International Civil Aviation Organization

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WORKING PAPER

SPECIAL AFRICA-INDIAN OCEAN (AFI) REGIONAL AIR NAVIGATION (RAN) MEETING

Durban, South Africa, 24 to 29 November 2008

Agenda Item 6: Development of a set of comprehensive work programmes in the air navigation field, aimed at improving efficiency of the air navigation system (Efficiency Committee)

ELIMINATION OF MAJOR AIR NAVIGATION DEFICIENCIES IN THE REGION

(Presented by the Secretariat)

SUMMARY

This paper contains major air navigation deficiencies in the AFI Region in the fields of AGA, ATM, AIS/MAP, CNS, MET and SAR as updated by APIRG, its subsidiary bodies, the Secretariat and by States. These were identified on the basis of a uniform methodology endorsed by the Air Navigation Commission and the Council for global application by all ICAO PIRGs.

Action by the meeting is in paragraph 4.

1. INTRODUCTION

1.1 Identification, assessing, tracking and reporting of air navigation deficiencies is one of the regular tasks of the ICAO planning and implementation regional groups (PIRGs). To achieve consistency in this matter, a uniform methodology was developed and endorsed by the Air Navigation Commission.

2. DISCUSSION

2.1 The Special AFI RAN meeting will recall the appreciation by the Commission and the Council on the efforts of the AFI Planning and Implementation Regional Group (APIRG) in identifying, assessing, tracking and reporting air navigation deficiencies. Following the concerns raised by the Commission and the Council on the serious impact of unresolved deficiencies on safety, the SP AFI RAN meeting will wish to recall the previous discussions in this regard, which concluded, among others; that considering the negative impact of non-implementation of the air navigation plan requirements and the persistence of serious cases of deficiencies in several parts of the AFI Region, States concerned should with extreme urgency, take concrete measures to eliminate all deficiencies impairing the safety of aircraft operations in the region.

2.2 In accordance with the established practice, at the sixteenth meeting of APIRG (Rubavu, Rwanda, 19 – 23 November 2007) deficiencies were updated in the air navigation fields of AGA, ATM, AIS/MAP, CNS, MET and SAR as shown in Appendix P of the APIRG/16 Report available in the ICAO website at www.icao.int/icao/en/ro/wacaf/apirg/apirg16/ respectively and proposed appropriate remedial action to reduce or eliminate them.

2.3 Furthermore, the respective regional offices undertook the follow-up action of APIRG Conclusion 16/67 relating to these deficiencies.

Conclusion 16/67 — Elimination of air navigation deficiencies

That States be reminded to adopt a step-by-step approach when implementing air navigation system elements, by giving priority to solving the deficiencies affecting all elements of the system.

2.4 As a consequence of this follow-up, the list of deficiencies has been updated which is available at the ICAO website as indicated in paragraph 2.2 above. Many deficiencies including those impairing safety, are still persistent and need to be resolved as a matter of urgency. In particular priority should be given to the elimination of the deficiencies listed in the Appendix.

2.5 With respect to deficiencies in the field of SAR, it should be noted that supplementary data has become available to the normal deficiency identification process by virtue of the ICAO/AFCAC SAR Project in the AFI Region that was conducted from 2002 through 2007. While particular deficiencies in each of the thirty-four States that were evaluated are too numerous to list in this paper, graphical representation of their general nature and systematic extent is included in the SAR performance objectives in the Appendix to this working paper.

2.6 It is important that the States which have not done so develop their relevant action plans to eliminate and/or reduce these deficiencies.

2.7 Implementation of the relevant action plans may require States to seek assistance and support form external sources.

2.8 Based on the above the meeting is invited to adopt the following recommendation:

Recommendation 6/x — Elimination of air navigation deficiencies in the AFI Region

That the AFI States concerned:

a) be invited to develop their national action plan to eliminate their relevant deficiencies in the fields of AGA, ATM, AIS/MAP, CNS, MET and SAR, priority being given to the deficiencies as contained in the Performance Framework Form in the Appendix to this paper, using the planning process described in the Global Air Navigation Plan; and

b) take steps to seek assistance where required for the implementation of their action plans. Such assistance may be sought from existing ICAO mechanisms such as TCB, IFFAS, SIPs and from industry stakeholders and donor agencies.

