

# INTERNATIONAL CIVIL AVIATION ORGANIZATION



**THE AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP (APIRG)**

**REPORT OF THE THIRD MEETING OF THE INFRASTRUCTURE AND INFORMATION  
MANAGEMENT SUB-GROUP**

**(IIM/SG3)**

*(Virtual Meeting, 12 to 14 October 2020)*

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

**Approved by the Meeting  
and published under the authority of the Secretary General**

**Prepared by ICAO Secretariat**

**October 2020**

**The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.**

## Table of Contents

<b>PART I</b> .....	1
1. INTRODUCTION .....	1
2. OBJECTIVES .....	1
3. ATTENDANCE .....	1
4. SECRETARIAT .....	1
5. WORKING LANGUAGE.....	1
6. OPENING.....	2
7. AGENDA .....	3
8. CONCLUSIONS AND DECISIONS - DEFINITION .....	4
9. SUMMARY OF DRAFT CONCLUSIONS AND DECISIONS .....	4
<b>PART II: REPORT ON AGENDA ITEMS</b> .....	5
AGENDA ITEM 1: ADOPTION OF THE AGENDA, THE WORK PROGRAMME AND ELECTION OF THE CHAIRPERSON AND VICE CHAIRPERSON OF THE MEETING .....	5
AGENDA ITEM 2: REVIEW OF THE CONCLUSIONS/DECISIONS OF THE SECOND MEETING OF THE APIRG INFRASTRUCTURE AND INFORMATION MANAGEMENT SUB-GROUP (APIRG IIM SG/2) 5	5
AGENDA ITEM 3: REVIEW OF THE OUTCOME OF THE APIRG/22ND MEETING.....	7
AGENDA ITEM 4: STATUS OF IMPLEMENTATION OF THE AFI IIM REGIONAL PROJECTS ADOPTED BY APIRG.....	11
AGENDA ITEM 5: AIR NAVIGATION PLANNING, DEFICIENCIES AND REPORTING IN THE AIM, CNS AND MET AREAS.....	17
AGENDA ITEM 6: REVIEW OF THE TERMS OF REFERENCE AND WORK PROGRAMME OF THE APIRG IIM SUB GROUP .....	21
AGENDA ITEM 7: REVIEW OF THE DRAFT CONCLUSIONS/DECISIONS OF THE THIRD MEETING OF THE APIRG INFORMATION AND INFRASTRUCTURE MANAGEMENT SUB- GROUP 21	21
AGENDA ITEM 8: ANY OTHER BUSINESS.....	21

## **LIST OF IIM/SG3 DRAFT CONCLUSIONS AND DECISIONS**

- Draft Decision 3/1:** Appointment of the Chairperson and Vice-Chairperson of the Meeting
- Draft Conclusion 3/2:** Implementation of APIRG IIM SG outstanding Conclusions and Decisions
- Draft Conclusion 3/3:** Participation in the activities of APIRG IIM SG Project Teams
- Draft Conclusion 3/4:** Effective and efficient coordination of the IIM Projects activities
- Draft Conclusion 3/5:** Operationalization of the APIRG IIM SG COM Project 2 and AIM Project 3
- Draft Conclusion 3/6:** Cooperation and harmonization in planning implementing, operation and monitoring
- Draft Conclusion 3/7:** AFI IWXXM Implementation Guideline and development of capabilities of handling OPMET data in digital format
- Draft Conclusion 3/8:** Coordination of Regional AAO and IIM Projects
- Draft Conclusion 3/9:** IIM Projects Package for Funding
- Draft Decision 3/10:** AIM Project 1 activities
- Draft Conclusion 3/11:** Coordination and guidance on the implementation of AIM Go-Team activities in AFI States
- Draft Decision 3/12:** Development of IIM Projects Master Plan
- Draft Conclusion 3/13:** Cyber Safety and Resilience of the Air Navigation Systems
- Draft Conclusion 3/14:** Submission of expert names for the SPEC project
- Draft Conclusion 3/15:** Preparation of ITU WRC-23
- Draft Decision 3/16:** Adoption of the MET Project 1 and MET Project 2 Terms of Reference and their Projects deliverables for 2021-2022
- Draft Conclusion 3/17:** Development of Volcanic Ash Contingency Plans and conduct of Volcanic Ash exercises in the AFI Region
- Draft Conclusion 3/18:** Reporting on Air Navigation Deficiencies and operationalization of the AANDD
- Draft Conclusion 3/19:** Africa and Indian Ocean Aeronautical Information Management Action Group (AFI AIM AG)
- Draft Conclusion 3/20:** Establishment of a Regional Space Weather Project
- Draft Conclusion 3/21:** Development of action plans for the implementation of Space Weather requirements
- Draft Decision 3/22:** Adoption of the Terms of Reference, composition and the work programme of the APIRG IIM SG

## **APPENDICES:**

- Appendix A:** List of Participants
- Appendix A1** Draft Conclusions and Decisions of IIM/SG3
- Appendix B:** Status of implementation of the Conclusions/Decisions of the second meeting for the APIRG Infrastructure and Information Management Sub-Group (IIM/SG/2)
- Appendix C:** Conclusions and Decisions of APIRG/22 meeting related or linked to the scope of APIRG IIM/SG
- Appendix D:** Terms of Reference Composition, Working Methods and Work Programme of the APIRG IIM/SG
- Appendix E:** Draft AFI IWXXM Implementation Guideline document
- Appendix F:** AIM Project 1 activities and project deliverables for 2021-2023
- Appendix G:** MET Project 1 and 2 Project activities, deliverables and tasks and Project Terms of Reference

## **PART I**

### **1. INTRODUCTION**

1.1 The Third meeting of the APIRG Infrastructure and Information Management Sub-Group (IIM/SG/3) was held virtually from 12 to 14 October 2020.

### **2. OBJECTIVES**

2.1 The main objectives of the meeting were to:

- a) Review the Conclusions/Decisions of the Second meeting of the APIRG Infrastructure and Information Management Sub-Group (IIM/SG/2) held in Dakar, Senegal from 09 to 11 July 2018;
- b) Review the outcome of the APIRG/22 meeting (held in Accra, Ghana from 29 July to 02 August 2019) pertaining to the areas of Aeronautical Information Management (AIM), Aeronautical Communication Navigation Surveillance and Spectrum (CNS) and Aeronautical Meteorology (MET);
- c) Review the status of implementation of the regional projects adopted by APIRG in the above mentioned fields (AIM, CNS & MET), to be implemented based on the ICAO ASBU prioritized related modules selected by the AFI Region;
- d) Discuss issues on Air Navigation Deficiencies and Reporting in the AIM, CNS and MET Areas; and
- e) Review the Term of Reference and work programme of the Sub Group.

