



Fourth Meeting of the APIRG Infrastructure and Information Management Sub-group (IIM/SG4)

Virtual Meeting, from 31st August to 3 September 2021

Final report

Prepared by the Secretariat

September 2021

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List of the IIM/SG4 Meeting Conclusions and Decisions

Reference of draft Conclusions /Decisions	Title of the draft Conclusions /Decisions
Draft Decision 4/01	Appointment of the Chairperson and Vice-Chairperson of the Meeting
Draft Decision 4/02	Approval of the IIM Projects Log frame
Draft Decision 4/03	Submission of Project Documentation to IIM Masterplan Project Team
Draft Decision 4/04	Increasing of the number of States reporting on the Sub-group activities
Draft Conclusion 4/05	States Focal points in the technical areas
Draft Conclusion 4/06	Coordination of IIM Projects
Draft Decision 4/07	AFI SIGMET Guide and SIGMET Trial Procedure
Draft Decision 4/08	Project Costing for IIM/SG MET
Draft Decision4/09	Aeronautical Meteorological Personnel Competency Assessment
Draft Decision 4/10	Sample request form for TAC to IWXXM translation services
Draft Conclusion 4/11	Traditional Alphanumeric Code to IWXXM translation agreements
Draft Decision 4/12	Approval of AFI Volcanic Ash Contingency Plan
Draft Conclusion 4/13	AFI Volcanic Ash Exercise Operational Instructions and Directive
Draft Decision 4/14	Adoption of the MET Project 3 Terms of Reference and the Project deliverables for 2021-2022
Draft Decision 4/15	Update of the Air Navigation System Implementation Action Plan in line with the 6 th Edition of the GANP
Draft Decision 4/16	Review of IIM Projects ASBU references in relation to the 6th Edition of the GANP
Draft Decision 4/17	Incorporation of Research, Development and Innovation (RDI) in APIRG work programme
Draft Decision 4 /18	Endorsement of the revised minimum reporting Areas
Draft Conclusion 4/19	Measures to improve the availability of OPMET data in the AFI Region
Draft Conclusion 4/20	Review of the MET Table II-2 to Part V of the AFI eANP Vol II
Draft Conclusion 4/21	Continuation of the CODEVMET AFI Project
Draft /Decision 4/22	Terms of Reference of the APIRG IIM/SG

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Part I – History of the Meeting

1. Introduction

- 1.1. The fourth meeting of the APIRG Infrastructure and Information Management Sub-Group (IIM/SG4) was held virtually from 31st August to 3 September 2021.
- 1.2. The Sub-Group records the outcomes of its meetings 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 for further actions to be undertaken in accordance with established procedures; and
 - b) Decisions deal with matters of concern only to the APIRG and its subsidiary bodies.

2. Objectives

- 2.1. The objectives of the meeting were inter alia to:
 - a) review Conclusions/Decisions of the Third Meeting of the Infrastructure and Information Management Sub-Group (IIM/SG3) held virtually from 12 to 14 October 2020.
 - b) review Conclusions/Decisions of the APIRG/23 Meeting pertaining to the areas of Aeronautical Information Management (AIM), Aeronautical Communication Navigation Surveillance and Spectrum (CNS), Aeronautical Meteorology (MET);
 - c) review the status of implementation of the regional projects adopted by APIRG in the fields of AIM, CNS and MET;
 - d) update participants on the provisions of the sixth edition of the Global Air Navigation Plan (GANP);
 - e) discuss issues related to Air Navigation Deficiencies and Minimum reporting areas in the AIM, CNS and MET Areas; and
 - f) review the Terms of Reference (ToRs) and work Programme of the Sub Group.

3. Attendance

- 3.1. The meeting was attended by two hundred ninety (290) participants from thirty-two (32) States, five (5) Air Navigation Service Providers (ASECNA, ATNS, GCAA, KCAA, and SODEXAM), International Airlines Association (IATA), International Federation of Air Traffic Controllers' Associations (IFATCA) and ICAO Regional Offices for Western and Central Africa (WACAF) and Eastern and Southern Africa (ESAF).
- 3.2. The list of participants is provided at **Appendix A**.

4. Officers and Secretariat

- 4.1. The meeting elected Ms. Anne Njeri Gitau (Kenya) and Mr. Issoufou Abdoulaye (Niger) respectively as Chairperson and Vice Chairperson of the Subgroup.
- 4.2. Mr. Goama Ilboudo Regional Officer MET from the ICAO Regional Office WACAF, 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 ESAF, Nairobi, and Mr. François-Xavier-Salambanga and Fanfé Bamba, Regional Officer CNS and AIM respectively, from ICAO Regional Office WACAF, Dakar.

