

INTERNATIONAL CIVIL AVIATION ORGANIZATION



AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP (APIRG)

REPORT OF

**THE THIRTEENTH MEETING OF THE AIR TRAFFIC
MANAGEMENT/AERONAUTICAL INFORMATION MANAGEMENT/SEARCH AND
RESCUE SUB-GROUP (ATM/AIM/SAR SG/13)**

(Nairobi, Kenya, 16 – 19 September 2013)

PREPARED BY THE SECRETARIAT OF THE ATM/AIM/SAR SUB-GROUP

The views expressed in this Report should be taken as those of the APIRG ATM/AIM/SAR Sub-Group and not of the Organization. This Report will be submitted to the APIRG and any formal action taken will be published in due course as a Supplement to this Report.

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PART I – HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1 The Thirteenth meeting of Air Traffic Management/Aeronautical Information Management/Search and Rescue Sub-Group (ATM/AIM/SAR SG/13) was held at the Nairobi Safari Club Hotel in Nairobi, Kenya from 16-19 September 2013.

2. OPENING

2.1 The ATM/AIM/SAR SG/13 and the CNS/SG/5 meetings held a joint opening session. Opening remarks were delivered by Mr. Boitshoko Sekwati, Deputy Regional Director for Eastern and Southern African (ESAF) Regional Office, on behalf of the Regional Director. In his opening remarks, Mr. Sekwati welcomed the delegates to Nairobi and to the thirteenth meeting of the Sub-Group. He expressed appreciation on the level of attendance and thanked States and Organizations that had made it possible for the officials to attend the meeting. Mr. Sekwati further highlighted that the ATM/AIM/SAR SG/13 and the CNS SG/5 meetings were being held at the same time and venue in order to facilitate coordination of CNS/ATM issues during their sessions

2.2 Mr. Sekwati recalled the Air Navigation Commission and Council had considered and approved the report of the APIRG/18 Meeting convened in Kampala, Uganda from 27 to 30 March 2012. He highlighted that there continues to be shortcomings in implementing recommendations emanating from the AFI Regional Air Navigation Meetings, as well as Conclusions and Decisions from the AFI Planning and Implementation Regional Group (APIRG). In this regard, Mr. Sekwati reiterated the need to encourage reporting of air navigation deficiencies by States, as well as collection of information on impediments to implementation in order to facilitate identification of solutions.

2.3 Finally, Mr. Sekwati called on the participants of the two Sub-Groups to agree on sustainable strategies to achieve tangible results consistent with ICAO Standards and Recommended Practices (SARPs), policies and regional requirements, as well as specific actions to be implemented by the States with timelines. He urged States' regulatory bodies to effectively oversee the processes of implementation.

3. ATTENDANCE

3.1 The meeting was attended by a total of fifty one (51) participants and experts from twelve (12) States and six (6) organizations. The list of participants is at the **Attachment 1A** to this report.

4. OFFICERS AND SECRETARIAT

4.1 The meeting was chaired by Mr. Geoffrey Okot, Manager Air Traffic Management from Uganda Civil Aviation Authority.

4.2 Mr. Seboeso Machobane, Regional Officer ATM/SAR, ESAF Regional Office was the Secretary of the meeting. He was supported by Messrs. David Labrosse, Regional Officer ATM/SAR, ESAF Regional Office, Sadou Marafa, Regional Officer ATM/SAR WACAF Regional Office and Georges Baldeh, Regional Officer AIM, WACAF Regional Office.

5. LANGUAGE AND DOCUMENTATION

5.1 The discussions were conducted in the English and French languages and the meeting documentation was issued in both languages. Translation and simultaneous interpretation services were provided.

6. AGENDA

6.1 The following Agenda was adopted by the Sub-Group:

Strategic Objective	Agenda Item No.	Subject
	1.	Adoption of the Provisional Agenda and Election of the Chairperson and Vice Chairperson
A & C	2.	Follow-up on SP AFI RAN Recommendations and APIRG Conclusions and Decisions relevant to ATM, AIM and SAR fields
A	3.	Review and update of AFI SSR code allotment plan
A & C	4.	CNS/ATM coordination issues
A & C	5.	RVSM operations and monitoring
A & C	6.	Performance Based Navigation (PBN) and AFI ATS route network
A & C	7.	Safety management
A & C	8.	ATM contingency arrangements
A & C	9.	Search and Rescue (SAR)
A & C	10.	Civil/Military cooperation
A & C	11.	ICAO 2012 flight plan format – post implementation
A & C	12.	AIM/MAP issues
A & C	13.	Review of Air Navigation deficiencies in the ATM, AIM, MAP and SAR fields
A & C	14.	Review of ATM/AIM/SAR Sub-Group terms of reference and future work programme
A	15.	Date, venue and provisional agenda of next ATM/AIM/SAR Sub-Group meeting
	16.	Any other business

7. CONCLUSIONS AND DECISIONS – DEFINITION

7.1 All APIRG Sub-Groups and Task Forces record their actions in the form of Conclusions and Decisions with the following significance:

- a) **Conclusions** deal with matters which, in accordance with the Group's terms of

reference, merit directly the attention of States on which further action will be initiated by ICAO in accordance with established procedures; and

- b) **Decisions** deal with matters of concern only to the APIRG and its contributory bodies.

PART II – AGENDA ITEMS

Report on Agenda Item 1: Agenda and Election of Chairperson and Vice-Chairperson

1.1 The agenda for the Thirteenth Meeting of the Air Traffic Management/Aeronautical Information Management/Search and Rescue Sub-Group (ATM/AIM/SAR SG/13) was adopted by the meeting as at **Appendix 1A** to this report.

1.2 The meeting recalled that at its Twelfth meeting held in Dakar, Senegal 25-29 July 2011, Mr. Sulayman J. Jabang from Gambia had been elected as Chairperson to facilitate the business of the Sub-Group for two successive meetings. In view that Mr. Jabang did not attend the Thirteenth meeting of the Sub-Group, it was agreed that a new Chairperson should be elected.

1.3 In view of the above, Mr. Okot was elected as Chairperson of the ATM/AIM/SAR Sub-Group, to serve for two consecutive meetings.

1.4 The meeting raised concern on the lack of continuity by Chairpersons of the Sub-Group. In this regard the meeting requested that in the process of sending the invitation letter to States and organizations for future Sub-Group meetings, the Secretariat should establish a way of sensitizing the concerned State or organization (from which the Chairperson comes) in order to facilitate his/her release to attend and service the Sub-Group meeting.

Report on Agenda Item 2: Follow-up on SP AFI RAN Recommendations, APIRG Conclusions and Decisions within the Framework of APIRG relevant to the ATM/AIM/SAR SG

2.1 The meeting reviewed 18 Recommendations from the SP/AFI RAN meeting in 2008, 21 Conclusions and Decisions from the APIRG/18 Meeting in Kampala March 2012, which were relevant to the Sub-Group, as well as Draft Conclusions from the APIRG subsidiary bodies reporting to ATM/AIM/SAR Sub-Group, and took action as necessary.

2.2 Pursuant to APIRG Decision 18/01: *Review and Update of APIRG Conclusions and Decisions*, the Sub-Group reviewed the APIRG Conclusions from the APIRG/13 Meeting to the APIRG/18 Meeting and took action to:

- a) identify those which are no longer valid, for deletion or update;
- b) consolidate Conclusions and Decisions with common objectives; and
- c) transfer Conclusions and Decisions which have reached maturity and considered still relevant to appropriate guidance material, handbooks and manuals for the AFI Region.

2.3 In this regard, due to the high number of Conclusions and Decisions, the meeting formed four small working groups (SMGs) as reflected in **Appendix 2A** to this report, to review 179 Conclusions and Decisions from the APIRG/13 Meeting in 2001 to the APIRG/18 in 2012. After carrying out the above tasks, the Sub-Group agreed that 129 Conclusions and Decisions had become redundant (overtaken by events, action completed,

included in other documents, etc.) or were duplicated in other APIRG Conclusions or Decisions. The Sub-Group proposed the retention or reformulation 50 Conclusions and Decisions as at **Appendix 2B** to this report.

- 2.4 The meeting deliberated on the various aspects in the implementation of air traffic services (ATS) in general and of air traffic control service (ATC) in particular, that had resulted in the formulation of at least seven (7) Conclusions since the APIRG/13 meeting in 2001. The meeting agreed that in order to enable various ATM performance improvements, ATC should be implemented in certain areas and in a harmonized manner to ensure seamlessness of services. In this regard, the meeting was particularly cognizant of safety issues in some FIRs and the need to upgrade the level of ATS. Accordingly, the Sub-Group formulated the following Draft Conclusion which is proposed to supersede all previous APIRG Conclusions regarding the implementation of air traffic control service in the AFI Region:

DRAFT CONCLUSION 13/01: IMPLEMENTATION OF AIR TRAFFIC CONTROL SERVICE

That,

By 14 March 2014, AFI States that have not already done so, establish Class A airspace in accordance with Section 2.6 of Annex 11 to the Chicago Convention, and implement air traffic control services in the lower airspace as follows:

- a) establish Class A airspace above FL145 for all ATS routes referred to in Table ATS 1 of the AFI Air Navigation Plan (Doc 7474) as amended;*
- b) establish Class A airspace above Flight Level 195 elsewhere within the FIR; and*
- c) implement air traffic control service in all terminal control areas (TMA) and control zones (CTR).*

Note: This Draft Conclusion is to supersede all previous Conclusions of APIRG relating to the implementation of ATC, including Conclusions 13/31, 13/41, 14/20, 14/26, 15/45 and 16/45.

- 2.5 The Sub-Group deliberated on the utility and status of ICAO Doc 003 as a “one stop” source document and guidance to inform States on planning and implementation. It was noted that in recent years there had been rapid changes in planning methodologies and tools made available. In this regard, it was acknowledged that significant changes are required to keep Doc 003 up to date. The meeting requested the Secretariat to take necessary action to revive at least those aspects of Doc 003 which continue to be relevant.

