International Civil Aviation Organization

FIRST MEETING OF THE ASIA PACIFIC REGIONAL AVIATION SAFETY TEAM (APRAST/1)

(Bangkok, Thailand, 20-24 February 2012)

Agenda Item 9: **Regional Performance Framework for Safety**

REGIONAL PERFORMANCE FRAMEWORK FOR SAFETY

(Presented by the Secretariat)

SUMMARY
This paper describes the principles of a performance-based approach to reduce risk and achieve continuous improvement in safety performance through the establishment and monitoring of specific performance criteria based on a data driven process.
In addition, it provides information on a software tool developed by the Secretariat to monitor the development and implementation of safety enhancements. The RASG-APAC referred consideration of this approach to the first meeting of the APRAST (Decision 1/2).

1.   **INTRODUCTION**

1.1   The ICAO planning objective is to implement a performance-based safety framework through safety systems and procedures in a progressive, cost-effective and cooperative manner. This approach will provide guidance for the prioritization and allocation of aviation safety resources with measurable achievement of global safety goals and associated global safety targets.

2.   **TRANSITION TO A PERFORMANCE BASED APPROACH**

2.1   The aim of a performance-based approach is to reduce risk and achieve continuous improvement in safety performance through the establishment and monitoring of specific performance criteria based on a data driven process.

2.2   The performance-based approach adheres to the following principles: strong focus on results through adoption of performance objectives and targets; collaborative decision making among stakeholders; and reliance on facts and data for decision making. Assessment of achievements is periodically checked through a performance review, which in turn requires adequate performance measurement and data collection capabilities.

2.3   The advantage of a performance-based approach is that it is result oriented, transparent and promotes accountability. It shifts from prescribing solutions to specifying desired performance outcomes; employs quantitative and qualitative methods; avoids a technology driven approach; helps decision makers to set priorities, makes the most appropriate trade-offs, and allows optimum resource allocation.

2.4   It is essential to use harmonized terminology in applying performance-based approach to safety. For performance measurement three basic terms are explained:

    a) *Performance Indicator*: Current/past performance, expected future performance as well as actual progress in achieving performance objectives is quantitatively expressed by means of performance indicators. To be relevant, indicators need to correctly express the intention of the associated performance objective. Since indicators support objectives, they should not be defined without having a specific performance objective in mind. These performance indicators are not often directly measured. They are calculated from supporting metrics;

    b) *Performance Metrics:* Performance measurement is done through the collection of data for the supporting metrics. In other words, metrics are quantitative measure of system performance – how well the system is functioning; and

    c) *Performance Target:* Performance targets are closely associated with performance indicators: they represent the values of performance indicators that need to be reached or exceeded to consider a performance objective as being fully achieved.

3.   IMPLEMENTATION OF A PERFORMANCE FRAMEWORK FOR SAFETY

3.1   Update to GASP

3.1.1   The first version of the ICAO Global Aviation Safety Plan (GASP) was developed in 1997 by formalizing a series of conclusions and recommendations developed during an informal meeting between the Air Navigation Commission and industry. The plan was used to guide and prioritize the technical work programme of the Organization and was updated regularly until 2005 to ensure its continuing relevance. In May 2005, another meeting between the Air Navigation Commission and industry identified a need for a broader plan that would provide a common frame of reference for not only ICAO but all stakeholders. Consequently, an amended GASP was developed and was subsequently recognized in Resolution A36-7 (*ICAO Global Planning for Safety and Efficiency)* at the 36th Session of the ICAO Assembly in October 2007.

3.1.2   The GASP, published in October 2007, is undergoing a revision to reflect new developments such as the concept of performance-based approach to safety and the State Safety Programme (SSP) and also the notion of Safety Management Systems (SMS) is undergoing an in-depth review, standardization and further development. Accordingly, the GASP is being revised in order to align its contents with SSP/SMS roles and should be available by May 2012.

3.2   Regional Implementation

3.2.1   Recognizing that the current regional mechanisms are not sufficient to follow-up on the implementation of the GASP in a globally harmonized fashion, the Council in May of 2010, established the Regional Aviation Safety Groups (RASGs), that will monitor progress, coordinate actions among States and industry partners and make recommendations to ICAO to facilitate the implementation of performance framework for safety through the GASP, and the subregional action plans resulting from the implementation of the associated GASR.

3.2.2   The Regional Aviation Safety Group – Asia and Pacific (RASG-APAC) has been established following the ICAO Council directive and the 47th APAC Directors General of Civil Aviation meeting agreement (DGCA-APAC/47).

