International Civil Aviation Organization

MIDANPIRG/19 and RASG-MID/9

(Riyadh, Saudi Arabia, 14 - 17 February 2022)

Agenda Item 5.9: Air Navigation Planning and Implementation - MET

MET IMPLEMENTATION ISSUES

(Presented by the Secretariat)

SUMMARY

This paper presents MET issues identified and potential solutions.

Action by the meeting is at paragraph 3.

REFERENCES

- MET SG/9 Report
- MIDANPIRG/18 Report
- ICAO MID SWX Advisory Information Dissemination Webinar
- ICAO MID IWXXM Implementation Webinar

1. INTRODUCTION

1.1 The meeting may recall the Eighteenth Meeting of the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG/18) and the Eighth Meeting of the Regional Aviation Safety Group – Middle East (RASG-MID/8) (virtual meetings, 15-22 February 2021) reviewed the status on implementation of OPMET data exchange in the MID Region.

1.2 Implementation issues identified included the need to assist in the implementation of the ICAO Meteorological Information Exchange Model (IWXXM) as well as the dissemination of space weather advisory information. Two separate events were held virtually in 2021 in order to address these issues.

2. DISCUSSION

ICAO MID SWX Advisory Information Dissemination Webinar

2.1 The ICAO MID Space Weather Advisory Information Dissemination Webinar was held from 3 to 4 March 2021. The objectives of the Webinar were to share information on the background and developments of ICAO provisions related to Space Weather Advisory Information as well as review the dissemination requirements of this information.

2.2 The Webinar was attended by a total of ninety-five (95) participants from fourteen (14) States (Austria, Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE, USA (FAA) and Yemen) and two Organizations (ACAO and IFATCA).

2.3 The Webinar provided an overview of space weather and related phenomena (solar flares, radiation storms and geomagnetic storms) and their impacts on aviation.

2.4 Information related to the ICAO provisions on space weather introduced in Amendment 78 to Annex 3 (November 2018) was highlighted. Specifically, space weather advisory information is issued for High Frequency (HF) Voice/Data and Satellite Communications; Radiation Exposure to Crew and Passengers; and Global Navigation Satellite System (GNSS) Based Navigation and Surveillance. These services are provided by four global Space Weather Centres that include consortium arrangements in three cases.

2.5 The Webinar addressed the dissemination of space weather advisory information as this information must be supplied to Area Control Centres (ACC), Flight Information Centres (FIC), Aerodrome Meteorological Offices (AMO), other Space Weather Centres, international OPMET databanks, international NOTAM Offices and aeronautical fixed service Internet-based services (WIFS and SADIS). Typically, the National OPMET Centre (NOC) distributes space weather advisory information to the ACC(s)/FIC(s), AMO(s) and international NOTAM Offices.

2.6 The Webinar encouraged States to investigate (e.g. survey) with operators in their State on their operational procedures in space weather events (e.g. descent procedures planned by an airline in case of radiation exposure) and provide feedback on their experience.

ICAO MID IWXXM Implementation Webinar

2.7 The ICAO MID IWXXM Implementation Webinar was held from 26 to 27 May 2021.

2.8 The objectives of the Webinar were to share information on the background, requirements and best implementation practices of ICAO provisions and World Meteorological Organization (WMO) means of compliance related to IWXXM.

2.9 The Webinar was attended by a total of one-hundred and five (105) participants from seventeen (17) States (Austria, Bahrain, Belgium, France, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, Syria, UAE and USA) and three (3) Organizations (GCC, IFATCA and WMO).

2.10 The Webinar noted that provisions related to IWXXM became a requirement in Amendment 78 to Annex 3 applicable 5 November 2020. Specifically, the following MET related data shall be disseminated in IWXXM form in addition to Traditional Alphanumeric Code (TAC) form: METAR and SPECI, TAF, SIGMET and AIRMET, Tropical Cyclone Advisory, Volcanic Ash Advisory and Space Weather Advisory Information.