### **3. ATTENDANCE**

3.1 The meeting was attended by Two Hundred and Fifteen (215) participants comprising representatives of thirty-one (31) States, Five (5) Air Navigation Service Providers (ASECNA, ATNS, GCAA, KCAA, SODEXAM) and two (2) international airlines association (AFRAA & IATA). The list of participants is provided in **Appendix A**.

### **4. SECRETARIAT**

4.1 The meeting elected Mr. **Kinafo SILUÉ**, Head of the Department of Airport and Aeronautical Infrastructures SODEXAM, Côte d'Ivoire as Chairperson and Mrs. **Esther Gaborekwe KHAMBULE**, South African Weather Service as Vice Chairperson.

4.2 **Mr. François-Xavier SALAMBANGA**, Regional Officer, Communications, Navigation and Surveillance from the ICAO Regional Office for Western and Central Africa, Dakar and Secretary of the APIRG IIM/SG, acted as Secretary of the meeting and was assisted by Mrs. **Chinga MAZHETESE** and Mr. **Harvey Gabriel LEKAMISY**, Regional Officers ENV & MET and CNS respectively, from the ICAO ESAF Regional Office Nairobi.

### **5. WORKING LANGUAGE**

5.1 The meeting was conducted in the English and French languages with simultaneous interpretation.

## 6. OPENING

6.1 The meeting was opened by **Mr. Barry Kashambo**, Regional Director for the ICAO Eastern and Southern African Office and Secretary to APIRG.

6.2 In his address **Mr. Kashambo** reminded the participants, that the meeting was being held virtually due to COVID-19 pandemic that adversely impacted all the sectors globally including international air transport.

6.3 He outlined that ICAO, in collaboration with other UN specialized organizations, the industry and other partners, issued the Council Aviation Recovery Task Force (CART) High Level Recommendations (eleven), and takeoff document to guide the restart and recovery process. This has been supported by the ICAO Secretariat COVID-19 Emergency Programme Group (SCEPG) and Global Implementation Roadmap and various guidance materials to assist States and Organizations and the industry to resume and sustain operation and advised the meeting to take into consideration this new environment of COVID-19 which is evolving in our sector.

6.4 He recalled the key tasks assigned to the IIM SG and recognized the key achievements of the Sub Group as reflected in APIRG/22 conclusions and decisions agreed along the areas of Aeronautical Information Management (AIM), Communication Navigation (CNS) and Surveillance and Aeronautical Meteorology (MET).

6.5 Mr. Kashambo underlined that the ICAO Council pays a high attention to the alignment of the regional implementation initiatives with PIRGs Conclusion and Decisions. He therefore, encouraged the meeting to seek for a tight linkage between the regional programmes and projects with the APIRG Project approach approved by the ICAO Council, in a Collaborative Decision Making environment between all stakeholders with focus on the cost effective development of the air navigation service in the AFI Region.

6.6 The Sub Group was invited to identify all outstanding tasks in preparation of the forthcoming APIRG 23 meeting to which the Sub Group will report through the APIRG Project Coordination Committee (APCC). The sub-group, was urged to reassess their continued relevance or otherwise in the implementation of the ASBUs, and where required, to formulate them into potential new projects.

6.7 Mr. Kashambo recalled that ICAO is available to coordinate support activities to realize ICAO strategic objectives and other supporting initiatives envisaged in the GANP through ASBU, GASP and GASeP initiatives. He further appreciated the high participation of States and the industry which should result in positive transformation and progress of the AFI air navigation landscape.

## 7. AGENDA

The meeting adopted the following Agenda items:

- 7.1 **Agenda Item 1:** Adoption of the Agenda, the Work programme and Election of Chairperson and Vice-Chairperson of the Meeting
- 7.2 **Agenda Item 2:** Review of the Conclusions/Decisions of the Second meeting for the APIRG Infrastructure and Information Management Sub-Group (IIM/SG/2)
- 7.3 **Agenda Item 3:** **Review of the outcome of the APIRG/22<sup>st</sup> meeting**
- 7.4 **Agenda Item 4:** **Status of implementation of the regional projects adopted by APIRG**
  - 4.1 AFI Aeronautical Information Management
  - 4.2 AFI Aeronautical Communication Navigation Surveillance and Spectrum
  - 4.3 Aeronautical Meteorological Regional
- 7.5 **Agenda Item 5:** **Air Navigation Planning, Deficiencies and Reporting in the AIM, CNS and MET Areas**
  - 5.1: Air Navigation Planning e-ANP in the AIM, CNS and MET Areas
  - 5.2: Air Navigation Deficiencies and Reporting in the AIM, CNS and MET Areas
  - 5.3: Other Air Navigation issues
- 7.6 **Agenda Item 6:** Review of the Term of Reference and Work Programme of the APIRG IIM Sub Group
- 7.7 **Agenda Item 7:** Review of the draft Conclusions/Decisions of the Third meeting of the APIRG Information
- 7.8 **Agenda Item 8:** Any Other Business (AOB)

## 8. CONCLUSIONS AND DECISIONS - DEFINITION

8.1 All APIRG Sub-Groups and Project Teams record their actions in the form of *Conclusions* and *Decisions* with the following significance:

- a) **Conclusions** deal with the 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.

## 9. SUMMARY OF DRAFT CONCLUSIONS AND DECISIONS

9.1 After deliberations, the IIM/SG3 meeting formulated the Draft Conclusions and Decisions as contained in Appendix A1 to this Report.

## **PART II: REPORT ON AGENDA ITEMS**

### **AGENDA ITEM 1: ADOPTION OF THE AGENDA, THE WORK PROGRAMME AND ELECTION OF THE CHAIRPERSON AND VICE CHAIRPERSON OF THE MEETING**

1.1 Under this agenda item, the meeting discussed and adopted the draft agenda and the work programme proposed by the Secretariat and elected Côte d'Ivoire and South Africa as Chairperson and Vice Chairperson to the meeting.

1.2 In this regard, the meeting elected Mr. **Kinafo Silué**, Head of the Department of Airport and Aeronautical Infrastructures, SODEXAM, Côte d'Ivoire as Chairperson and Mrs. **Esther Gaborekwe Khambule**, South African Weather Service as Vice Chairperson.