Report on Agenda Item 3: Review and Update of the AFI SSR Code Allocation Plan

- 3.1 The Sub-Group recalled that the APIRG/14 meeting in June 2003 adopted Conclusion 14/25 regarding inclusion of the updated SSR Code Allotment Plan. The meeting

noted that many States in the AFI Region have introduced or are in the process of introducing radar services as part of their strategy to enhance air traffic services and their surveillance obligations to match the level of surveillance required within designated airspaces (terminal and/or en-route). In this regard, the existing SSR Code Allotment Plan no longer serves States and air navigation services adequately.

3.2 In view of the above and in order to avoid shortage of SSR codes for some States in the near future, the ATM/AIM/SAR Sub-Group agreed to review the AFI SSR Code Allotment Plan, and accordingly formulated the following Draft Decision establishing a Working Group to undertake the task of reviewing and updating the Plan:

***DRAFT DECISION 13/02: ESTABLISHMENT OF THE AFI SSR CODE
ALLOCATION AND ASSIGNMENT WORKING
GROUP***

That, the AFI SSR Code Allocation and Assignment Working Group (ASCAA WG) is established with the terms of reference as at Appendix 3A to this working paper, to review and update the AFI SSR Code Allotment Plan and code assignment principles.

Report on Agenda Item 4: CNS/ATM Coordination Issues

4.1 On 18 September 2013, the ATM/AIM/SAR SG/13 and the CNS/SG/5 convened in a joint session of the Sub-Group meetings (JSSG) to discuss issues that required coordination between the two Sub-Groups.

Planning and implementation of surveillance and other technologies

4.2 The JSSG recalled the outcome of the Performance-Based Navigation Route Development Network Working Group (PRND WG/3) held in Dakar, Senegal, from 5-8 August 2013 where issues of planning and implementation of surveillance was discussed in the context of its support to airspace optimization. The JSSG also noted that the AFI Region had advanced in the implementation of surveillance technologies. However, in many States the operational planning and application of the technologies was lagging. Amongst others, in many States radar surveillance (SSR) was used for “monitoring” *procedural* ATC separation. Members of the ATM/AIM/SAR Sub-Group highlighted the concern that at national levels, some CNS technologies were introduced without any or adequate consultation with users (ATC, AIS, Message Handling, etc.).

4.3 Accordingly, the meeting urged States to take necessary measures to optimize the operational use of existing and planned technologies, and in particular take into consideration the PBN related operational improvements that can benefit (efficiency, airspace capacity, safety and environmental protection) from such technologies.

4.4 The JSSG acknowledged that investments in CNS infrastructure require long term planning. As such, the identification of operational requirements should target both medium and long term. It was agreed that coordination to ensure that operational requirements to inform the

planning and implementation of CNS infrastructure, should be improved, not just at Regional level but at the level of individual FIRs and States. It was also recognized that the sharing of surveillance data (particularly radar) could facilitate early coverage of surveillance at relatively low costs. The JSSG recalled that the CNS/ATM Implementation Coordination Sub-Group (CNS/ATM/IC SG) and the Implementation Coordination Groups (ICGs) achieved much of the coordination in question. In this regard, the JSSG agreed on the reactivation of the ICGs to be combined and aligned with other existing forums in order to avoid the proliferation of bodies. Further discussion on the ICGs is reflected under agenda item 6 of this report.

CNS support to air traffic services

4.5 The JSSG noted that AFI Tactical Action Group had recorded a high number of Unsatisfactory Condition Reports (UCRs) including AIRPROXs in which lack of or poor communication had been a cause or contributing factor. Some FIRs were still relying on High Frequency (HF) facilities for air/ground and ATS/DS communications, while some had gaps in the coverage of communications with aircraft. While unimplemented circuits were identified in the list of deficiencies on which concerned States were expected to take action, the Sub-Group nevertheless urged States and ANSPs to take necessary action without delay.

AFI GNSS Strategy

4.6 The JSSG reviewed information relating to progress related to APIRG Conclusions 17/28: *Need for High Level Meeting on AFI GNSS Strategy* and 17/29: *Need for an Independent Cost Benefit Analysis* and noted the following:

- a) The AFI GNSS Strategy was finalized by second meeting of the PBN/GNSS Task Force (PBN/GNSS TF/2) convened from 13 to 15 June 2011 and endorsed by CNS/SG/4 meeting in Dakar, Senegal, July 2011;
- b) Guidance was developed to assist States, together with pre-implementation requirements; and
- c) The terms of reference carrying out the AFI SBAS CBA were developed in coordination between AFCAC and the APIRG Secretariat.

Missing Flight Plans

4.7 The JSSG reviewed information on the implementation of the *NEW* ICAO Flight Plan format on 15 November 2012 and the period after, and noted with appreciation the work of the FPLT Task Force to facilitate a successful implementation. The JSSG was however, concerned on the unbaiting challenge of missing flight plans. In this regard, the JSSG reviewed information on operational issues regarding the missing flight plans as detailed under agenda item 11 of this report. In addition, the JSSG recalled a number of APIRG Conclusions on the matter, including Conclusion 17/14: *AFTN Monthly Statistical Data*, 17/42: *Resolution of Missing Flight Plans Problem*, and agreed that in addition to any other measures that Sates/ANSPs and users should be taking to address the matter, Regional Offices be requested to carry out a survey to identify the current magnitude of the challenge and the associated causal or

contributing factors to missing flight plans.

4.8 The JSSG urged States to review the procedures that could lead to the use of outdated information from their AIPs and ICAO Documents, such as Doc 7910, and ensure that operational staffs, both CNS and ATM were provided with the necessary awareness.

4.9 The JSSG discussed the issue of surveys, in order to target specific role players associated with missing flight plans. However, there were views from the meeting that such approach might result in missing the bigger picture. On a wider scale, ANSPs should take necessary remedial action and civil aviation authority (CAA) regulators should establish, implement and enforce safety and security regulations.

4.10 Given the dissolution of the FPLT Task Force, it was agreed that the two Sub-Groups should continue looking into and addressing the flight plan related challenges.

Report on Agenda Item 5: RVSM Operations and Monitoring

RVSM Safety Policy

5.1 The meeting considered the amendments to the AFI RVSM Safety Policy proposed by the *AFI Regional Monitoring Agency (ARMA)*, as at **Appendix 5A** to this report. It was noted that the amendment constitutes an update in relation to the *ICAO 2012 Flight Plan* implementation, clarification on Single Point of Contact (SPOC), as well as consequential alignment of language to ensure continued relevance of the Policy document. The meeting endorsed the amendments and accordingly requested the ICAO AFI Regional Offices to circulate the amended **AFI RVSM Safety Policy** document to AFI States.

5.2 The meeting was provided with information relating to ARMA circulars which are placed on the ARMA webpage for access by the aviation community. It was recalled that historically, the circulars were being distributed by email to all RVSM National Program Managers (NPMs) and selected members and organizations of the aviation community. However, States were urged to periodically consult the ARMA webpage for any new Circulars which may contribute to enhance RVSM safety in the AFI Region. The meeting was also provided with an update on the ARMA Key Performance Areas in which it noted information on the functions of the ARMA and related developments. It was noted among others that there has been some improvement in the rate of safety returns from States; however, significant improvement is still required. The meeting was provided with an overview of the outcome of the recent Global RMACG/8 meeting held in Canberra, Australia in May 2013.

5.3 The meeting reviewed the tasks pertaining to the AFI Scrutiny Group and noted that these were already incorporated into the tasks of TAG and the ATS Incident Analysis Group (AIAG). It was noted that monthly reviews of RVSM operational errors through the TAG teleconferences were adding value to the process and was contributing to the expectations of the AFI Scrutiny Group.

RVSM approvals survey

5.4 The meeting noted the statistical information on the Global RVSM Approvals Survey which was conducted in Africa for the period December 2012, as well as the results following an assessment carried out in 2012 on 22 of the 30 FIRs that are monitored. In this regard, it was noted that out of a total of 73230 flights that were assessed, 46 aircraft were found to be non- RVSM approved, which indicates a reduction from 2011, where 104 aircraft were found to be non- RVSM approved. The meeting urged States/ANSPs to support ATM coordination between area control centres (ACCs) when non-RVSM approved State aircraft are being transferred with 2000 feet separation, and where non-RVSM approved aircraft request higher flight level after transfer. States/ANSPs were also urged to inform ARMA of suspected non-RVSM approved flights in order for appropriate action to be taken.

5.5 The meeting noted the information provided on Altimetry System Error (ASE) results collected using primarily the GMU (GPS-based monitoring unit) height monitoring system which is now being incorporated into the AFI RVSM Collision Risk Assessment. Out of 538 aircraft monitored by ARMA, 255, representing nearly 48%, still require height monitoring in accordance with Annex 6 to the Chicago Convention. The meeting noted that where aircraft ASE is greater than the maximum permissible error of plus/minus 245ft, the ARMA requests the relevant civil aviation authority to suspend the RVSM operations approval of the aircraft concerned, until the causal factor has been identified and resolved. State having deficiencies in this respect are reflected in the deficiency list. The meeting reviewed a table reflecting ASE per aircraft as monitored by the ARMA, and noted significant ASEs with regard to the following aircraft: B727, FA10, H25A, H25B and GLF2.

5.6 The Sub-Group urged States' civil aviation authorities to ensure that operators comply with the Annex 6 Standard for height monitoring and maintain contact with ARMA with the objective of ensuring that States meet their obligation with respect to height monitoring Standard.

