INTERNATIONAL CIVIL AVIATION ORGANIZATION

THE MIDDLE EAST AIR NAVIGATION PLANNING AND IMPLEMENTATION REGIONAL GROUP (MIDANPIRG)

REPORT OF THE TWELFTH MEETING OF MET SUB-GROUP (MET SG/13)

(Cairo, Egypt, 16 - 17 December 2025)

The views expressed in this Report should be taken as those of the MIDANPIRG MET Sub-Group and not of the Organization. This Report will, however, be submitted to the MIDANPIRG and any formal action taken will be published in due course as a Supplement to the Report.

Approved by the Meeting
and published by authority of the Secretary General

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PART I – HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1 The Thirteenth Meeting of the Meteorology Sub-Group of the Middle East Air Navigation Planning and Implementation Regional Group (MET SG/13) was held in Cairo, Egypt, from 16 to 17 December 2025.

2. OPENING

2.1 The meeting was opened by Ms. Nino Gelovani, Regional Officer, Meteorology, ICAO EUR/NAT and MID Regional Office.

2.2 Mrs. Nino Gelovani addressed her welcome to the Group. She thanked the MID Region representatives for their steadfast support and meticulous efforts in organizing this meeting. She also thanked all states and External participants for their valuable input. She emphasized that this meeting represents a vital platform for dialogue, collaboration, and shared progress and wished everyone a valuable and productive meeting.

3. ATTENDANCE

3.1 The meeting was attended by a total of Twenty (20) participants from five (5) countries (Egypt, Kuwait, Saudi Arabia, Sudan, USA, and Yemen) and WMO. The list of participants is provided at **Attachment A**.

4. OFFICERS AND SECRETARIAT

4.1 Mrs. Nino Gelovani, Regional Officer for Air Navigation Systems Implementation (Meteorology) at ICAO Europe and North Atlantic, served as Secretary of the meeting. She was supported by Mr. Radhouan Aissaoui, Regional Officer for Implementation Management from the ICAO Middle East Office, as well as Mrs. Manal Wissa and Mrs. Ameera Falah Al-Azmi, who chaired the meeting.

5. LANGUAGE

5.1 The meeting was conducted in English and documentation posted under meetings on the ICAO MID Regional Office website.

6. AGENDA

6.1 The following Agenda was adopted:

Agenda Item 1: Adoption of the Provisional Agenda

Agenda Item 2: Follow-up on MIDANPIRG/22 Conclusions and Decisions relevant to

MET Agenda Item 3: Global and Regional Developments

Agenda Item 4: MET Planning and Implementation issues

- Performance Framework for MET implementation in the MID Region
- Review of the implementation of WAFS and SADIS
- Review of requirements for OPMET data as well as IWXXM implementation

Agenda Item 5: Review of air navigation deficiencies in the MET

field Agenda Item 6: Future Work Programme

Agenda Item 7: Any other business

7. CONCLUSIONS AND DECISIONS - DEFINITIONS

7.1 All MIDANPIRG Sub-Groups and Task Forces record their actions 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 on which further action will be initiated by ICAO in accordance with established procedures; and

b) **Decisions** deal with matters of concern only to the MIDANPIRG and its contributory bodies.

8. LIST OF DRAFT CONCLUSIONS AND DRAFT DECISIONS

DRAFT CONCLUSION 13/1: STRENGTHENING IMPLEMENTATION AND OPERATIONAL USE OF GLOBAL ADVISORIES IN THE MID REGION

DRAFT DECISION 13/2: SADIS FOCAL POINT INFORMATION

DRAFT CONCLUSION 13/3: STRENGTHENING SIGMET AND VA SIGMET ISSUANCE IN THE MID REGION

DRAFT CONCLUSION 13/4: MID REGION IWXXM IMPLEMENTATION STATUS

PART II: REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1: ADOPTION OF THE PROVISIONAL AGENDA AND ELECTION OF CHAIRPERSONS

1.1 The subject was addressed in WP/1, presented by the Secretariat. The meeting reviewed and adopted the Provisional Agenda.

1.2 The meeting agreed to defer the election of the Chairperson and Vice-Chairperson to MET SG/14, due to insufficient State representation.

REPORT ON AGENDA ITEM 2: FOLLOW-UP ON MIDANPIRG/22 CONCLUSIONS AND DECISIONS RELEVANT TO MET

2.1 The subject was addressed in WP/2 presented by the Secretariat. The meeting noted the status of the MIDANPIRG/22 Conclusions and Decisions relevant to MET and the follow-up actions taken by concerned parties as at **Appendix 2A**.

REPORT ON AGENDA ITEM 3: GLOBAL AND REGIONAL DEVELOPMENTS

Progress on the amendment to Annex 3 and a new PANS-MET, outcomes from the METP6

3.1 The subject was addressed in IP/4, presented by the ICAO secretariat, providing an update on the outcomes of the sixth meeting of the ICAO Meteorology Panel (METP/6), held in Montreal from 3 to 7 March 2025. The meeting noted that METP continues to advance a broad programme of work aimed at improving meteorological operational practices and developing advanced meteorological information services in support of the Global Air Navigation Plan (GANP) and Aviation System Block Upgrades (ASBUs).

3.2 The meeting acknowledged that METP/6 reviewed draft amendment proposals to Annex 3 — Meteorological Service for International Air Navigation — and the Procedures for Air Navigation Services — Meteorology (PANS-MET, Doc 10157), aimed at enabling the transition from product-centric to information-based and SWIM-enabled MET service provision.

3.3 The meeting further noted that METP/6 considered proposals to improve the Quantitative Volcanic Ash (QVA) service, including upgrading QVA to a Standard in Annex 3 for "significant" volcanic ash clouds and making incremental improvements to spatial and temporal resolution. It was noted that any improvements outside the Annex 3 amendment cycle would require agreement by all nine VAACs, with technical details to be addressed in the Handbook on the International Airways Volcano Watch (Doc 9766).

3.4 The meeting noted that the AVER form was developed in close collaboration with the user community, including IFALPA and IATA, to facilitate more efficient and timely reporting of volcanic ash encounters and to better support VAACs and State Volcano Observatories. The Secretariat informed the meeting that, after internal review, the proposed amendment concerning the AVER form has been postponed for further coordination with other relevant ANC Panels.

3.5 The meeting emphasized that METP/6 reviewed developments related to the Space Weather Information Service (SWIS), including increased temporal resolution of advisory information. It also highlighted that space weather services are still developing and that States should pay close attention to ICAO guidance and upcoming amendments.

3.6 The meeting also noted METP/6 agreement to progress the future transition of SWIS toward a SWIM-enabled information service, with an intended applicability timeframe aligned with November 2030, allowing users to gain operational experience before full integration.

3.7 The meeting was informed that METP/6 reviewed planned upgrades to the World Area Forecast System (WAFS), including higher-resolution data, multi-step SIGWX forecasts, and the introduction of new application programming interfaces, with further probabilistic enhancements planned in the medium term.

3.8 The meeting further noted METP-endorsed proposals for longer-term WAFS enhancements planned for November 2028, including probabilistic forecasts for turbulence, icing, and cumulonimbus, the introduction of turbulence-type forecasts, and the removal of "widespread sandstorm/dust storm" from WAFS SIGWX charts.

