



International Civil Aviation Organization

Fifth Meeting of the Asia Pacific Regional Aviation Safety Team (APRAST/5)

(Bangkok, Thailand, 16 – 19 September 2014)

Agenda Item 5: Presentations – State / Industry / ICAO

REGIONAL DATA COLLECTION, ANALYSIS AND INFORMATION SHARING

(Presented by Singapore)

SUMMARY

This Paper follows up on the APRAST Decisions 4/1 and 4/2 to update the meeting on the outcome of the feasibility study of a regional information collection, analysis and sharing system for the Asia Pacific (APAC) region. The paper also seeks the meeting's support of a demonstration project of such a system for the APAC region.

Action by the meeting is at Paragraph 4.

1. INTRODUCTION

1.1 The APRAST/4 Meeting in April 2014 supported Singapore's initiative for the Flight Safety Foundation (FSF)/MITRE to conduct a study on the feasibility of a regional information collection, analysis and sharing system for the APAC region (see Decision APRAST 4/1 at **Annex A**). Such a system seeks to integrate and analyse safety and operational data (such as air traffic control and flight data) at a broader and regional level, which could potentially uncover safety vulnerabilities or hazards that would otherwise not be detected. Individual service providers such as airlines would also be able to benchmark their own safety performance against the aggregate trends. APRAST/4 also encouraged States / Administrations, air navigation service providers (ANSPs), airlines and industry organisations to participate in the feasibility study (see Decision APRAST 4/2 at **Annex A**).

1.2 Following up on the APRAST/4 Decision 4/1 and 4/2s, MITRE met with a number of Asia Pacific States / Administrations, ANSPs, airlines and industry organisations to explore the feasibility of such a regional system. (A list of entities approached during the feasibility study is contained in **Annex B**.) Singapore would like to express its appreciation to the various organisations for their participation in this feasibility study.

2. BENEFITS AND CHALLENGES FOR APAC DATA COLLECTION, ANALYSIS AND INFORMATION SHARING

2.1 FSF/MITRE completed the feasibility study in August 2014. The study indicated that there was general consensus that a regional data collection, analysis and information sharing system, if implemented, would enhance States' and service providers' abilities to identify safety hazards and develop targeted safety improvements in the APAC region. The study also indicated that some States, ANSPs and airlines are keen to take part in regional data collection, analysis and information sharing. As requested by APRAST/4, FSF/MITRE will be reporting on the findings of the feasibility study at this APRAST/5 meeting.

2.2 The feasibility study noted that unlike the existing ASIAs¹ programme implemented in the United States, an APAC data collection, analysis and information sharing system would involve multiple jurisdictions and therefore require further deliberations on fundamental issues such as governance structures, funding models and data confidentiality. These issues are not straightforward and would require stakeholders to come together early to discuss and develop solutions.

3. DEMONSTRATION OF APAC DATA COLLECTION, ANALYSIS AND INFORMATION SHARING

3.1 As a next step, the feasibility study recommended an APAC data collection, analysis and information sharing demonstration project involving interested States/Administrations, ANSPs, airlines and industry organisations. The intent of this project is to demonstrate the potential benefits of such a system and to address potential issues such as data protection and confidentiality, operating models, governance structure and funding mechanisms. To extract maximum value, the demonstration project should include the participation of a minimum number of States/Administrations, ANSPs, airlines and industry organisations.

3.2 Participants would come together to agree on the modality of their collaboration. They would be expected to contribute data (such as FDM data or radar data) to support the data analysis, participate in discussions to address issues related to the set-up of a regional data collection, analysis and information sharing system. Please see potential areas to be addressed in **Annex C**.

3.3 As the duration of this demonstration project is estimated to be up to 36 months, the progress and developments of the demonstration would be shared regularly (or as appropriate) with APRAST and RASG APAC, so that the lessons learnt would provide a useful basis to deliberate the establishment of a regional data collection, analysis and information sharing system in the future.

3.4 Subsequent to the FSF / MITRE's presentation at APRAST/5 and deliberations, the meeting is invited to support Singapore's initiative for FSF / MITRE to conduct a demonstration of a regional data collection, analysis and information sharing system. This initiative also builds on the earlier efforts made under APRAST Decision 3/6 to research and develop possible mechanisms for regional data collection and sharing. As a commitment to kick-start the initiative, Singapore may consider to cover part of the costs of the demonstration project.

4. RECOMMENDATIONS

4.1 The Meeting is invited to:

- a) Support Singapore's initiative for a demonstration project on a regional data collection, analysis and information sharing system for the APAC region; and
- b) Encourage States/Administrations, ANSPs, airlines and industry organisations to participate in this demonstration project.

¹ The US Federal Aviation Administration developed the Aviation Safety Information Analysis and Sharing (ASIAs) system, which enables users to perform integrated queries across multiple databases, search an extensive warehouse of safety data, and display pertinent elements in an array of useful formats.

APRAST/4 Decisions relating to WP/11

Decision APRAST 4/1:

That, APRAST support Singapore's initiative for FSF and MITRE to conduct a study on the feasibility of a regional safety information collection, analysis and sharing system for the APAC region.

Decision APRAST 4/2:

That, States/Administrations, air navigation service providers, airlines and international organisations be encouraged to participate in such a study, including providing inputs to FSF / MITRE.

Decision APRAST 4/3:

That airlines be encouraged to subscribe to the IATA FDX programme as a means to enhance internal risk management and to contribute to regional safety information sharing.

List of entities approached during the feasibility study

Civil aviation authorities

- Civil Aviation Authority of Macao, China
- Civil Aviation Authority of Singapore
- Civil Aviation Department of Hong Kong, China
- Civil Aviation Safety Authority, Australia
- Department of Civil Aviation Malaysia
- Department of Civil Aviation Thailand
- Japan Civil Aviation Bureau
- Korea Office of Civil Aviation

Airlines based in Asia Pacific region

- Air New Zealand
- Air Nippon Airways
- Cathay Pacific
- Garuda Indonesia
- Japan Airlines
- Jetstar Airways
- Malaysia Airlines
- Qantas
- Singapore Airlines
- Thai Airways
- Virgin Australia Airlines

Airlines based in regions other than Asia Pacific

- American Airlines
- Delta Air Lines
- Emirates
- United Airlines

International organisations

- Airbus
 - Association of Asia Pacific Airlines
 - Boeing
 - International Air Transport Association
 - International Federation of Air Line Pilots' Associations
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Participants for the Demonstration Project can expect to be involved in the following:

- Provide FDM data (for airlines) or radar data (for ANSPs) as needed for data analysis;
- Receive information on aviation safety risks identified from the demonstration project analysis that is relevant to the APAC region;
- Develop and/or obtain recommendations on mitigation of the identified safety risks;
- Provide inputs on the governance structures, operations models, funding models and data confidentiality that are essential for a sustainable and scalable regional system.

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