3. ACTION BY THE MEETING

3.1 The meeting is invited to approve the draft recommendation at paragraph 2.8 above.

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APPENDIX

AERODROME PERFORMANCE OBJECTIVES

ELIMINATION OF DEFICIENCIES IN THE AOP FIELD (bird hazard reduction, rescue and fire fighting services and aerodrome emergency planning)				
Benefits				
Safety **Efficiency**	• strengthen States' safety oversight responsibility on aerodrome operations • enhanced safety, efficiency and regularity of aerodrome operations in the States • uniform implementation of the relevant ICAO SARPs and/or applicable national regulations in the AFI States			
Strategy **Short term (2010)** ***Medium term (2011 - 20015)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AOP	• regional office to carry out a survey within States to determine the current level of implementation with respect to the three major deficiencies in the AFI Region	January – June 2009		
	• regional office to analyze guidance in the ICAO *Manual on the ICAO Bird Strike Information System (IBIS)* (Doc 9332) and the *Airport Services Manual*, Part 1 — *Rescue and Fire Fighting*, Part 3 — *Bird Control and Reduction* and Part 7 — *Airport Emergency Planning* (Doc 9137) vis-à-vis national regulations and Annex 14 provisions	June – December 2009		
	• regional office to evaluate training needs in the AFI Region, if any; and coordinate these with the training needs for aerodrome certification	October – November 2009		
	• regional office in collaboration with the respective States to identify specific technical assistance needs, if any	October – November 2009		
	• regional office to develop and implement an action plan to meet the identified training needs in coordination with those for aerodrome certification	November – February 2010		
	• regional office to develop and implement an action plan for technical assistance needs in coordination with the respective States and TCB	June 2009 – December 2014		
	• each State to develop and implement an action plan to remove the three major deficiencies	2009 – 2011		

	• regional office to develop and implement an efficient monitoring system and regular feedback mechanism to APIRG regarding the correction of the identified three major deficiencies within the respective AFI States	2009 – ..		
linkage to GPIs	GPI/13: Aerodrome operations			

ATM PERFORMANCE OBJECTIVES

ELIMINATION OF IDENTIFIED ATM DEFICIENCIES (provision of ATC service and implementation of ATS routes including RNAV routes, joint use of airspace)				
Benefits				
Environment **Efficiency** **Safety**	• reductions in fuel consumption • ability of aircraft to conduct flight more closely to preferred trajectories • enhance safety by wider distribution of aircraft in a given airspace • enhanced safety management			
Strategy **Short term (2010)** ***Medium term (2011 - 20015)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AOM	• implementation and provision of ATC service along ATS routes UA618, UB525, UB607, UL612, UM220, UM365, UR400 (Khartoum FIR) and UR780 (Mogadishu FIR), in the Table ATS 1 – Basic ANP, Doc 7474 and the provision of ATC service at terminal area of Mogadishu International Airport	2008 – 2009		
	• elimination and/or removal of special use airspaces (prohibited restricted and danger areas)	2008 – 2009		
	• State develop an implementation action plan to eliminate/or reduce these deficiencies	2008 – 2009		
linkage to GPIs	GPI/1: Flexible use of airspace; GPI/7: Dynamic and flexible ATS route management; GPI/8: Collaborative airspace design and management; GPI/10: Terminal area design and management			

AIS/MAP PERFORMANCE OBJECTIVES

ELIMINATION OF AIS/MAP DEFICIENCIES (implementation of WGS-84 coordinates, publication of aeronautical charts and timely publication and updating of AIS/MAP documents, i.e. NOTAMs, AIPs, AICs, etc.)				
Benefits				
Efficiency **Safety**	• improved collaborative decision-making through sharing aeronautical data information • enhance safety by timely exchange air safety data, i.e. electronically and wider distribution of such data			
Strategy **Short term (2010)** ***Medium term (2011 - 20015)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AIS/MAP	• publication of relevant aeronautical charts	2008 – 2009		
	• publication of WGS-84 coordinates for en-route waypoints and use for GNSS coordinates for terminal approaches and departure procedures	2008 – 2009		
	• publication of AIPs, NOTAMs and AICs using standards formats			
	• States concerned to develop action plan to eliminate the deficiencies	2008 – 2009		
linkage to GPIs	GPI/18: Aeronautical information; GPI/20: WGS-84			