3.9 The meeting pointed out that METP/6 discussed the transition of aeronautical meteorological information to SWIM-enabled information services and reviewed the development of new services such as the Aerodrome Meteorological Observation Information Service (AMOIS) and Aerodrome Meteorological Forecast Information Service (AMFIS). These proposals were referred back to the Working Group on Meteorological Requirements and Development (WG-MRAD) for further refinement and coordination with other ANC Panels ahead of METP/7.

3.10 The meeting highlighted that METP/6 approved Version 3 of the MET-SWIM Roadmap, aligned with GANP ASBU blocks. It emphasized the upcoming discontinuation of legacy text-based formats in favor of structured digital exchange. It also stressed the importance of early regional preparation for this transition.

3.11 The meeting noted significant progress in the development of Hazardous Weather Information Services (HWIS), leveraging SWIM capabilities to enhance the availability and quality of hazardous weather information, initially focusing on cumulonimbus clouds, icing, and turbulence. METP/6 endorsed the HWIS Communication and Outreach Plan and tasked the WG-MRAD HWIS work stream to implement it.

3.12 The meeting noted that METP/6 endorsed the HWIS Communication and Outreach Plan and tasked the Working Group on Meteorological Requirements and Development (WG-MRAD) to refine the concept further and coordinate with other ANC panels prior to METP/7, scheduled for late 2027.

3.13 The meeting acknowledged that ICAO, through METP, continues to work closely with States and international partners to support implementation readiness, capacity building, and harmonized transition timelines. The meeting agreed that Regional Offices have a key role in facilitating awareness, coordination, and monitoring.

WMO activities of relevance to ICAO

3.14 The meeting was informed in IP/03 of recent activities of the World Meteorological Organization of relevance to ICAO, particularly in the context of WMO's latest organizational structures, engagement with ICAO and other agencies at the global and regional levels, recent and upcoming events, and other noteworthy information, including links to WMO resources.

3.15 The meeting noted that with reference to the WMO reform of its governance structures in 2019, a new non-governmental Standing Committee on Services for Aviation (SC-AVI) was established under a new intergovernmental Commission for Weather, Climate, Water and Related Environmental Services and Applications (abbreviated to 'Services Commission' or SERCOM).

3.16 The meeting recalled that ICAO and WMO continue to coordinate closely in the establishment and maintenance of international Standards, Recommended Practices, procedures, and guidance for aeronautical meteorological service provision. In 2024, the working arrangements between ICAO and WMO were updated to strengthen collaboration in aeronautical meteorology, climate change, and the mitigation of environmental impacts.

3.17 The meeting noted that WMO plays an active role in the METP and its working groups. This includes contributions to the HWIS, AMOIS, AMFIS, MET in SWIM, and the ongoing development of the IWXXM.

3.18 The meeting also noted that, at the request of ICAO, WMO is responsible for the development and publication of the IWXXM schemas. The latest version of the schema, version **2023-1**, was published by WMO in June 2023 and is available **here**. (Release Notes for version 2023--1 are **available here**).

3.19 The group was informed that, in preparation for the applicability of Amendment 82 to Annex 3 in November 2025, WMO has developed IWXXM schema version 2025-2. Release Candidate 1 of version 2025-2 was published in March 2024, with Release Notes **available here**. The meeting noted that the operational publication of version 2025-2 will follow the adoption of Amendment 82 to Annex 3 by ICAO (April 2025) and the completion of a WMO fast-track approval process in November 2025.

3.20 The meeting also noted WMO contributions to other ICAO bodies, including the Committee on Aviation Environmental Protection (CAEP), Airport Economics Panel and Air Navigation Services Economics Panel (AEP-ANSEP), addressing guidance for the cost recovery of aeronautical meteorological services, and to IATA's Accident Classification Task Force (ACTF) weather-related safety analysis. The latest (2024) IATA Safety Report, published in February 2025, is **available here** in an interactive format.

3.21 At the regional level, the meeting was apprised of WMO training activities, including aviation meteorology seminars conducted in Africa and Asia, with the next seminar planned in Türkiye in May 2026.

3.22 The meeting further noted an upcoming amendment to the Aeronautical Meteorological Personnel (AMP) qualification and competency requirements contained in WMO-No. 49, Volume I, and supported by guidance in WMO-No. 1209, with an applicability date of 1 January 2026.

3.23 The meeting noted that, in accordance with the decision of the nineteenth World Meteorological Congress (Cg-19), Parts I and II of the WMO Technical Regulations (WMO-No. 49), Volume II, Meteorological Service for International Air Navigation, were discontinued on 31 December 2023. The meeting further noted that the material of continuing relevance has been transitioned to Annex 3 and PANS-MET (Doc 10157). A comprehensive communication package on the discontinuation is **available here**.

3.24 WMO organized the 2024 Aeronautical Meteorology Scientific Conference (AeroMetSci-2024) in Geneva in October 2024 to discuss advancements in meteorological services and climate change impacts on aviation. Proceedings were published in July 2025 as AeM SERIES No. 10 and are **available here** on the WMO e-Library.

3.25 The meeting was informed that Phase II of the WMO Aviation Research and Development Project (AvRDP2), which started in 2021, is concluding in 2025. The Project has focused on developing and demonstrating improvements in the probabilistic forecasting of convection and associated hazards, with outcomes of direct relevance to the HWIS concept. The meeting further noted that the results of AvRDP2 will be reported to ICAO and available **here** on the Project website.

REPORT ON AGENDA ITEM 4: MET PLANNING AND IMPLEMENTATION IN THE MID REGION

ICAO MID regional MET implementation survey

4.1 The subject was addressed in WP/3 presented by the secretariat on the results of the ICAO MID regional MET implementation survey conducted pursuant to MIDANPIRG Conclusion 22/32, which assessed States' compliance with Annex 3 and PANS-MET, the reception and operational use of global advisory information, and readiness for digital and SWIM-enabled MET services. The survey results are provided in **Appendix 4A**.

4.2 The meeting acknowledged that responses were received from eleven (11) of the fifteen (15) MID States and was informed that the ICAO MID Office would follow up bilaterally with the four (4) non-responding States.

4.3 The meeting emphasized that institutional arrangements for MET service provision are primarily established across the Region, with all responding States having designated MET Authorities and oversight mechanisms in place. The meeting highlighted some variability in how States reported the status of Annex 3 implementation, underlining the need for continued monitoring of national regulatory alignment.

4.4 The meeting pointed out that organizational arrangements are generally mature, with all responding States issuing core MET products (METAR, SPECI, TAF, and SIGMET). However, the meeting highlighted that cross-border SIGMET coordination is implemented by only five (5) States, indicating the need for improved FIR-to-FIR harmonization.

4.5 The meeting drew attention to the fact that Quality Management Systems are implemented in ten (10) States, while Safety Management Systems are in place in seven (7) States, identifying SMS integration as an area requiring further strengthening.

4.6 The meeting acknowledged that the reception and operational use of WAFS and VAAC/VONA advisories are established in most States. The meeting highlighted concern that only four (4) States have confirmed receiving Space Weather advisories, which remain the least implemented global advisory service in the Region.