**Therefore, the following Decision was formulated:**

**Draft Decision 3/1: Appointment of the Chairperson and Vice-Chairperson of the Meeting:**

**That:**

**In order to ensure effective chairing of the third meeting of the APIRG IIM /SG and the coordination of its future activities, Côte d'Ivoire and South Africa are respectively appointed as Chairperson and Vice Chairperson of the APIRG IIM SG.**

### **AGENDA ITEM 2: REVIEW OF THE CONCLUSIONS/DECISIONS OF THE SECOND MEETING OF THE APIRG INFRASTRUCTURE AND INFORMATION MANAGEMENT SUB-GROUP (APIRG IIM SG/2)**

2.1 The meeting reviewed the status of implementation of the Conclusions and Decisions of the Second Meeting of the APIRG IIM Sub Group held in Dakar, Senegal from 9 to 11 July 2018. The Secretariat presented to the meeting the summary of the available information on the status of implementation of the second meeting of the IIM/SG outcomes (**Appendix B**) and requested for its update by States and organizations. The meeting further noted that while some conclusions were successfully implemented others were still ongoing. The meeting therefore urged States/Organizations through the following conclusion to undertake the effective implementation of the outstanding conclusions and decisions of the APIRG IIM SG/2 and previous meetings.

**Draft Conclusion 3/2: Implementation of APIRG IIM SG outstanding Conclusions and Decisions**

**That:**

**In order to effectively address pending issues identified by APIRG IIM SG, States/Organizations that have not yet done so, undertake the effective implementation of the outstanding conclusions and decisions of the previous APIRG IIM SG meetings.**

2.2 The Conclusions and Decisions of APIRG/22 meeting related or linked to the scope of IIMSG (**Appendix C**) were presented to the meeting which meeting expressed concern on the low pace of participation of project team members to the activities of the project and noted the lack of response to Project Team Coordinator requests for project coordination.

Consequently, the meeting urged the Secretariat to circulate the list of IIM Projects Teams to States/Organizations and encouraged States to confirm the list of their nominees and assess their expertise, availability, commitment and participation of their experts nominated to be project Team members. The meeting also encouraged States to notify the Secretariat on any case of unavailability of appointed experts.

**The following conclusion was formulated:**

**Draft Conclusion 3/3: Participation in the activities of APIRG IIM SG Project Teams**

**That:**

**In order to increase the efficiency of the work of the APIRG IIM SG:**

- a) **The Secretariat will circulate the list of IIM Projects Teams to States/Organizations not later than 16 November 2020;**
- b) **Member States/Organization of the APIRG IIM SG:**
  - i. **Update the Secretariat and confirm the list of their nominees with their contact details by 29 January 2021;**
  - ii. **Verify the expertise, availability, commitment and participation of their qualified experts; and**
  - iii. **Take advantage of the available teleworking tools to ensure their effective and continuous participation in the activities of the IIM Sub Group and notify the Secretariat in case of unavailability of appointed experts.**
- c) **APIRG IIM SG Chair and vice chair convene quarterly PTCs coordination meetings to assess the progress made and identify the challenges, the first meeting being conducted before 14 January 2021.**

2.3 The meeting was informed that the survey questionnaires developed by some Project Teams had not yet been forwarded to States for completion and invited the Secretariat to disseminate the subject documents. States were also invited to respond to the questionnaire in a timely manner and to take the necessary measures to ensure effective and active participation of their experts in the APIRG IIM Projects activities.

**The following conclusion was formulated:**

**Draft Conclusion 3/4: Effective and efficient coordination of the IIM Projects activities**

**That:**

**In order to efficiently contribute to the APIRG IIM projects activities and to ensure their timely completion**

- a) **The Secretariat to distribute the projects survey questionnaires by 16 November 2020;**
- b) **States to:**
  - i. **Respond to the survey questionnaire before 31 March 2021; and**
  - ii. **Continuously take the necessary measures to ensure effective and active participation of their experts in the APIRG IIM Projects activities.**

### **AGENDA ITEM 3: REVIEW OF THE OUTCOME OF THE APIRG/22ND MEETING**

3.1 Under this Agenda item the meeting reviewed the outcome of the APIRG/22 meeting jointly held with the RASG- AFI 5<sup>th</sup> meeting held in Accra, Ghana from 29 July to 2 August 2019 in the areas pertaining or linked to AIM, CNS and MET.

#### **AIM Matters**

3.2 In the area of Aeronautical Information Management (AIM), the Secretariat provided the meeting with an update on the AIM Project to support States in the implementation of quality management system (QMS) in a digital/electronic AIM environment, through the establishment of an “AIM Go-Team for the AFI Region”. The meeting was informed that a project document was currently under review in order to be submitted to the AFI Plan Steering Committee for further consideration.

3.3 The meeting was informed that APIRG/22 meeting discussed the outcome of the APIRG IIM SG /2 meeting and noted a lack of coordination by some IIM projects including AIM Project 3 with its Project Team where Nigeria is yet to start the coordination. The APIRG/22 meeting urged concerned States to confirm to the APCC with a copy to the Secretariat their commitment to effectively lead the project. The Secretariat reported that State Letter T 17/6.11 (C)-0726 dated 5 December 2019 had been issued to concerned States with effective actions taken by Senegal and Uganda while Nigeria responded a few weeks prior to the IIMSG3 meeting.

3.4 The Nigerian delegation informed the meeting that a change of nominees and reaffirmed their willingness to lead the project. Nigeria further confirmed the plan to provide nominees contact details of the nominees to the Secretariat in response to the State letter.

**The following conclusion was formulated:**

**Draft Conclusion 3/5: Operationalization of the APIRG IIM SG COM Project 2 and AIM Project 3**

**That:**

**In order to operationalize the APIRG IIM SG COM Project 2-Implementation of Ground/Ground communication (AFTN, AMHS) and AIM Project 3-Implementation of the provision of electronic terrain and obstacle data (e-TOD) in the AFI Region, Nigeria, not later than 30 October 2020:**

- a) **Confirm formally, through a correspondence in response to ICAO State Letter T 17/6.11 (C)-0726 dated 05 December 2019 their commitment to lead the APIRG IIM SG COM Project 2 and AIM Project 3;**
- b) **Appoint the related Projects Team Coordinators and forward their details to the Secretariat for sharing and appointment of Projects Team members by States/Organizations; and**
- c) **The PTCs appointed by Nigeria convene as soon as possible preferably before 15 January 2021 the first projects coordination meetings to develop and forward to the Secretariat, for sharing, the Projects documents by 15 February 2021.**

## **CNS Matters**

3.5 The meeting reviewed the outcome of the APIRG/22 meeting pertaining to the area of Aeronautical Communication Navigation Surveillance and Spectrum (CNS), and commended the good progress of the implementation of AIDC, AMHS and ADS-B space in AFI Region.

