



ICAO

**Twenty –Third Meeting of the AFI Planning and Implementation Regional Group
(APIRG/23)
(Virtual meeting, 24-26 November 2020)**

**OUTCOMES OF THE THIRD MEETING OF THE APIRG INFRASTRUCTURE AND
INFORMATION MANAGEMENT SUB-GROUP (APIRG IIM SG/3)**

INTERNATIONAL CIVIL AVIATION ORGANIZATION



Third Meeting of the APIRG Infrastructure and Information Management Sub-Group (IIM/SG/3) Virtual 12– 14 October 2020

Report

Prepared by ICAO Secretariat

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PART I

1. Introduction

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

The main objectives of the meeting were inter alia to:

- a) The meeting for the Establishment of IIM/SG meeting will, inter alia:
- b) 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
- c) 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);
- d) 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.
- e) Discuss issues on Air Navigation Deficiencies and Reporting in the AIM, CNS and MET Areas
- f) Review the Term of Reference and work programme of the Sub Group.

3. Attendance

3.1 The meeting was attended by Two Hundred Fifteen (**215**) participants comprising representatives of XX (**xx**) States, Five (5) Air Navigation Service Providers (**ASECNA, ATNS, GCAA, KCAA, SODEXAM**) (2) international airlines association (**AFRAA & IATA**).

A list of participants is provided at **Appendix A**.

4. Officers and 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 Ms. **Chinga Mazhetese** and Mr. **Harvey Gabriel LEKAMISY**, Regional Officers ENV & MET and CNS respectively, from the ICAO Regional Office of 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.

6.2 In his address **Mr. Kashambo** reminded the participants, that the meeting was being held in a particular circumstance of the COVID-19 pandemic environment that adversely impacted all the sectors in the world with great emphasis on the international air transport.

6.3 He outlined that ICAO, in collaboration with other UN specialized organizations, the industry and other partners has developed through the provision of the Council Aviation Recovery Task Force (CART) and the ICAO Secretariat COVID-19 Emergency Programme Group (SCEPG), 11 High Level Recommendations supported by a Global Implementation Roadmap and various guidance materials to assist Administrations Organizations and the industry to resume and sustain operation and advised the meeting to take into consideration this new environment of COVID-19 in which is evolving our sector.

6.4 He recalled the key tasks assigned to the IIM SG and recognized the important 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 and 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 He invited the Sub Group to identify for the preparation of the forthcoming APIRG 23 to which the Sub Group will report through the APIRG Project Coordination Committee (APCC), all outstanding tasks of the sub-group, 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 stands ever ready to play its coordinating role to support activities that are aimed at realizing the objectives set out in the ICAO strategic objectives and other supporting initiatives envisaged in the GANP through ASBU, GASP and GASeP initiative.

6.8 He appreciated the high number of participating States, ANSPs and user representatives in the meeting, and urged all participants to take full advantage of the gathering to lay the foundation for a positive transformation of the AFI air navigation landscape in order to achieve significant progress.

6.9 Mr Kashambo noted that although participants are obliged to telecommute, the hospitable and friendly nature of such a meeting that embraces people and organizations from diverse nationalities and cultures should engender a productive work environment where continent-wide outcomes can be achieved and wished to the meeting fruitfully deliberations

7. Agenda

The meeting adopted the following agenda:

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/22st 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 Meteorology

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**

Agenda Item 6: Review of the Term of Reference and Work Programme of the APIRG IIM Sub Group

Agenda Item 7: Any other business and Infrastructure Management Sub-Group

Agenda Item 8: Review of the draft Conclusions/Decisions of the Second meeting of the APIRG Information

8. Summary of Draft Conclusions & Decisions

The IIM/SG3 meeting after deliberation formulated the following Draft Conclusions and Decisions:

Decision 3/01: Appointment of the Chairperson and Vice-Chairperson of the Meeting

That;

**In order to ensure the 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
APIRG IIM SG.**

Conclusion 3/02: 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 APIRG IIM SG 2nd and previous meetings.**

Conclusion 3/03: 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 circulate the list of IIM Projects Teams to States/Organizations not later than 16 November 2020.**
- b) **States/Organization members of the APIRG IIM SG:**
 1. **Update the Secretariat and confirm the list of their nominees with their contact details by 29 January 2021**
 2. **Verify the expertise, availability, commitment and participation of their qualified experts**
 3. **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.**