AFI RVSM Collision Risk Assessment

5.7 The meeting reviewed information relating to the sixth Collision Risk Assessment (CRA 6) (2011) for the AFI Region, which inter alia, provides an assessment and information about ATM Coordination failures and errors which are generically captured in the Total Vertical Collision Risk estimate when applicable. It was recalled that CRA 6 presents the 3rd post-implementation CRA for RVSM in the AFI Region. The assessment addresses two of the AFI RVSM Safety Policy objectives, i.e. an assessment of the Technical Vertical Collision risk evaluated against the agreed TLS of 2.5×10^{-9} fatal accidents per flight hour, and an assessment of the Total Vertical Collision risk evaluated against a Target Level of Safety (TLS) of 5×10^{-9} fatal accidents per flight hour. It was also recalled that ARMA processes and manages CRA's for the AFI region on an annual basis utilizing the safety assessment data captured by States/ACC's and submitted to ARMA, as well as unsatisfactory condition reports (UCR's) reported to and processed by the AFI Tactical Action Group (TAG).

5.8 The meeting noted that there was a decrease in the rates of improper crossings at waypoints or navigational facilities where aircraft are at the correct same semi-circular rule flight level with standard RVSM separation being broken. The Sub-Group noted with concern that in

too many cases, the required separation had been restored as a result of TCAS intervention. It was also noted that Large Height Deviations had decreased from 54 to 34. This marked a recovery from the increases in these factors which was being experienced up to 2010.

5.9 The meeting noted with concern that, while the estimate of the Technical Vertical Collision risk was calculated to be below the Technical Vertical TLS of 2.5×10^{-9} fatal accidents per flight hour, the estimate of the Total Vertical collision risk still did not meet the Total Vertical TLS of 5×10^{-9} fatal accidents per flight hour. The result of the Total Vertical Collision Risk was largely influenced by the risk of aircraft levelling off at a wrong opposite- or same-direction flight level. The current Total Vertical collision risk is exceeded by a factor of 4.7, which is down from the previous year when it was calculated at a factor of 6.6 above the TLS. The meeting noted that the main contributing factors to the Total Vertical Risk estimate not meeting the Target Level of Safety were as follows:

- Human Factors; either ATC or flight deck originated.
- The lack of or improper coordination between ATC sectors and FIRs continues to be a dominant cause.
- Safety events resulting from unreliable communications.
- The lack of or non-adherence to procedures.

5.10 The meeting urged States and ANSPs to take effective measures to ensure that the causal factors are addressed, in particular air traffic coordination failures between ACCs.

5.11 Questions were asked regarding non-RVSM aircraft that require to climb through the RVSM strata to flight levels above the RVSM strata, and back through. The meeting recalled that the challenge with non-RVSM approved aircraft is their ability to hold the levels within required tolerance. As such, uninterrupted climbs may be permitted.

5.12 The meeting noted that there was a perennial challenge of RVSM National Programme Managers (NPM) who move from their positions and are not replaced on time. It was proposed that Regional Offices should circulate State Letters periodically to requesting States to update the lists of NPMs and other focal points. It was also recognized that ICAO, through the USOAP and other missions to States, could review job descriptions (JDs) to verify that critical tasks such as those of NPMs are included in the JDs of the relevant persons.

RVSM implementation deficiencies

5.13 The meeting reviewed the list of deficiencies related to RVSM which contained information updated as of 6 September 2013 and called for States to provide updates on their status to the ESAF and WACAF Regional Offices or ARMA for necessary update of the deficiency list. The meeting also agreed that the RVSM deficiency list should be incorporated into the AFI Deficiency List.

Report on Agenda Item 6: PBN and AFI ATS Route Network

6.1 The meeting recalled the outcome of the APIRG/18 meeting with regard to PBN implementation and the review of the AFI ATS route network. In this regard, the meeting reviewed the outcome of the PRND WG/3 meeting and noted that the Working Group had commenced consideration of the comprehensive user requirements with regard to route trajectories and flexibility of routing.

6.2 The Sub-Group noted that the Twelfth Air Navigation Conference (AN-Conf/12) in Montréal, 19 to 30 November 2012 adopted Recommendation 1/1 introducing the revised draft related to the Fourth Edition of the Global Air Navigation Plan (Doc 9750, GANP). It was noted that addition to building on the past editions of the GANP, the new GANP identifies the need for the development of standards and recommended practices, regulatory requirements, procedures and technology associated with the aviation system block upgrades (ASBU) methodology. In this regard, the Sub-Group endorsed the outcome of the PRND WG/3 and further agreed that in order to provide for a coordinated development, the AFI Optimized Route Trajectories and Airspace (AORTA) is introduced to provide for the identification of specific elements of implementation carried over from the work done under the 3rd Ed of the GANP and the Regional Performance objectives, to the 4th Ed. AORTA is a package of specific end to end (departure to arrival) operational improvements which will be phased for implementation at specific target dates on a Regional (AFI) basis. As such, the AORTA consists of the following:

- a) Regional ATS routes (en-route structure) – Developed under agreement to form part of the ANP as regional requirements.
- b) Terminal routes (PBN-based SIDs/STARs) – developed by States/ANSPs in coordination with adjacent airspaces as necessary, intended to cater specifically for transition to/from the optimized en-route structures.
- c) PBN Instrument approach procedures intended to meet the requirements of the AFI Regional PBN Implementation Plan.

6.3 It was acknowledged that in order to arrive at the specific elements (routes, etc.) forming part of AORTA, States will continue to be guided by the Regional PBN Implementation Plan as updated and aligned within the framework of the ASBUs.

6.4 The meeting considered and endorsed the criteria developed by the PRND Working Group for the identification and endorsement of elements of AORTA.

6.5 The meeting also noted that PRND Working Group had accepted into the AFI ATS Route Catalogue (AARC) a number of routes that had been initiated in various forums, as well as entry/exit points to user preferred trajectories in the Indian Ocean area, as reflected in **Appendices 6A** and **6B** to this report. The meeting updated the terms of reference of the PRND Working group as at **Appendix 6C** to this report

Critical path and implementation priorities

6.6 The meeting agreed on the criteria for considering user requirements, developing trajectories based on PBN, facilitating the implementation of flexible routing including user preferred profiles in defined airspaces. In this regard, the following elements will be applied through the use of matrixes and other tools that will be considered by the PRND Working Group:

Aircraft equipage

- Due regard should be given to the level of equipage (percentage of aircraft equipped) in a particular area or sub-region. However, it should be acknowledged that in general, latter day fleets are equipped with technologies that enable significant navigational advantages from on-board capabilities. Consideration should therefore be given to enabling benefits from such investments.

Early, accessible benefits

- Advantage should be taken of *low-hanging fruits*. Consideration should be given to conditions that offer the best opportunities for successful implementation with the least delay, even though the benefits may not have high significance.
- Conversely, some of the most inefficient trajectories are in areas where there is little or no flexibility to improve them, making any effort to establish efficient trajectories significantly *cost-ineffective*. While not abandoning areas with the most roadblocks, they should be given lower priority.

Significance of benefits

- High density routes and those involving heavy aircraft operations generally imply that operational improvements would result in high aggregate benefits.
- High density flows (or areas of routing) also provide high aggregate benefits.

Surveillance implementation

- The current or immediate existence of surveillance systems should support PBN specification having stringent accuracy requirements, typically RNAV 5 en-route and RNAV 1 in terminal areas. This in turn presents opportunities for airspace and trajectory flexibilities. The availability of surveillance in continental areas also facilitates the implementation of free routing.

CDM should continue to be one of the basic elements in considering the need for surveillance.

Duration of flights

- Duration of flights should be considered in prioritizing routes for inclusion into the AARC. ATS routes for city pair operations of four or more hours

(jet time), should be given higher priority over shorter routes. Besides the significance of benefits, such routes also present less climb through complexities per distance.

Minimum benefits

- For purposes of managing workload, efforts should be focused on higher benefits. In this regard the PRND Working Group should establish threshold benefits in distance (NM), CO₂) at or above which efforts would be focused.

6.7 In addition to the above, the following were agreed by the Sub-Group:

- a) The Priority Matrix established by the Working Group will be applied.
- b) City pair segments of four (4) hour (jet time) flights or more shall be prioritized into Phase 1.
- c) Implementation performance will be based primarily:
 - i. Best approximation of the user proposals. The percentage difference between the user proposals and the implemented trajectories shall be a measure of the shortfall which should remain to be addressed.
 - ii. Implementation timelines. It will be critical to meet the implementation timelines agreed within the framework of APIRG and the extent to which this is met shall be factored into the implementation performance. (This criterion is to be further developed by the Sub-Group).

6.8 The meeting noted that the PRND Working Group had developed 70 ATS route trajectories primarily for long range flights, taking into consideration that while direct (great circle) segments generally support reduced flight times, this is more true in short segments than in longer ones. For long haul flights, in many cases it becomes preferable to fly away from the great circle track due to upper wind conditions. It was noted that progress continues to be made in the Indian Ocean area with regard to random routing (user preferred routes (UPR)). In addition, it was noted that free routing was becoming increasingly practical in some continental airspace.

6.9 The meeting recognized that the AFI Tactical Action Group (TAG) has identified ATC competence as one of the main causal or contributing factors of high volumes of ATS incidents in some AFI FIRs. Other factors include deficiencies in staffing, lack of English language proficiency and communication infrastructure. The meeting agreed however, that these should not be reason not propose establishment of efficient ATS route requirements. Instead, the routes requirements should be identified and agreed, and the factors delaying their implementation, should be addressed as soon as possible to enable implementation. In this respect it was recalled that ICAO has various mechanisms to work with States in addressing deficiencies.

6.10 The meeting reviewed and updated the AARC as at **Appendix 6A** to this report, to reflect targeted operational benefits for the specific improvement, as well as benefits at the time a specific ATS route is submitted to the Regional Office for the ANP amendment proposal to be processed.

6.11 In view of the above, the meeting agreed on the following Draft Conclusion:

DRAFT CONCLUSION 13/03: AFIATS ROUTE CATALOGUE (AARC)

That, In order to facilitate the review and implementation of user ATS route requirements:

- (a) the AARC is revised to reflect operational benefits, and is initially populated with user requirements as indicated in Appendix 6A to the report on agenda item 6; and***
- (b) AFI States and concerned international organizations are urged to review the Catalogue every six (6) months (January and July), note developments, and take action as applicable.***

6.12 In order to provide focus for ANSPs, the meeting agreed that the development of ATS routes to revise the AFI ATS route network should continue to be within the framework of the PRND Working Group and should follow the prioritization established by the Working Group. While users may still make initiate proposal for ATS routes amendments through States, outside the purview of the Working Group, implementation priority shall be given to ATS routes proposed to and endorsed by the PRND Working Group, except where safety may justify other approaches.