3.6 The meeting was informed about the result of the last World Radio Communication Conference held in Sharm el Sheikh, Egypt (ITU WRC-19) where ICAO issues and concerns were successfully well addressed, with compliments to the developed strategies and coordination encouraging CAAs to participate in the ATU preparatory meetings to the conference.

3.7 The meeting discussed the different initiatives by States and from industry and agreed on the need to integrate the implementation of those Regional initiatives in the framework of APIRG project approach.

3.8 The meeting further deliberated on the sustainability of aeronautical infrastructure and information systems, and noted the needs to continue and reinforce the cooperation and harmonization in planning and expeditious implementation, operation and monitoring of interconnected systems.

### **The following Conclusion was formulated:**

#### **Draft Conclusion 3/6: Cooperation and harmonization in planning implementing, operation and monitoring**

#### **That:**

#### **In order to build sustainable aeronautical infrastructure and information systems, States/Organizations:**

- a) **Take the appropriate measures and actions aimed at integrating their implementation programme/plans into Regional initiatives promoted by the framework of APIRG projects approach; and**
- b) **Reinforce cooperation and harmonization in planning and speed up implementation, operation and monitoring of interconnected systems.**

## **MET Matters**

3.9 The Secretariat presented the outcome of the APIRG/22 meeting in the area of Aeronautical Meteorology (MET) which gave emphasis to the need for coordination under MET Project 2, which is coordinated by Senegal. The meeting was informed that Senegal had appointed two experts to take the role of the Project Team Coordinators for MET Project 2.

3.10 The meeting was reminded of the APIRG/22 discussions pertaining to the dissemination of meteorological information in the ICAO Meteorological Information Exchange Model (IWXXM). The Secretariat reported that the AFI IWXXM workshop had been conducted from 15 to 16 September 2020 with the objective of providing awareness to States on the technical details related to IWXXM implementation. The workshop also highlighted the importance of the global document adopted by the ICAO MET Panel (METP) in 2016 entitled- *“Guidelines for the Implementation of OPMET Data Exchange using IWXXM”*.

3.11 The meeting was informed that each ICAO-Region was to maintain a regional version to cover regional features related to IWXXM and subsequently, the Secretariat had developed an initial draft of this document for the AFI Region. Accordingly, the meeting discussed the steps that could be undertaken to ensure that the guideline is adopted and made available to AFI States at the earliest possible convenience.

3.12 A reminder was made of previous APIRG Conclusions and of the need to take the necessary steps to expedite the development and implementation of IWXXM capabilities.

**In view of the above, the following conclusion was formulated:**

**Draft Conclusion 3/7: AFI IWXXM Implementation Guideline and development of capabilities of handling OPMET data in digital format**

**That:**

**In the framework of the ICAO Annex 3 provision related to the IWXXM and to improve the exchange of OPMET data in digital format:**

- a) **The Secretariat, should support the coordinators and members of MET Project 1 take the appropriate measures and steps to ensure that the AFI IWXXM Implementation Guideline document as contained in Appendix E is finalized and submitted to the APCC and be made available to States not later than 15 January 2021;**
- b) **States be invited to expedite the development of IWXXM capabilities for exchange of OPMET data in digital format to meet the implementation date in accordance with ICAO Annex 3;**
- c) **States that have developed capabilities for exchange of OPMET data in digital format are encouraged to enter into bilateral/multilateral agreements for testing of their systems; and**
- d) **COM Project 2, consider the provision of the AFI AMHS Manual and integrate an appendix focusing on the AMHS Profile for OPMET IWXXM in line with the EUR AMHS Manual.**

### **General IIM Matters**

3.13 The outcome of the APIRG/22 & RASG AFI/5 meetings with linkage to APIRG IIM subjects was presented to the meeting and in particular Agenda Item 1, *Follow up on APIRG/21 Conclusions and Decisions*, constraints to implementation and as well as challenges faced in the implementation of APIRG conclusions and decisions such as but not limited to:

- a) Inadequate or lack of financial resources and high level commitment to aviation;
- b) Lack of expertise within States CAAs and ANSPs to implement, follow up or provide feedback on APIRG activities including recommendations, decisions and Projects implementation;
- c) Ineffective mechanisms and participation to coordinate and support implementation of the APIRG conclusions, decisions and Projects implementation;
- d) Weak effective safety oversight in some States at the level of regulators; and
- e) Poor reporting of APIRG recommendations, decisions and Projects implementation.

3.14 The meeting was informed that APIRG/22 deliberated on *Performance Framework for Regional Air Navigation Planning and Implementation* technical issues related to the IATA survey on Aeronautical Mobile Service (AMS) and implementation of Performance Based Communication and Navigation (PBCS) and the need to increase the liaison between the two APIRG AAO and IIM Sub Groups. In this regard, the project Team Coordinators (PTCs) were encouraged to regularly review their project document, with the aim to identify and act upon IIM project linkage with AAO Projects and circulate a linkage matrix amongst Projects Teams in order to prevent duplication and ensure harmonization of the implementation of ASBU modules and threads.

**The following conclusion was formulated:**

**Draft Conclusion 3/8: Coordination of Regional AAO and IIM Projects**

**That:**

**In order to comply with ANS operational requirements:**

- a) **Each PTC with the support of the Secretariat regularly review the project document, identify and act upon IIM project linkage with AAO Projects and circulate a linkage matrix amongst Projects Teams;**
- b) **The Projects Teams identify coordination actions to be undertaken in order to prevent duplication and ensure harmonization of the implementation of ASBU modules and threads.**

3.15 The meeting was also informed that APIRG/22 discussed issues related to the mechanisms and opportunities of funding IIM Projects and observed that the mobilization of resources to fund regional projects was a challenge that may seriously jeopardize the effective implementation of the APIRG Project Approach Concept, if tangible and sustainable funding solutions are not found. The meeting was further provided with a summary of presentation by African Development Bank (AfDB) to APIRG/22 on the financing options that should comply with the following:

- a) Regional approach preferred
- b) Involvement of private sector encouraged through PPP
- c) Co-financing
- d) Projects included in a Master Plan

3.16 In consideration of the Conclusion 22/34: *Organization of a Round Table for APIRG Projects Funding* approved by APIRG/22, the meeting urged Projects Teams to expedite the finalization of the projects initiation documentation and project cost estimation for consideration by the APCC and APIRG for funding.

