



International Civil Aviation Organization

MIDANPIRG STEERING GROUP

Sixth Meeting (MSG/6)
(Cairo, Egypt, 3 - 5 December 2018)

Agenda Item 5.3: Specific Air Navigation Issues

MET MATTERS

(Presented by the Secretariat)

SUMMARY
This paper presents an update on IWXXM implementation, establishment of the MID ROC and Wind Shear issues.
Action by the meeting is at paragraph 3.
REFERENCES
- MET SG/7 Report
- ANSIG/3 Report
- State Letter Ref.: ME 3/2.3 – 18/066 dated 21 February 2018
- State Letter Ref.: ME 3/2.3 – 18/114 dated 10 April 2018

1. INTRODUCTION

1.1 The MET SG/7 meeting (Cairo, Egypt, 14-16 November 2017) agreed to three (3) Draft Conclusions and one (1) Draft Decision; and those relevant to this meeting are described in this working paper.

2. DISCUSSION

IWXXM Implementation Survey

2.1 The meeting may wish to recall that the MET SG/7 meeting agreed to develop an IWXXM Implementation Survey in order to gather and analyse information pertaining to States' action plans for IWXXM implementation in the MID Region and present the results of the survey to MIDANPIRG/17 (MID MET SG Draft Conclusion 7/1 refers). Accordingly, the IWXXM survey was distributed to States on 10 April 2018 (State letter Ref.: ME3/2.3 – 18/114). Replies have so far been received from Five (5) States (Egypt, Jordan, Libya, Oman and Sudan). A summary of responses is at **Appendix A**.

2.2 ANSIG/3 meeting urged States, that have not yet done so, to complete the IWXXM survey and provide their feedback to the ICAO MID Office.

IWXXM Implementation Guidance Material

2.3 The meeting may wish to note that the MET SG/7 meeting agreed that the *Guidelines for the Implementation of OPMET data exchange using IWXXM* be presented to MIDANPIRG/17 for endorsement and publication as MID Doc 010 (MID MET SG Draft Conclusion 7/2 refers). This document is maintained by the Meteorology Panel (METP) Working Group on Meteorological Information Exchange (WG-MIE) and a recent update will be promulgated to Regions.

IWXXM Implementation – MID ROCs

2.4 The meeting may wish to note that the ANSIG/3 meeting recommended that the Regional OPMET Centre (ROC) Jeddah and back-up ROC Bahrain implement the exchange of OPMET data in IWXXM and consider serving as translation Centre(s).

MID ROCs Implementation – support from States

2.5 The meeting may wish to recall that in order to implement Aviation System Block Upgrade (ASBU) module B1-AMET such as IWXXM, completion of implementing B0-AMET is a prerequisite. With reference to the status of implementation of ROC Jeddah and back-up ROC Bahrain: nine (9) States (Iraq, Lebanon, Libya, Jordan, Oman, Qatar, Saudi Arabia, Sudan and United Arab Emirates) have fully implemented the appropriate OPMET exchange scheme. Four (4) States (Bahrain, Egypt, Iran and Kuwait) have partially implemented this scheme, while two (2) States (Syria and Yemen) have not started implementation in this regard. Accordingly, the ANSIG/3 meeting urged States, that have not yet done so, to complete the implementation.

Wind Shear Questionnaire

2.6 The MET SG/7 meeting agreed that the ANSIG/3 and MET SG/8 meetings should consider the inclusion of wind shear as an element of the B0-AMET in the MID Air Navigation Strategy with well identified applicability area (list of International Airports requiring implementation of wind shear systems). In parallel, necessary monitoring Tables (enablers) should be developed for inclusion in the MID eANP Vol III to support the monitoring of wind shear implementation.

2.7 To support this effort, a Wind Shear Questionnaire was developed and distributed to States on 21 February 2018 (ref.: State letter ME 3/2.3 – 18/066). Replies have so far been received from eight (8) States (Bahrain, Egypt, Iran, Kuwait, Libya, Qatar, Sudan and Yemen). A summary of responses is at **Appendix B**.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) support implementation of IWXXM in the MID Region and urge States, that have not yet done so, to complete the IWXXM Survey;
- b) support implementation of ROC Jeddah and back-up ROC Bahrain;
- c) urge States, that have not yet done so, to complete the Wind Shear Questionnaire and provide their feedback to the ICAO MID Office; and
- d) agree to include Wind Shear in the MID eANP Vol III, based on the results of the survey by the Wind Shear Questionnaire.