6.13 The meeting noted with appreciation the successful outcome of the PBN Airspace Design Workshop which was arranged by the Global PBN Task Force Go Team, and, noting that much training was still necessary to enable expeditious implementation, requested ICAO to arrange seminar/workshops to which implementation experiences in the Region could be shared to complement specific PBN expertise.

6.14 The meeting acknowledged the importance of ATM coordination meetings in order to address a multiple of issues including, safety issues, traffic coordination and the establishment of ATS routes. It was further acknowledged that these had resulted in the effective resolution of safety concerns and improvement of efficiency. However, the meeting was cognizant that various forums could result in the undesirable proliferation of bodies and meetings. In this regard, the meeting agreed that to the extent possible, meetings should be combined and aligned with the AFI Homogeneous ATM areas and major traffic flows/routing areas and hence the Implementation Coordination Groups established in the AFI CNS/ATM Implementation Plan (Doc 003). The meeting was however, mindful that some of the tasks undertaken by the informal ATM coordination meetings were sub-regional in nature. Consideration should therefore be taken in consolidating the forums, to avoid groups that may be too large or meetings that may be long due to the number of tasks to be dealt with in the agenda. In this respect, the Sub-Group considered adding additional tasks to the PBN/GNSS TF, but

concluded that such action would detract the focus and progress of the Task Force.

6.15 Decision: Based on these discussions, the Sub-Group formulated the following Draft Decision:

DRAFT DECISION 13/04: REACTIVATION AND REVIEW OF THE TERMS OF REFERENCE OF CNS/ATM IMPLEMENTATION COORDINATION GROUPS (ICGs)

That, in order to facilitate coordination in the planning and implementation of CNS systems for ATM, as well as the harmonized implementation of ATM performance improvements:

- a) The Implementation Coordination Groups (ICGs) as established in the AFI CNS/ATM Implementation Plan (Doc 003) be reactivated;***
- b) The activities of the ICGs be expanded to include ATM coordination tasks that had been carried out in informal ATM Coordination Meetings;***
- c) The number and alignment of the ICGs take into consideration the added tasks, in particular those that are sub-regional in nature; and***
- d) The terms of reference of the ICGs are revised as at Appendix 6D to this report.***

Note: This Draft Decision is the result of the outcome of the joint session of the ATM/AIM/SAR SG/13 and the CNS SG/5 meetings, and is reflected in the reports of both meetings.

Homogeneous ATM areas and major traffic flows/routing areas

<i>Areas (AR)</i>	<i>Homogeneous ATM areas and major traffic flows/routing areas</i>	<i>FIRs involved</i>	<i>Type of area covered</i>
Africa-Indian Ocean (AFI) Region			
AR1	Europe — South America (EUR/SAM) (oceanic)	Atlantico ¹ , Canarias, Casablanca, Dakar Oceanic, Recife, Sal Oceanic	Oceanic en route low density in southern part and oceanic high density in northern part
AR2	Atlantic Ocean interface between the AFI, NAT and SAM Regions	Accra, Dakar, Johannesburg Oceanic, Luanda, Sal	Oceanic en route low density
AR3	Europe — Eastern Africa routes including the area of the Indian Ocean	Addis Ababa, Antananarivo, Asmara, Cairo, Dar es-Salaam, Entebbe, Khartoum, Mauritius, Mogadishu, Nairobi, Seychelles, Tripoli	Continental en route/ oceanic low density
AR4	Europe to Southern Africa	Algiers, Beira, Brazzaville, Cape Town, Gaborone, Harare, Johannesburg, Kano, Kinshasa, Lilongwe, Luanda, Lusaka, N'Djamena, Niamey, Tripoli, Tunis, Windhoek	Continental en route low density
AR5	Continental Western Africa including coastal areas	Accra, Dakar, Kano, Ndjamen, Niamey, Roberts, Brazzaville, Kinshasa, Khartoum, Addis, Nairobi, Entebbe, Dar-ES-Salaam ¹	Continental/oceanic low density
AR6	Trans-Indian	Antananarivo, Bombay ¹ , Johannesburg Oceanic, Male ¹ , Mauritius, Melbourne ¹ , Seychelles	Oceanic high density

Note:

- In terms of Recommendation 6/11 of AN Conf./12 November 2012, on the alignment of ANPs and SUPPs (Doc 7030), Alger, Casablanca and Tunis FIRs will become part of EUR ANP; Cairo, Khartoum and Tripoli FIRs will become part of MID ANP. AFI FIRs/State in the interface areas AFI/EUR and AFI/MID will therefore also change.*
- This table of Homogeneous ATM areas and major traffic flows/routing areas includes changes on AR-5 proposed in 2011 due to observed traffic growth between East and West Continental Africa. The change was not part of Doc 9750 3rd Ed. and is yet to be formally adopted.*

6.16 The meeting proposed the revised terms of reference of the PBN Route Network Development Work Group as at **Appendix 6B** to this report in order to adequately reflect the assignment by APIRG/18 of tasks relating to environmental protection.

¹ Brazzaville, Kinshasa, Khartoum, Addis, Nairobi, Entebbe, Dar-ES-Salaam FIRs are developing expansion areas of AR-5

6.17 The Sub-Group noted that Zambia (Lusaka FIR) was the only concerned State that had still not implemented APIRG/18 Conclusion 18/10 regarding the lowering of ATS routes UM214 and UM215. The meeting requested ICAO to send a State Letter to Zambia urging the State to implement the Conclusion as soon as practical, preferably before the end of November 2013.

6.18 The meeting noted information provided regarding the Global Operational data Link Document (GOLD) and recalled that the purpose of the GOLD was to facilitate global harmonization of existing data link operations and resolve regional and/or State differences impacting on seamless operations.

AFI Flight Procedure Programme

6.19 The meeting was briefed on the establishment of the AFI Flight Procedure Programme (FPP) to advance the implementation of PBN in the Region pursuant to Assembly Resolution A37-11. It was noted that the FPP, which is located in Dakar, Senegal, was launched under the initial sponsorship of three (3) years by the French Civil Aviation Directorate (DGCA) and ASECNA. The FPP is hosted by ASECNA which is also providing other resources.

6.20 Questions were raised regarding the regulatory authority under which the training part of the FPP would be functioning, as well as the qualification status of the trainees. In addition, the meeting requested clarifications with respect to the liability issues associated with the final output of the FPP, in particular the flight procedures that would be developed for States. The FPP welcomed the queries and indicated that it would be undertaking consultations within ICAO to provide the responses to the issues raised.

6.21 The meeting also requested information regarding the finality of the APIRG Conclusion 17/52: *Dissemination of a letter inviting proposals for establishment of the AFI Flight Procedures Programme (FPP)*. It was indicated that consultations and discussions led by the ICAO Director of Air Navigation Bureau were undertaken in a side meeting during the APIRG/18 meeting in Kampala in March 2012, on the best way to advance the AFI FPP, taking into consideration several factors including experiences from the establishment and operation of the APAC FPP. From such consultations, it had been agreed that the D/ANB would carry out further consultations at ICAO HQ during forthcoming meetings that would be convened there. The outcome of such process led to the decision which was captured in the circular letter by the ICAO Secretary General Ref.: AN 11/45.2.1-13/18 dated 28 February 2013 and subsequent developments thereafter.

Report on Agenda Item 7: Safety Management

7.1 The meeting reviewed the outcome of the AFI Tactical Action Group (TAG/5), as well as safety issues that had been identified and addressed in a series of informal ATM Coordination Meetings arranged by the Regional Offices.

7.2 It was noted that updates from States that had been having high numbers of UCRs had been limited. However, through interventions from the Regional Offices, information had been obtained on progress being made to implementation the Corrective Action Plans (CAPs) that the States had agreed with the TAG, as well as commitments they had made at the ATM Coordination meetings. Among others, it was noted that VSAT installation had been completed in Kinshasa FIR thereby addressing essential communication requirements, and that Luanda FIR had scheduled to carry out CPDLC trials in January 2014, with implementation of the same expected by March 2014.

7.3 The meeting noted that notwithstanding the above, the TAG/5 meeting had established the TAG Task Team (TAG/TT) to develop a proposed *Special Airspace Structure and Systems of Operations* (SASSO) to be presented to the concerned States for consideration and application. The output of the TT would be focused on immediately accessible safety improvements, such as changes in ATS route structures.

7.4 The meeting deliberated at length on coordination failures between Area Control Centres of FIRs in the AFI Region and noted with concern that the TAG had been receiving increasing numbers of UCR of this nature. Over the period January 2012 to August 2013, a total of 229 Unsatisfactory Condition Report (UCRs) on coordination failures were recorded.

7.5 The meeting noted the interventions that had been carried out by the TAG including convening special ATM coordination meetings between FIRs having high numbers of UCRs related to ineffective coordination between them, to discuss and find solutions. The TAG has also followed up on commitments from such meetings and the Sub-Group noted that the results have been noticeably positive.

7.6 In view of the above, the meeting urged States and ANSPs to take necessary measures to ensure that the identified causal and contributing factors to coordination failures are effectively addressed. In addition, FIRs and ACCs are to provide timely information on coordination failures to other concerned FIRs/ACC with copy to the ARMA, in order to enable the concerned FIRs/ACC to conduct the investigations and provide feedback.

7.7 The types of coordination failures included the following:

- a) Aircraft received at a different flight level than coordinated.
- b) Aircraft received with no co-ordination of time and flight level.
- c) Operations close to FIR boundary without co-ordination or notification.