**The following Conclusion was formulated:**

**Draft Conclusion 3/9: Funding IIM Projects**

**That:**

**In order to facilitate IIM Project funding:**

- a) **Projects Teams expedite the finalization of the projects initiation documentation (Description, Organization, Term of Reference, Business case, Plans, questionnaires, projects inter linkage, etc.) and project cost estimation for consideration by the APCC and APIRG;**
- b) **The APCC review the consolidated package of IIM projects for submission to APIRG; and**
- c) **The APIRG Chair with the assistance of the Secretariat and AFCAC promote the package of IIM projects to funding organizations.**

**AGENDA ITEM 4: STATUS OF IMPLEMENTATION OF THE AFI IIM REGIONAL PROJECTS ADOPTED BY APIRG**

**Aeronautical Information Management**

4.1 Under this Agenda Item, Kenya, the PTC, provided a report on the progress made on the AIM Project 1- *Assessment and development of QMS applied to AIM in AFI States*. The Team has developed the project activities associated with deliverables for the 2021-2023 period. The meeting applauded the achievement of the project and agreed to approve the initiation project document as developed.

**The following decision was formulated:**

**Draft Decision 3/10: AIM Project 1 activities**

**That:**

**In the framework of the conduct of the project, the proposed AIM Project 1 activities with its associated project deliverables for 2021-2023 as contained in Appendix F is adopted for submission to the approval of the APCC.**

4.2 The Team reported to have conducted a survey to establish the levels of compliance and implementation of AIM-QMS through questionnaires to determine the implementation status of each State and a total of eight (8) responses were received from Kenya, Seychelles, Botswana, Zambia, South Africa, Senegal, Tanzania and Ghana. The PTC reported that a total of 21 member States (including 17 ASECNA states) indicated that their AIM systems are ISO certified while 4 States indicated that they are not. However, the status of 23 member States is still unknown due to lack of response.

4.3 The meeting requested the Secretariat to provide guidance on the implementation of the Go-Team activities in the AFI and to distribute the updated questionnaire for States to respond by the end of the first quarter of year 2021. States were encouraged to nominate AIM focal point(s) to the PTC and to expressing their willingness to participate in the Regional AIM QMS Go-Teams by providing subject matter experts.

**The following Conclusion was formulated:**

**Draft Conclusion 3/11: Coordination and guidance on the implementation of AIM Go-Team activities in AFI States**

**That:**

**For the successful implementation of the activities of the “AIM Go-Team for the AFI Region”;**

- a) **The Secretariat provides the project with guidance on the implementation of the Go-Team activities in the AFI States and distributes the updated questionnaire for States to respond not later than 31 March 2021;**
- b) **States, in consideration of the slow progress made in the Region’s effective implementation of QMS in AIM undertake the necessary action not later than 14 January 2021 to expedite this activity through:**

- i. **Nominating AIM focal point(s) to the PTC and copy to the IIM Secretariat; and**
- ii. **Expressing their willingness to participate in the Regional AIM QMS Go-Teams by providing subject matter experts.**

4.4 The meeting was also provided with the report on progress made by the AIM Project 2- Implementation of Aeronautical Information Exchange Systems (AIXM) (AFI). In this regard, ASECNA on behalf of Benin, PTC of the pro informed the meeting on the availability of draft documents including: Project Description, Project Organization and project Questionnaire.

4.5 The PTC AIM Project 2 underscored the low level of attendance of the Team members resulting in unsuccessful tentative of meetings with no response from States nominated experts except South Africa. The meeting was reminded that as a technical matter involving interoperability concerns, the successful implementation of AIXM requires the effective participation of a set of experts sufficiently representative of the region. This concern was reflected in Conclusion 3/2, Conclusion 3/3 and Conclusion 3/4 of the IIM/SG3 meeting.

4.6 In the absence of the appointed PTC from Nigeria the meeting did not receive a report on AIM Project 3- *Implementation of the provision of electronic terrain and obstacle data (e-TOD)* in the AFI Region. The corrective action in this regard is envisaged in Conclusion 3/5: *Operationalization of the APIRG IIM SG COM Project 2 and AIM Project 3.*

#### ***Aeronautical Communication Navigation Surveillance and Spectrum Infrastructure and Systems***

4.7 Mali, the PTC COM Project 1- : *Implementation of Ground/Ground Communication (ATS/DS, AIDC, VoIP)* presented to the meeting the status of progress of the work assigned to the Project. During the presentation, it was apparent that there was a slow pace of progress due to unsuccessful commitment and participation and a low response by Project team members to the request of the PTC for holding the coordination meeting.

The PTC outlined the need for training on the subject and the meeting recalled that although the need for refreshment on particular technics is real, the appointed experts should be basic Subject Matter Experts (SMEs) prior to their nomination. Concerns were raised on the low levels of participation and the lack of commitment was addressed in the above Conclusion 3/2, Conclusion 3/3 and Conclusion 3/4.

4.8 There was no report on **COM PROJECT.2: *Implementation of Ground/Ground communication (AFTN, AMHS)*** since the appointed PTC from Nigeria did not give any information on the project. The corrective action in this regard is envisaged in Conclusion 3/5: *Operationalization of the APIRG IIM SG COM Project 2 and AIM Project 3.*

4.9 The PTC COM Project 3- ***Implementation of Air/Ground communication (HF/VHF voice data, CPDLC) appointed by South Africa***, provided the meeting (WP/4B.3) with the progress made by the project. The initial project deliverables were all completed. The team reported to have experienced technical network connectivity challenges (via Teleconference, GoToMeeting, Skype) thus a decision to communicate via WhatsApp was taken. The PTC informed the meeting on the intended future activities and made emphasis on the key importance of the project questionnaire. The meeting therefore noted the need to for the Secretariat to circulate the survey questionnaire to states for response.

The meeting also agreed on the establishment of a Project Team Coordinator Core Team tasked to develop the IIM Projects Master Plan, track all the IIM Projects activities and provide periodic reports.

**The following decision was formulated:**

**Draft Decision 3/12: Development of IIM Projects Master Plan**

**That:**

**In order to facilitate IIM Projects planning implementation and monitoring:**

**A Project Team Coordinator Core Team comprised of South Africa, Cameroon, Cote d'Ivoire and Uganda be established with the assistance of the Secretariat under the supervision of Chair and Vice Chair to:**

- a) **develop the IIM Projects Master Plan by 31 July 2021; and**
- b) **track all the IIM Projects activities and provide quarterly reports.**

4.10 ASECNA on behalf of Benin provided the meeting with the status of progress of COM PROJECT 4 - *Integrated Aeronautical Telecommunication Infrastructure*. The reported indicated that the Project initial documents are under development assigned to Project members. The main challenge encountered were similar to those identified by the other projects and tentatively deemed to be addressed in Conclusion 3/2, Conclusion 3/3 and Conclusion 3/4.