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. Prosper Zo'o Minto'o, Regional Director for the ICAO Western and Central African Office and Secretary of APIRG.
- 6.2. In his address, Mr. Zo'o Minto'o on behalf of the President of ICAO Council, Mr. Salvatore Sciacchitano; the Secretary General, Mr Juan Carlos Salazar, ICAO Regional Director for Eastern and Southern Africa, Mr. Barry Kashambo and himself, extended his heartfelt appreciation to the Administrations and Organizations for facilitating the participation of their delegates and experts to the fourth meeting of the IIM Sub-Group.
- 6.3. He highlighted the importance for States to implement the provisions of the CART report and take off guidance material in order to assist the aviation industry for its recovery and resilience through COVID-19.
- 6.4. He recalled the main expectations of the Fourth meeting of the IIM Sub-Group which include the election of a new bureau for the next two coming years. In this regards, he extended his sincere thanks to Mr. Kinafo Silue and Mrs. Gaborekwe Khambule, outgoing Chairperson and Vice-Chairperson of the Sub-Group for their leadership and the support provided.
- 6.5. Whilst commending the Sub-group for the job done to date, he emphasized that one of the key tasks to be addressed by the meeting was related to the implementation of the ASBU modules for which States' reporting level is still low, and the updating of the AFI eANP.
- 6.6. Mr Zo'o Minto'o therefore, called for the commitment, diligence and determination of the experts and all stakeholders to make the difference which the AFI region desperately needs, in order to meet the IIM sub-group mandate.
- 6.7. Mr. Barry Kashambo expressed his gratitude to participants for their attendance through the use of virtual means as envisaged in the current APIRG structure.

7. Agenda

- 7.1. The meeting adopted the following agenda:

- Agenda 1. Adoption of the Agenda, the Work Programme and election of the Chairperson and Vice-Chairperson of the Sub-Group**
 - 1.1. Adoption of the agenda and the work programme
 - 1.2. Election of the Chairperson and Vice-Chairperson
- Agenda 2. Review of the Conclusions/Decisions of the Third Meeting of the Infrastructure and Information Management Sub-Group (IIM/SG3)**
- Agenda 3. Review of the Conclusions/Decisions of the APIRG/23 Meeting applicable to IIM/SG**
- Agenda 4. Update on the Regional Projects implementation**

- 4.1. Aeronautical Information Management (AIM) Projects
- 4.2. Aeronautical Communication, Navigation, Surveillance and Spectrum (CNS) Infrastructure Projects
- 4.3. Aeronautical Meteorology (MET) Projects

Agenda 5. Implementation of ASBU Modules

- 5.1. Sixth Edition of the GANP
- 5.2. Aeronautical Information Management (AIM) modules
- 5.3. Aeronautical Communication, Navigation, Surveillance and Spectrum (CNS) Infrastructure modules
- 5.4. Aeronautical Meteorology (MET) modules
- 5.5. Update on the AFI eANP

Agenda 6. Air Navigation Deficiencies

Agenda 7. Review of the Terms of Reference and Work Programme of the Sub-Group

Agenda 8. Any other business

Agenda 9. Review of the draft Conclusions/Decisions of the fourth meeting of the Infrastructure and Information Management Sub-Group (IIM/SG4)

8. Summary of Draft Conclusions and Decisions

- 8.1. The following Draft Conclusions and Decisions were formulated by the fourth meeting of the IIM/SG:

Decision 4/01 Election of the Chairperson and Vice-Chairperson of the Sub-Group

That;

In order to guide the work of the Sub-Group, Ms. Anne Njeri Gitau from Kenya and Mr. Issoufou Abdoulaye from Niger are respectively elected as Chairperson and Vice Chairperson of the IIM Sub-Group.

Draft Decision 4/02 Approval of the IIM Projects Log frame

That;

In order to provide the IIM/SG Projects Teams with a tracking framework for all IIM Projects and a reporting mechanism for all activities of the approved IIM Projects,

The Log Frame proposed by the Masterplan Project team is approved.

Draft Decision 4/03 Submission of Project Documentation to IIM Masterplan Project Team

That;

In order to populate the IIM Projects Masterplan, t

The projects AIM 3, COM 2, COM 4 and Surveillance to submit their project documentation with deliverables to the Masterplan Team Coordinator with copy to the Secretariat by 31 October 2021.

Draft Decision 4/04 Increasing number of States reporting on the Sub-group activities

That;

In order to improve data availability on States planning and implementation of activities in technical areas,

The secretariat to explore other mechanisms as alternative to surveys.

Draft Conclusion 4/05 States Focal points in the technical areas

That,

In order to facilitate the coordination of APIRG and its subsidiary bodies activities,

States to nominate a National Coordinator for Planning and Implementation (NCPI) as well as focal points in the areas of AIM, CNS, MET and communicate their details to ICAO Regional Offices by December 2021.

Draft Conclusion 4/06 Coordination of IIM Projects

That;

To ensure proper coordination and implementation of the Projects with coordination challenges,

- a) **Nigeria, Mali and Togo to confirm their willingness to continue leading the projects AIM 3 and COM 2, COM 1, and COM 4 respectively and to nominate qualified expert to coordinate these projects by 31 December 2021;**
- b) **The Secretariat to proceed with their replacement if no response is received from the concerned States**

Draft Decision 4/07 AFI SIGMET Guide and SIGMET Trial Procedure

That;

To assist States/Organisations in providing SIGMET information in accordance with ICAO SARPs and operational procedures,,

MET Project 1 to review and finalize the AFI SIGMET Guide and the AFI SIGMET Trial procedure and submit it to the next APIRG/24 Meeting.