Conclusion 3/04: 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 distribute the projects survey questionnaires by 16 November 2020;**
- b) **States:**
 1. **Respond to the survey questionnaire before 31 March 2021; and**
 2. **Continuously take the necessary measures for the effective and active attendance of their experts in the APIRG IIM Projects activities**

Conclusion 3/05: 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;**
- 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 (Description, baseline, plans, timeline....) by 15 February 2021.**

Conclusion 3/06: 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;**
- b) Reinforce cooperation and harmonization in planning and speed up implementation, operation and monitoring of interconnected systems.**

Conclusion 3/07: 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, with the support of 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 then 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.**

Conclusion 3/08: 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.**

Conclusion 3/09: IIM Projects Package for Funding

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....) 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;**
- c) The APIRG Chair with the assistance of the Secretariat and AFCAC promote the package of IIM projects to funding organizations**

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.

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

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 (South Africa, Cameroon, Cote d'Ivoire and Uganda) is established with the assistance of the Secretariat under the supervision of Chair and Vice Chair to develop the IIM Projects Master Plan by 31 July 2021; track all the IIM Projects activities and provide quarterly reports.

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.

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 this meeting (APIRG IIM SG/3) 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.**

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 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, 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.

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 Appendices 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;**
- (c) AFI States and Organizations are encouraged to participate in the annual AFI SIGMET Tests.**

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 in 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.**

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;**
- b) ICAO should endeavor to organize the workshop on Reporting on Air Navigation Deficiencies preferably before 31 December 2020**

Conclusion 3/18: 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:**
 - 1. 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);**
 - 2. Actively participate in the activities of the AFI AIM AG;**
- b) The AIM AG supports the AIM Projects under the IIM SG through sharing relevant AIM AG outcomes and recommendations**

Conclusion 3/19: 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.

Conclusion 3/20: 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;**
- 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**

Decision 3/21: 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

PART II

9 Report on Agenda Items

Agenda Item 1: Adoption of the Agenda, the Work programme and Election of 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 to designate its Chairperson and Vice Chairperson.

1.2 In this regards 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:

Decision 3/01: Appointment of the Chairperson and Vice-Chairperson of the Meeting

That;

In order to ensure the 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 Under this Agenda Item, 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 09 to 11 July 2018.

The Secretariat presented to the meeting (**WP02**) the summary of the available information on the status of implementation of the second meeting of the IIM/SG outcomes (**Appendix B** to the WP) and queried for its update by States and organizations.

The meeting noted that while some conclusions were successfully implemented other were staying to be completed.

The meeting therefore urged States/Organizations through the following conclusion to so undertake the effective implementation of the outstanding conclusions and decisions of the APIRG IIM SG 2nd and previous meetings.

Conclusion 3/02: 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 APIRG IIM SG 2nd and previous meetings.

2.2 Under this Agenda item, the meeting was presented with Conclusions and Decisions of APIRG/22 meeting related or linked to the scope of IIMSG. The 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.

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:

Conclusion 3/03: 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,

*d) The Secretariat circulate the list of IIM Projects Teams to States/Organizations not later than **16 November 2020**.*

e) States/Organization members of the APIRG IIM SG:

*4. Update the Secretariat and confirm the list of their nominees with their contact details by **29 January 2021***

5. Verify the expertise, availability, commitment and participation of their qualified experts

6. 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;

*f) 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 were not yet forwarded to States for filling up and invited the Secretariat to disseminate the documents. States were invited to respond to the questionnaire in a timely manner and to take the necessary measures for the effective and active attendance of their experts in the APIRG IIM Projects activities

The following conclusion was formulated:

Conclusion 3/04: 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,

*c) The Secretariat distribute the projects survey questionnaires by **16 November 2020**;*

d) States:

*3. Respond to the survey questionnaire before **31 March 2021**; and*

4. Continuously take the necessary measures for the effective and active attendance 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 5th meeting 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 meeting was provided by the Secretariat (**WP03A**) 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 under its agenda item 3 discussed the outcome of the APIRG IIM SG /2 meeting and noted a lack of coordination of some IIM projects including AIM Project 3 with its Project Team to be coordinated by Nigeria. The APIRG meeting urged concerned Administrations to confirm to the APCC with copy to the Secretariat their commitment to effectively lead the project. The Secretariat reported to have issued State Letter T 17/6.11 (C)-0726 dated 05 December 2019 to concerned Administrations 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 on a change of nominees, confirmed their willingness to lead the project and plan to provided nominees contact details to the Secretariat in response to the State letter.