4.11 The Project Team Coordinator of IIM COM 5 Project presented the assessment of AFI navigation services Cyber resilience, and reported that 75 % of the project tasks defined in the initial planning had been completed, including the main deliverables such as the project description, the project linkage matrix, the project questionnaire and the ANS Cyber safety and resilience framework.

4.12 The meeting was further informed of an ICAO Regional workshop on Cyber Safety and Resilience for Air Navigation Systems with Tabletop Exercise held at the ICAO Regional Office in Nairobi, Kenya from 3 to 5 December 2019, to foster a cyber-safety culture that promotes a resilient and secure cyberspace for ANS. The IIM SG COM 5 Project Team participated and provided presentation on regional initiatives on the subject.

4.13 The meeting noted the challenges in the effective participation and availability of the experts, and the active dissemination of project baseline questionnaire to AFI States. Similarly, the lack of awareness about Cyber safety and resilience of ANS systems by States/Organizations also was raised.

**The following conclusion was formulated:**

**Draft Conclusion 3/13: Cyber Safety and Resilience of the Air Navigation Systems**

**That:**

**In order to increase States/Organizations technical personnel capability in cyber securing ANS systems, ICAO with the collaboration of the industry within the framework of the APIRG mechanism, increase its support in activities aimed at raising awareness of ANS Cyber safety and resilience through webinars/workshops/seminars on Cyber safety and resilience of ANS systems for AFI Region.**

4.14 The PTC appointed by Cameroon, provided information and update on the Navigation Project. The team reported the finalization of the development of a questionnaire aimed at gathering information on the deployed radio navigation and GNSS infrastructure, and assisting in identifying the availability and reliability of these systems in the AFI region. The PTC also outlined the main challenges in the area of effective participation and availability of the experts and the dissemination of project baseline questionnaire to be sent to AFI States, and noted the information on the progress and challenges that are highlighted in Conclusion 3/2, Conclusion 3/3 and Conclusion 3/4.

4.15 Ghana the PTC of Surveillance project presented to the meeting the progress made by the Team and reported on the completion of the development of the survey questionnaire aimed to gather information on the deployed surveillance infrastructure. The sought information included Radar, ground-based and space-based ADS-B, ADS-C and MLAT / WAM and assistance in the identification of the availability and reliability of these systems in the region, as well as access the possibility of sharing surveillance data between neighboring States. The surveillance team has identified initial linkages with the following IIM COM Project 1-AIDC) and COM Project 5-Cyber Security.

4.16 Ghana also reported on initiative for Surveillance Data Sharing in the airspaces along the Gulf of Guinea among Four (4) ANSPs namely, ASECNA, Ghana Civil Aviation Authority (GCAA) Nigeria Airspace Management Agency (NAMA) and The Roberts FIR. The four ANSPs have signed some initial Memorandum of Cooperation (MoC) and have a roadmap for implementation. This Roadmap has also been affected by the COVID-19 pandemic. Though this initiative does not cover the entire AFI, region, it is the belief that the experiences gained by such an initiative can be shared with other states in the hope that it would encourage them to follow suite.

4.17 APIRG/22 Conclusion 22/40 was considered, calling upon States and aircraft operators to ensure that all aircraft operating within the AFI RVSM airspace are equipped with ADS-B 1090MHz Extended Squitter Transponder by **June 2023** (AIRAC date). This is to ensure that all aircraft operating within the AFI Region airspace are equipped with ADS-B 1090 MHz Extended Squitter Transponder by **January 2025** (AIRAC date), after an assessment for Go or No-Go Decision be conducted in 2022 targeting 90% aircraft equipped with Transponder Extended Squitter 1090 for AFI RVSM airspace as the threshold.

4.18 The meeting noted that due to the financial challenges related to of the COVID – 19 pandemic, many aircraft operators in AFI Region will find it difficult to carry out the ADS-B activity and discussed on possible extension of AFI ADS-B aircraft transponder requirements mandate to enable appropriate planning by the AFI region. The ad’hoc committee tasked to examine this request from the Surveillance Team suggested that the meeting maintain the status quo on this APIRG conclusion since an assessment is requested prior to complete implementation.

4.19 With regard to the progress of the aeronautical Frequency Management Project – SPEC project including the scope and the actions, was presented to the meeting by Uganda, Posts and Telecommunications Commission (UPTC). The meeting noted the challenges faced by the SPEC Project Team members in terms of effective participation and level of States representation and identified a need to review the draft Terms of Reference, Project Description and the Project planning document.

**The following conclusion was formulated:**

**Draft Conclusion 3/14: Submission of expert names for the SPEC project**

**That:**

**In order to increase the level of representation in the Spectrum Project, States represented in (APIRG IIM SG/3) be urged to:**

- a) Submit names of experts to form part of the SPEC project; and**
- b) Review the draft TOR, Project Description, and Project planning documentation for consideration in the forthcoming SPEC project Virtual meeting to be hosted before 30 November 2020.**

4.20 The outcome of 1<sup>st</sup> ATU Preparatory Meeting for the WRC-23 was presented and the meeting. The following was noted: the key lessons learnt from WRC-19, the ITU preparatory work plan for WRC-23 (4 topics and 19 agenda items), the preliminary views on WRC-23 Agenda Items, the work plan and leadership of ATU to WRC-23 and ATU strategic plan elements including AU COVID-19 action.

4.21 The meeting was further informed by the PTC on the outcome of the 10<sup>th</sup> ICAO Frequency Spectrum Management Panel Working Group (FSMP WG/10) meeting held from 17- 26 August 2020, which discussed the draft ICAO position for the International Telecommunication Union World Radio Communication Conference 2023 (ITU WRC-23). Although the positions have not yet been agreed upon, the outcome provide a good building block for States to follow up with their respective frequency regulators. The key WRC-23 agenda items of interest to aviation to be considered by States on protecting the aeronautical spectrum from any form of interference were presented and noted by the meeting.

**The following conclusion was formulated:**

**Draft Conclusion 3/15: Preparation of ITU WRC-23**

**That:**

**In order to promote ICAO Position and ensure the proper protection of aeronautical spectrum, States/Organizations should:**

- a) when provided with the ICAO Position for ITU-WRC-23 Agenda Items on aeronautical spectrum requirements, start as soon as possible, the work for the preparation of WRC-23; and,**
- b) based on the lessons learnt from the last WRCs, reinforce their collaboration with the sub Regional Association of National Regulators of Telecommunication and work closely with ATU.**

## **Aeronautical Meteorology**

4.22 The PTCs for MET Project 1 and 2 presented on the activities of their Projects and on the draft Terms of References that had been developed. The meeting noted with concern, the limited involvement of experts nominated to the groups as well as the lack of response to questionnaires by some States. The presentation from MET Project 1 also highlighted the low level of participation by States in the 2019 AFI Regional SIGMET tests and emphasized the importance of States' participation in the 2020 SIGMET Tests.