2.11 One of the main advantages of providing MET data in IWXXM format is that IWXXM is geo-referenced specifically to aeronautical information which is needed to move towards a System Wide Information Management (SWIM) environment. Another main advantage is that national extensions are easier to support in IWXXM and additional information nationally (e.g. reporting wind at various altitudes on approach) can be provided in a standard format.

2.12 The Webinar addressed global developments related to SWIM and ICAO ASBU as well as developments by the MET Panel (METP) Working Group on Meteorological Information Exchange (WG-MIE) and WMO.

2.13 Furthermore, the Webinar reviewed the Guidelines for the Implementation of OPMET Data Exchange using IWXXM (MID Doc 012). As different WMO abbreviated header lines are used for IWXXM, the Webinar encouraged the notification of changes for OPMET data using the METNO procedures.

2.14 Interregional IWXXM coordination, steps on IWXXM implementation and State examples of IWXXM implementation were provided to the Webinar. In addition, an overview of Appendix H of the EUR AMHS Manual was provided to the Webinar.

2.15 The Webinar received input on the status of IWXXM implementation from seven (7) States in the MID Region as provided at **Appendix A** and States are encouraged to update this information.

MET Deficiencies

2.16 The MIDANPIRG/18 RASG-MID/8 Meeting noted that the total number of MET deficiencies was thirteen (13) priority 'A' deficiencies. Six (6) related to QMS; and seven (7) related to METAR, TAF, SIGMET and WAFS. Three (3) new deficiencies were added: ORBM METAR and 24-hour TAF not available internationally (Iraq), SADIS FTP not available (Libya) and OYAA METAR and 30-hour TAF; OYHD, OYRN, OYSN, OYTZ METAR and 24-hour TAF not available internationally (Yemen).

2.17 With reference to the deficiencies listed for Yemen (QMS, SIGMET as well as METAR and TAF), a corrective action plan was provided and reflected in the Middle East Air Navigation Deficiencies Database (MANDD) which includes the expected date of remedying these deficiencies (31 December 2022).

2.18 Since MIDANPIRG/18, required international exchange of OPMET data had ceased in Sudan beginning 25 October 2021. Required OPMET data (HSSK and HSPN: METAR and 30-hour TAF; HSOB and HSNN: METAR) was not available and ICAO MID corresponded with the Sudan Meteorology Department on making this information available internationally. Regional OPMET Centre (ROC) Jeddah confirmed that this required OPMET data was not received at ROC Jeddah for the months of November and December 2021.

2.19 Furthermore, as confirmed by ROC Jeddah, required OPMET (METAR and 24-hour TAF) is not available for HLLB and HLLT (Libya) and the required OPMET (METAR) is not available for HLLS (Libya) for the months of November and December 2021.

2.20 Since MIDANPIRG/18, the SADIS Provider informed ICAO MID that SADIS FTP is no longer available for Iraq (as of January 2021) and Jordan (as of January 2022). Furthermore, the SADIS Provider informed ICAO MID that SADIS FTP has been acquired in Libya and this related deficiency proposed to be removed.

2.21 Given the above, updates to the MANDD are provided for the meetings consideration.

3. ACTION BY THE MEETING

3.1 The meeting is invited to urge States to:

a) investigate (e.g. survey) with operators in their State on their operational procedures in space weather events (e.g. descent procedures planned by an airline in case of radiation exposure) and provide feedback on their experience;

b) provide an updated status on IWXXM implementation; and

c) provide a corrective action plan, for the referenced MET deficiencies identified.

APPENDIX A

Table – Status of IWXXM Implementation in the MID Region

State	Expected implementation date	Comment
Bahrain		
Egypt		
Iraq		
Iran		
Jordan	Q3 2021	Upgraded MET-Switch; connection to COM expected shortly followed by conformance test
Kuwait	End 2021/ early 2022	
Lebanon	End 2023	
Libya		
Oman	End 2021/ early 2022	
Qatar	Mid 2021	Testing IWXXM v3.0 between MET and COM Centres
Saudi Arabia	Q2 2022	IWXXM v3.0
Sudan		
Syria		
United Arab Emirates	complete	Becoming compliant at national aerodromes
Yemen		

- END -