



ICAO

International Civil Aviation Organization  
Asia and Pacific Office

**Twentieth Meeting of the Asia Pacific Regional Aviation Safety Team (APRAST/20)**

*(Bangkok, Thailand, 07-11 August 2023)*

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**Agenda Item 5: Presentations – State / Industry / ICAO**

**FLIGHT SAFETY FOUNDATION REGIONAL SAFETY ASSESSEMENT PROJECT -  
PHASE TWO, STATUS UPDATE**

*(Presented by the Flight Safety Foundation)*

**SUMMARY**

As of January 2023, the Flight Safety Foundation, through its Asia Pacific Centre for Aviation Safety, embarked on a comprehensive Regional Safety Assessment and analysis of aviation safety issues in key sectors of aviation in Asia Pacific region. This working paper presents FSF's progress and results to date with a target to complete the project by 31 Dec 2023.

**1. INTRODUCTION**

1.1 In 2021/2022, the Flight Safety Foundation performed a Global Safety Assessment which included a regional assessment of safety risks in the APAC region, produced in collaboration with the Association of Asia Pacific Airlines. The Assessment 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. This has helped to identify how well existing established safety management systems and state safety programs have 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 RASG-APAC/11, APRAST/17, as well as the 41<sup>st</sup> ICAO General Assembly. The outcomes and recommendations stemming from the project were unanimously supported at the 41<sup>st</sup> ICAO General Assembly.

1.2 The outcomes of the assessment revealed the need for a further, more detailed review that could help the region better understand regional safety needs and trigger targeted assistance through existing and new regional safety platforms. A Working Paper was presented at the last ICAO Asia Pacific Regional Aviation Safety Team (AP-RAST/19) meeting in February 2023 outlining the objectives and methodology for the regional safety assessment. The member States and Administrations of AP-RAST fully supported the regional safety assessment and requested that a progress report be presented to the AP-RAST/20 Meeting.

**2. DISCUSSION**

2.1 As of January 2023, the Flight Safety Foundation, through its 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.

2.2 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 plan and APAC draft regional 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 sub-regional national aviation safety plans, as well as insights from the ICAO Pacific Small Island Developing States Aviation Needs Analysis (PSIDS Study) that was performed by ICAO in 2019. 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). Figure one below, summarizes the collection and analysis of the safety information used to derive the outcomes of this project.



Fig 1

2.3 **Creation of an interactive dashboard.** A customized and interactive dashboard of the 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 filter results by aircraft type (e.g., turboprop versus jet). 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 Global Aviation Safety Plan Study Group (GASP-SG) comprised of members from States international organizations and 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. (Attachment one refers).

2.4 **Data collection and analysis** – Pulling together all safety information as reflected in Para 2.1 together with the dashboard information as reflected in para 2.2 provided AP-CAS the ability to perform an analysis on the information collected thus far. This includes performing correlations between accidents/serious incidents and EI of USOAP results, specifically when reviewing the results stemming from the Basic Building Blocks (BBBs) as well as correlations with air navigation (AN) deficiencies. The preliminary results provided AP-CAS 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. In addition, this analysis has the potential of providing a means to impact future activities where greater leverage can be applied to future outcomes.

2.5 Draft “Fact Sheets” have been developed that correlate and summarize the initial results relative to high-risk accidents and serious incidents in the region. The fact sheets will be 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, APAC RASP or the NASPs that have been prepared in the region. The additional information collected from stakeholders will be used to modify or add information to the Fact Sheets that will eventually contribute to the final report of the project.

2.6 **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 in flight (LOC-I)
- i) Controlled Flight into Terrain (CFIT)

2.7 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 an essential input 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.

2.8 **Next Steps.** This project will validate the results of information gathered by engaging with States and industry through workshops to be held during the third quarter of 2023. The workshop engagements will also be used to gather qualitative safety information. These will be conducted to gather a wider perspective of the safety capabilities and potential issues in the region.

2.9 The results and recommendations of the study in the form of reports will be shared with stakeholders as well as with ICAO and other regulatory organizations, which can help the region and States to prioritize resources to achieve higher regional safety levels.

2.10 AP-CAS is planning to complete the assessment and its report by December 2023 and will report its progress and outcomes at the next ICAO APRAST as well as RASG-APAC meeting.