4.7 The meeting underscored that the absence of WAFS reception in one State constitutes a significant operational gap for flight briefing and en-route operations and requires follow-up action by the ICAO MID Office.

4.8 The meeting highlighted that IWXXM implementation in the Region remains uneven, with five (5) States reporting implementation, while others indicated planned or no implementation. The meeting emphasized that AMHS connectivity, IWXXM translation capability, and structured testing are key enablers for accelerating digital exchange.

4.9 The meeting acknowledged that MET–ATM coordination arrangements are generally in place; however, it pointed out that joint training activities and the development of tailored MET products remain limited and could be further strengthened.

4.10 The meeting emphasized that the consolidated regional assessment identified digital exchange (IWXXM), cross-border SIGMET coordination, and Space Weather advisory reception as the primary contributors to residual regional risk.

4.11 Given the above, the meeting agreed on the following draft conclusion:

DRAFT CONCLUSION 13/1: STRENGTHENING IMPLEMENTATION AND OPERATIONAL USE OF GLOBAL ADVISORIES IN THE MID REGION

That,

a) States be urged to:

- *take the necessary measures to fully implement the provisions of Annex 3 (including the latest amendments) and PANS-MET (Doc 10157), aiming for full implementation by 31 December 2026;*
- *strengthen national capabilities for receiving and operationally using global advisory information, including WAFS, VAAC/VONA, SWX, and TAAC products and advisories;*
- *improve cross-border SIGMET coordination through regular drills, harmonized procedures, and proper monitoring, with a target date of 31 December 2026; and*
- *nominate national focal points for IWXXM and SWX matters, to support regional coordination and help identify assistance and capacity-building needs.*

b) ICAO MID Office be requested to continue monitoring MET implementation through periodic surveys and report progress to MET SG and MIDANPIRG.

Performance Framework for MET Implementation in the MID Region

4.12 The subject was addressed in WP/4 presented by the Secretariat.

4.13 The meeting reviewed the MID Air Navigation Report (2023), focusing on the MET Part, as outlined in Appendix 4B. It was noted that the tabular data had been incorporated into the MID eANP Volume III—AMET Tables.

4.14 The meeting recalled the importance of the upcoming MID Region Air Navigation Report – 2025. States were encouraged to submit information regarding their level of implementation of the AMET thread priority 1 elements to the ICAO MID office by 15 December 2025.

4.15 The meeting strongly urged States to provide comprehensive data on the level of implementation of AMET thread priority 1 elements. This information is essential for accurately assessing the current implementation status and identifying areas for improvement.

WAFS & SADIS update

4.16 The subject was addressed in WP09. The SADIS Provider informed the meeting about recent developments regarding the WAFS and the Secure Aviation Data Information System (SADIS).

4.17 The meeting noted that no significant changes were made to WAFS gridded data this past year, aside from a correction to WAFC Washington's issuing centre name. On 23 January 2025, the T+24 SIGWX forecasts were automated, transitioning to colour charts with updated content including tropopause height contours and revised CB coverage, while removing the in-cloud turbulence field. The forecast issuance time improved by one hour to 5:50 post-model run. A fully

automated backup procedure between WAFCs was implemented, with data exchanged preemptively and published at 06:50 if needed. The new multi-timestep SIGWX product (T+6 to T+48 at 3-hour intervals in IWXXM format) became operational via the SADIS API on 8 April 2025.

4.18 The meeting was informed that both WAFCs verify their own wind and temperature forecasts, with WAFC London additionally verifying harmonized cumulonimbus and turbulence forecasts. WAFC London can now provide turbulence verification data using the IATA Turbulence Aware datasets reported as Eddy Dissipation Rate (EDR). It was noted that the IATA data does not distinguish between turbulence types and may include convective turbulence not forecast by WAFCs. Verification data for WAFC London is available online (http://www.metoffice.gov.uk/aviation/responsibilities/icao). Verification data for WAFC Washington is also available online: (https://www.emc.ncep.noaa.gov/users/verification/aviation/wafs/prod/).

4.19 The meeting noted that WAFC London has introduced new performance metrics for different wind speed categories and time steps out to T+120. Furthermore, both WAFCs plan to begin SIGWX verification of cumulonimbus, turbulence, and icing across multiple forecast time steps in 2026. They are currently collecting the required observational data so that the verification data can be published on their websites next year. It was highlighted that the BUFR format SIGWX data will be retired in November 2026.

4.20 The meeting noted that no changes were made to the SADIS FTP service over the past year, but its retirement is planned for November 2028, requiring all users to migrate to the SADIS API. The meeting was also informed of a cybersecurity incident on August 12, 2025, which necessitated a compulsory password reset for all FTP users on August 19, 2025; no data was compromised.

4.21 The meeting was informed that the SADIS API is now fully operational, providing WAFS gridded data, SIGWX forecasts, and OPMET data. The meeting noted that the SADIS API adheres to the EUROCONTROL SWIM yellow profile and is listed in the EUROPEAN SWIM registry. It utilizes the Open Geospatial Consortium Environmental Data Retrieval (OGC-EDR) framework and is aligned with its counterpart, the WIFS API operated by WAFC Washington. Operational details can be found on the Met Office website https://www.metoffice.gov.uk/services/transport/aviation/regulated/international-aviation/sadis/sadis-api/index

4.22 The meeting was also informed that a change to the OPMET part of the SADIS API service had been applied on 16 September 2025: a change to the file naming convention for collective METAR and TAF bulletins (using "ii=99") to distinguish them from individual reports, and the enabling of VONA messages for publication in both TAC and IWXXM formats, in line with Amendment 82 to Annex 3.

4.23 The meeting also noted a known issue with the WAFS gridded data API, where the top-level collection metadata updates before all data is published; a fix for this issue is expected before the end of 2025.

4.24 The meeting was provided with an update on SADIS access, referencing a list of users within the MID region in Appendix A of WP/09. This list, a subset of the latest "Status of Implementation of SADIS" document, now indicates users who have also signed up for the new SADIS API. The meeting was reminded that the relevant ICAO documentation has moved to a new webpage. States using SADIS were again encouraged to accede to the SADIS Agreement if they have not already done so. Interested States were advised to contact the SADIS Manager for information.

4.25 The meeting was informed about the SADIS Cost Recovery Administrative Group (SCRAG), which administers the SADIS Arrangement. SCRAG meets annually to determine cost-share allocations and review service costs, with its composition including at least one representative from each ICAO region. For the MID region, there is currently only one representative, U.A.E. The meeting noted that one or two additional representatives from MID SADIS-using States are sought to join SCRAG, which typically holds one annual one day virtual meeting. MET SG13 encouraged its participants to volunteer for these positions, with Slovakia and Switzerland agreeing to participate. The Secretariat will follow up with PCG to complete the formal nominations.

4.26 Participants were encouraged to take part in the annual 2025 SADIS FTP efficacy survey, which began on July 1, 2025. The survey can also be accessed here: https://response.questback.com/metoffice/hbkoeo6jeq. Results from the 2024 survey will soon be available on the ICAO Meteorological Service Documents webpage. A separate survey for SADIS API users is planned for late 2025.

