

INTERNATIONAL CIVIL AVIATION ORGANIZATION
**Third Meeting of the APIRG Information and Infrastructure Management Sub-Group
(IIM/SG3), Virtual meeting, 10 to 12 August 2020**
**Agenda Item 4.3.1: Implementation of information concerning en-route weather phenomena
(SIGMET), (QMS/MET)**

Meteorology Project 1: Implementation of information concerning en-route weather phenomena which may affect the safety of aircraft operations (SIGMET), Quality Management System for aeronautical meteorology (QMS/MET) service, in the AFI region

(Presented by South Africa)

SUMMARY

<p>This paper provides progress report on the status of implementation of APIRG Projects under IIM SG Meteorology Project 1 and highlights the challenges encountered by the team for consideration by the meeting.</p>

<p>Action by the meeting is in paragraph 3:</p>
--

<p>REFERENCE(S):</p>

- | |
|--|
| <ul style="list-style-type: none"> ▪ ICAO State Letter reference ES AN 8.6-0163 dated 05 March 2020 and SL ES AN 8.6-0164 dated 05 March 2020 ▪ IIM/SG Second Meeting Report, Decision 2/04 ▪ Doc 9750, Global Air Navigation Plan ▪ Electronic Air Navigation Plan— Africa-Indian Ocean Region (eANP- AFI) ▪ APIRG Procedural Handbook |
|--|

<p>Related ICAO Strategic Objective(s):</p>
--

<p>A – Aviation Safety, B – Air Navigation Capacity and Efficiency,</p>

<p>Related ASBU KPIs & B0/1 Modules:</p>

<p>B0/1-AMET PFF – 1, ASEP, FRTO, CDO and CCO</p>

1. INTRODUCTION

1.1. During the first meeting of the APIRG Infrastructure and Information Management Sub-group (APIRG IIM SG/1) held in Nairobi, Kenya from 27 to 30 June 2017, the APIRG IIM SG Meteorology Project 1 and its main objective being to assist the AFI states with the implementation of:

- a) SIGMET and standards and recommended practices of Annex 3 and Part V – MET of the AFI Air Navigation Plan (ANP), Volumes I, II, III concerning the issuance and distribution of en-route weather phenomena including volcanic ash clouds (WV), tropical cyclones

(WC) and other phenomena (WS - thunderstorms, severe turbulence, icing, mountain waves, heavy sandstorms and dust storm), likely to affect the safety of aircraft operations, and the evolution of such phenomena in time and space (SIGMET WV, WC and WS);

- b) QMS in accordance with the ISO 9001 series.
- c) An action plan to assist concerned States in their effort to remove air navigation deficiencies in the MET field listed in the APIRG report; and
- d) The transition plan from current aeronautical meteorological information to the future SWIM-enabled environment by encouraging AFI States to progressively develop capability of handling OPMET data in digital format (XML/GML) and to start using XML/GML codes in operational environment.

1.2. The tasks of the APIRG IIM SG Met Project 1 were developed to be undertaken by experts in the field of aeronautical meteorology as nominated by AFI States: namely; Niger, Togo, Côte d'Ivoire, WMO, Guinea, Ghana, Kenya, Mauritania, ASECNA, IATA, Nigeria, Botswana, Uganda, Ethiopia and IFALPA. South Africa is the Project-Team Coordinator (PTC) and the Project Facilitators are the MET Regional Officers (ROs/MET) from the ICAO Dakar and Nairobi Offices.

1.3. In addition to the above nominated APIRG IIM SG Met Project 1 team members, two additional formal appointment of new members from Senegal and ASECNA were received by the Secretariat. The activities of the APIRG IIM SG Met Project 1 are being facilitated by RO/MET from the ICAO Nairobi Office pending the appointment of the RO/MET for the Dakar Office.

1.4. The activities of the APIRG IIM SG MET Project 1 officially started in March 2018 albeit at a slow pace due to communication challenges and poor participation by team members. The situation improved significantly in 2019 as the Project team was able to meet on a monthly basis, until 26th March 2020. The Project team meetings were held virtually, but this was not without challenges as some meeting had to be cancelled or postponed due to poor network connectivity. Other factors which impacted the activities of the Project team were related to the lack of interpreters resulting in the postponement of several Project Team meetings. Nevertheless, some meeting were successfully conducted with the help of interpretation services from the ICAO ESAF Region.

2. DISCUSSION

Despite the aforementioned challenges, the APIRG IIM SG Met Project 1 managed to accomplish most of the tasks allocated to it as reported in the sections below.

Outcomes of MET Project 1 meetings and activities

2.1 The meeting may recall that Decision 2/4 of the IIM SG/2 formulated several intervention areas in order to improve the coordination mechanisms of the IIM Projects. In this regard, the APIRG IIM SG Met Project 1 has undertaken several activities as part of the implementation of its tasks (Appendix B) the status of which is reported in the next sections of this paper.

