



COMPREHENSIVE REGIONAL IMPLEMENTATION PLAN FOR AVIATION SAFETY IN AFRICA (AFI PLAN)

THIRTEENTH AFI PLAN STEERING COMMITTEE MEETING

(Dakar, Senegal, 29-30 May 2014)

Agenda Item 2: Progress report on developing a means to monitor the status and improvement of ANS technical area

(Presented by the Secretariat)

EXECUTIVE SUMMARY

This paper presents information related to the development of ANS indicators as recommended by the 12th Meeting of the Steering Committee of the Comprehensive Regional Implementation Plan for Aviation Safety in Africa (AFI Plan) held on 14 November 2013 in Montreal.

Action: The Steering Committee is invited to:

- a) Take note of the content of this paper;
- b) Analyze the proposed performance metrics and indicators and the feasibility of their application to the AFI Region; and
- c) Select indicators and metrics for which regional targets are to be established by States under the APIRG mechanism, coordinated by the Secretariat, and presented to the 14th AFI Plan SC meeting for approval.

1. INTRODUCTION

1.1 At the 12th Meeting of the Steering Committee on the Comprehensive Regional Implementation Plan for Aviation Safety in Africa, the ICAO Secretary General indicated that the AFI Plan Work Programme is ongoing and continues to assist States in Africa with a low level of Effective Implementation (EI) of international Standards and Recommended Practices (SARPs) and/or with Significant Safety Concerns (SSCs).

1.2 The Secretary General recalled that the 38th Session of the Assembly had approved the expansion of the AFI Plan to include the technical areas of Air Navigation Services (ANS), Aerodromes

and Ground Aids (AGA) and Aircraft Accident and Incident Investigation (AIG) to the existing areas of Airworthiness (AIR), Operation of Aircraft (OPS) and Personnel Licensing (PEL). He pointed out that this expansion would enable the alignment of the AFI Plan with the decisions and targets adopted during the Ministerial Conference on Aviation Safety held in Abuja in July 2012 and endorsed by the Assembly of Heads of States of the African Union (AU) in January 2013.

1.3 Among other important provisions, Assembly Resolution A38-7 (AFI Plan) urges Member States of the AFI Region to implement the recommendations of the AFI Planning and Implementation Regional Group (APIRG) and the Regional Aviation Safety Group (RASG-AFI) meetings, and instructs the Council to monitor and measure the status of implementation in the AFI Region throughout the triennium and to report to the next session of the Assembly on the progress made.

2. DISCUSSION

2.1 Regarding the alignment and expansion of the AFI Plan with the Abuja Declaration and safety targets by including the technical areas of Air Navigation Services (ANS), Aerodromes and Ground Aids (AGA) and Aircraft Accident and Incident Investigation (AIG), the Steering Committee noted that the AFI Plan Work Programme for 2013 had incorporated all technical audit areas as reflected in the scope of assistance missions undertaken by the Regional Office Safety Teams (ROST).

2.2 It was recalled that under its Recommendation 3/3 (*Performance-based approach and measurement*), the Special AFI Regional Air Navigation (SP AFI RAN) meeting held in Durban, South Africa, from 24 to 29 November 2008 had already adopted a performance-based approach to aviation safety and air navigation efficiency, and accordingly established specific regional performance objectives and metrics; and had recommended States of the region to work on the improvement of ANS. These regional objectives were endorsed by the APIRG/17 meeting (Ouagadougou, Burkina Faso, 2-6 August 2010).

2.3 In accordance with Recommendation 6/1 (*Regional Performance Framework – Planning Methodologies and Tools*) of the Twelfth Air Navigation Conference (AN-Conf/12) and the Global Air Navigation Plan (Doc 9750, 4th Edition), the APIRG/19 meeting (Dakar, Senegal, 28-31, October 2013) adopted the AFI Air Navigation System Implementation Action Plan aligned with the ICAO Aviation System Block Upgrades (ASBUs). The aligned regional Plan focuses on implementing ASBU Block 0 Modules, establishes targets and priorities, and includes the need to report on the progress of regional implementation through a planned online system which would also support an annual Global Air Navigation Report.

2.4 The APIRG/19 meeting also noted that, while PIRGs are progressively identifying a set of regional performance indicators and supporting metrics, States had recognized that data compilation, processing, storage and reporting for the identified regional performance metrics were fundamental to the success of the performance-based approach. Although recognizing the difficulties associated with the process but also its importance, the meeting recommended that States should establish, consistent with the Twelfth Air Navigation Conference Recommendation 6/1, priorities and targets for air navigation.

2.5 In view of the above and based on the meeting discussions, the AFI Plan Steering Committee then recommended to incorporate the ANS technical area into the Work Programme of the AFI Plan, and requested the Secretariat to initiate the development of targets and monitoring of this technical area, consistent with the ICAO Global Air Navigation Plan and Regional Implementation Action Plan.