CNS PERFORMANCE OBJECTIVES

ELIMINATION OF IDENTIFIED CNS DEFICIENCIES				
Benefits				
Safety	**Implementation of AFI ANP** • enhanced safety in flight operations • uniform implementation of CNS/ATM systems (Doc 003) and relevant ICAO SARPs			
Strategy **Short term (2010)** ***Medium term (2011 - 20015)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AMS	• provision of VHF in FIRs Angola, Sudan, Somalia and Congo (RD)	2008 – 2009		ongoing
Navigational	• implementation of navigational aids to increase safety at terminal areas	2008 – 2011		ongoing
	• implementation of GNSS – carry out survey to determine the implementation status and identify the specific assistance needed if any	2009		ongoing (60% implementation)
Surveillance	• development of AFI surveillance plan	2008 – 2009		
	• development of State implementation action plan based on AFI surveillance plan	2009 – 2012		
Safety	• implementation of automation support tools to enhance frequency management	July 2008 – 2009		ongoing
	• AFI to join ICARD	August 2008 – March 2009		
linkage to GPIs	GPI/10: Terminal area design and management; GPI/21: Navigation systems			

MET PERFORMANCE OBJECTIVES

FOSTER THE IMPLEMENTATION OF TERMINAL AREA WARNINGS AND FORECASTS, WAFS NATIONAL COMPONENTS AND OPTIMIZATION OF OPMET DATA EXCHANGES IN THE AFI REGION				
Benefits **Environment** • contribution in the reduction in fuel consumption **Efficiency** • improvement of efficiency of meteorological services to aircraft in flight • ensure timely preparation and provision to airlines of aviation warnings for terminal area meteorological hazards • improvement in the efficiency of flight planning by airlines taking into account prevailing and expected meteorological conditions along the route **Safety** • minimize encounters by aircraft of hazardous meteorological conditions along the route				
Strategy **Short term (2010)** ***Medium term (2011 - 20015)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
ATM-SDM	**Terminal area warnings and forecasts** • Step 1: Assessment of the current level of implementation of facilities at aerodromes for monitoring hazardous meteorological conditions • Step 2: Establishment of an updated list of deficiencies including States not compliant with required facilities stipulated in Annex 3 and the AFI ANP and for States to develop action plans to eliminate the deficiencies • Step 3: Provision of details guidance to States not issuing terminal area warnings and forecasts • Step 4: Establishment of an implementation project in terms of seminars and consultancy services through Special Implementation Projects (SIPs) and IFFAS Projects respectively for States not meeting their obligation	2008 – 2010		
	World area forecast system (WAFS) • Step 1: Two seminars in English and French on new WAFS gridded forecasts			

	• Step 2: Establishment of an updated list of States not receiving WAFS products and areas of constraints in implementing SADIS, VSAT and FTP service and States concerned to develop remedial action plans • Step 3: Establishment of an implementation project in terms of seminars and consultancy services through Special Implementation Projects (SIPs) and IFFAS Projects respectively	2008 – 2011		
	Optimization of OPMET data exchange and implementation of OPMET data banks • Step 1: Undertake an assessment of the availability and quality of OPMET data in the region and States not meeting the required levels of implementation to develop remedial action plans • Step 2: Two seminars in English and French on AMBEX and OPMET AFI data bank procedures • Step 3: Establishment of an implementation project in terms of seminars and consultancy services through Special Implementation Projects (SIPs) and IFFAS Projects respectively	2008 – 2011		
linkage to GPIs	GPI/19: Meteorological systems			

SEARCH AND RESCUE (SAR) PERFORMANCE OBJECTIVES

ELIMINATION OF IDENTIFIED SAR DEFICIENCIES (SAR legislation, SAR agreements and SAR ELT)				
Benefits				
Efficiency **Safety**	• efficiency in the conduct of SAR service • effective and timely assistance by all participating emergency response agencies • safety of life			
Strategy **Short term (2010)** ***Medium term (2011 - 20015)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
SAR service	• review deficiencies in the provision of effective SAR and rescue service	2008 – 2009		
	• review deficiencies concerning implementation of SAR legislation	2008 – 2009		
	• review deficiencies concerning implementation of SAR agreements with assisting SAR organizations	2008 – 2009		
	• review deficiencies concerning implementation of COSPAS SARSAT ELT 406 MHz	February 2009		
	• develop State action plan to eliminate and/or reduce these deficiencies	2009		
linkage to GPIs	GPI/16: Decision support and alerting service			

In addition to the above long standing deficiencies, supplementary data has become available to the normal deficiency identification process by virtue of the ICAO/AFCAC SAR Project in the AFI region that was conducted from 2002 through 2007. In all, thirty-four African States were evaluated by the project.