The Met Project 1 team has made progress as reported in the table below:

NO	TASK	RESPONSIBLE PERSON	PLANNED DATE	COMMENTS / STATUS
1	PTC and experts appointment finalisation	States / Organizations	Immediately	Completed
2	Project Team Activities	PTC	06 August 2020	The updated Met Project 1 Activities are attached (Appendix B).
3	Project Terms of Reference (ToR) and Description	PTC and Team Members	26 March 2020	The ToR were updated and attached (Appendix A)
4	Project link finalisation	PTC	August 2018	Completed and submitted to IIM Sub-Group Chair, Vice and Secretariat on 22 March 2018 Project link finalization- this will be treated as a living document
5	Project Questionnaires	PTC and Team Members	26 March 2020	The following questionnaires were drafted: <ol style="list-style-type: none"> 1. QMS Implementation Status 2. IWXXM -status of readiness of the RODBs and the States 3. Aeronautical Met deficiencies on Met field

IIM SG Met Project 1 questionnaires

- 2.1 The Met Project 1 team has managed to prepare and send two questionnaires to AFI States after it was decided that Met Project 1 questionnaires be put on hold until the Secretariat has finalized the process of defining minimum reporting requirements for air navigation deficiencies within the AFI region. Through the Secretariat, Met Project 1 team has managed to distribute the questionnaires related to the readiness of the two AFI RODBs (Pretoria and Dakar) and AFI States to exchange Met information in ICAO Meteorological Information Exchange Model (IWXXM) which is applicable from 5 November 2020.
- 2.2 Dakar and Pretoria RODBs responded to the State Letter that was issued with the questionnaire requesting information regarding their readiness to handle OPMET data in IWXXM format. Both RODBs have indicated that they have developed the necessary capabilities to enable them to handle OPMET data in IWXXM format. Furthermore, Pretoria RODB indicated that they have developed the capability to translate OPMET data from Traditional Alpha Numeric Code (TAC) format to IWXXM and vice versa.
- 2.3 The second questionnaire sort to establish whether AFI states developed capabilities for handling OPMET data in IWXXM format. Eighteen (18) States responded to the questionnaire and the Secretariat presented the results during the AFI IWXXM Workshop held from 15-16 September 2020. These results are available on the ICAO ESAF website, under the IWXXM workshop documents.

IWXXM Training seminars/workshops

- 2.4 In accordance with APIRG 20 Resolution 20/45, training/seminars in the AFI Regional were required in order to (a) develop capacity building for handling OPMET data in digital format; and (b) to increase awareness to users of exchange of OPMET in digital format and expedite transition for handling OPMET in digital form. In this regard, the ICAO ESAF Regional Office organized and hosted a successful virtual IWXXM training workshop from 15-16 September 2020. The workshop was facilitated by the ICAO ESAF Regional Office supported by the ICAO Paris Office's EUR Data Management Group (EUR DMG) and representatives from the World Meteorological Organisation (WMO).

Quality Management System

2.5 During its meeting of the 26th March 2020, the Met Project 1 noted that the METP/4 formulated Decision 8/1 which called for the discontinuation of the *Manual on the Quality Management System for the Provision of Meteorological Service for International Air Navigation* (ICAO Doc 9873. Furthermore, the Met Project 1 meeting noted that ICAO Doc 9873 would be replaced by WMO-No. 1100 (*Guide to the Implementation of Quality Management Systems for National Meteorological and Hydrological Services and other Relevant Service Providers*) and that this document would service as an official guide for QMS Implementation.

Annual AFI SIGMET Tests

The annual AFI SIGMET Test was conducted during November/ December 2019. The report of the test was considered by the IIM SG Met Project team at its meeting held on 06th August 2020. It was noted that most the AFI States did not participate in the annual AFI SIGMET tests. The meeting felt that there was a need to urged the AFI States to participate in future tests while those with identified deficiencies should be encouraged to endeavor to address them.

2.6 Furthermore, the meeting noted that several reasons could have contributed to the lack of participation in the SIGMET tests by AFI States including:

- (a) Lack of adequate and effective oversight activities within the States; and
- (b) Not enough capacity building in respect of issuances of SIGMET in the States. With the foregoing in mind, the meeting suggested that in 2020, the Secretariat should conduct a capacity building workshop in respect of SIGMET implementation.

2.7 The meeting is invited to note that the 2020 AFI SIGMET Tests will be conducted from 02-04 November 2020. Details are provided in State Letter ES AN 8/8-0385 dated 17 August 2020.

IIM SG Met Project 1 deliverables

2.8 The project tasks and deliverables were updated and are attached (Appendix B) for consideration by the meeting.

Challenges and conclusion

2.9 The IIM SG Met Project 1 encountered several challenges during the implementation of its activities, reproduced here below for ease of reference:

- (a) The rate of participation by nominated experts in the activities of the Met Project 1 was unsatisfactory;
- (b) The low rate of response to questionnaires by AFI states participation also delayed the work of the project teams;
- (c) The lack of participation to the annual SIGMET tests by most AFI MET Watch Offices (MWOs); and
- (d) The unavailability of interpretation (English/French) led to the cancellation of several Met Project 1 team meetings.

3. ACTION BY THE MEETING

3.1 The meeting is invited to take note of the information presented in this paper and formulate the following conclusion/decision:

Draft Conclusion/Decision 3/xx: *Adoption of the MET Project 1 Terms of Reference and the Project deliverables for 2021-2022*

That;

- a) **APIRG IIM/SG/3 considers and adopts the proposed MET Project 1 Terms of References and its associated project deliverables as contained in Appendices A and B;**
- b) **Concerned States and Organizations take appropriate actions to support their nominated experts appointed to MET Project 1; and**
- c) **States are encouraged to respond to project teams' questionnaires, and to participate in the annual AFI SIGMET Tests.**

---END---