Draft Decision 4/08 Project Costing for IIM/SG MET

That,

In order to in order to facilitate the IIM MET Project funding,

The IIM/SG4 endorses the project costing for MET Project 1 as contained in Appendix D2

Draft Decision 4/09 Aeronautical Meteorological Personnel Competency Assessment

That,

In order to improve States aeronautical meteorology personnel competency,

IIM/SG MET Project 1, in coordination with States, to develop a process for assessing the competency of Aeronautical Meteorology Personnel within the AFI region.

Draft Decision 4/10 Sample request form for TAC to IWXXM translation services

That,

In order to enable AFI States to have OPMET data translated from TAC to IWXXM format by their associated Data Translation Centre,

The sample request form as per Appendix 4C for TAC to IWXXM translation services request is endorsed.

Draft Conclusion 4/11 Traditional Alphanumeric Code to IWXXM translation agreements

That,

In the framework of the dissemination of OPMET data in the IWXXM format in the AFI Region:

- a) States data producer having their TAC data converted into IWXXM by another State on their behalf, to ensure that a bi-lateral or regional agreement be signed for such circumstances:**
- b) RODBs/IROGs Dakar and Pretoria to put in place a formal regional plan by 30 November 2021 to support the implementation of the IWXXM in the Region and formalize a bilateral agreement to conduct the IWXXM operationalization tests between the two IROGs and their corresponding ROC; and**
- c) The Secretariat to record the regional plans for follow-up purpose, maintain the list of agreements and make it available on the ICAO public website.**

Draft Decision 4/12 Approval of AFI Volcanic Ash Contingency Plan

That,

In order to provide States/Organizations with standardized guidelines and procedures for the provision of information to airlines and en-route aircraft before and during a volcanic eruption;

The draft AFI ATM Volcanic Ash Contingency Plan, Edition 2021 (AFI VACP, Ed 2021) is endorsed.

Draft Conclusion 4/13 AFI Volcanic Ash Exercise Operational Instructions and Directives

That,

In the framework of the conduct of the volcanic ash exercise in the AFI region,

- a) The IIM/SG MET Project 2, in coordination with the AFI Volcanic Exercise Leader State, finalize the AFI Volcanic Ash Exercise Operational Instructions (AFI VOLCEX OPINS) and the Volcanic Ash Exercise Directives by 30 October 2021 for endorsement by APIRG/24; and
- b) The Secretariat, to coordinate with Democratic Republic of Congo, Kenya, Ethiopia and Eritrea to get their Volcano Observatories Contact details as per the guidance provided in ICAO Doc 9766 Handbook of IAWV, by 30 October 2021.

Draft Decision 4/14 Adoption of the MET Project 3 Terms of Reference and the Project deliverables for 2021-2022

That;

The proposed MET Project 3 Terms of References and its associated project deliverables as contained in Appendices D5 and D6 are adopted.

Draft Decision 4/15 Alignment of the Regional Air Navigation Plan with the 6th Edition of the GANP

That;

In order to ensure consistency between the AFI Regional air navigation plan and the GANP:

- a) The Secretariat to conduct a specific workshop to update States on the provisions of the sixth edition of the GANP;
- b) The IIM/SG Projects teams to identify the applicable modules of ASBU Block 1 for the AFI region, and submit with the related prioritization to the secretariat by 31 December 2021; and
- c) The IIM/SG secretariat to coordinate with the AAO/SG secretariat to develop a draft revised Regional Air Navigation implementation Plan for integration in the eANP Volume III.

Draft Decision 4/16 Alignment of IIM Projects ASBU references to the GANP

That;

In order to incorporate changes introduced by the 6th Edition of the GANP and its impact on the regional and national Plans,

IIM PTCs to align project references to the sixth Edition of the GANP Groups, Threads and Modules by 31 December 2021.

Draft Decision 4/17 Incorporation of Research, Development and Innovation (RDI) in APIRG work programme

That;

In order to assist AFI States in addressing the implementation of operational requirements and ASBU modules elements,

The work programmes of APIRG and its auxiliary bodies be amended to include activities related to Research, Development and Innovation (RDI).

Draft Decision 4 /18 Endorsement of the revised minimum reporting Areas

That;

In order to support the implementation of the Uniform Methodology for the identification, assessment and reporting of deficiencies,

The revised minimum reporting areas is endorsed.

Draft Conclusion 4/19 Measures to improve the availability of OPMET data in the AFI Region

That;

To address safety issues related to the unavailability of OPMET data,

- a) States/Organizations to implement measures provided in the OPMET availability Action Plan as contained in Appendix E2 and report quarterly to the Secretariat;**
- b) The Secretariat to coordinate the implementation of the OPMET availability Action Plan and provide support where necessary.**

Draft Conclusion 4/20 Review of the MET Table II-2 to Part V of the AFI eANP Vol II

That,

In order to improve the provision of the required observations and forecasts by the Responsible Aerodrome MET Offices,

States to submit to the Secretariat proposals for amendments of their Table MET II-2 in the eANP volume II Part V.