### **3. CONCLUSIONS**

3.1 The Flight Safety Foundation, through AP-CAS, has launched a comprehensive aviation safety assessment in the Asia Region that looks at all sectors (i.e., PEL, AIR, OPS, AGA and ANS). The project aims to highlight risk areas and provide targeted safety solutions, informing aviation stakeholders for regional engagement and outreach. An interactive dashboard was created, displaying accident and incidents in the APAC and enabling filtering by aircraft type and occurrence categories. The analysis led to identifying emerging risk areas and potential correlations with air navigation deficiencies. Draft “Fact Sheets” summarizing high risk incidents will be used to engage with stakeholders and contribute to the final report.

### **4. ACTION BY THE MEETING**

4.1 The Meeting is invited to:

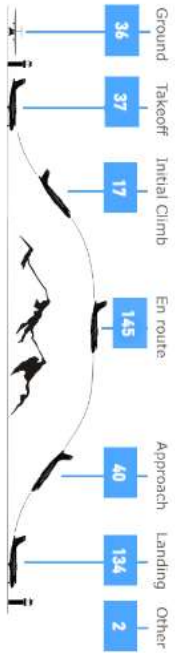
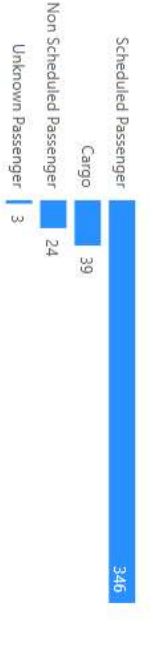
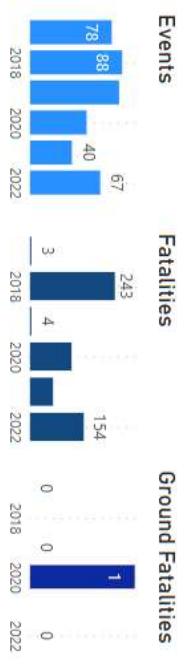
- a) note the information prescribed in this paper;
- b) encourage States and industry to support the Flight Safety Foundation and AP-CAS in its ongoing efforts in performing a comprehensive regional safety assessment in 2023, including participation at arranged workshops;
- c) encourage States to access the customized and interactive Aviation Safety Network dashboard (para. 2.3 refers) to strengthen their risk identification and mitigation capabilities; and
- d) request the Flight Safety Foundation and AP-CAS to present its ongoing progress, final results and outcomes at future APRAST and RASG-APAC meetings during 2023/2024.

— END —

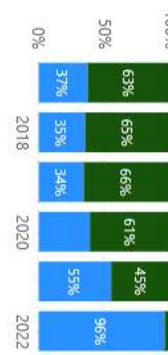


# APAC Safety Dashboard 2017-2022

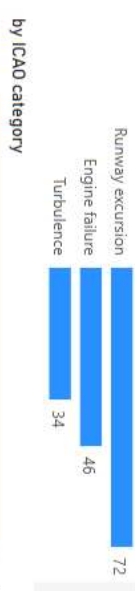
Accident and incident data from Aviation Safety Network (ASN), an exclusive service by The Flight Safety Foundation



477



avg investigation duration (days)



| ASN date                   | type                          | location                                   | country     | fatalities | final report? | cat    |
|----------------------------|-------------------------------|--|-------------|------------|---------------|--------|
| Monday, January 02, 2017   | Airbus A320                   | Khon Kaen (KKC/VTUN)                       | Thailand    | 0          | no            | ARC    |
| Tuesday, January 10, 2017  | Airbus A320                   | Kalibo (KLO/RPVK)                          | Philippines | 0          | no            | RE     |
| Saturday, January 14, 2017 | ATR 72                        | near Palu-Mutiana SIS Al-Jufrie (PLW/WAAF) | Indonesia   | 0          | no            | SCF-PP |
| Thursday, January 19, 2017 | de Havilland Canada DHC-8-400 | New Chitose (CTS/RUCQ)                     | Japan       | 0          | yes           | RE     |
| Sunday, January 22, 2017   | Boeing 737-800                | Dhaka-Shajjalal International Airport      | Bangladesh  | 0          | yes           | ARC    |
| <b>Total</b>               |                               |  |             | <b>589</b> |               |        |



Country of occurrence

|           |    |
|-----------|----|
| India     | 81 |
| Austra... | 71 |
| Indon...  | 48 |
| Japan     | 42 |

Country of registry

|           |    |
|-----------|----|
| India     | 76 |
| Australia | 65 |
| Japan     | 28 |
| Thailand  | 22 |
| Malaysia  | 12 |

airliners  corpjets

jet  piston  turboprop

AC  SI  fatal  non-fatal