7.8 Causal and contributing factors included the following:

- a) Human factors, including but not limited to fatigue, workload, unsatisfactory working conditions, excessively long working hours, and punitive corrective actions on operational staff;
- b) Lack of air traffic controller proficiency;
- c) Lack of management commitment to address UCRs; and
- d) Lack of or poor communication equipment.

7.9 The Sub-Group noted that from the Tenth ATS Incident Analysis Group meeting (AIAG/10) and the TAG/5 meeting in March 2013, it had been identified that there was a similar pattern of causal and contributing factors to ATS incidents in most FIRs as follows:

- a) air traffic controller proficiency was inadequate due to inadequate training and lack of recurrent (refresher) training;
- b) shortage of qualified air traffic controllers resulting in understaffed shift operations (one air traffic controller manning more than one position), controller overload and other human factors issues;
- c) inability of ANS Management to assign air traffic controllers to recurrent and specialized training;
- a) airspace organization that has been overtaken by events, no longer pertinent to existing traffic complexities;
- b) inadequate and unserviceable communication equipment;
- c) lack of effective backup power for ATC equipment;
- d) lack of updated operational procedures, including Letters of Procedure (LOPs); and
- e) lack of internal coordination within the ANSP ATS units.

7.10 These and other causal factors were accountable for the following:

- a) failure by air traffic controllers to coordinate traffic between ATC units and neighbouring FIRs;
- b) failure by air traffic controllers to coordinate revisions (estimates over the transfer of control points, changes to flight levels) related to traffic between ATC units and neighbouring FIRs;
- c) loss of situational awareness;
- d) unrealistic expectations on aircraft performance and flight crew;
- e) unchecked errors by senior air traffic controllers providing OJT supervising;
- f) lack of technological awareness (*in one case a controller seemed to lack knowledge of basic aircraft manoeuvres related to a TCAS RA*); and
- g) other ATC errors.

7.11 The Sub-Group acknowledged the impact of inadequate ATC proficiency in most of the AFI Region and was of the view that the issue should be further studied. It was acknowledged that there were several areas in which shortcomings existed with varying degrees from one ANSP to another, and these include the following:

- a) Different standards applicable in aviation training academies, schools and institutions;
- b) Lack of effective abridging (conversion) training being provided by ANSPs in order to bring their candidates to set standards and to specific requirements of air traffic services units (ATSUs) depending on airspace configuration, daily aircraft movements, whether procedural or radar control, etc.;

- c) Type and quality of on-the-job (OJT) training being provided, covering both initial and in-service training;
- d) Quality of recurrent training being provided;
- e) Special training including introduction/indoctrination to new technologies; and
- f) Development and implementation of training programmes and training plans (Ref. ICAO USOAP Audit reports).

7.12 The meeting further agreed that the adequacy of available training to the ANSPs should be reviewed and necessary supplemental training recommended. States were to be urged to implement refresher training programmes for ATC staff. In addition, ANSPs were encouraged to consider cockpit operations familiarization visits for air traffic controllers. ANSPs should also consider the use of flight simulators (various levels) as well as visits to airline simulator training sessions, to update air traffic controllers' competence with regard to aircraft recognition and performance characteristics, including cockpit workload of flight crew.

Based on the above, the Sub-Group formulated the following Draft Decision:

***DRAFT DECISION 13/05: ESTABLISHMENT OF THE ATS
COMPETENCIES STUDY GROUP***

That, the ATSCSG is established with the Terms of Reference as at Appendix 7A to this report:

- a) study the shortcomings in ATC training including States' (and ANSPs) training programmes and plans; and***
- b) establish and provide recommendations that would address issues relating to lack of competency of ATS personnel.***

7.13 The meeting recognized that the Study Group would require funding for such tasks as visits to States, ANSPs and training organizations, and accordingly requested that ICAO arrange funding.

7.14 The meeting also noted that existing Letters of Procedure/Agreement (LOP/A) were based on a template that had been established in the Air Traffic Services Planning Manual, First Edition -1984. In this regard, the meeting agreed that the template should be updated to more effectively facilitate addressing safety and efficiency issues taking into consideration latest developments in ATM. To this effect, the Sub-Group agreed that the draft updated LOP Template at **Appendix 7B** to this report be circulated for comments. The Secretariat would then incorporate the comments and produce a *Final Draft LOP Template* for endorsement by States through mail. The State Letter circulating the Draft Updated LOP and related procedure will indicate target response dates as necessary to complete the process by March 2014.

7.15 The Sub-Group reviewed available information regarding the implementation of Strategic Lateral Offset Procedure (SLOP) in the AFI Region, pursuant to APIRG Conclusion 17/43 *Implementation of Strategic Lateral Offsets (SLOP) in the AFI Region*. Given the critical importance of SLOP in reducing the risk of collision, the meeting stressed that States should give effect to Conclusion 17/43 without further delay. In addition, the Sub-Group requested the Regional Offices to circulate State Letters to this effect, urging States that have not already done so to implement SLOP in accordance with Conclusion 17/43 as soon as possible and forward copies of aeronautical publications for the implementation, to ESAF and WACAF Regional Offices by 30 November 2013.

7.16 The meeting noted that the ICAO Council had adopted Annex 19 to the Chicago Convention, and that specific safety requirement such as safety management system, that had been in Annex 11 and other Annexes would now be consolidated in Annex 19.

Report on Agenda Item 8: ATM Contingency Arrangements

8.1 The meeting referred to Section 2.30 of Annex 11 to the Chicago Convention and recalled that it provides for specific actions regarding the development of contingency plans (CP) and that supporting implementation guidance is provided in Attachment D to the Annex. Critical elements of the process include coordination with adjacent airspaces and users and the assistance of ICAO in the development of ATM contingency plans.

3.3

8.2 The meeting recalled that the APIRG/18 meeting in Kampala, Uganda, March 2012 had noted with concern while at its 17th Meeting in 2010, APIRG had adopted a CP Template to complement the support provided by the Regional Offices, and noted that many States were yet to develop or update their CPs. Furthermore, although some States had developed CPs for their FIRs, many of the CPs were yet to be formatted in accordance with the APIRG template.

8.3 The meeting noted that from information provided to the Regional Offices, many States had not included elements relating to public health emergencies in their CPs. Accordingly, the meeting agreed on the modification of the APIRG CP Template to guide States in this regard. However, the meeting noted that the CP template relates only to material that is shared with users, adjacent airspace and such other external stakeholders. Considerable material relating to risk analysis, planning, relationships between State agencies, processes on management of infrastructure and other backup systems, etc., would be contained in other documents which form the basis for what ultimately is in the CP template and published.

8.4 The meeting noted that guidance for ANSPs regarding the development of the public health emergencies parts of the CP was not readily available. The meeting acknowledged that the assessment of risk and process of deriving responses should be based on guidance from State agencies responsible for public health emergencies. The meeting was informed about the *Cooperative Arrangement for the Prevention of Spread of Communicable Disease Through Air Travel (CAPSCA)* of which there are several international organizations including ICAO. Participation in the events of the CAPSCA enables the civil aviation authorities and service providers to be better informed on actions to take in relation to CPs. Detailed information on

CAPSCA may be obtained from its website (www.capsca.org).

8.5 The meeting highlighted the importance of consultation with users in the development of CPs, pursuant to Section 2.30 of Annex 11.

8.6 The Sub-Group also recalled that the APIRG/18 meeting had recognized that within and adjacent to the AFI Region there were areas of volcanic activity which were likely to affect flight operations in the AFI Region. In this regard, APIRG/18 agreed to the development of the AFI Volcanic Ash Contingency Plan (AFI VACP), based on a draft VACP that was initially developed by adapting the EUR/NAT VACP, and accordingly adopted Conclusion 18/14: *Establishment of the AFI Volcanic Ash Contingency Plan*. Due to the immediate need for the AFI VACP, APIRG/18 had directed the MET and ATM/AIM/SAR Sub-Groups to finalize the development of the AFI VACP and to distribute the finalized CP to States for implementation, without necessarily awaiting the next APIRG meeting.

8.7 In view of the above, the Sub-Group considered the AFI VACP Template that had been adapted by the ATM/MET TF/1 meeting in June 2013, from the VACP template developed by the International Volcanic Ash Task Force (IVATF). Pursuant to APIRG Conclusion 18/14, the meeting adopted the VACP template and agreed that in order to reduce multiplicity of CPs, the AFI VACP Template should be an appendix of the ATM CP, developed pursuant to Section 2.30 of Chapter 2 of Annex 11.

8.8 Given that the ATM/MET Task Force had completed its initial task of developing the VACP Template, the ATM/AIM/SAR Sub-Group deliberated at length on the merits of continuation of the Task Force under the ATM/AIM/SAR Sub-Group and agreed that the Task Force should undertake its remaining tasks under revised terms of reference and the direction provided by the MET Sub-Group. As such, the ATM/AIM/SAR Sub-Group reviewed the terms of reference of the ATM/MET Task Force that had been adopted by the APIRG/18 Meeting as at **Appendix 8A** to this report, and proposed revised terms of reference as at **Appendix 8B** to this report.