4.27 The meeting was informed that a SADIS Data Catalogue had been created to help users identify missing TAF and METAR data. This catalogue is available on SADIS and will soon also be available in the SADIS and WIFS documentation section on the METP public webpages. Users should consult this catalogue before reporting absent data to the SADIS Manager.

4.28 Lastly, the meeting noted the availability of SADIS evaluation guides for users to assess their own FTP and API workstation systems. These guides are available on the following link: https://www.icao.int/airnavigation/aeronautical-meteorological-service/documents. The SADIS Provider also offers chargeable individual workstation evaluations upon request.

SADIS Focal Points

4.29 The meeting was informed that the official list of SADIS Focal Points, maintained by the ICAO Secretariat in Montreal and available as Attachment A to WP/04, requires updating. The current list contains outdated, incorrect, or obsolete entries for several States. Members were invited to review their State's entry and submit necessary corrections or deletion requests to the SADIS Manager by 31 January 2026.

4.30 The meeting noted that all fax numbers will be removed from the document and that the updated list will likely be moved to the ICAO Secure Portal.

4.31 It was noted that the accuracy and currency of the list depend on users proactively notifying the Secretariat of any changes. The meeting was further informed that the documents are currently published on the public ICAO webpage at Meteorology Panel-Documents. Once the necessary updates have been incorporated, the document will be moved to the ICAO Secure Portal.

4.32 The meeting agreed to the following decision:

DRAFT DECISION 13/2: SADIS FOCAL POINT INFORMATION

*THAT UPDATED CONTACT INFORMATION FOR THE SADIS FOCAL POINTS document, or a request to delete the record, should be sent to the SADISManager@metoffice.gov.uk by **31 January 2026** so that a document update can be initiated with the ICAO Secretariat.*

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VA SIGMET Issues in the Region

4.33 The subject was addressed in WP/07, presented by the SADIS Provider on behalf of the Meteorological Operations Group (MOG) International Airways Volcano Watch (IAVW), providing an analysis of the issuance of Volcanic Ash SIGMETs during the Hayli Gubbi volcanic eruption in Ethiopia in November 2025.

4.34 The meeting was informed that the Hayli Gubbi volcano erupted on 23 November 2025, prompting the issuance of Volcanic Ash Advisories (VAAs) and Volcanic Ash Graphics (VAGs) by VAAC Toulouse. The meeting noted that the volcanic ash plume subsequently affected, or was forecast to affect, the Sana'a, Muscat and the south-eastern part of the Jeddah Flight Information Regions (FIRs), before moving eastwards out of the MID Region.

4.35 The meeting recalled that, in accordance with Annex 3 and the Procedures for Air Navigation Services – Meteorology (PANS-MET, Doc 10157), Meteorological Watch Offices (MWOs) are required to prepare and disseminate Volcanic Ash SIGMETs upon receipt of a VAA when volcanic ash is observed or forecast to affect their FIR, using the information provided in the VAA/VAG.

4.36 The meeting noted with concern that no Volcanic Ash SIGMETs were received from the Sana'a FIR during this event.

4.37 The meeting was informed that the first Volcanic Ash SIGMET for the Muscat FIR was issued on time, corresponding to the time when the VAA first indicated that ash would reach the FIR. However, the meeting highlighted several issues with the coding and content of the SIGMETs issued during the event.

4.38 The meeting noted that a number of Volcanic Ash SIGMETs were initially disseminated using incorrect SIGMET identifiers, inappropriate descriptors, and non-compliant polygon formatting. The meeting further noted inconsistencies between the ash height information included in the SIGMETs and that provided in the corresponding VAA/VAG.

4.39 The meeting highlighted that the use of "VA CLD" without an appropriate reference to a known volcanic source was not compliant with the SIGMET coding rules contained in PANS-MET. The meeting emphasized that, where the volcanic source is known, SIGMETs should explicitly reference the volcanic eruption, including the volcano name and position, in accordance with Appendix 7 to PANS-MET.

4.40 The meeting also noted that certain Volcanic Ash SIGMETs issued for the Jeddah FIR used descriptors intended for situations where the source of volcanic ash is unknown, which was not applicable in this case.

4.41 The meeting was informed that issues related to SIGMET coding and formatting impacted the ability of some flight planning and visualization systems to decode and display SIGMETs accurately. The meeting stressed that correct coding is crucial to ensure SIGMET information can be used operationally by airspace users.

4.42 The meeting highlighted that, while there was generally good cross-border alignment between some neighboring FIRs, opportunities exist to improve coordination further to avoid gaps or overlaps between adjacent Volcanic Ash SIGMET areas during such events.

4.43 The meeting emphasized that the resumption of volcanic activity at Hayli Gubbi indicates a potential for future events affecting the MID Region and underscored the importance of ensuring that MWOs are fully prepared to issue timely, accurate, and compliant Volcanic Ash SIGMETs.

4.44 The meeting agreed that refresher training for MWO personnel, enhanced cross-border coordination, and regular post-event reviews would support improved compliance with Annex 3 and PANS-MET and contribute to safer and more efficient flight operations during volcanic ash events.

4.45 The meeting endorsed the following draft conclusion:

DRAFT CONCLUSION 13/3: STRENGTHENING SIGMET AND VA SIGMET ISSUANCE IN THE MID REGION

That MID States, in coordination with the ICAO MID Office and ROC Jeddah:

a) review and update national regulatory frameworks, operational procedures, and guidance material related to the issuance, coding, and dissemination of SIGMETs, ensuring alignment with Amendment 82 to Annex 3 and PANS-MET (Doc 10157), including correct use of descriptors, polygon formats, and integration of VAA/VAG and future QVA information;

b) conduct refresher training for Met Watch Office personnel on SIGMET preparation and coding, with specific modules tailored for VA SIGMET issuance;

c) initiate and formalize cross-border coordination among adjacent MWOs to ensure consistency and avoid gaps or overlaps between SIGMET areas during volcanic ash events;

d) establish a VA SIGMET ad-hoc group, composed of interested MID States, ICAO MID Office to coordinate refresher training, conduct post-event reviews, support regional harmonization and preparedness for QVA implementation, and report to MET SG/14;

e) initiate regional SIGMET test exercises, in coordination with VAAC Toulouse, WAFC London, and ROC Jeddah, covering WS, TC, and VA SIGMET types, to validate timely issuance, cross-border coordination, and compliance with Annex 3 and PANS-MET, and compile a quality monitoring report for review by MID-MET SG.

IWXXM Implementation

4.46 The subject was addressed in WP/5, presented by the Secretariat.

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

4.48 The status of IWXXM implementation in the MID Region was updated with input from ROC Jeddah, as provided in **Appendix 4B**. Notably, the following States have implemented

IWXXM v3.0: Bahrain, Jordan, Saudi Arabia, Qatar, and the United Arab Emirates. Kuwait also plans to implement IWXXM in 2025.

4.49 States that have implemented IWXXM were encouraged to assist those that still need to do so. In addition, States that have not yet implemented IWXXM were urged to review ICAO Doc 10003 (Manual on the ICAO Meteorological Information Exchange Model) and the ICAO MID IWXXM Implementation Webinar material is available at the following website: https://www.icao.int/MID/Pages/2021/ .