Draft Conclusion 4/21 Continuation of the CODEVMET AFI Project

That,

In order to improve States Safety Oversight activities in MET;

States /Organizations to support the implementation of the Project related to the Cooperative Development of Aeronautical Meteorological Service in the AFI Region (CODEVMET AFI).

Draft /Decision 4/22: Terms of Reference of the APIRG IIM/SG

That;

The updated Terms of reference of the IIM/SG is endorsed.

Part II Report on the Agenda Items

Agenda Item 1: Adoption of the Agenda, the Work Programme and election of the Chairperson and Vice-Chairperson of the Sub-Group

- 1.1. Under this agenda item, the meeting discussed and adopted the draft agenda and the work programme proposed by the Secretariat and elected its Chairperson and Vice Chairperson.
- 1.2. The Meeting elected Ms. Anne Njeri Gitau, Manager Aeronautical Information Management from Kenya as the Chairperson and Mr. Issoufou Abdoulaye, MET Inspector from Niger as the Vice Chairperson of the Sub-group.

The meeting formulated the following Decision accordingly.

Decision 4/01 Election of the Chairperson and Vice-Chairperson of the Sub-Group

That;

In order to guide the work of the Sub-Group, Ms. Anne Njeri Gitau from Kenya and Mr. Issoufou Abdoulaye from Niger are respectively elected as Chairperson and Vice Chairperson of the IIM Sub-Group.

Agenda Item 2: Review of the Conclusions/Decisions of the Third Meeting of the Infrastructure and Information Management Sub-Group (IIM/SG3)

- 2.1. Under this Agenda Item, the meeting discussed the status of implementation and actions taken on the Conclusions and Decisions of the IIM/SG3 meeting held virtually from 12 to 14 October 2020.
- 2.2. The meeting noted that three Conclusions/Decisions out of seven were implemented while four others were still pending as per **Appendix B** to this report. The meeting urged Administrations and Organizations that have not yet done so, to effectively address outstanding Conclusions and Decisions.

Agenda Item 3: Review of the Conclusions and Decisions of the APIRG/23 Meeting applicable to IIM/SG

- 3.1. The meeting was updated on the status of the implementation of the Conclusions and Decisions of the APIRG/23 meeting held virtually from 23 November to 02 December 2020 pertaining to the areas of Aeronautical Information Management (AIM), Aeronautical Communication Navigation Surveillance and Spectrum (CNS) and Aeronautical Meteorology (MET).
- 3.2. The meeting noted that most of the IIM/SG/23 meeting Conclusions were adopted by APIRG and some were successfully implemented, while others are still ongoing as indicated in the Appendix C to this report. The meeting called States to consider the outstanding APIRG Conclusions and Decisions that require their actions.

AIM matter

- 3.3. In the area of Aeronautical Information Management (AIM), the meeting was provided with an update on activities and associated deliverables under each Conclusion.

- 3.4. For the *Conclusion 2/05 on the NOTAM Quality* improvement, a workshop was conducted with recommended follow-up actions aiming at eliminating old and very old NOTAM and improving the quality of NOTAM. The meeting encouraged States to implement remaining actions.
- 3.5. Regarding the *Coordination and guidance on the implementation of AIM Go-Team activities in AFI States*, the meeting was updated on the ongoing revision of the AIM "Result Based Implementation Support (RBIS)" Project aiming to cover the Go-team activities for the implementation of QMS, AIXM and eTOD projects in the AFI Region. The meeting noted delays in RBIS Project implementation due to the COVID-19 pandemic.

CNS matter

- 3.6. The meeting reviewed the outcome of the APIRG/23 meeting pertaining to the area of Aeronautical Communication Navigation Surveillance and Spectrum (CNS), and noted with concerns that all the conclusions formulated by the twenty-third meeting of APIRG in CNS area are still pending.
- 3.7. Nerveless, the meeting noted with satisfaction, the development of Project Master Plan and the increased awareness of States and Organization technical personnel of ANS cybersecurity and its threats.
- 3.8. The meeting was informed on the latest update of the ICAO position for the International Telecommunication Union World Radio communication Conference 2023 (ITU WRC-23) that was approved by the ICAO Council and was submitted to States on 18 August 2021 by the State Letter Ref.: E/5-21/37 dated 18 August 2021.

MET matter

- 3.9. The meeting reviewed the status of implementation of the APIRG/23 conclusions and decisions pertaining to MET area and noted that three were fully implemented while three others are still pending.
- 3.10. Regarding Conclusion 23/20 of APIRG/23 related to the ICAO Meteorological Information Exchange Model (IWXXM) Implementation Guideline and the development of capabilities for handling data in digital format, the meeting was informed of actions undertaken by RODBs Dakar and Pretoria for the transition towards the IWXXM format in the AFI Region, and noted that some challenges were still to be addressed including the operationalization tests of the IWXXM model and the establishment of the translation agreements.
- 3.11. For the APIRG/23 Conclusion 23/28 on the development of volcanic ash contingency plans and the conduct of volcanic ash exercises in the AFI region, a workshop was conducted on volcanic ash exercises and Cape Verde agreed to act as the AFI Volcanic Ash Exercise Leader to direct the preparation and the conduct the volcanic ash exercise in the AFI region.
- 3.12. The APIRG/23 Conclusion 23/38 dealing with RHWAC/MWOs collaboration experimentation and development of the Regional Hazardous Weather Advisory Center (RHWAC) is still pending. The MET Project 1 was urged to coordinate with ASECNA for the incorporation of this matter in the Project work plan.