8.9 Accordingly the ATM/AIM/SAR Sub-Group formulated the following Draft Conclusion and Decision:

***DRAFT CONCLUSION 13/06: INTEGRATION OF THE VOLCANIC
ASH CONTINGENCY PLAN TO THE AIR
TRAFFIC MANAGEMENT
CONTINGENCY PLAN***

***That, the AFI Volcanic Ash Contingency Plan at Appendix 8C to this report be
integrated as an Appendix to the AFI ATM Contingency Plan.***

***DRAFT DECISION 13/07 REVISED ATM/MET TASK FORCE TERMS
OF REFERENCE***

That, the Terms of Reference given in Appendix 8B to this report, be revised to

focus on the activities of the Task Force on the AFI regional requirements only

Report on Agenda Item 9: Search and Rescue

Implementation of ICAO requirements in the field of search and rescue (SAR)

9.1 The meeting recalled the reference documents and various guidelines relating to the implementation of SAR services, among others:

- a) Article 25 of the Convention.
- b) Annex 12 to the Chicago Convention.
- c) The International Aeronautical and Maritime Search and Rescue Manual (IAMSAR Manual Doc 9731).
- d) Appendix N of the Assembly Resolution 37-15 on *Provision of Search and Rescue Services*.
- e) Part VII of the AFI Air Navigation Plan (ANP) (Doc 7474).
- f) The outcome of Regional Air Navigation (RAN) meetings, in particular the seventh AFI Regional Air Navigation Meeting (AFI 7) in Abuja, Nigeria 12-23 May 1997.
- g) The Recommendation 6/22 of the Special AFI RAN Meeting Durban, South Africa 24-29 2008 on the *Establishment of sub regional search and rescue (SAR) arrangements*.
- h) The conclusions and decisions emanating from APIRG meetings in particular Decision 17/67 of APIRG/17 establishing the AFI SAR Services Integration Task Force (ASSI/TF).

9.2 The meeting discussed the status of implementation of ICAO SAR provisions including Regional requirements and supporting documents, as well as the implementation and improvement of SAR services in general.

9.3 The meeting noted with concern the lack of effective implementation of SAR provisions and the long outstanding deficiencies in the AFI region. It was noted that implementation roadblocks include the following:

- a) lack of commitment from State authorities and other stakeholders.
- b) concerns on national security.
- c) perceptions and concerns on sovereignty.
- d) national procedures on processing of international agreements.
- e) the fact that in most States the main SAR resources are provided by State security agencies such as police and military.
- f) other non-technical aspects.

9.4 In view of the above, the meeting was of the view that ICAO should explore high level measures to sensitize States authorities with regard to SAR provisions and requirements.

9.5 The Sub-Group also reviewed the work of the AFI SAR Services Integration Task Force (ASSI TF) including the outcome of its three meetings (Dakar, Senegal 2011, Nairobi, Kenya 2012 and Yaoundé, Cameroon 2013). The Sub-Group noted with appreciation that the Task Force had organized two workshops in 2012 and 2013 where participants were provided with the opportunity to share their experiences on SAR organization and SAR services provision. As part of the seminars, visits were made to SAR facilities of the host States. During the 2013 Seminar which was arranged together with the ASSI TF/3 meeting in Yaoundé, Cameroon, participants attended a full-scale search and rescue exercise (SAREX) conducted by the host State.

9.6 The meeting recognized that, in order to clearly define the actions to be taken by States for the improvement of SAR services in the AFI region, there is a need for updated information on the status of current implementation by States. Accordingly, the meeting requested the Regional Offices to circulate State Letters requesting AFI States to provide information on SAR implementation by 31 December 2013, based on the questionnaire at **Appendix 9A** to this report. After the survey, the AFI SAR list of deficiencies should be updated accordingly.

9.7 The meeting also requested ICAO to develop a SAR webpage, with the objective of capturing and publishing information on SAR implementation, as well as of informing and sensitizing the States' SAR authorities and other stakeholders.

9.8 In view of the above, the meeting formulated the following draft conclusions:

DRAFT CONCLUSION 13/08: SAR DATA COLLECTION AND DEVELOPMENT AND MANAGEMENT OF AN AFI SAR WEB PAGE:

That,

- a) AFI States provide SAR implementation information reflected in the questionnaire at Appendix 9A to this report, not later than 31 December 2013, to the ICAO ESAF and WACAF Regional Offices;***
- b) ICAO develop and manage a webpage under ESAF and WACAF websites, to post information from AFI States on SAR implementation and activities; and***
- c) AFI States forward to the ICAO regional offices regular information on their SAR activities, for posting on the website.***

DRAFT CONCLUSION 13/09: TEAM OF SAR EXPERTS

That, in order to support the implementation of SAR services in AFI States, ICAO establish a SAR Team of Experts that could, at the request of a State, be called upon to assist States in the establishment of SAR systems including legislation frameworks and operational documentation.

9.9 The meeting noted a proposal by the APAC Region SAR Task Force for a joint meeting with the next ASSI Task Force, preferably hosted by a State in the Indian Ocean interface area between the AFI and APAC regions, and recognized the significant potential benefits of such an event. Accordingly the meeting requested the Secretariat to facilitate such an event.

9.10 The Sub-Group reviewed the SAR performance objectives at **Appendix 9B** to this report and endorsed the identification of sub-regional economic bodies such as ECOWAS, CEMAC, EAC, etc., as enabling stakeholders.

9.11 The meeting proposed the revised terms of reference of the ASSI Task Force as at **Appendix 9C** to this report.

Report on Agenda Item 10: Civil/Military Cooperation

10.1 The meeting recalled the outcome of the Global Air Traffic Management Forum on Civil/Military Cooperation (GATM FCMC), convened at ICAO HQ in Montreal, Canada from 19 to 21 October 2009 and the Recommendations of the Eleventh Air Navigation Conference (Doc 9828, Rec. 1/2) concerning coordination with military authorities, with a view to achieving enhanced airspace organization, management and flexibility. The Forum further recommended that in order to support cooperation between the authorities and air navigation service providers (ANSPs) and to promote and foster cooperation implementation, military representatives should participate in ICAO meetings, seminars and other related events, relating to Civil/Military Cooperation, as part of delegations of States.

10.2 The meeting noted that as a follow up to the outcome of the GATM FCMC, a Civil/Military Cooperation Seminar had been organized under a Special Implementation Project (SIP) and scheduled to be convened in Nairobi, Kenya from 25 to 28 November 2013, after it had been postponed from February 2013. States were urged to participate at the seminar.

10.3 The meeting underscored that the success of the Seminar is highly dependent on participation of military aviation official. In this regard, civil aviation authorities were urged to inform and encourage military authorities in their States to participate at the seminar. In addition, noting the involvement of military authorities in relief missions, the meeting encouraged States and organizations that are able to do so, to encourage humanitarian organizations such as the World Food Programme (WFP) to also participate.

Report on Agenda Item 11: ICAO 2012 Flight Plan Format – Post Implementation

11.1 The meeting recalled that the APIRG/17 meeting in Ouagadougou, Burkina Faso, 2-6 August 2010 established the AFI FPLT Transition Task Force (FPLT TF) to coordinate and support States' preparedness towards the successful implementation of Amendment 1 to the 15th Edition of PANS-ATM (Doc 4444) relating to the *NEW* ICAO model flight plan. The Sub-Group noted with appreciation that the *NEW* ICAO model flight plan was successfully implemented in

the AFI Region, along with other ICAO Regions on 15 November 2012, following intensive AFI-wide efforts by the Task Force and the ESAF and WACAF Regional Offices. The meeting noted that the activities leading to global implementation date of 15 November 2012 included the following:

- (a) Six meetings of the FPLT Task Force convened in Johannesburg, ESAF and WACAF Regional Offices and Seychelles.
3.4
- (b) Four Flight Plan Coordination Workshop/Meetings (FCWMs) hosted by AFI AFTN Main Centres, as well as the WACAF Regional Office as follows:
 - i. Addis Ababa, 17-18 April 2012.
 - ii. Nairobi, 24-25 April 2012.
 - iii. Johannesburg, 8-9 May 2012.
 - iv. Dakar, 22-23 May 2012.

11.2 The meeting noted that one of the challenges addressed by the FPLT Task Force was the issue of missing flight plans. In this regard, it was noted that while the rate of missing flight plans was slightly reduced towards and during the launch of the *NEW* ICAO flight plan, the rate of missing flight plans started to increase after 15 November 2012. The meeting also noted that the ESAF and WACAF Regional Office had convened four ATM coordination meetings (ATM CMs) during which the issue of missing flight plans had also been addressed. From the collective efforts of the above activities, as well as information provided by the Johannesburg Aeronautical Fixed Telecommunication Network (AFTN) Main centre (which was experiencing 7-10% of the missing flight plans monthly) in 2013, it was noted that the following were among the prominent causal or contributing factors for missing flight:

11.2.1 *Operational issues*

- a) Incorrect equipage entries in item 10a and 10b of the flight plan; not conforming to Amendment 1 of Doc 4444.
- b) Syntax errors – not including the waypoint entry/exit point on/off a route, incorrectly formatted co-ordinates, using “Oscar” instead of “Zero” and vice versa.
- c) Route errors – using, withdrawn or non-existent navigational aids and waypoints as well as incorrect route names.
- d) Mismatch with requested flight level and intended ATS route, i.e. requested flight level is too high (or too low) for the requested ATS route.
- e) Non-provision of critical data in item 18 – missing estimated elapse times (EET) to Flight Information Region (FIR) boundaries; missing or incorrect PBN capability data; missing Communication (COM), Navigation (NAV) and/or Data (DAT) information when this is required as indicated in item 10a and 10b.
- f) Missing or incorrect nomination of search and rescue requirements.
- g) Message handling centres not issuing service messages (e.g. query on missing or rejected flight plan), or not responding to such messages when received from other centres.

11.2.2 *Other issues*

- h) Flight not filed or filed in an incomplete manner; i.e. flight plan not transmitted but flight allowed to depart.
- i) Message handling systems (engineering) errors at departure, downstream or destination.
- j) Flight plans filed over the radio (airborne) without all necessary information/data.
- k) Flight plans sent to incorrect addresses.

11.3 The meeting noted that ASECNA had consolidated two addresses to which flight plans should be sent to. However, in many cases, flight plans for flights into FIRs in which ASECNA provides services, are still misaddressed. Johannesburg was also experiencing high numbers of missing NOTAMs. The meeting acknowledged that this matter requires more concerted effort by ANSPs with regard to training, procedures and the use of up to date information.

11.4 The meeting discussed the issue of competence among air operators with regard to correct filing of flight plans. It was noted that the challenge among airlines is very limited and that this aspect is one those covered by the IATA IOSA programme. Significant challenges were experienced in the general aviation (GA) community.