4.50 The meeting noted that States should be strongly encouraged to implement IWXXM as soon as possible since these translation services are not intended to continue indefinitely.

IWXXM Implementation and Statistics and Translation Agreements

4.51 The subject was addressed in WP/12, presented by the Secretariat on behalf of the Data Management Group (DMG), providing an update on the status of IWXXM and AMHS implementation in the EUR Region and on the current exchange of IWXXM data with the MID Region.

4.52 The meeting was informed that, based on the latest information available from COM Centres and National OPMET Centres (NOCs), sixteen (16) out of fifty-two (52) EUR States are not, or only partially, fulfilling the technical requirements to support IWXXM exchange via AMHS. The meeting highlighted that several States reported ongoing system upgrades and indicated that compliance is expected within the coming months. A similar situation was noted regarding AFS connectivity in the MID Region.

4.53 The meeting was informed that, since 24 January 2023, the AMHS link between Nicosia and Jeddah has been operational, enabling the Inter-Regional OPMET Gateways (IROGs) Vienna and Jeddah to exchange IWXXM data between the EUR and MID Regions. Following successful testing, the new IWXXM bulletin headers were promulgated through the METNO procedure, and routing within the EUR Region was activated on the AIRAC date of 4 April 2023.

4.54 The meeting noted that the IWXXM data flow between the EUR and MID Regions continues to be monitored and analyzed. The meeting was informed that coordination between IROG Vienna and IROG Jeddah is ongoing to optimize data exchange and address identified issues, including duplicate IWXXM messages and the use of different IWXXM schema versions for the same reports.

4.55 The meeting was informed that validation of IWXXM messages is supported through MET-Switch test systems. When validation issues are detected, the responsible IROGs are notified to enable further investigation and corrective action, in coordination with the relevant ROCs and States.

4.56 The meeting was informed that monitoring activities conducted by the DMG and ROC Vienna identified cases where IWXXM data are translated by more than one centre, resulting in multiple IWXXM versions being disseminated for the same reports. The meeting highlighted that such situations are not optimal and require further coordination to ensure consistency and efficiency of IWXXM exchange.

4.57 The meeting highlighted that, in the MID Region, IWXXM data exchange is currently limited to communications with the EUR Region and that there is no dedicated regional working group to oversee IWXXM exchange and management. The meeting stressed that improved

regional coordination would support better data quality, more efficient routing, and enhanced implementation monitoring.

4.58 The meeting noted that DMG monitoring and statistical analysis of IWXXM data continue to provide valuable insight into global availability, translation performance, schema usage, and failure rates. The meeting emphasized that these statistics support implementation planning, identification of deficiencies, and targeted assistance to States during the transition from TAC to IWXXM.

4.59 The meeting agreed on the following draft conclusion:

DRAFT CONCLUSION 13/04 – MID REGION IWXXM IMPLEMENTATION STATUS

That ICAO MID Office circulate a survey to collect up-to-date information from MID States (with particular attention to States continuing to use IWXXM translation services provided by ROCs) on the national status and planned implementation dates for: (a) providing IWXXM data internationally via the AMHS network; (b) providing METAR/SPECI in IWXXM; (c) providing TAF in IWXXM; and (d) providing SIGMET in IWXXM; including the identification of implementation challenges and State assistance needs, as appropriate, and to consolidate the results and report updates to MET SG and MIDANPIRG to support regional planning and identification of assistance needs.

REPORT ON AGENDA ITEM 5: REVIEW OF AIR NAVIGATION DEFICIENCIES IN THE MET FIELD

5.1 The subject was addressed in WP/6 presented by the Secretariat.

5.2 The MIDANPIRG/22 meeting noted the implementation status of IWXXM v3.0 across the MID States. It was also noted that Bahrain, Jordan, Saudi Arabia, Qatar, and the UAE had completed implementation, with other States expected to follow in 2025. States that had not yet implemented IWXXM were urged to accelerate their implementation under v3.0. Accordingly, the meeting agreed to the following MIDANPIRG Conclusion 22/29: That, States that have not implemented IWXXM for OPMET exchange as per ICAO and WMO provisions be included in the list of Air Navigation Deficiencies.

5.3 The meeting may note that the total number of MET deficiencies is twenty-four (24) priority "A" deficiencies. Five (5) related to QMS and nine (9) related to METAR, TAF, SIGMET, and WAFS, and ten (10) related to the IWXXM implementation for OPMET Data Exchange.

5.4 The meeting also noted that several deficiencies listed in the MANDD still did not have a specific Corrective Action Plan (CAP). States were urged to provide this information for each deficiency (MIDANPIRG Conclusion 15/35 refers).

5.5 The list of deficiencies was updated based on the information above as provided at **Appendix 5A**.

REPORT ON AGENDA ITEM 6: FUTURE WORK PROGRAMME

6.1 The subject was addressed in WP/7, presented by the Secretariat. The meeting agreed on the MET SG Terms of References (TORs) as at **Appendix 6A**.

6.2 The meeting agreed that the MET SG/14 meeting will be held in Cairo, Q4 2026.

REPORT ON AGENDA ITEM 7: ANY OTHER BUSINESS

Proposal for the establishment of a Competency Certification (licensing) Framework for Meteorological Personnel

7.1 The meeting reviewed WP/10 and WP/11, presented by Saudi Arabia, which discuss proposals for establishing certification frameworks for meteorological service providers and licensing meteorological personnel involved in aeronautical meteorological services.

7.2 The meeting was informed that, while Annex 3 requires meteorological services to be provided by authorized or designated entities and mandates the implementation of Quality Management Systems, it does not establish a formal global certification mechanism for meteorological service providers comparable to those applied to other aviation service providers.

7.3 The meeting noted that many States rely on administrative designation schemes or third-party ISO certification as proxies for oversight, which do not fully meet the principles of State safety oversight as defined in ICAO safety oversight guidance and may limit civil aviation authorities' ability to enforce corrective actions.

7.4 The meeting highlighted that the absence of a standardized certification framework may result in inconsistencies in service quality, regulatory oversight, and interoperability, particularly in cross-border and regional operational environments.

7.5 The meeting was informed of national experience in establishing certification mechanisms for meteorological service providers, including the example presented by Saudi Arabia, where a formal certification process was implemented following a technical audit of personnel competency, meteorological equipment, and quality management systems.

7.6 The meeting acknowledged that a standardized certification framework for meteorological service providers could enhance service quality, strengthen regulatory oversight, support safety management and State Safety Programme objectives, and contribute positively to States' Effective Implementation under the Universal Safety Oversight Audit Programme.

7.7 The meeting was informed that, unlike other aviation professionals, such as air traffic controllers, meteorological personnel are not subject to a formal licensing or certification requirement under Annex 3, despite the critical safety role of aeronautical meteorological services.

7.8 The meeting noted that the lack of a unified competency certification framework for meteorological personnel could result in variability in qualification standards, competency management, and professional recognition across states.

7.9 The meeting highlighted that the proposed competency certification framework for meteorological personnel would build upon existing ICAO and WMO competency-based training and assessment guidance and could support standardized qualification requirements, ongoing competency assurance, and improved cross-border recognition of qualifications.