Agenda Item 4 : Update on the Regional Projects implementation

- 4.1. Under this Agenda Item, the meeting was updated on the status of implementation of the IIM regional projects adopted by APIRG and the development of the IIM/SG Projects Master Plan.

IIM/SG Projects Masterplan

- 4.2. The meeting reviewed the outcome of the Decision 23/24 of APIRG/23 and commended the work done by the Sub-Group regarding the development of the IIM Masterplan to track the IIM Projects activities and provide quarterly reports. The meeting took note of the development of the Log Frame for IIM projects as set out in **Appendix D1**, and highlighted some challenges, mainly related to project activities and expected results.

The following decisions were formulated:

Draft Decision 4/02 Approval of the IIM Projects Log frame

That;

In order to provide the IIM/SG Projects Teams with a tracking framework for all IIM Projects and a reporting mechanism for all activities of the approved IIM Projects,

The Log Frame proposed by the Masterplan Project team is approved.

Draft Decision 4/03 Submission of Project Documentation to IIM Masterplan Project Team

That;

In order to populate the IIM Projects Masterplan, the projects AIM 3, COM 2, COM 4 and Surveillance to submit their project documentation with deliverables to the Masterplan Team Coordinator with copy to the Secretariat by 31 October 2021.

States Reporting on Planning and Implementation

- 4.3. The meeting was informed that Projects questionnaires were circulated to States through State Letter ES AN 1/6-0018 dated 29 January 2021. To date, few States effectively responded to the questionnaires. The meeting recognized that the low level of availability of data from States on their planning and implementation of air navigation services is a challenge for the AFI Region. In order to overcome this issue, the meeting tasked the secretariat to explore other mechanisms as alternative to surveys.

The following decision was formulated accordingly:

Draft Decision 4/04 Increasing the number of States reporting on the Sub-group activities

That;

In order to improve data availability on States planning and implementation of activities in technical areas,

The secretariat to explore other mechanisms as alternative to surveys.

- 4.4. Furthermore, the meeting identified that, like the NCMC in the field of Safety Oversight, the establishing of a National Coordinator for Planning and Implementation (NCPI) as well as Focal Points for each Technical area would facilitate the coordination of APRIG and its subsidiary bodies' activities.

The meeting formulated the following Conclusion:

Draft Conclusion 4/05 States Focal points in the technical areas

That,

In order to facilitate the coordination of APIRG and its subsidiary bodies activities,

States to nominate a National Coordinator for Planning and Implementation (NCPI) as well as focal points in the areas of AIM, CNS, MET and communicate their details to ICAO Regional Offices by December 2021.

Aeronautical Information Management (AIM)

- 4.5. The meeting was provided with reports on the progress made by *AIM Project 1 - Assessment and development of QMS applied to AIM in AFI State* and *AIM Project 2 - Implementation of Aeronautical Information Exchange Systems (AIXM)*. .
- 4.6. Regarding the *AIM Project 1*, the meeting was informed that a survey was conducted to determine the compliance and implementation of AIM-QMS through a questionnaire. Eleven (11) States took up the survey, Nine (9) indicated that they are ISO certified being at stage 2 of implementation while two (2) indicated that they are not ISO certified. Moreover, ASECNA shared an ISO certificate with the PTC indicating that all its member States are ISO 9001:2015 certified.
- 4.7. With regard to the Go Team activities, the meeting was informed that the AIM Result Base Implementation Support (RBIS) Project was under revision and would cover the Go Team activities for the implementation of QMS, AIXM and eTOD.
- 4.8. For the *AIM Project, 2* the meeting was noted the completion of some project documents including the description, organization and the project questionnaire. The Project linkage and cost estimation are still not finalized. Some challenges related to the low participation of States' Experts in the project activities were reported.
- 4.9. The meeting did not receive any report on *AIM Project 3 on the Implementation of the provision of electronic terrain and obstacle data (e-TOD) in the AFI Region*. The meeting called upon Nigeria, coordinator of AIM Project 3, to confirm its willingness to continue leading this project and to nominate a qualified expert for the coordination of the project.

Aeronautical Communication Navigation Surveillance and Spectrum Infrastructure and Systems (CNS)

- 4.10. The meeting was updated on the progress made by the CNS related Projects COM 2, COM 3, COM 5 and the Surveillance, Navigation and Spectrum Projects. The meeting noted achievements made. However, challenges were raised, including lack of coordination of some projects, lack of participation of States experts to the activities of the projects and lack of responses to the project survey questionnaires.
- 4.11. The meeting noted with satisfaction, the significant progress made by the IIM COM Project 5 with regard to the deliverables provided, which include amongst others, assessment of potential cyber threats to ANS, Initial Analysis of existing cybersecurity and cyber resilience frameworks, development of the AFI ANS Cyber safety and resilience framework.
- 4.12. The meeting did not receive any report on COM Project 1 -Implementation of Ground/Ground communication (ATS/DS, AIDC, VoIP) and COM Project 4 - Implementation of interoperable seamless telecommunication infrastructure.