11.5 It was noted that Kenya had been experiencing significant challenges with regard to flights into/out of airports to which 'ZZZZ' designator is used. Concerned operators were provided with a two-day training session on flight planning, which has had positive results.

11.6 The meeting recalled that in many cases the missing flight plans resulted in air traffic controllers being required to copy airborne flight plans, sometimes from poor HF communication transmissions. It was highlighted that compelling air traffic controllers (or exposing them) to obtain crucial flight plan information in this manner compromised safety.

11.7 States were urged to take necessary measures to address the identified causal/contributing factors and that remedial action should include the establishment or review of operational procedures, as well as training of operational staff. In this regard, it was recalled that the FPLT Task Force had developed and made available to States, example procedures for message handling/flight plan processing operational staff.

11.8 The Sub-Group expressed concern that notwithstanding measures taken over many years within the framework of APIRG and specific efforts by Regional Offices, the issue of missing flight plans has prevailed, with obvious contribution to degradation of safety. The meeting deliberated at significant length on the issue of implementing effective measures to realize the much sought and urgent results, particularly given the impact of the missing flight plans on air navigation safety. The meeting agreed that one of the solutions is the effective implementation of Annex 2 standards on flight plans. The meeting also agreed that the active involvement of users was paramount. In this regard, after extensively reviewing various options to facilitate effective implementation of the said Annex 2 Standards, the Sub-Group agreed on the following Draft Conclusions:

**DRAFT CONCLUSION 13/10: IMPLEMENTATION OF FLIGHT PLAN
STANDARDS IN ANNEX 2 TO THE
CHICAGO CONVENTION**

That, in order to support the effective implementation of international standards relating to flight plan:

- (a) operators and ANSPs should, take necessary measures to ensure that, prior to departure, flight plans are correctly filed and accepted;*
- (b) AFI States and Air Navigation Service Providers are urged to:*
 - (i) ensure that international flights are not released for departure without correctly filed flight plans; and*
 - (ii) strongly discourage the acceptance of flights into their States/FIRs, whose standard flight plans have not been received;*
- (c) AFI States regulatory bodies take necessary action to ensure effective implementation.*

**DRAFT CONCLUSION 13/11: DISSOLUTION OF THE FPLT TASK
FORCE**

That,

- a) the AFI Flight Plan Transition Task Force is hereby dissolved; and*
- b) the ATM/AIM/SAR Sub-Group should take necessary action to follow up on the post implementation issues of the NEW ICAO Flight Plan format.*

11.9 The meeting noted the concern of users regarding actions that might be instituted by ANSPs to discourage acceptance of flights without flight plans, that this could be applied in a way that jeopardizes safety. The meeting acknowledged the concern and noted that States and ANSPs are not unaware of their obligations regarding safety. The Sub-Group recognized that action to discourage flights without flight plans would not be inconsistent with national regulations giving effect to international standards in Annex 2 to the Chicago Convention. Furthermore, it was acknowledged that there are already FIRs in which flights without flight plans are not permitted to operate. The meeting was also informed that flights without flight plans were regarded as security concerns in some States. Notwithstanding the above, the meeting urged States to take due cognizance of safety in ensuring compliance with the flight plan related international Standards.

Report on Agenda Item 12: AIM/MAP Issues

Review of the latest developments as of APIRG/18 meeting, in the implementation of the AIM provisions, the requirements of the AIS to AIM transition roadmap, and take necessary action to

support implementation

12.1 The meeting reviewed information on the outcome of the Second Meeting of the APIRG AFI AIM Implementation Task Force (AFI AIM TF/2) held in Nairobi, Kenya from 17-19 December 2012 and deliberated on discussion matters concerning:

- a) AIM related outcomes of other meetings;
- b) Status of Implementation of the Conclusions/Decisions of the APIRG/18 Meeting related to AIM implementation;
- c) Draft Amendment of the AFI Basic ANP/FASID to reflect the Transition from AIS to AIM;
- d) Development of Air Navigation Report Forms (ANRF) under ASBU Methodology in Performance Improvement Area 2 (ASBU BO -30);
- e) Survey of National Plans submitted by States in accordance with the Roadmap for transition from AIS to AIM;
- f) Updates on the implementation of the AFI-CAD Business Plan as per Appendix 3.6 I (AFI-CAD Doc. 007) of the APIRG/17 Report;
- g) Adoption of Amendment 37 to Annex 15 by the ICAO Council; and
- h) Reports of the Fifth, Sixth and Seventh Meetings of the AIS-AIM Study Group and its implication in the AFI Region.

AFI Region AIM related outcomes of other meetings

12.2 The Sub-Group reviewed the information on the outcomes related to Aeronautical Information Services and Aeronautical Information Management in the AFI Region emanating from the APIRG/18 meeting, the 12th Air Navigation Conference (AN-Conf/12) and the Fifth and Sixth Meetings of the AIS-AIM Study Group (AIS-AIMSG/5/6).

12.3 The Sub-Group then reviewed and updated the follow-up action on previous APIRG/17 and 18 Conclusions/Decisions related to AIM (Conc/Dec: 17/86; 17/88; 17/89; 17/90; 17/91; 17/92; 17/93; 17/94; 17/95; 17/97; 18/35; 18/36; 18/37; 18/38) as per **Appendix 12A** to this report and agreed on the validity of these Conclusions and Decisions for continuous actions and consolidated all of them under one single Conclusion. Accordingly, the meeting endorsed the following Draft Conclusion:

DRAFT CONCLUSION 13/12: REGIONAL AND STATE PLANNING AND IMPLEMENTATION OF THE TRANSITION FROM AIS TO AIM

- a) The region Develop performance goals for the transition from AIS to AIM in the AFI region in line with the AFI roadmap from AIS to AIM and Aviation System Block Upgrades methodology;***
- b) The region and states identify achievable milestones in relation to the transition roadmap phase 1, 2 and 3;***
- c) The region and states develop and implement progress reporting structures, processes and frequency in terms of the transition roadmap phase 1, 2 and 3;***
- d) States develop and action implementation plans addressing the transition from***

- AIS to AIM in line with the AFI AIS to AIM transition roadmap phases 1, 2 and 3 as well as aviation system block upgrades; and*
- e) *States to review and amend as required the AIS/AIM training programmes to encompass the required skills, competences and knowledge to transition from AIS to AIM in line with the AFI AIS to AIM transition roadmap.*

Draft Amendment of the AFI Basic ANP/FASID to reflect the Transition from AIS to AIM

12.4 The meeting reviewed the proposed Amendment to the AFI ANP/FASID Doc. 7474 Vol.I and Vol.II with major changes in comparison to the previous versions and noted that opportunity has been taken to change the title of this Part from AIS to AIM to reflect the future direction on the provision of aeronautical information in the context of the Global ATM Operational Concept and associated System Wide Information Management (SWIM).

12.5 The meeting noted the proposed amendments as reflected in the FASID Tables AIM-1 to AIM-9 and ensured that the required data is populated in the new FASID AIM Tables for the development of Regional e-ANPs to be made available through the GIS website at ICAO HQ as per **Appendix 12B1-B9** to this report.

Development of Air Navigation Report Forms (ANRF) under ASBU Methodology in Performance Improvement Area 2 (ASBU BO -30)

12.6 The meeting noted that current PFFs have been redesigned and aligned with ASBU framework and called the Air Navigation Report Form (ANRF). The ANRF will be the basis for performance monitoring of the ASBU implementation. The ANRF templates for all the 18 Modules of the ASBU Block 0 will be available in Volume III of the e ANP and the FASID of each Regional e-ANP. The meeting also noted that effective 2014, and on an annual basis, a Global Air Navigation Report will be released indicating the following:

- a) The Regional Air Navigation Reports (ANRF) that provides data for shared review will be utilized in developing the annual Global Air Navigation Report.
- b) The spirit of such a global review is to assist in understanding which areas requires special attention and effectively improve air navigation performance in the future.
- c) This review also provides an opportunity for world civil aviation community to compare the progress across different ICAO Regions in the establishment of air navigation infrastructure.

12.7 The meeting was informed that according to the ICAO road map for transition from AIS to AIM, in AIM, some key aspects should be considered. Some of them are as follows:

- a) Quality management system;
- b) WGS-84; AIRAC adherence;
- c) AIS Automation;

- d) Digital NOTAM; e-AIP; and
- e) e-TOD.

12.8 The meeting then reviewed and endorsed the new ASBU AIM framework called the Air Navigation Report Forms (ANRF) attached under **Appendix 12 C1- C3** to this report.

Survey of National Plans submitted by States in accordance with the Roadmap for transition from AIS to AIM

12.9 The requirement for States to develop national plans for transition to AIM was reflected and details are to be shown in the AFI FASID. The meeting then reviewed and updated, as appropriate, the information at **Appendix 12D** to this report concerning the National Plans submitted by States in accordance with the Roadmap for the transition from AIS to AIM and the current status in the AFI Region as per state circular letter ref. T 2/7-0725, dated 7 August 2012.

12.10 The meeting then agreed that an AIM/SWIM Seminar be organized in the AFI Region, in order to provide States with a better understanding of the planning and implementation issues related to the transition from AIS/AIM to Information Management/SWIM, and expedite the implementation of the AIM/SWIM requirements in a harmonized manner.

12.11 In view of the above the meeting endorsed the following Draft Conclusion:

DRAFT CONCLUSION 13/13: AIM/SWIM SEMINAR, SIP FOR THE AFI REGION

That:

The ICAO Regional Offices Dakar, and Nairobi, in order to provide AFI States with a better understanding of the planning and implementation issues related to the transition from AIS/AIM to Information Management/SWIM, and expedite the implementation of the AIM/SWIM requirements in a harmonized manner with other regions, undertake necessary action, in coordination with EUROCONTROL, and Regional ANSP's for the organisation of an AIM/SWIM Seminar, as a Special Implementation Project (SIP) for 2014/2015.