7.10 The meeting highlighted that developing such a framework would require close cooperation among the International Civil Aviation Organization (ICAO), the World Meteorological Organization, regional planning groups, and training institutions, and could benefit from sharing best practices with existing national systems.

7.11 The meeting recognized that both proposals align with ICAO's performance-based approach to service delivery and support ongoing efforts to enhance quality assurance, oversight, and harmonization of meteorological services.

7.12 The meeting agreed that more work is needed to evaluate feasibility, scope, and implementation options at both regional and global levels.

7.13 The meeting noted broad support from participating States for further consideration of the establishment of a certification framework for aeronautical meteorological service providers and a competency-based licensing or certification framework for meteorological personnel. In this context, the Secretariat shared experience from the EUR/NAT Region, highlighting that, under European Union regulatory provisions (Commission Regulation (EU) No 373/2017), all EU Member States are required to certify their aeronautical meteorological service providers. This process has been completed across the EU. It was further noted that several States outside the EU within the EUR/NAT Region have also aligned their national arrangements with these certification principles.

7.14 The meeting recognized that initiating such frameworks at the regional or global level would require careful consideration of feasibility, scope, and implementation arrangements, including regulatory, institutional, and resource implications, and would necessitate close coordination with the World Meteorological Organization and relevant regional planning and coordination bodies.

7.15 In this regard, the meeting invited Saudi Arabia to present the proposals contained in WP/10 and WP/11 to MIDANPIRG, with a view to initiating broader regional discussion, raising awareness among States, and assessing interest in the possible development of regional guidance or recommendations for future consideration.

Strengthening the synergies of the MID-MET SG

7.16 The meeting emphasized that to strengthen the synergies of the MID-MET SG, active engagement from States is essential to address both current and future challenges in providing MET services for international aviation. States with near or full MET implementation are encouraged to support those that have not yet achieved full implementation, particularly in addressing the numerous existing deficiencies.

7.17 The meeting noted with concern the limited participation of MID States at MET SG/13, with only a small number of States represented. The meeting emphasized that broad and sustained involvement of States is essential to ensure the effective conduct of meetings, meaningful technical discussion, and the timely provision of national updates, which are fundamental to the development of well-informed conclusions, decisions, and follow-up actions.

7.18 The meeting further noted that limited State participation decreases the Group's ability to accurately assess regional implementation status, identify challenges and assistance needs, and effectively address and resolve recorded deficiencies in a timely manner.

7.19 In this regard, the meeting emphasized that enhanced State participation would support improved monitoring of implementation, facilitate the progressive removal of deficiencies from the regional deficiency lists, and contribute to more effective regional planning and coordination.

7.20 The meeting agreed that this concern should be brought to the attention of MIDANPIRG, with a view to strongly encouraging MID States to ensure appropriate and consistent participation in future MET SG meetings, including the nomination of relevant subject-matter experts, as appropriate, to strengthen regional cooperation, decision-making, and implementation of agreed ICAO provisions and regional conclusions.

APPENDICES

APPENDIX 2A

FOLLOW-UP ON MIDANPIRG/22 CONCLUSIONS & DECISIONS

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C.22/28	**MID REGION WAFS DATA** That, the SADIS users be encouraged to prepare their systems for visualizing and creating charts from the new WAFS SIGWX data sets in IWXXM format by using the test data sets available at https://www.metoffice.gov.uk/services/transport/aviation/regulated/wafs-sigwxtest-data & for those with WIFS accounts https://aviationweather.gov/wifs/data/IWXXM_TEST/.	To harmonize the implementation within the Region	MID States	ICAO MID	DEC 2025	**Completed** SL AN 10/3 – 25/167 July 2025 Disseminated
C.22/29	**IWXXM IMPLEMENTATION DEFICIENCIES** That, States that have not implemented IWXXM for OPMET exchange as per ICAO and WMO provisions be included in the list of Air Navigation Deficiencies.	Implementation of IWXXM translation within the MID Region	MID Deficiency List	MID States	Dec 2025	**Ongoing**
C.22/30	**WORKSHOP ON ENHANCING MET CAPABILITIES** That, the ICAO MID Office, in collaboration with WMO and Member States, organize a workshop alongside MET SG/13 in 2025 to support States in addressing MET deficiencies.	Organize a Workshop on enhancing awareness	MID States	ICAO MID	Nov 2025	**Completed** State Letter ME 3/2.3 – 25/170 Disseminated
C.22/31	**REVISED MET SG TOR** That, the revised Terms of References (TORs) of the MET SG are endorsed as at Appendix 5W	Publish revised ToRs	MID States	ICAO MID	May 2025	**Completed**

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C.22/32	**SURVEY ON STATES' COMPLIANCE WITH EXISTING AND FORTHCOMING GLOBAL AND REGIONAL MET REQUIREMENTS** That, the ICAO MID Regional Office conduct a survey to assess States' compliance with both current and upcoming global and regional MET requirements.	Conduct a comprehensive Survey	MID States	ICAO MID	Aug 2025	**Completed** SL AN 10/3 – 25/166 Dated 8 July 2025 Disseminated
D.21/33	**MIDANPIRG REVISED STRUCTURE** That, the revised MIDANPIRG Structure 2024 is endorsed to be included in MIDANPIRG Procedural Handbook.	Consistency in establishment of experts groups	Revised MIDANPIRG structure	MIDANPIRG	2025	**On going**

Appendix 4A

Survey Results

TABLE 1: INSTITUTIONAL ARRANGEMENTS & LEGAL FRAMEWORK

State	MET Authority	Oversight Entity	AMSP Designated	Functional Separation	Legal Framework	Annex 3 Amendment
Egypt	☑	☑	☑	☑	☑	Amendments 78-81
Qatar	☑	☑	☑	☑	☑	20th Edition (2018)
Bahrain	☑	☑	☑	☑	☑	Not specified
Iraq	☑	☑	☑	☑	☑	Not specified
Sudan	☑	☑	☑	☑	☒	Not specified
Libya	☑	☑	☑	☒	☑	Edition 2016
Saudi Arabia	☑	☑	☑	☑	☑	Amendment 81
Oman	☑	☑	☑	☑	☑	Not specified
Iran	☑	☑	☑	☑	☑	Updating to Amendment 82
Kuwait	☑*	☑*	☑*	☑*	☑*	Not specified
Jordan	☑	☑	☑	☑	☑	Not specified
TOTAL	**11/11**	**11/11**	**11/11**	**10/11**	**10/11**	

TABLE 2: ORGANIZATIONAL ASPECTS

State	MWO Designated	MWO Documented	AMO at All Airports	AMO Procedures	AMS Standards	Coordination Mechanism
Egypt	☑	☑	☑	☑	☑	☑
Qatar	☑	☑	☑	☑	☑	☑
Bahrain	☑	☑	☑	☑	☑	☑
Iraq	☑	☑	☑	☑	☑	☑
Sudan	☑	☑	☑	☑	☑	☑
Libya	☑	☑	☒	☑	☑	☑
Saudi Arabia	☑	☑	☑	☑	☑	☑
Oman	☑	☑	☑	☑	☑	☑
Iran	☑	☑	☑	☑	☑	☑
Kuwait	☑	☑	☑	☑	☑	☑
Jordan	☑	☑	☑	☑	☑	☑
TOTAL	11/11	11/11	10/11	11/11	11/11	11/11