3.2.3   Using the GASP and GASR, the RASG-APAC should build on the work already done by other groups in the region such as the Asia and Pacific Air Navigation Planning and

Implementation Regional Group (APANPIRG), COSCAP and the COSCAP RASTs (SARAST; SEARAST and NARAST) including the Asia RAST (ARAST) to be effective and avoid duplication.

3.2.4   To adequately follow the guidelines of the GASP, the working methods of the RASG-APAC need to be dynamic and follow a performance-based cycle such as the following:

    a) identify key stakeholders;

    b) gather and analyze data from all available sources;

    c) identify risk areas;

    d) prioritize;

    e) elaborate Safety Enhancement Initiatives (SEIs);

    f) create Detailed Implementation Plans (DIPs) with measurable objectives; and

    g) monitor/adjust the implementation plans by gathering and analyzing data.

3.2.5   Consistent to the APANPIRG, it is envisaged that progress reports prepared by the RASG-APAC will be reviewed by the Air Navigation Commission (ANC) on a regular basis and the ICAO Council as deemed necessary. The ANC will be very keen to understand the identified issues, the resulting safety enhancement initiatives and follow closely the implementation plans while monitoring the results on the annual safety report to provide any support deemed appropriate. In between the regular meetings of the RASG-APAC, the Asia Pacific Regional Aviation Safety Team (APRAST) will advance the technical work programme and coordinate the RASG-APAC activities.

3.2.6   Tracking the progress of all ICAO Regions in implementing safety enhancements will also be important to determine the effectiveness of the GASP on both a regional and global basis. To support the regions in tracking their progress, the Secretariat developed a software tool to monitor the development and implementation of safety enhancements. The tool follows the performance measurement concepts as outlined in this paper. Information concerning implementation plans is centrally stored on an ICAO network server. Thus, regions that choose to use the programme would not only be able to track the development and implementation of their safety initiatives, but also safety initiatives in other regions. Consideration should be given to implementing this programme in the Asia Pacific Region. Details of the Tool are outlined in Attachment I.

3.2.7   The RASG-APAC referred consideration of this approach to the first meeting of the APRAST (RASG-APAC/1 Decision 1/2).

4.   ACTION BY THE MEETING

4.1   The meeting is invited to:

    a) note the information presented in this working paper;

    b) organise the RASG-APAC work programme in accordance with the performance-based approach described in this working paper;

    c) Utilize the ICAO developed Tool outlined in Attachment I.

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<div align="right">**Attachment I**</div>

<div align="center">**ICAO Tool for Implementation of the Regional Performance Framework**</div>

1. The Tool provides a process to ensure adherence to Regional Performance Framework and enable ICAO to readily share the outputs between the various RASGs. The APRAST would first identify Safety Enhancement Initiatives (SEIs). These initiatives could be established based on the analysis of data, ICAO initiatives and/or as developed by other organizations/safety teams. While for the most part SEI would be globally applicable, this may not always be the case and the priorities for implementation of SEIs may vary between regions. Recognizing that it will take time to implement SEIs, APRAST could prioritize, using some of the criteria below to ensure that those identified SEIs which have the greatest potential for reducing safety risk are examined first. The following information is contained in the SEI template.

   a) GSI (Global Safety Initiative) Number from the GASP;
   b) RAST Number in the form of APRAST /(risk areas)/ (i.e. APRAST/CFIT/1);
   c) Safety Impact (High, Medium or Low) ;
   d) Changeability (Difficult, Moderate and Easy) taking into consideration the political will, commitment / consensus, resource requirements, availability for implementation, potential blockers – what conditions exist that could prevent implementation;
   e) Impact-Changeability (IC) Indicator (P1, P2, P3, etc.);
   f) Priority;
   g) Possible Champion; and
   h) Notes.

2. Subsequently, for each SEI a Detailed Implementation Plan (DIP) would be completed which should contain the following additional information:

   a. Safety Enhancement Action (expanded);
   b. Statement of Work;
   c. Human Resources;
   d. Financial Resources;
   e. Relation with Current Aviation Community Initiative;
   f. Performance Goal;
   g. Indicators; and
   h. Key Milestones.

3. Once the Detailed Implementation Plans are completed the Outputs for each DIP would be defined utilizing the appropriate template. The Outputs Template contains the following information:

   a. Description;
   b. Target Initiation Date;
   c. Resources;
   d. Resource Notes;
   e. Timelines;
   f. Action; and
   g. Target Completion Date.

   Note: Sample SEI, DIP and Outputs Templates from the ICAO Tool are outlined at Appendix 1, Appendix 2.1 and 2.2.

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