Updates on the implementation of the AFI-CAD Business Plan as per Appendix 3.6 I (AFI-CAD Doc. 007) of the APIRG/17 Report

12.12 Following the recent review of the revised AFI Plan by the 12th Air Navigation Conference, it was agreed that the Concept of AFI-CAD when implemented, will offer all AIM related tasks including even the classic AIM services to reduce the ANSP's efforts and timelines needed by the States on their way to the AIS/AIM Transition process. This has also been re-confirmed by Recommendation 3/8 (c) of the 12th AN Conference which states:

ANC 12 Rec.3/8 (c):

That States:

engage in intra-regional and interregional cooperation for an expeditious transition from aeronautical information service (AIS) to aeronautical information management (AIM) in a harmonized manner and to using digital data exchange and consider the regional or sub regional AIS databases as an enabler for the transition from AIS to AIM;

12.13 To this effect, the meeting noted that ASECNA is progressively developing and plans to implement in accordance with the AFI-CAD Concept, a Regional AIS Database to accommodate all the States in the Western and Central African Region as per **Appendix 12E** to this report. In accordance with the AFI-CAD Concept, the meeting also noted that South Africa has invited AFI States to join the South African Regional AIS Database as an alternative to enhance the AIM implementation process with the AFI Region as per **Appendix 12F** to this report.

12.14 The meeting then endorsed the possibility of AFI States migrating to the ASECNA Regional AIS Database in accordance with the AFI-CAD Concept as per Recommendation 3/8 (c) of the 12th Air Navigation Conference, and also endorsed the possibility of AFI States migrating to the South African Regional AIS Database in accordance with the AFI-CAD Concept as per Recommendation 3/8 (c) of the 12th Air Navigation Conference.

12.15 Finally the meeting reviewed and agreed on ANC 12Rec.3/8 (c), and endorse the formation of a Working Group with terms of reference as per **Appendix-12G** to this report to implement ASECNA's development of a Regional AIS Database intended to accommodate all States in the WACAF Region and ATNS's development of a Regional AIS Database intended to accommodate AFI States wishing to enhance the AIM implementation process.

Adoption of Amendment 37 to Annex 15 by the ICAO Council

12.16 The meeting noted that the 6th Meeting of the 198th Session of the Council of ICAO adopted Amendment 37 to Annex 15, effective 14 November 2013 and incorporating all of Phase 2 AIS/AIM Roadmap transition steps, and that Amendment 57 to Annex 4 was also adopted by the ICAO Council.

Reports of the Fifth, Sixth and Seventh Meetings of the AIS-AIM Study Group and its implication in the AFI Region

12.17 The meeting was informed that with the implementation of the future Amendment 38, the total revision and restructure of Annex 15 will be complete. A new PANS-AIM Document will focus on procedures and practices, and revisions to Doc. 8126 will focus on the development of an AIS organization from an AIM perspective, and contain guidance on meeting the requirements of the SARPs and PANS. The meeting was also informed about the anticipated AIM Divisional Meeting to be held in Montreal in February 2015. This Meeting will review and finalize the Draft PAN-AIM Document, Draft Amendment 38 and SWIM elements.

12.18 The Secretariat provided an update on AIS-AIM related Air Navigation Deficiencies in the AFI Region. The Phase 1 Steps became effective on 18 November 2010, in line with the effective date of Amendment 36 to Annex 15. Several States reporting in accordance with the AFI Region State circular letter ref. T 2/7-0725 dated 7 August 2012 have not completed all Phase 1 steps. Many States have failed to report any AIM implementation progress at all. It is considered that the AIS-AIM related deficiencies list should be updated to record deficiencies where States have reported that they have not yet completed the Phase 1 Steps, or where they have failed to provide any reports of progress. The list of proposed AIS-AIM related deficiencies is provided at **Appendix 12H** to this report.

12.19 The meeting further noted the potential deficiencies arising when Amendment 37 to Annex 15 comes into effect on 14 November 2013, including the AIS-AIM Transition Phase 2 Steps. It is considered that this needs to be brought to the attention of APIRG/19 Meeting. A summary of AIS-AIM related deficiencies anticipated after 14 November 2013 based on implementation of Roadmap steps is provided at **Appendix 12I** to this report.

Report on Agenda Item 13: Review of Air Navigation Deficiencies in the ATM, AIM, MAP and SAR Fields

13.1 The meeting recalled the definition of “deficiency” as approved by the ICAO Council and that one of the regular tasks of APIRG was to identify, assess and report specific air navigation deficiencies affecting the ATM, AIM and SAR fields.

13.2 The meeting acknowledged that deficiencies in the competence of air traffic services and supporting personnel, as well as deficiencies in communication (infrastructure and operations) were among the leading causal factors of the UCRs.

13.3 It was recalled that APIRG/18 had adopted a list of minimum reporting areas for ATM, AIM and SAR as at **Appendix 13A** and **Appendix 13B** to this report. The Sub-Group reviewed the list and proposed appropriate follow-up action by States to address the outstanding deficiencies. The Sub-Group noted that the reporting of deficiencies remained minimal, and urged all civil aviation stakeholders to report incidents as required.

13.4 The meeting reviewed the outcome of four ATM Coordination Meetings (ATM CMs) which were convened between August 2012 and June 2013, under the aegis of ICAO, to address coordination challenges facing the States/ANSPs, such as traffic coordination between Air Traffic Services (ATS) units within a Flight Information Region, and between ATS units in adjacent FIRs. It was identified that lack of two-way communication (VHF, HF, and ATS-DS), lack of adequate staff, ATCO competency and outdated Letters of Procedures were the main causal factors for the lack of effective coordination between the ATS units concerned. The outcome of the ATM CMs, including follow-up action by States and ANSPs are at **Appendices 13C, 13D, 13E, 13F 13G and 13H**, to this report.

13.5 IATA had compiled a report on AIS issues from Airline Operational Requests (AOR) queries from member airlines and noted that AORs were operational concerns that affect flight operations and which are then forwarded to the IATA Regional Office for follow up, as

reflected at **Appendix 13I** to this report. IATA urged States to review the strategy to address identified deficiencies and requested for the AIAG Database to be expanded to host the AFI Regional Database.

13.6 The meeting noted the progress made by ASECNA in the implementation of the AIM-AIM roadmap. The meeting also noted the activities related to ASBUs module B0-DATM in the ASECNA member States. In addition, the meeting noted the latest on progress in the implementation of systems related to AIS-AIM transition in the Roberts FIR. The systems implementation includes the integrated solution for data processing automation of AIXM 5 database, eAIP, digital NOTAM, Charting, Data originator integration, NOTAM Office, Briefing, OPMET database, OPMET bulletin exchange (ROBEX), Flight Planning, Procedure design, Obstacle Handling (eTOD), and the AIS website.

13.7 The meeting recalled Conclusion 18/63: *Measures to Address Human Factors and Infrastructure Deficiencies*, which inter alia, calls for addressing human factor issues related to runway safety. The Sub-Group requested ICAO to urge States to implement runway safety, taking advantage of guidance material available from ICAO and IATA.

Report on Agenda Item 14: Review of the ATM/AIM/SAR Sub-Group Terms of Reference and Future Work Programme

14.1 The meeting reviewed and updated the terms of reference (TOR) and the Work Programme of the ATM/AIM/SAR Sub-Group as reflected in **Appendix 14A** to this report.

Report on Agenda Item 15: Date, Venue and Provisional Agenda of the Next ATM/AIM/SAR Sub-Group Meeting

15.1 The meeting discussed the dates and venue of its next meeting and in view that the dates of the next Sub-Group meeting would have to be coordinated with other activities of the ESAF and WACAF Regional Offices, the meeting agreed for the two Regional Offices to do the necessary in this regard. It was also agreed that any State wishing to host the ATM/AIM/SAR SG/14 meeting will have to communicate formally with the WACAF Regional Office by 21 October 2013. The meeting adopted the Draft Provisional Agenda for the ATM/AIM/SAR SG/14 meeting as **Appendix 15A** to this report.

Report on Agenda Item 16: Any Other Business

16.1 The meeting was informed that Mr. Sadou Marafa, Regional Officer ATM/SAR from the WACAF Regional Office had reached the end of his service contract with ICAO and will thus be leaving the Organization at the end of September 2013. Mr. Seboseso Machobane, on behalf of the Secretariat expressed his appreciation on the cordial relationship that Mr. Marafa has had with colleagues in the Secretariat, States and organizations, during his tenure in ICAO. He observed that Mr. Marafa was retiring from ICAO but not from being the experienced aviation professional that he is. He thanked Mr. Marafa for the part he had played in supporting

the development of aviation in the Region, and wished well in his future endeavours.

16.2 Mr. Protus Seda from IATA recalled the many events and activities at which he had shared platforms with Mr. Marafa to advance the course of the Region on airspace efficiency and safety areas. He thanked him for his contribution and wished him well. Ms. Keziah Ogutu from IFATCA and Mr. Frederic Legrand from the AFI FPP also wished Mr. Marafa a bright future.

16.3 The meeting applauded Mr. Marafa on his service and warm relationship with colleagues in the States and organizations.

16.4 Mr. Marafa acknowledged the remarks from colleagues in the Secretariat and delegates of the ATM/AIM/SAR Sub-Group. He reminded all that he will remain a friend to all and would be only a phone call away.

16.5 The meeting noted that the number of working/information papers contributed by States continued to be significantly low. It was also acknowledged that a contributing factor could be the late nomination of officials to prepare for and attend specific events. However, States were encouraged not wait for invitation letters to events before commencing to compose material for working/information papers. In this regard, it was recognized that issues to be addressed are known well in advance and the Sub-Group usually agrees on the provisional agenda for its forthcoming meeting and this is included in its report.

16.6 It was noted that while more than three years have elapsed since the introduction of paperless meetings in ICAO including APIRG and its subsidiary bodies, many delegations were still not equipped with computer equipment to enable them to participate effectively in the meetings. States and organizations were urged to take necessary action in this regard.

16.7 The meeting was adjourned at 17:01 on Thursday, September 19, 2013.