TABLE 3: COMPLIANCE MONITORING SYSTEMS

State	QMS Established	SMS Established	Competency Program	Assessment Status	AMF Ready
Egypt	☑	☑	☑	Planned	☑
Qatar	☑	☑	☑	Implemented	☑
Bahrain	☑	☑	☑	Implemented	☑
Iraq	☑	☒	☑	Implemented	☑
Sudan	☑	☑	☑	Implemented	☑
Libya	☒	☒	☑	Implemented	☑
Saudi Arabia	☑	☒	☑	Implemented	☑
Oman	☑	☒	☑	Implemented	☑
Iran	☑	☑	☑	Implemented	☑
Kuwait	☑*	☑	☑	Implemented	☑
Jordan	☑	☑	☑	**Implemented**	☑
TOTAL	**10/11**	**7/11**	**11/11**		**11/11**

TABLE 4: GLOBAL INFORMATION RECEPTION

State	WAFS Reception	VAAC Reception	SWX Reception	TAAC Reception	Overall Integration	Data Integrated
Egypt	☑	☑	☑	☑	☑	☑
Qatar	☑	☑	☒	☑	☑	☑
Bahrain	☑	☑	☑	☑	☑	☑
Iraq	☒	☒	☒	☒	☒	☒
Sudan	☑	☑	☒	☒	☑	☑

Libya	☑	✗	✗	✗	☑	☑
Saudi Arabia	☑	☑	☑	☑	☑	☑
Oman	☑	☑	✗	☑	☑	☑
Iran	✗	☑	✗	☑	✗	✗
Kuwait	☑	☑	✗	☑	☑	☑*
Jordan	☑	☑	☑	☑	☑	☑
TOTAL	**9/11**	**9/11**	**4/11**	**8/11**	**9/11**	**9/11**

TABLE 5: MET SERVICES & ADVANCED PRODUCTS

State	METAR/SPECI	TAF Issuance	SIGMET Issuance	Cross-border SIGMET	SIGMET in IWXXM	IWXXM Products	Aircraft Obs (AMDAR)
Egypt	☑	☑	☑	✗	✗	✗	✗
Qatar	☑	☑	☑	☑	☑	☑	✗
Bahrain	☑	☑	☑	☑	☑	☑	?
Iraq	☑	☑	☑	☑	✗	✗	✗
Sudan	☑	☑	☑	✗	☑	☑	✗
Libya	☑	☑	☑	✗	✗	✗	✗
Saudi Arabia	☑	☑	☑	☑	☑	☑	✗
Oman	☑	☑	☑	✗	☑	☑	✗
Iran	☑*	☑*	☑	✗	✗	✗	✗
Kuwait	☑	☑	☑	✗	✗	✗	✗
Jordan	☑	☑	☑	☑	☑	☑	☑
TOTAL	**11/11**	**11/11**	**11/11**	**5/11**	**5/11**	**6/11**	**2/11**

TABLE 6: OPMET & IWXXM STATUS

State	NOC Designated	NOC 24/7	ROC Connected	IWXXM Translation	IWXXM Decoding	IWXXM Status
Egypt	☑	☑	☑	❌ (2027)	❌	Planned
Qatar	☑	☑	☑	☑	☑	Implemented
Bahrain	☑	☑	☑	☑	☑	Implemented
Iraq	☑	☑	☑	❌	❌	Not implemented
Sudan	☑	☑	☑	❌	❌	Not implemented
Libya	☑	☑	☑	❌	❌	Not implemented
Saudi Arabia	☑	☑	☑	☑	☑	Implemented
Oman	☑	☑	☑	☑	☑	Implemented but not removed from the deficiency list. Official notification from States required
Iran	☑	☑	☑	❌ (needs AMHS)	❌	Needs upgrade
Kuwait	☑	☑	☑	❌	❌	Not implemented
Jordan	☑	☑	☑	☑	☑	Implemented
TOTAL	**11/11**	**11/11**	**11/11**	**5/11**	**5/11**	

TABLE 7: ATM COORDINATION

State	Institutional Agreement	Operational Coordination	MET in Decision Making	Tailored Products	MET-ATM Integration	Joint Training
Egypt	☑	☑	☑	☑	☑	✗
Qatar	☑	☑	☑	✗	☑	✗
Bahrain	☑	☑	☑	☑	☑	✗
Iraq	☑	☑	☑	☑	☑	☑
Sudan	✗	✗	☑	✗	✗	☑
Libya	☑	☑	☑	☑	☑	☑
Saudi Arabia	☑	☑	☑	☑	☑	☑
Oman	☑	☑	☑	☑	☑	✗
Iran	✗ (updating)	☑	☑	✗	✗	✗
Kuwait	✗	☑	☑	☑	☑	✗
Jordan	☑	☑	☑	☑	☑	☑
TOTAL	8/11	8/11	9/11	7/11	8/11	5/11

TABLE 8: CHALLENGES & SUPPORT NEEDS

State	Top Challenges	Priority Support Areas	Audit Status
Egypt	Technical capacity, HR, IWXXM	Technical guidance, on-site training, system support	Planned
Qatar	None specified	Online training	No recent
Bahrain	Human resource capacity limitations	On-site training, online training	No recent
Iraq	Technical capacity, IWXXM, institutional gaps	IWXXM translation, all support types	Planned
Sudan	Technical capacity, HR, IWXXM	Infrastructure, equipment, training, regulatory alignment	No recent
Libya	Technical capacity, HR, IWXXM, data exchange	QMS, IWXXM, coordination with ATM	No recent
Saudi Arabia	Technical capacity, HR	Online training, desert phenomena support	2014
Oman	None specified	Not specified	2024
Iran	Technical capacity, IWXXM, ATM integration	System upgrade, on-site training, regional collaboration	2022
Kuwait	HR and training	HR and training	2023
Jordan	Technical capacity, IWXXM/SWIM, regulatory gaps, SIGMET/VAA/SWX readiness	IWXXM & SWIM implementation support, system upgrade, training, ROC connection	Not specified

TABLE 9: COMPLIANCE SCORECARD SUMMARY

Category	High Compliance	Medium Compliance	Low Compliance	% Compliance
Institutional	11/11 states	0	0	100%
Legal Framework	10/11 states	0	Sudan,	91%
Organizational	11/11 states	0	0	100%
QMS	10/11 states	0	Libya only	91%
SMS	6/11 states Egypt, Qatar, Bahrain, Sudan, Iran, Jordan		6 states	55%
WAFS Reception	8/11 states Egypt, Qatar, Bahrain, Sudan, Libya, Saudi Arabia, Oman, Jordan		Iraq, Libya. Iran does not receive WAFS products, receives VAAC and TAAC,	72%
IWXXM Capability	4/11 states	Egypt, Iran (planning)	5 states	36%
Cross-border SIGMET	5/11 states Qatar, Bahrain, Iraq, Iran, Jordan		6 states	45%
ATM Coordination	8/11 states	0	Kuwait, Sudan	72%
Overall Weighted Average				**72%**