The meeting formulated the following conclusion

Draft Conclusion 4/06 Coordination of IIM Projects

That;

To ensure proper coordination and implementation of the Projects with coordination challenges,

- c) **Nigeria, Mali and Togo to confirm their willingness to continue leading the projects AIM 3 and COM 2, COM 1, and COM 4 respectively and to nominate qualified expert to coordinate these projects by 31 December 2021;**
- d) **The Secretariat to proceed with their replacement if no response is received from the concerned States**

The International Telecommunication Union World Radio communication Conference 2023 (ITU WRC/23) and the provisions related to the Remotely Piloted Aircraft Systems

- 4.13. The meeting was also informed of the forthcoming African Telecommunication Union Preparatory Meeting for ITU WRC/23, to be held from 6 to 16 September 2021, to discuss all agenda items relating to the International Telecommunication Union World Radio communication Conference 2023 (ITU WRC/23).
- 4.14. The meeting was informed of the adoption of the First Edition of Volume VI “Communication Systems and Procedures Relating to Remotely Piloted Aircraft Systems C2 Link” to Annex 10. The related SARPs will become applicable on 26 November 2026.
- 4.15. The meeting discussed aviation concerns about the major operational risks resulting from 5G technology deployment and invited States to take the necessary measures when 5G is utilized around airports.

Aeronautical Meteorology (MET)

- 4.16. The meeting noted the progress made on the MET Project 1 related to the Implementation of en-route weather phenomena information (SIGMET), (QMS/MET) service, in the AFI region. Some achievements were made regarding the implementation QMS, the conduct of the AFI Regional SIGMET tests and the update of the AFI SIGMET Guide and SIGMET Trial Procedures. The meeting stressed the need to accelerate the finalisation of the update of the AFI SIGMET guide and its posting on the ICAO website.

The meeting formulated the following decision:

Draft Decision 4/07 AFI SIGMET Guide and SIGMET Trial Procedure

That;

To assist States/Organisations in providing SIGMET information in accordance with ICAO SARPs and operational procedures,

MET Project 1 to review and finalize the AFI SIGMET Guide and the AFI SIGMET Trial procedure and submit it to the next APIRG/24 Meeting.

- 4.17. The meeting discussed the cost estimation of MET Project 1, including the onsite missions/workshops/Trainings for approximately USD 83 871.74, and online workshops/trainings estimated at USD 58 730.64.
- 4.18. In addition, the need to assess competency of Aeronautical Meteorological Personnel within the AFI region was raised.
- 4.19. Some challenges related to the low rate of response to the questionnaires and the lack of implementation (by MWOs) of recommendations provided in the AFI annual SIGMET Test reports were also discussed.

The following decisions were formulated accordingly:

Draft Decision 4/08 Project Costing for IIM/SG MET

That,

In order to facilitate the IIM MET Project funding,

The IIM/SG4 endorses the project costing for IIM MET Project 1 as contained in Appendix D2

Draft Decision4/09 Aeronautical Meteorological Personnel Competency Assessment

That,

In order to improve States aeronautical meteorology personnel competency,

IIM/SG MET Project 1, in coordination with States, to develop a process for assessing the competency of Aeronautical Meteorology Personnel within the AFI region

- 4.20. The meeting was updated on the status of the implementation of the IWXXM model in the AFI region. A workshop was conducted on 25th August 2021 to assist States in implementing the IWXXM Model. Furthermore, a survey questionnaire on the status of the IWXXM was sent to States and recorded participation rate of 44,68%. The meeting discussed also the matter related to the translation of TAC OPMET data to IWXXM format and noted some concerns regarding the provisions of the translation services. The meeting therefore urged States/Organizations to use the Sample request form as per Appendix D3 to this report to request the translation services as appropriate.

The following conclusions and decisions were formulated accordingly:

Draft Decision 4/10 Sample request form for TAC to IWXXM translation services

That,

In order to enable AFI States to have OPMET data translated from TAC to IWXXM format by their associated Data Translation Centre,

The sample request form as per Appendix 4C for TAC to IWXXM translation services request is endorsed.

Draft Conclusion 4/11 Traditional Alphanumeric Code to IWXXM translation agreements

That,

In the framework of the dissemination of OPMET data in the IWXXM format in the AFI Region:

- d) States data producer having their TAC data converted into IWXXM by another State on their behalf, to ensure that a bi-lateral or regional agreement be signed for such circumstances:**
 - e) RODBs/IROGs Dakar and Pretoria to put in place a formal regional plan by 30 November 2021 to support the implementation of the IWXXM in the Region and formalize a bilateral agreement to conduct the IWXXM operationalization tests between the two IROGs and their corresponding ROC; and**
 - f) The Secretariat to record the regional plans for follow-up purpose, maintain the list of agreements and make it available on the ICAO public website.**
- 4.21. The meeting was informed on the progress made by the MET Project 2, including actions undertaken in line with the APIRG/23 Conclusion 23/28 related to the Development of Volcanic Ash Contingency Plans and the conduct of Volcanic Ash exercises in the AFI Region. The meeting noted that a workshop was conducted on the volcanic ash exercise, and the AFI Volcanic Ash Contingency Plan (AFI VACP) was reviewed.