The following conclusion was formulated:

Conclusion 3/05: 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:

- d) 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;*
- e) Appoint the related Projects Team Coordinators and forward their details to the Secretariat for sharing and appointment of Projects Team members by States/Organizations;*
- f) 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 (Description, baseline, plans, timeline....) by 15 February 2021.*

CNS Matters

3.5 The meeting reviewed (**WP03B**) 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 Radiocommunication Conference held in Sharm el Sheikh, Egypt (ITU WRC-19) where ICAO issues and concerns were successfully addressed and dealt , thanks to the strategies developed to encourage CAAs to participate in the ATU preparatory meetings of the conference.

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

3.8 The meeting discussed also the sustainability of aeronautical infrastructure and information systems, and noted the needs to continue and reinforce the cooperation and harmonization in planning and speeding up implementation, operation and monitoring of interconnected systems.

The following Conclusion was formulated:

Conclusion 3/06: Cooperation and harmonization in planning implementing, operation and monitoring

That;

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

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

MET Matters

3.9 The Secretariat (**WP 03C**) 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 was to be coordinated by **Senegal**. In this regard, the Secretariat informed the meeting that Senegal had appointed two experts to take the role of the Project Team Coordinators for MET Project 2.

3.10 The meeting was also reminded of the APIRG22 discussions pertaining to the dissemination of meteorological information in the ICAO Meteorological Information Exchange Model (IWXXM). The Secretariat informed the meeting of the AFI IWXXM workshop that had been conducted from 15-16 September 2020. The objective of the workshop was to provide 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 the Secretariat had developed an initial draft of this document for the AFI Region. 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 The meeting also reminded States 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:

Conclusion 3/07: 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,

- e) The Secretariat, with the support of 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 then made available to States not later than **15 January 2021**;*
- f) 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;*
- g) 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*
- h) 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 meeting was provided (**WP03D**) with the outcome of the APIRG/22 & RASG AFI/5 meetings with linkage to APIRG IIM subjects. The meeting was informed that APIRG/22 meetings identified in its Agenda Item 1, *Follow up on APIRG/21 Conclusions and Decisions*, constraints 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
- e) Poor reporting of APIRG recommendations, decisions and Projects implementation

3.14 The meeting was informed that APIRG/22 addressed under its Agenda Item 2-*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). The meeting therefore noted 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 projects 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:

Conclusion 3/08: Coordination of Regional AAO and IIM Projects

That;

In order to comply with ANS operational requirements;

- c) *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;*
- d) *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 APIR 22 discussed issues related to the mechanisms and opportunities of funding IIM Projects and outlined that the mobilization of resources to fund regional project 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 informed on a summary of the contribution of the African Development Bank (AfDB) to APIRG/22 through a presentation focused 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 APIRG 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:

Conclusion 3/09: IIM Projects Package for Funding

That;

In order to facilitate IIM Project funding,

- d) *Projects Teams expedite the finalization of the projects initiation documentation (Description, Organization, Term of Reference, Business case, Plans, questionnaires, projects inter linkage....) and project cost estimation for consideration by the APCC and APIRG;*
- e) *The APCC review the consolidated package of IIM projects for submission to APIRG;*

- f) *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 the meeting (WP/04A.1) with a report on the progress made by the Team, working 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 this achievement of the project and decide to approve the initiation project document developed The following decision was formulated:

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 by issuing questionnaires to determine the implementation status of each State. Out of the questionnaires sent out, 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 responsiveness.

4.3 The meeting requested the Secretariat to provide guidance on the implementation of the Go-Team activities in the AFI and to distributes 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:

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”;

- c) *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**;*
- d) *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:*

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

4.4 The meeting was also provided (**WP04A.2**) with the report on progress made by the AIM Project 2- *Implementation of Aeronautical Information Exchange Systems (AIXM) (AFI)*. In this regards, **ASECNA** on behalf of **Benin**, PTC of the project informed the meeting on the availability of the following draft documents: Project Description, Project Organization, and project Questionnaire.

4.5 The PTC AIM Project 2 underlined the low pace of attendance of the Team members resulting in unsuccessful tentative of meetings with no response from States nominated 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 the above Conclusion 3/02, Conclusion 3/03, Conclusion 3/04.

4.6 During this meeting there was not any report on AIM Project 3- *Implementation of the provision of electronic terrain and obstacle data (e-TOD)* in the AFI Region, since the appointed PTC from Nigeria did not attend the meeting and did not give any information on the project. The corrective action in this regard is envisage in Conclusion 3/05: *Operationalization of the APIRG IIM SG COM Project 2 and AIM Project 3*.