2.6 In follow-up to the above Steering Committee recommendation, the Secretariat has defined relevant metrics and indicators for specific areas considered relevant for the AFI Region.

2.7 Proposals for specific metrics and indicators associated with the regional targets are contained in **Attachment A** to this discussion paper.

3. **CONCLUSION**

3.1 Coordination within the Secretariat resulted in the table shown in **Attachment A** to this discussion paper and the Steering Committee is requested to analyze the proposal and its feasibility for application to the AFI Region.

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DP 07 Attachment A: Progress report on developing a means to monitor the status and improvement of ANS technical area

Performance Objectives	Priority	Linkage with ASBU Modules	Indicators/Metrics	Targets (to be completed once indicators and metrics are approved)	Qualitative performance benefits associated with safety key performance area	Remarks
1. Implementation of Performance Based Navigation (PBN)	1	ASBU Module BO-APTA	<ul style="list-style-type: none"> • Number of PBN routes • Number of International Aerodromes/TMAs with PBN SIDs implemented • Number of International Aerodromes/TMAs with PBN STARs implemented • Number of International Aerodromes with Approach Procedures with vertical guidance (APV) • Number of International Aerodromes with Approach Procedures with lateral guidance (LNAV) 		<ul style="list-style-type: none"> • Increased safety through stabilized approach paths • Reduced runway safety related accidents/incidents and CFIT • Increased safety through optimization of airspace use in the vertical and horizontal planes 	<ul style="list-style-type: none"> • Reflected on the AN Dashboard • Safety key performance area (KPA) related ASBU Module identified by APIRG/19

Performance Objectives	Priority	Linkage with ASBU Modules	Indicators/Metrics	Targets (to be completed once indicators and metrics are approved)	Qualitative performance benefits associated with safety key performance area	Remarks
2. Implementation of Continuous Descent Operations (CDO) and Continuous Climb Operations (CCO) (by 2017)	1	ASBU Modules B0-CDO and CCO	<ul style="list-style-type: none"> Number of International Aerodromes/TMA with CDO implemented Number of International Aerodromes/TMA with CCO implemented Annual environmental benefits attained (reduced fuel consumption/GHG emissions) 		<ul style="list-style-type: none"> More consistent flight paths and stabilized approach paths 	<ul style="list-style-type: none"> Safety key performance area (KPA) related ASBU Module identified by APIRG/19
3. Implementation of Digital ATS Coordination/Transfer	1	ASBU Module B0-FICE	<ul style="list-style-type: none"> Number of FIRs within which all applicable ACCs have implemented at least one interface to use ATS Inter-facility Data Communications (AIDC) with neighbouring ACCs 		<ul style="list-style-type: none"> Improved coordination between ATS units 	<ul style="list-style-type: none"> Reflected on the AN Dashboard

Performance Objectives	Priority	Linkage with ASBU Modules	Indicators/Metrics	Targets (to be completed once indicators and metrics are approved)	Qualitative performance benefits associated with safety key performance area	Remarks
4. Implementation of En-Route Data Link Applications	1	ASBU Module BO-TBO	<ul style="list-style-type: none"> Number of FIRs having implemented Data Link (ADS-C/CPDLC) for en-route operations 		<ul style="list-style-type: none"> ADS-C based safety nets supports cleared level adherence monitoring, route adherence monitoring, danger area infringement warning and improved search and rescue CPDLC reduces occurrences of misunderstandings between air traffic controllers and pilots Solution to stuck microphone situations 	<ul style="list-style-type: none"> Safety key performance area (KPA) related ASBU Module identified by APIRG/19
5. Implementation of Aeronautical Information Management (AIM) Quality Management System (QMS)	1	ASBU Module BO-DATM	<ul style="list-style-type: none"> Number of States with AIM QMS implemented 		<ul style="list-style-type: none"> Reduction in the number of possible inconsistencies 	<ul style="list-style-type: none"> Reflected on the AN Dashboard Safety key performance area (KPA) related ASBU Module identified by APIRG/19

Performance Objectives	Priority	Linkage with ASBU Modules	Indicators/Metrics	Targets (to be completed once indicators and metrics are approved)	Qualitative performance benefits associated with safety key performance area	Remarks
6. Implementation of Aeronautical Meteorology (MET) Quality Management System (QMS)	1	ASBU Module BO-AMET	<ul style="list-style-type: none"> • Number of States with MET QMS implemented • Number of incidents/accidents with MET conditions as a sole or as a contributory factor 		<ul style="list-style-type: none"> • Reduced incidents/accidents in flight and at international aerodromes due to MET support 	<ul style="list-style-type: none"> • Safety key performance area (KPA) related ASBU Module identified by APIRG/19

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