International Civil Aviation Organization

Third Meeting of the Middle East Regional Aviation Safety Group (RASG-MID/3)

(Kuwait, 27 - 29 January 2014)

Agenda Item 3: Regional Performance Framework for Safety

UPDATE ON THE SIEs & DIPs RELATED TO CFIT

(Presented by CFIT Coordinator)

SUMMARY

This paper presents the Safety Enhancement Initiatives (SEIs) and the Detailed Implementation Plan (DIP) to mitigate risks of CFIT.

Action by the meeting is at paragraph 3.

1. INTRODUCTION

1.1 In accordance with the data analysis carried out by the ASRT for the Second MID Region Annual Safety Report, CFIT is identified as one of the Focus Areas (FAs) in the MID Region.

2. DISCUSSION

2.1 The RSC/2 meeting reviewed the SEIs**,** at **Appendix A** to this working paper, and reconfirmed that the SEIs to mitigate CFIT are prioritized as follows:

1) the construction, approval and implementation of RNAV(GNSS)/RNP-AR procedures to all runways not currently served by precision approach procedures;

2) promote, implement and mandate best practice Standard Operating Procedures with respect to CFIT amongst Aircraft Operators and Air Navigation Service Providers; and

3) mandate the incorporation of the latest standard CFIT warning and prevention technology onboard operators' aircraft and within ANSP's facilities.

3.1 The meeting reviewed the DIP at **Appendix B** to this working paper, and noted that the DIP developed for the top priority SEI, includes the following actions:

1) ensure that RNAV (GNSS) and RNP-AR approach design and procedures are adequate and provide sufficient altitude protection during the approach and landing phase;

2) ensure that pilots and controllers training and guidance in the use of RNAV(GNSS) & RNP-AR is adequate, current, uniformly conducted and supports the optimum utilization of automation resources so that individuals can take a monitoring role; and

3) work with the MID PBN Support Team (MPST) to accelerate the implementation of PBN in the Region.

2.2 The meeting agreed that the DIP might need to be revised in order to include concrete action(s) to be coordinated with the MIDANPIRG PBN SG which could be implemented within the agreed timeframe.

2.3 In this respect, the meeting may wish to note that the MIDANPIRG/14 meeting (Jeddah, Saudi Arabia, 15-19 December 2013) tasked the PBN SG to support PBN-related actions under the CFIT DIPs such as the implementation of RNP AR and APV procedures for the Non-Precision Approach Runways. The coordination of these activities should be ensured through the Secretariat and chairpersons of the groups.

3. ACTION BY THE MEETING

3.1 The meeting is invited:

a) review the SEIs and DIP for CFIT as at **Appendices A and B** to this working paper; and

b) task the RAST to revise the DIP to include concrete action(s), in coordination with the MIDANPIRG PBN SG.

APPENDIX A

APPENDIX A

No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	IC Indicator	Priority	Possible Champion	Time Frame	Notes
RAST-MID/CFIT/1	The construction, approval and implementation of RNAV(GNSS) / RNP-AR procedures to all runways not currently served by precision approach procedures	**Safety Management Standarzation:** Implementation of risk-based standarization **Safety Oversight Standarization:** Promotion of Compliance with National Regulations and Adoption of Industry Best Practices	BP-GEN-1 BP-GEN-2 BP-GEN-4 BP-STD-S-12 BP-STD-S-13	High	Difficult	P3	1	IATA/CANSO	Long Term	
RAST-MID/CFIT/2	Promote,implement and mandate best practice Standard Operating Procedures with respect to CFIT amongst Aircraft Operators and Air Navigation Service Providers	**Safety Management Standarzation:** Implementation of risk-based standarization **Safety Oversight Standarization:** Promotion of Compliance with National Regulations and Adoption of Industry Best Practices	BP-GEN-1 BP-GEN-2 BP-GEN-4 BP-STD-S-12 BP-STD-S-13	High	Moderate	P2	2		Mid-Term	