4.23 In addition, the meeting also noted the decision made by the ICAO METP/4 pertaining to the WMO guideline for MET Quality Management System (QMS) implementation.

**The following decision was formulated:**

**Draft Decision 3/16: Adoption of the MET Project 1 and MET Project 2 Terms of Reference and their Projects deliverables for 2021-2022**

**That:**

**In order to expedite the work assigned to AFI IIM MET Projects:**

- a) The proposed MET Project 1 and MET Project 2 Terms of References and their associated project deliverables are adopted as contained in Appendix G;**
- b) In consideration of the ICAO METP/4 Decision 8/1 which calls for the discontinuation of the Manual on the Quality Management System for the Provision of Meteorological Service for International Air Navigation (ICAO Doc 9873), States/Organizations are encouraged to discontinue the use of ICAO Doc 9873 and use WMO No. 1100; and**
- c) AFI States and Organizations are encouraged to participate in the annual AFI SIGMET Tests.**

**AGENDA ITEM 5: AIR NAVIGATION PLANNING, DEFICIENCIES AND REPORTING  
IN THE AIM, CNS AND MET AREAS**

*Air Navigation Planning e-ANP in the AIM, CNS and MET Areas*

5.1 The Secretariat reminded the meeting of APIRG/21 discussions which shared the outcomes of the 2017 Regional Awareness Seminar on the AFI Air Traffic Management (ATM) Volcanic Ash Contingency Plan (VACP). Emphasis was also mentioned of APIRG Conclusion 21/35, which urged States to develop and conduct Volcanic Ash exercises using the guidance contained in **Appendix F** of ICAO Doc 9766, (Handbook on the International Airways Volcano Watch (IAVW)).

5.2 The meeting was reminded of the importance of collaborative decision-making (CDM) and involvement of all relevant stakeholders when mitigating the hazards posed by volcanic ash.

**The following conclusion was formulated:**

**Draft Conclusion 3/17: Development of Volcanic Ash Contingency Plans and conduct of Volcanic Ash exercises in the AFI Region**

**That:**

**In view of the need for the provision of information to airlines and en-route aircraft before and during a volcanic eruption:**

- a) **The State Volcano Observatories listed in the AFI eANP Volume I's Table MET I-1 provide their updated contact details to the Secretariat by 29 January 2021 for sharing with the States/Organizations;**
- b) **States who have not developed volcanic ash contingency plans and conducted Volcanic Ash exercises should do so, using the guidance in the AFI Volcanic Ash Contingency Plan as contained in Appendix H of the AFI Regional ATM Contingency Plan by 30 June 2021; and**
- c) **ICAO assist in planning and conducting a coordinated regional Volcanic Ash exercise by 31 December 2021.**

*Air Navigation Deficiencies and Reporting in the AIM, CNS and MET Areas*

5.3 The Secretariat presented an overview of the most recent developments pertaining to the AFI Air Navigation Deficiency Database (AANDD) following the discussions during the APIRG/22 meeting on the AANDD and the minimum reporting requirements for all air navigation areas. This included the activities embarked on by the Secretariat to identify the minimum reporting areas for all air navigation disciplines i.e. AIM, CNS, MET, AGA and ATM.

5.4 To enhance the required information on the air navigation deficiencies and reporting in the AIM, CNS and MET areas, the meeting was presented with the minimum reporting requirements in the AIM, CNS and MET areas. The Secretariat also indicated that a workshop will be conducted to sensitize States on these minimum reporting requirements as well as the operation of the AANDD web interface. It was also noted with concern, that some States had not appointed focal points for the AANDD.

**The following conclusion was formulated:**

**Draft Conclusion 3/18: Reporting on Air Navigation Deficiencies and operationalization of the AANDD**

**That:**

**In order to expedite the operationalization of the AFI Air Navigation Deficiencies Database (AANDD):**

- a) States that have not yet appointed their focal points, are encouraged to do so by 30 October 2020; and**
- b) ICAO endeavors to organize the workshop on Reporting on Air Navigation Deficiencies preferably before 31 December 2020.**

### **Other Air Navigation Issues**

5.5 IATA provided information on the African Indian Ocean (AFI) Aeronautical Information Management Action Group (AIM AG), a multi-stakeholder collaborative forum for the purpose of identifying deficiencies and challenges in the AFI aeronautical information and through collaborative engagement between parties develop and implement recommendations and actions to improve the availability and quality of aeronautical information pre- and post- publication. The core membership comprises of ICAO, IATA, IFAIMA and CANSO.

5.6 The meeting noted this initiative and encouraged the group to support the AIM Projects under the IIM SG through sharing relevant AIM AG outcomes and recommendations in order to harmonize ongoing initiatives and activities in the area of AIM.

**The following conclusion was formulated:**

**Draft Conclusion 3/19: Africa and Indian Ocean Aeronautical Information Management Action Group (AFI AIM AG)**

**That:**

**In order to harmonize ongoing initiatives and activities in the area of AIM:**

- a) States wishing to participate in the AFI AIM AG:**
  - i. Nominate their Representative/s for the AIM AG and the AIM AG Microsoft Teams Collaboration Platform through e-mail to the AIM AG secretariat ([kirkmanl@iata.org](mailto:kirkmanl@iata.org));**
  - ii. Actively participate in the activities of the AFI AIM AG; and**
- b) The AIM AG supports the AIM Projects under the IIM SG through sharing relevant Group outcomes and recommendations.**

5.7 South Africa, as the host State for the Regional Space Weather Centre presented a paper on the implementation of the requirement for the provision of a space weather information service in the Region. This service is a support to international air navigation as part of ICAO's Global Air Navigation Plan (Doc 9750). The meeting was reminded that ICAO amended Annex 3, Annex 15, PANS-ABC and PANS-ATM to include the provision of space weather information from designated centers.

5.8 It was further reported that South Africa (*through the South African National Space Agency -SANSa*) is the designated Regional Space Weather Centre for the provision of space weather information to national and regional Air Navigation Service Providers (ANSPs) and operators. The presentation provided information on the progress made by SANSa in implementing this service, the regional coordination requirements and emphasized the implications for civil aviation. Following deliberations, the meeting concluded that a new IMSG MET Project be established to deal with tasks related to Space Weather.