The following decision was taken accordingly.

Draft Decision 4/12 Approval of AFI Volcanic Ash Contingency Plan

That,

In order to provide States/Organizations with standardized guidelines and procedures for the provision of information to airlines and en-route aircraft before and during a volcanic eruption;

The draft AFI ATM Volcanic Ash Contingency Plan, Edition 2021 (AFI VACP, Ed 2021) is endorsed.

- 4.22. The meeting was also updated on the ongoing activities related to the preparation of the volcanic ash exercise to be conducted in the AFI region by the end of the year. In this regard, the meeting reviewed the draft operational guidance and directives on the volcanic ash exercise, including the AFI Volcanic Ash Exercise Operational Instructions (AFI VOLCEX OPINS) and the AFI Volcanic Ash Exercise Directives.

Following the discussions, the meeting agreed on the following:

Draft Conclusion 4/13 AFI Volcanic Ash Exercise Operational Instructions and Directives

That,

In the framework of the conduct of the volcanic ash exercise in the AFI region,

- c) **The IIM/SG MET Project 2, in coordination with the AFI Volcanic Exercise Leader State, finalize the AFI Volcanic Ash Exercise Operational Instructions (AFI VOLCEX OPINS) and the Volcanic Ash Exercise Directives by 30 October 2021 for endorsement by APIRG/24; and**
 - d) **The Secretariat, to coordinate with Democratic Republic of Congo, Kenya, Ethiopia and Eritrea to get their Volcano Observatories Contact details as per the guidance provided in ICAO Doc 9766 Handbook of IAWV, by 30 October 2021.**
- 4.23. The meeting discussed the report on the progress made by the *MET Project 3 related to the Implementation of Annex 3 provisions relating to Space Weather requirements within the AFI Region*. The project documents (Terms of Reference and Project, Scope, objectives, tasks ...) were developed. Project survey questionnaires were developed and circulated to States and Projects implementation activities are ongoing.

The following decision was formulated

Draft Decision 4/14 Adoption of the MET Project 3 Terms of Reference and the Project deliverables for 2021-2022

That;

The proposed MET Project 3 Terms of References and its associated project deliverables as contained in Appendices D5 and D6 are adopted.

Agenda Item 5: Implementation of ASBU Modules

Provisions of the sixth edition of the GANP

- 5.1. Under this Agenda Item, the meeting was updated on the sixth edition of the Global Air Navigation Plan (GANP).
- 5.2. The meeting was provided with details on the ASBU modules pertaining to AIM, CNS and MET, with emphasis on the necessity for the AFI region to assess the priority modules and elements of Block 1 for implementation.
- 5.3. Taking note of the important changes introduced through the sixth edition of the GANP, the meeting identified the need for the AFI Region to align the Regional Air navigation Plan to the GANP. In this regard, the meeting agreed on the following draft Decision.

Draft Decision 4/15 Alignment of the Regional Air Navigation Plan with the 6th Edition of the GANP

That;

In order to ensure consistency between the AFI Regional air navigation plan and the GANP:

- d) **The Secretariat to conduct a specific workshop to update States on the provisions of the sixth edition of the GANP;**
 - e) **The IIM/SG Projects teams to identify the applicable modules of ASBU Block 1 for the AFI region, and submit with the related prioritization to the secretariat by 31 December 2021; and**
 - f) **The IIM/SG secretariat to coordinate with the AAO/SG secretariat to develop a draft revised Regional Air Navigation implementation Plan for integration in the eANP Volume III.**
- 5.4. The meeting requested the IIM Projects Teams to align projects references with ASBU Groups, Threads and Modules of the GANP. For this purpose, the following draft decision was formulated.

Draft Decision 4/16 Alignment of IIM Projects ASBU references to the GANP

That ;

In order to incorporate changes introduced by the 6th Edition of the GANP and its impact on the regional and national Plans,

IIM PTCs to align project references to the sixth Edition of the GANP Groups, Threads and Modules by 31 December 2021.

Incorporation of Research, Development and Innovation (RDI) in APIRG work programme

- 5.5. The meeting discussed the introduction of Research, Development and Innovation (RDI) in aviation. It was emphasized that there is a need to align research amongst the AFI States aviation stakeholders to prepare for the future, share relevant experiences so that members are aware of the potential benefits. After discussions, the meeting formulated the following Decision:

Draft Decision 4/17 Incorporation of Research, Development and Innovation (RDI) in APIRG work programme

That;

In order to assist AFI States in addressing the implementation of operational requirements and ASBU modules elements,

The work programmes of APIRG and its auxiliary bodies be amended to include activities related to Research, Development and Innovation (RDI).