RAST-MID/CFIT/3	Mandate the incorporation of the latest standard CFIT warning and prevention technology onboard operators' aircraft and within ANSP's facilities	**Safety Management Standarzation:** Implementation of risk-based standarization **Safety Oversight Standarization:** Promotion of Compliance with National Regulations and Adoption of Industry Best Practices	BP-GEN-1 BP-GEN-2 BP-GEN-4 BP-STD-S-12 BP-STD-S-13	High	Difficult	P3	3		Long Term	

APPENDIX B

Detailed Implementation Plan Template

Rast No	Safety Enhancement Action	GASP Safety Initiative (ICAO Doc 10004)	Best Practices Supporting GASP Safety Initiative (ICAO Doc 10004, Appendix 2)	Safety Impact	Changeability	Indicator	Priority	Time Frame
RAST-MID/CFIT/1	The construction, approval and implementation of RNAV(GNSS) / RNP-AR procedures to all runways not currently served by precision approach procedures	Safety Management Standarzation: Implementation of risk-based standarization Safety Oversight Standarization: Promotion of Compliance with National Regulations and Adoption of Industry Best Practices	BP-GEN-1 BP-GEN-2 BP-GEN-4 BP-STD-S-12 BP-STD-S-13	High	Difficult	P3	1	Long Term
Safety Enhancement Action (expanded)	Introduction of RNAV(GNSS) / RNP-AR approaches and removal of traditional non-precision approaches. This is to ensure that the latest performance based navigation technology is utilized, at such airfields, to provide the highest level of safety during the conduct of an approach and landing towards the runway.							
Statement of Work	In an attempt to preclude future CFIT accidents, design an implementation plan to ensure that RNAV(GNSS) and RNP-AR approach design and procedures are adequate and provide sufficient altitude protection during the approach and landing phase and this, around all domestically and internationally identified, Higher Risk Airports served by NPA. Also ensure that pilots and controllers training and guidance in the use of RNAV(GNSS) & RNP-AR is adequate, current, uniformly conducted and supports the optimum utilization of automation resources so that individuals can take a monitoring role.							
Champion Organization	IATA/CANSO							

Human Resources	CAA Operational Support Service Procedure Designers Air Navigation Service Providers (ANSP)
Financial Resources	Options will be explored by SST as required (funds from States or other safety partners)
Relation with Current Aviation Community Initiative	IATA & ICAO are jointly developing a CFIT toolkit addressing the CFIT contributing AST safety enhancements addressing the CFIT contributing factors CAST safety enhancements addressing the CFIT contributing factors Partnership between airlines and RNP-AR consulting firms such as Quovadis/Airbus & Etihad Airways for the creation of RNP-AR approaches at specific airfields. These new technology approaches, designed by Airbus' Performance Based Navigation (PBN) subsidiary, Quovadis, utilize 'continuous descent' operations and optimised trajectories. This will enhance flight safety which is at the heart of the RNP-AR Implementation Plan effort.
Performance Goal	Goal 1: Implementation Plans to be complete in December 2013 Goal 2: Keeping in mind that GNSS with Baro-VNAV is the key enabling technology, PBN and APV operations (APproaches with Vertical guidance) regional operator implementation to be complete: - 30% by Dec 2015 - 70% by Dec 2018 - 100% by Dec 2020 Goal 3: Before year 2020, reduce CFIT accidents/incidents by 80%, at these airfields during the conduct of ground-based non-precision approaches. Goal 4: APV to apply to all runways not currently served by precision approach procedures by 2020 Goal 5: Promote stable approaches through APV
Indicators	Number of CFIT related accidents as a percentage of all accidents Maintain CFIT related accidents below the global rate
Key Milestones (Deliverables)	1. Identify the regional airports/runways which require specific RNP-AR approaches within 6 months. 2. Aircraft Operators FOQA programmes to monitor data (consistency and accuracy of the Operator's fleet for each selected "high risk/special airport) and provide a summary of stable/unstable approaches to MID-RAST each quarter commencing Q4 2013. 3. Identify suitable service providers who can assist Aerodrome Operators/States with procedure design for those airfield/runway combinations identified in deliverable 1 within 12 months.

Potential Blockers	Operators may not recognize the safety enhancements benefits Operators may not be able to afford the required technology Operators may have difficulties funding the development of the procedures or planning the required training due to technology or downtime limitations
Responsible	Core Team: 1.
DIP Notes	

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