Aeronautical Communication Navigation Surveillance and Spectrum Infrastructure and Systems

4.7 Under this agenda Item, **Mali**, the PTC COM Project 1- : *Implementation of Ground/Ground Communication (ATS/DS, AIDC, VoIP)* presented to the meeting (**WP04B.1**) the status of progress of the work assigned to the Project. It appeared a low pace of progress due to unsuccessful commitment and participation and a low reactivity of 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 took the opportunity to recall 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. The concern raised in the slow pace of participation and the lack of commitment was addressed in the above Conclusion 3/02, Conclusion 3/03, Conclusion 3/04.

4.8 During this meeting there was not any 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 envisage in Conclusion 3/05: *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 (**WP04B.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 urged the Secretariat to circulate the survey questionnaire to states for response. The meeting also agreed to establish 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:

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 (South Africa, Cameroon, Cote d'Ivoire and Uganda) is established with the assistance of the Secretariat under the supervision of Chair and Vice Chair to develop the IIM Projects Master Plan by 31 July 2021; track all the IIM Projects activities and provide quarterly reports.

4.10 **ASECNA** on behalf of **Benin** provided (**WP04B.4**) the meeting with the status of progress of COM PROJECT **4-Integrated Aeronautical Telecommunication Infrastructure**.

It appeared that the Project initial documents are under development assigned to Project members.

The main challenge encountered were those identified by the other projects above and tentatively addressed in Conclusion 3/02, Conclusion 3/03, Conclusion 3/04.

4.11 The Project Team Coordinator of IIM COM 5 Project *-Assessment of cyber safety and resilience for the ANS system* appointed by **Côte d'Ivoire**, presented (**WP04B.5**) the status of implementation of the AFI navigation services Cyber resilience and the meeting was informed 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 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 faced by the Project Team members in the effective participation and availability of the experts, and the active dissemination of project baseline questionnaire to AFI States. The lack of awareness about Cyber safety and resilience of ANS systems by States/Organizations also was raised.

The following conclusion was formulated:

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 meeting was provided (**WP04B.6**) by the PTC appointed by **Cameroon** with the update on the Navigation Project.

The Team reported to have finalized the development of a questionnaire aiming to gather information on the deployed radio navigation and GNSS infrastructure, and to assist 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.

The meeting noted this information on the progress and took note of the challenges that are addressed in Conclusion 3/02, Conclusion 3/03, Conclusion 3/04.

4.16 **Ghana** the PTC of Surveillance project presented to the meeting (**4WP04B.7**) the progress made by the Team. It was reported that the completion of the development of the survey questionnaire aimed to gather information on the deployed surveillance infrastructure, i.e. Radar, ground-based and space-based ADS-B, ADS-C and MLAT / WAM and assist 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.

4.18 The PTC 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.

4.19 The Surveillance Team considered APIRG/22 Conclusion 22/40 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) and 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 on 2022 targeting 90% aircraft equipped with Transponder Extended Squitter 1090 for AFI RVSM airspace as the threshold .

4.20 The meeting noted that due to the financial difficulty emanated out of the COVID - 19, many AFI aircraft operators will find it challenging to carry out this activity and discussed on possible extension of AFI ADS-B aircraft transponder requirements mandate to enable appropriate planning by the AFI region. An ad'hoc committee task to examine this request from the Surveillance Team suggested the meeting that agreed with to observe the status quo on this APIRG conclusion since an assessment is requested prior to complete implementation.

4.21 The progress of the aeronautical Frequency Management Project – SPEC project including the scope and the actions conducted, was presented (**WP04B.8.1**) to the meeting by **Uganda**, PTC of the project. The meeting noted the challenges faced by the SPEC Project Team members in terms of effective participation and level of States representation in the project and identified a need to review the draft Terms of Reference, Project Description and the Project planning document.

The following conclusion was formulated:

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 this meeting (APIRG IIM SG/3) to;

- c) Submit names of experts to form part of the SPEC project and;*
- d) 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**.*

4.22 The meeting was then informed (**WP04B8.3**) about the outcome of 1st ATU Preparatory Meeting for the WRC-23 and noted the key lessons learnt from WRC-19, the ITU preparatory work plan for WRC-23 (4 topics & 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.

