



INTERNATIONAL CIVIL AVIATION ORGANIZATION

Seventh Meeting of the APIRG Infrastructure and Information Management Sub-Group
(IIM/SG7)

Dakar, Senegal, 5 - 8 August 2024

Agenda Item 3 : Achievements in Infrastructure and Information Management

3.3. Implementation of ASBU elements and Achievements of IIM Projects

WP3.3M Progress in the implementation of the APIRG IIM MET Project 3 on the
Implementation of Annex 3 provision relating to space weather requirements
within the AFI Region

(Presented by MET 3 project team)

SUMMARY
This working paper provides the progress of MET 3 project “Implementation of Annex 3 provision relating to space weather requirements within the AFI Region” and the challenges encountered. Action by the meeting in paragraph 3.
REFERENCE(S): <ul style="list-style-type: none">▪ Global air navigation plan (Doc 9750)▪ Global Air Traffic Management Operational Concept (Doc 9854)▪ Doc 10100, Manual on Space Weather Information in Support of International Air Navigation▪ Annex 3 Amendment 78▪ APIRG/25 Report
Related to ICAO Strategic Objectives: A- Safety and B-capacity and efficiency Concerned ASBU B1 Modules: AMET-B1/1, AMET-B1/2, AMET-B1/3 and AMET B1/4 related to space weather.

1. INTRODUCTION

- 1.1 The Africa-Indian Ocean (AFI) Planning and Implementation Regional Group (APIRG) during its twenty-third meeting (APIRG/23), agreed on the establishment of a new space weather project on meteorology under its Information and Infrastructure Management Sub-Group (IIMSG).
- 1.2 The APIRG twenty-fifth meeting (APIRG/25) held in person in Rwanda from 7-11 November 2022 in Kigali Rwanda, approved the reframed project plan as per Appendix 3F6 to the meeting report.
- 1.3 The project objectives are:
 - a) To create awareness on the space weather information requirement within the aviation sector in the AFI region.
 - b) To engage with the States to ensure government support for the provision of space weather for the safety of aircraft operations.
 - c) To assist AFI States with the development of action plans for the implementation of Annex 3 space weather requirements.
 - d) To assist AFI States with implementing the requirements for the provision of space weather information services to support international air navigation in accordance with Annex 3.

2. DISCUSSIONS

Based on the reframed project plan that was approved by APIRG/25, the MET project 3 has to review the status of the WACAF and ESAF States in terms of their implementation status of the ASBU elements that are related to space weather as identified and presented during IIM/SG24 meeting.

2.1 The AMET ASBU elements that have been identified to be relevant to space weather are as follows:

- a) AMET-B1/1 Meteorological observations Information (Space weather events)
- b) AMET-B1/2 Meteorological forecast and warning information (Space weather events)
- c) AMET-B1/3 Climatological and historical meteorological Information (Enhanced climatological data)
- d) AMET-B1/4 Dissemination of meteorological Information (Space weather events).

2.2 The project deliverables have been revised and are as follows:

- a) Coordination of the Project and development of guidance material
- b) Status of implementation ASBU elements, Gaps analysis and development implementation Action Plan
- c) Monitoring and assisting the States with the Implementation of State Action Plan.

2.3 Action plan and implementation status has been revised and updated to be as follows:

2.3.1 The project deliverable 1.1: Monitoring and Evaluation of Membership Attendance at MET3 Project Meetings & Events (Not <75% of total constituency)" Report on the project progress i.e., expected outcome milestones. Establish and distribute relevant and associated project implementation guidance material e.g., Annex 3 - Amendment 81, SARPS, Doc 10100, COP etc., these are already available. The outstanding document is the concept of operations that is in draft format and waiting for approval.

Members of the Project 3 have been nominated as per the APIRG Handbook procedures and the team conducts meetings as per the planned dates. The last three meetings of 2024 were attended by less

than ten members an indication that most of the members are not attending meetings. Minutes of the meetings are compiled, and these reflect attendance of the members.

2.3.2 Deliverable 1.2. Status of implementation ASBU elements, Gaps analysis and development of implementation Action Plan: Establish a regulatory framework for the implementation of AMET-B1. The Secretariat to consider these aspects to ensure that Annex 3 is well reflected within the national regulations. Target States have been identified and the Secretariat as well as the Project Team shall provide assistance in terms of the required implementation guidance material.

2.3.3 In terms of deliverable 1.3 which is about training and hosting workshops, the project since its inception in 2021 has conducted three workshops aimed at creating awareness and educating the different stakeholders and AFI member states. The two were Virtual session in August 2021 and October 2022 with the first in-Person workshop held in June 2023. In 2024 during the ESAF Seminar on Aeronautical Meteorology, that took place from the 4-6 June 2024 in Namibia, space weather was included to be part of the agenda in continued effort to raise awareness about understanding the impact of space weather on aviation. For the WACAF region the idea is that there will be potential one workshop either online or in person to be hosted by WACAF regional office in 2025.

2.4 Challenges and Conclusions

2.4.1 Majority of the States have not yet included the amendment 78 of Annex 3 within their national regulations, which speaks to including the space weather information as part of flight planning. As a result, when completing their ASBU implementation questionnaire, they indicate that the space weather implementation is not applicable or has not started.

2.4.2 Lack of participation in the meeting and project activities by majority of the nominated experts from different states.

2.4.3 Lack of funding that is required to conduct the training to cover the cost for the experts, project team members, venues, interpretations, and all associated cost.

3. ACTIONS BY THE MEETING

3.1 The meeting is invited:

- a) To take note of the progress made by the project team and take note also of the challenges experienced by the project team and formulate the following conclusion/decision:

3.2 **Draft IIM/SG7 Conclusion /Decision 7/xx: Title of Conclusion/Decision**

That;

- a) Concerned States and Organizations take appropriate actions to support their nominated experts appointed to MET Project 3; and nominated team members to participate in the activities of the MET project 3.
- b) States are requested to develop regulatory frameworks and action plans for the implementation of the ICAO Annex 3 space weather requirements.
- c) ICAO has to convene MET 3 experts in a given venue to develop the remaining deliverables.

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