While the particular deficiencies in each of the thirty-four States are too numerous to list in this paper, the following graphical representation of their general nature and systematic extent is indicative of widespread and critical deficiencies across the continent.

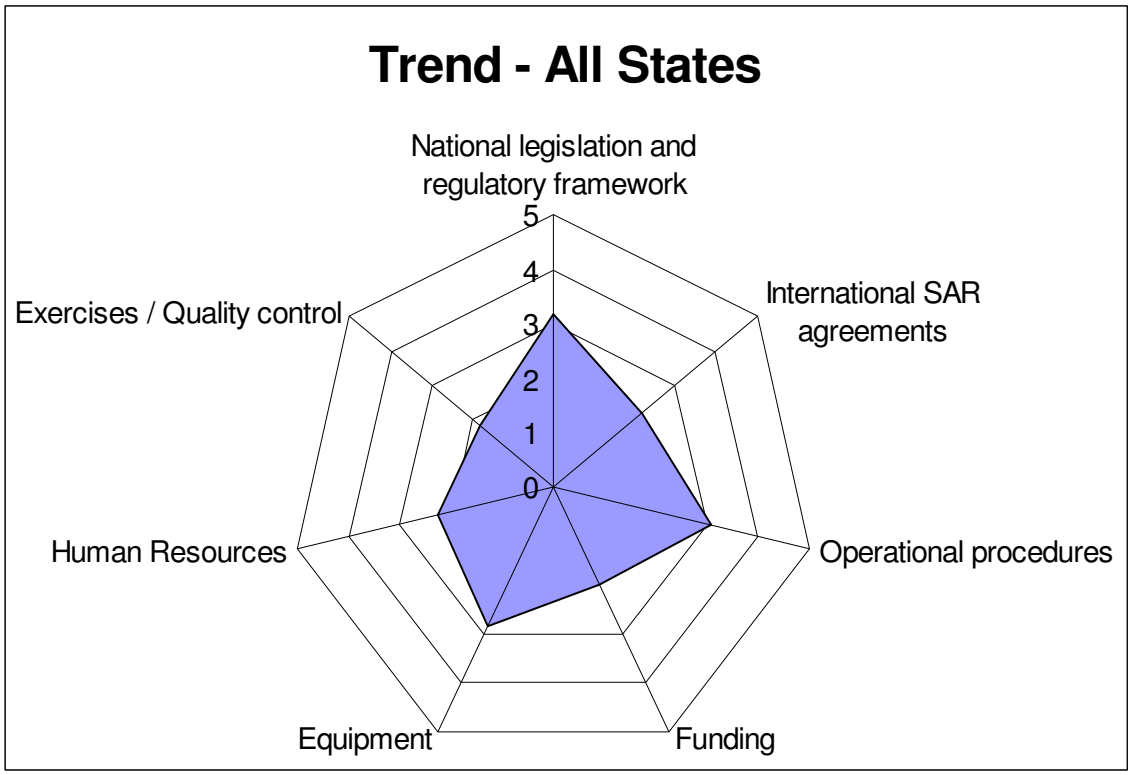
The following graphic presents the mean results of all evaluated States with respect to seven fundamental components of a SAR system:

1. national legislation and regulatory framework;
2. international SAR agreements;
3. operational procedures;
4. funding;
5. equipment;
6. human resources; and
7. exercises/quality control.

The rating scale of 1 to 5 signifies:

1 – not implemented
2 – initial implementation
3 – meets Annex 12 requirements in some areas
4 – meets Annex 12 requirements in most areas
5 – fully meets Annex 12 requirements

It is important to note that in the case of each evaluated State, the evaluation report was sent to the State concerned for comments on and objections to the findings. The results depicted here, then, are as agreed by the States and are indicative of widespread non-compliance with ICAO SARPs and, as a result, a severely compromised capacity to save endangered life.



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