APPENDIX A

Summary of IWXXM Implementation Questionnaire – MID Region

(Updated 7 Jun 2018)

Question\ State	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi Arabia	Sudan	Syria	UAE	Yemen
1 AFS COM ATSMHS includes FTBP		Yes			Yes			Plan when CAA upgrades their system	Plan No Date			No			
2 AMHS direct connect AFS COM- ROC Jeddah		Yes			Yes			Yes	Plan No Coord			Yes			
3 MET switch support exchange IWXXM MET mssg Extended ATSMHS including FTBP		Plan 2018-2020			No			Plan Planning to connect the MET-Switch System with the COM-Centre	Plan End of 2018			No			
4 National OPMET data in IWXXM		Plan 2018-2020			Yes			Yes 2019	Plan No Date			No			
5 Rx OPMET data in IWXXM		Plan 2018-2020			Plan 2019			Plan When CAA upgrades their AFTN Circuit to the AMHS	Plan No Date			No			
6 Need of assistance in IWXXM impl		No			Yes Training			Yes Guidance	Yes Training			Yes Workshop			

Questions

1. Does your AFS COM-Centre plan to implement a subset of the extended Air Traffic Services Message Handling Services (ATSMHS) that includes File Transfer Body Parts (FTBP) which is required for the exchange of IWXXM messages?
2. Do you intend to establish a direct ATS Message Handling System (AMHS)-connection between your AFS COM-Centre and AFS COM-Centre of your associated Regional OPMET Centre (ROC Jeddah)?

3. Does your MET-Switch system support the exchange of IWXXM MET-messages by means of a sub-set of extended ATSMHS including File Transfer Body Parts?
4. Do you plan to provide your national OPMET data in IWXXM format?
5. Do you plan to receive OPMET data in IWXXM format?
6. Do you need any kind of assistance for IWXXM implementation?

APPENDIX B

Appendix B - Summary of Wind Shear Questionnaire – MID Region

(last updated 16 April 2018)

Question\ State	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi Arabia	Sudan	Syria	UAE	Yemen
1	Y	Y	N		Y	Y		N		Y		Y			N
2	Y	Y	Y		Y	Y		Y		Y		Y			N
3	OBBI	HECA	N		N	OKBK		N		OTHH		HSSS			N
3a	OBBI	HECA	N		N	OKBK		N		OTHH		HSSS			N
3b	Y	Y	N		N	Y		N		N 10 min		Y			N
3c	Y	Y	N		N	Y		N		Y		Y			N
4	N/A	N	Y		N	N		N		N/A		Y			N
5	Y	Y	N		N	Y		N		N		Y			N

Systems used by States

Bahrain: Wind & Temp Profile (2016) / Aircraft observations / Forecasting using sounding.

Egypt: No system/mechanism in place to collect and disseminate information related to wind shear. But the detection equipment to detect wind shear is found only in Cairo International Airport and MWO in Cairo is responsible of issuing wind shear warnings/alerts.

Iran: In a few airports in Iran, IRIMO (I.R. of Iran Met. Org.) have ground based Doppler weather radars that can be used to alert on WS, but it can be used just in times that there is an active weather system with meteors like rain and snow on the air in order to get back radar reflectivities. Otherwise, in clear air which sometimes has considerable WS due to surface temperature/pressure differences or synoptic conditions without considerable particulate matter on the air, this is impossible.

Jordan: No

Kuwait: Not Provided

Libya: Due to the exceptional situation our country is experiencing, regulations and procedures concerning wind shear have not been established and promulgated by Aerodrome MET Offices. We shall establish and promulgate such regulations and procedures when the situation improves.

Qatar: Wind Profiler automated equipment updated every 10 minutes. *Note that WS is considered a rare event.*

Sudan: Not Provided

Yemen: No

Questions

1. Has your State established/promulgated Regulations and/or Procedures concerning wind shear by Aerodrome MET offices?
2. Has your State determined/identified those International Aerodromes for which wind shear is considered a safety factor for operation; and require the issuance of wind shear warnings/alerts? (Ref Annex 3, para. 7.4.1)? (**see end notes*)
3. Which International Aerodromes in your State are issuing wind shear warnings/alerts?
 - a) Which Aerodromes are equipped with automated, ground-based, wind shear remote-sensing or detection equipment to detect wind shear?
 - b) Are the wind shear alerts updated at least every minute?
 - c) Are the wind shear alerts cancelled as soon as the headwind/tailwind change falls below 7.5 m/s (15 kt)?
4. For the Aerodromes issuing wind shear warnings/alerts but not equipped with automated, ground-based, wind shear remote-sensing or detection equipment to detect wind shear; are there any other system/mechanism in place to collect and disseminate information related to wind shear?(*Please explain*)
5. Does your State ensure that the wind shear warnings and alerts are issued in accordance with Annex 3 requirements? (Ref Annex 3, para. 7.4.1, Appendix 6 para. 6.2 & Table A6-3)

**Notes:*

Note 1 - In determining whether or not wind shear is a factor to operations, the following can be used: ground-based, wind shear remote-sensing equipment (e.g. Doppler radar); ground-based, wind shear detection equipment (e.g. a system of surface wind and/or pressure sensors located in an array monitoring a specific runway or runways and associated approach and departure paths); aircraft observations during the climb-out or approach phases of flight to be made in accordance with Chapter 5 of Annex 3; other meteorological information (e.g. from appropriate sensors located on existing masts or towers in the vicinity of the aerodrome or nearby areas of high ground).

Note 2 - Wind shear conditions are normally associated with the following phenomena: thunderstorms, microbursts, funnel cloud (tornado or waterspout), gust fronts, frontal surfaces, strong surface winds coupled with local topography, sea breeze fronts, mountain waves (including low-level rotors in the terminal area), and low-level temperature inversions.

- END -