Agenda Item 6: Air Navigation Deficiencies

Minimum Reporting Areas in AIM, CNS and MET

- 6.1. Under this agenda item, the meeting was reminded that the twenty-third meeting of APIRG, noting the progress made in the operationalization of the AFI Air Navigation Deficiency Database (AANDD), endorsed the AANDD management process as well as the list of minimum reporting areas.
- 6.2. Participants were informed that works are ongoing to improve the database, with the purpose to make the system more user friendly and to fit the operational needs. The training of States/Organizations focal points will be conducted once the new version of the system is released.
- 6.3. The meeting discussed the revised list of Minimum reporting areas considering the Basic Building Blocks (BBB) and ASBU Modules with priority 1 in the AFI Region, as per **Appendix E1** to this report. The meeting endorsed this revision through the following draft decision.

Draft Decision 4 /18 Endorsement of the revised minimum reporting Areas

That;

In order to support the implementation of the Uniform Methodology for the identification, assessment and reporting of deficiencies,

The revised minimum reporting areas is endorsed.

- 6.4. The meeting discussed missing OPMET data in the AFI Region. Reports received by the Secretariat from the two Regional OPMET Data Banks (RODBs) Dakar and Pretoria have shown a high level of unavailability of OPMET data.
- 6.5. Consistent with the *Conclusion 20/43 of APIRG/20 related to Action plan to remove air navigation deficiencies in the MET field* and *Conclusion 21/24 of APIRG/21 dealing with Availability of OPMET Data at AFI OPMET Data Banks*, the Secretariat conducted on 21 June

2021, a virtual workshop on the availability of OPMET data in the AFI Region. Participants discussed gaps related to the loss of OPMET data in the AFI region and tasked a group of experts from Kenya, ASECNA and South Africa to develop a remedial action plan. The meeting reviewed this remedial action plan as presented in Appendix E2 to this report and called for its implementation. The following conclusion was formulated.

Draft Conclusion 4/19 Measures to improve the availability of OPMET data in the AFI Region

That;

To address safety issues related to the unavailability of OPMET data,

- c) States/Organizations to implement measures provided in the OPMET availability Action Plan as contained in Appendix E2 and report quarterly to the Secretariat;**
- d) The Secretariat to coordinate the implementation of the OPMET availability Action Plan and provide support where necessary.**

6.6. The meeting was reminded on the new provisions related to the Global Reporting Format (GRF) and the resulting implications on Table MET II-2 of Part V of the AFI eANP Volume II. Table MET II-2 currently includes a requirement for the Aerodrome MET Office to provide the state of the runway as supplementary information in METAR/SPECI although the implementation of the GRF related provisions removes this requirement. In addition, the meeting noted with concern that in order to improve the provision of the required observations and forecasts by the Aerodrome MET Offices, a number of AFI States are required to update their information contained in Table MET II-2. After discussions, the meeting formulated the following Conclusion.

Draft Conclusion 4/20 Review of the MET Table II-2 to Part V of the AFI eANP Vol II

That,

In order to improve the provision of the required observations and forecasts by the Responsible Aerodrome MET Offices,

States to submit to the Secretariat proposals for amendment of their Table MET II-2 in the eANP volume II Part V.

Continuation of the CODEVMET AFI Project

- 6.7. The meeting was informed of the revision of the CODEVMET AFI Project in order to ensure its relevancy with respect to challenges faced by States. The main objectives of the revised project being to assist States in improving their MET Service Oversight functions in member States, assist MET Service Providers in complying with ICAO SARPs and implementing the quality management system in MET.
- 6.8. The meeting was also informed that the second meeting of the CODEVMET AFI Steering Committee, held virtually in July 2021, approved the revised CODEVMET AFI project documents and annexes to guide its implementation by 2022. The IIM/SG/4 meeting formulated the following conclusion:

Draft Conclusion 4/21 Continuation of the CODEVMET AFI Project

That,

In order to improve States Safety Oversight activities in MET;

States /Organizations to support the implementation of the Project related to the Cooperative Development of Aeronautical Meteorological Service in the AFI Region (CODEVMET AFI)

Agenda Item 7: Review of the Terms of Reference and Work Programme of the Sub-Group

- 7.1. Under this agenda item the meeting reviewed, updated and adjusted the Terms of Reference and work programme of the APIRG IIM Sub-Group as presented in **Appendix F** to this report.
- 7.2. In particular, the meeting updated the working method of the Sub-group by including the requirement of the Conclusion 23/17 of APIRG/23 Meeting, calling for the APIRG IIM/SG Chair and Vice-chair to convene quarterly PTCs coordination meetings to assess the progress made and identify the challenges as a permanent activity.
- 7.3. The meeting also revised and completed the work programme of the sub-group as per attachment to its Terms of reference.

The following decision was formulated:

Draft /Decision 4/22: Terms of Reference of the APIRG IIM/SG

That;

To complement the working method of the sub-group with regard to periodic coordination by the Chair and Vice-Chair of the IIM/SG of APIRG,

The updated Terms of reference of the IIM/SG is endorsed.

Agenda Item 8: Any other business

- 8.1. No matter was discussed under this agenda item.

Agenda Item 9: Review of the draft Conclusions/Decisions of the fourth meeting of the Infrastructure and Information Management Sub-Group (IIM/SG4)

- 9.1. Under this agenda item, the outcomes of the meeting were reviewed and discussed. The meeting agreed on seven (7) conclusion and fifteen (15) decisions as contained in **Appendix G** to this Report.