**The following conclusion was formulated:**

**Draft Conclusion 3/20: Establishment of a Regional Space Weather Project**

**That:**

- a) **An APIRG IIM MET Project 3-Space Weather Project is established within the IIM SG to guide the implementation of the Annex 3 provision relating to Space Weather requirements within the AFI Region;**
- b) **South Africa, hosting the AFI Regional Space Weather Center through the South African National Space Agency (SANSa), coordinate the APIRG IIM MET Project 3; and**
- c) **ICAO, after reception of the Project initial document by 31 January 2021, call for nominations of the project team members from interested AFI States/Organizations.**

5.9 The meeting noted that there was a lot of work to be done by States/Organizations in order to comply with the ICAO Annex 3 requirements for the provision of space weather. Coordination between the Regional Space Weather Centre (SANSa) and States' regulatory authorities, ANSPs and operators was highlighted as a key element to the development of action plans for the implementation of Space Weather requirements. The IIM SG3 meeting therefore observed the need for the Secretariat and the Regional Space Weather Centre to take the appropriate steps to assist States.

**The following conclusion was formulated:**

**Draft Conclusion 3/21: Development of action plans for the implementation of Space Weather requirements**

**That:**

**On the basis of Annex 3 to the ICAO Convention requirements for the provision of space weather services in air navigation plans,**

- a) **States/Organizations consider the implications of Annex 3 space weather requirements for AFI States' regulatory authorities, ANSPs and operators' operational policies;**
- b) **The designated Regional Space Weather Center (SANSa) liaise with other relevant national institutions in the AFI region to ensure effective coordination; and**
- c) **The Secretariat, with the support of the designated Regional Space Weather Centre (SANSa), take appropriate actions to assist States to meet the space weather implementation requirements.**

5.10 ASECNA provided an update on Regional Projects on AFI Aeronautical CNS Infrastructure, Systems and Spectrum. In this regard improvement was reported in the implementation of CNS infrastructure including but not limited to:

- Upgrade of the CAFSAT network nodes via the implementation of the phase I re-engineering to support full IP capability through the CAFSAT Network Management Committee mechanisms;
- Interconnection and/ or interoperability of AFISNET with the AFI aeronautical VSAT networks (SADC-III, NAFISAT, CAFSAT, REDDIG...);
- Expansion and interconnection of AFISNET to South America Region (SAM) with nodes in Recife, Cayenne and Trinidad and Tobago linking AFI and AFI regions; and
- Modernization of AFISNET (AFISNET/SITA IP Gateway) in the framework of the Satellite network management committee (SNMC).

5.11 The meeting was also provided with additional ongoing bilateral and multilateral cooperation initiatives to sustain and improve the CNS infrastructures:

- Cooperation in the Gulf of Guinea;
- AFI North West Area (ANWA) Cooperation;
- ASECNA/ATNS MoU;
- Satellite Network Management Committee; and
- Cooperation in SAT area.

5.12 Progress in AMHS implementation with inter regional connection between the Dakar and Recife ATSUs was reported as well as ongoing trials AIDC that include the following connection :

- Johannesburg/Antananarivo, at an advanced coordination stage;
- Dakar/Recife with trials ongoing; and
- Dakar/Cayenne with coordination on going.

5.13 On the ASECNA ADS-B project that encompasses ground and space based ADS-B. ADS-B pre-operational implementation, it was reported that the project resumed since 1 January 2020 after trials and assessment of conformity to the ADS-B requirements through Benchmarking, sensitization, safety studies, training, performance monitoring Operational Implementation Centers.

5.14 The meeting took note of the information and encouraged States/Organizations to expedite the implementation of the aeronautical CNS services to achieve a seamless AFI Airspace and to strengthen cooperation for improvement of the aeronautical CNS infrastructure and systems.

5.15 Cameroon on behalf ASECNA presented to the meeting development status of the ASECNA “SBAS for Africa & Indian Ocean” project. It was reported that under the coordination of ASECNA and the support of the French Space Agency (CNES) and of the European Space Agency (ESA), a dedicated network of GNSS stations, so-called SAGAIE, was deployed to collect and process real GNSS data from core constellations for the AFI region specific feasibility studies.

5.16 The three steps services provision plan was presented to the meeting as well and the signal-in-space compliance with corresponding SARPs from ICAO Annex 10 as well as with Minimum Operational Performance Standards (MOPS) of the RTCA (Radio Technical Commission for Aeronautics) and EUROCAE (European Organization for Civil Aviation Equipment) was outlined.

5.17 It was reported that the pre-operational service, was effective since September 2020, with the aim to carry-out technical trials, build operational competencies, and undertake field demonstrations with partner airlines (ASKY, Air Côte d’Ivoire, Air Senegal, Air France, Emirates ...) and concretely illustrate the benefits of the future operational safety-of-life SBAS services. The meeting noted this achievement by ASECNA recalled the framework of the AFI GNSS Strategy in particular the awaited Cost Benefit analysis being carried out by AFCAC.

**AGENDA ITEM 6: REVIEW OF THE TERMS OF REFERENCE AND WORK PROGRAMME OF THE APIRG IIM SUB GROUP**

6.1 Under this Agenda Item the meeting reviewed the Terms of Reference of APIRG IIM Sub Group presented by the Secretariat and updated its Work Programme until its next session.

**The following decision was formulated:**

**Draft Decision 3/22: Adoption of the Terms of Reference, composition and the work programme of the APIRG IIM SG**

**That:**

**The updated Terms of Reference, Composition and Work programme of the IIM SG is adopted as attached in Appendix D.**

**AGENDA ITEM 7: REVIEW OF THE DRAFT CONCLUSIONS/DECISIONS OF THE THIRD MEETING OF THE APIRG INFORMATION AND INFRASTRUCTURE MANAGEMENT SUB-GROUP**

7.1 Under this agenda item the meeting reviewed the draft conclusions and decisions developed by the Secretariat and after deliberations the subject conclusion and decisions were approved as contained in Appendix A1 to this Report. It was agreed that the Secretariat be tasked to finalize and submit the final version for the endorsement of the APCC.

**AGENDA ITEM 8: ANY OTHER BUSINESS**

8.1 Under this Agenda Item, the Secretariat reminded the meeting to consider the various Information Papers that provide detailed technical reference on the future actions to be taken including the dissemination of the conclusions and decisions to States. States were requested to implement the conclusions and decisions by taking the agreed actions in a timely manner.

8.2 The Secretariat also drew the attention of States and Organizations on the forthcoming 5<sup>th</sup> APCC meeting and the APIRG/23 and RASG/AFI 6 meeting scheduled to take place before the end of 2020 and that invitation letters would be soon submitted accordingly.

-----