as IATA, ACI, CANSO and AAPA 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) or the National Aviation Safety Plans (NASPs) 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 of the NASPs 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 This project will validate the results of information gathered by engaging with States and industry through workshops during the third quarter of 2023. At the time of the DGCA Conference, several workshops will already have been conducted. The final report of the Regional Safety Assessment will be made freely available to all States and stakeholders in the APAC Region, including the aforementioned fact sheets. 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 CONFERENCE

3.1 The Conference is invited to:

- a) note the information provided in this paper;
- b) encourage States and industry to continue supporting the Flight Safety Foundation AP-CAS in its ongoing efforts in performing a comprehensive regional safety assessment in 2023 including participation in arranged workshops; and
- c) urge States and ICAO to refer to the FSF APCAS Regional Safety Assessment report and in particular its Fact Sheets, when they become available, when preparing National Aviation Safety Plans or updating the existing Regional or National Aviation Safety Plans.

— END —