4.23 The meeting was also informed (**WP04B8.2**) by the PTC on the outcome of the 10th ICAO Frequency Spectrum Management Panel Working Group (FSMP WG/10) meeting held from 17- 26 August 2020, virtually discussed the draft ICAO position for the International Telecommunication Union World Radiocommunication Conference 2023 (ITU WRC-23). Although the positions have not yet been agreed upon, these 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:

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 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, 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

4.24 The PTCs for MET Project 1, **Kenya** and MET Project 2, **Senegal** presented (**WP04C.1** and **WP04C.2**) 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.

4.25 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:

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:

- (d) The proposed MET Project 1 and MET Project 2 Terms of References and their associated project deliverables are adopted as contained in **Appendices G**;*
- (e) 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;*
- (f) 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 (**WP05**) of APIRG21 which shared the outcomes of the 2017 Regional Awareness Seminar on the AFI Air Traffic Management (ATM) Volcanic Ash Contingency Plan (VACP) and also 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:

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:

- d) *The State Volcano Observatories in Table MET I-1 provide their updated contact details to the Secretariat by 29 January 2021 for sharing with the States/Organizations;*
- e) *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*
- f) *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 (WP06 and associated PPTs) an overview of the most recent developments within the Secretariat pertaining to the AFI Air Navigation Deficiency Database (AANDD) following the discussions during the APIRG22 meeting on the AANDD and the minimum reporting requirements for all air navigation areas. The report 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 shed more light on 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 by the Secretariat. 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 apprehension, that some States had not appointed focal points for the AANDD.

The following conclusion was formulated:

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)

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

Other Air Navigation Issues

5.5 IATA provided the meeting (WP/10) with 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.

Conclusion 3/18: 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:

- c) *States wishing to participate in the AFI AIM AG:*

3. *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);*
4. *Actively participate in the activities of the AFI AIM AG;*

d) *The AIM AG supports the AIM Projects under the IIM SG through sharing relevant AIM AG outcomes and recommendations*

5.7 South Africa, as the host State for the Regional Space Weather Centre presented (**WP07**) 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 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 IIMSG MET Project be established to deal with tasks related to Space Weather.

The following conclusion was formulated:

Conclusion 3/19: Establishment of a Regional Space Weather Project

That,

- d) *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;*
- e) *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*
- f) *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 also agreed that a lot of work has 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 pointed out as a key element to the development of action plans for the implementation of Space Weather requirements.

The IIM SG3 meeting therefore concluded that the Secretariat and the Regional Space Weather Centre would take the appropriate steps to assist States.

The following conclusion was formulated:

Conclusion 3/20: 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,

- d) *States/Organizations consider the implications of Annex 3 space weather requirements for AFI States' regulatory authorities, ANSPs and operators' operational policies;*
- e) *The designated Regional Space Weather Center (SANSa) liaise with other relevant national institutions in the AFI region to ensure effective coordination;*

f) *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 to the meeting (**WP11**) 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,
- 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,
- Cooperation in SAT area.

5.12 Progress in AMHS implementation with inter regional connection between the Dakar and Recife ATSU 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,
- Dakar/Cayenne with coordination on going

5.13 The meeting was also informed on the ASECNA ADS-B project that encompasses ground and space based ADS-B. ADS-B pre-operational implementation was reported to have resumed since 1st 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 (**WP12**) 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 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 Term of Reference and Work Programme of the APIRG IIM Sub Group

6.1 Under this Agenda Item the meeting reviewed the Term of Reference of APIRG IIM Sub Group presented by the Secretariat (**WP08**) and updated its Work Programme until its next session.

The following decision was formulated

Decision 3/21: 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 Conclusions/Decisions of the Third meeting of the APIRG Information and Infrastructure Management Sub-Group

7.1 Under this agenda item the meeting examined in detail the draft conclusions and decisions developed by the Secretariat (**WP09**). After comments/amendments these conclusion and decisions was approved and the Secretariat was tasked to finalized and submit the final version to 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 on the meeting that give detailed technical reference to participants and informed the participants on the future actions to be taken amongst which the dissemination of the conclusions and decisions to States. States where requested to implement these conclusions and decisions by taking the agreed actions called upon by the meeting in a timely manner.

8.2 The Secretariat also drew the attention of State and Organizations on the forthcoming 5th APCC meeting and the APIRG/23 and RASG/AFI 6 meeting scheduled to take place before the end of the year.

8.3 Invitation letters were in preparation and should be released soon and concerned States/Organizations were invited to participate in these meetings.

*****END*****