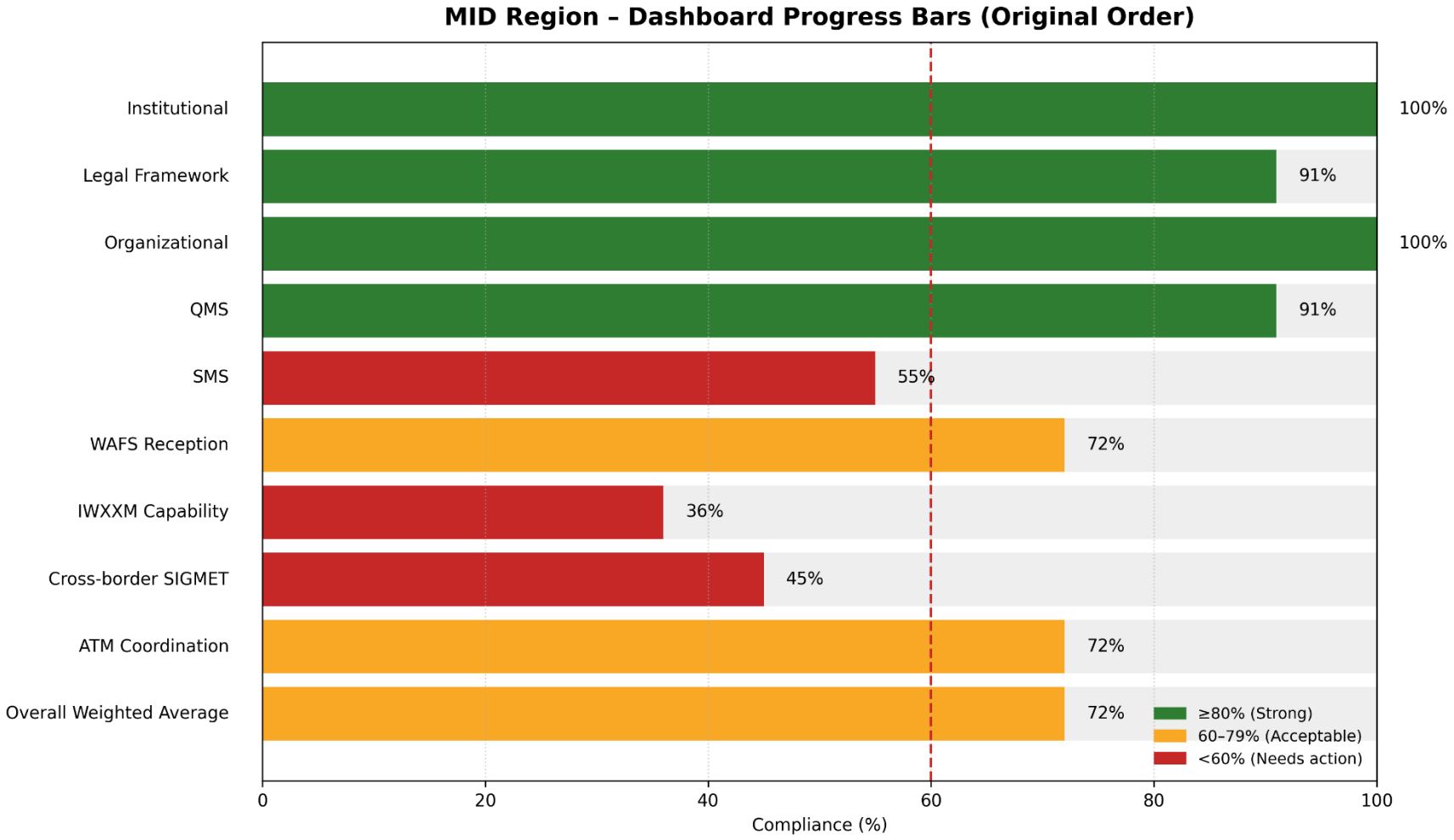
MID Region – Dashboard Progress Bars (Original Order)
Institutional
Legal Framework
Organizational
QMS
SMS
WAFS Reception
IWXXM Capability
Cross-border SIGMET
ATM Coordination
Overall Weighted Average
100%
91%
100%
91%
55%
72%
36%
45%
72%
72%
≥80% (Strong)
60–79% (Acceptable)
<60% (Needs action)
0
20
40
60
80
100
Compliance (%)

TABLE 10: REGIONAL PRIORITY MATRIX

Priority Level	States	Key Issues	Recommended Actions	Target deadline
CRITICAL	**Iraq, Libya**	1. **Iraq:** No reception of any global advisory information. 2. **Libya:** Multiple systemic deficiencies (QMS, SMS, AMO coverage, IWXXM).	1. **Iraq:** Urgent technical mission to establish basic global info reception. 2. **Libya:** Comprehensive capability-building programme.	**Q2 2026**
HIGH	**Iran, Sudan, Kuwait**	1. **Iran:** AMHS upgrade required for IWXXM; no WAFS reception. 2. **Sudan:** Legal framework not formalized. 3. **Kuwait:** IWXXM status unclear; HR/training challenges.	1. **Iran:** Technical/financial support for AMHS upgrade. 2. **Sudan:** Legal advisory support. 3. **Kuwait:** IWXXM gap assessment & training.	**Q4 2026**
MEDIUM	**Egypt, Bahrain, Qatar**	1. IWXXM implementation planned or advanced. 2. Need to enhance cross-border SIGMET coordination.	1. Technical support for IWXXM & ROC connectivity. 2. Regional SIGMET coordination workshops.	**Q4 2027**
LOW	**Saudi Arabia, Oman, Jordan**	Advanced implementation with minor gaps. Opportunity for regional leadership.	1. Peer-support roles. 2. Lead regional best practices & SOPs development. 3. Host training events.	**Ongoing / 2028**

APPENDIX 4B

Table – Status of IWXXM Implementation in the MID Region

State	Expected implementation date	Comment
Bahrain	Completed	IWXMM v3.0
Egypt		In Progress
Iraq		
Iran		Support planned until end of 2022
Jordan	completed	IWXMM v3.0
Kuwait	2024	In Progress
Lebanon	End 2023	
Libya		
Oman	Q1 2024	In Progress
Qatar	Completed	IWXXM v2.1 Testing IWXXM v3.0 between MET and COM Centres Need to exchange with ROC Jeddah
Saudi Arabia	completed	IWXXM v3.0
Sudan		
Syria		
United Arab Emirates	completed	IWXXM v3.0
Yemen		

APPENDIX 5A

Deficiencies in the MET Field

BAHRAIN

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action

No Deficiencies Reported

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

EGYPT

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**	**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
1.	Annex 3 App 3 2.1.3 App 5 1.1.2 App 6 1.1.6 App 6 2.1.6	IWXXM translation	IWXXM is not implemented for OPMET Data Exchange	Sep 2025	The state provides no official corrective action plan	To implement IWXXM for OPMET Data Exchange, no corrective action plan is provided by the State	EGYPT	Dec 2025	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

IRAN

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**	**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
1.	Annex 3 App 3 2.1.3 App 5 1.1.2 App 6 1.1.6 App 6 2.1.6	IWXXM translation	IWXXM is not implemented for OPMET Data Exchange	Sep 2025	The state provides no official corrective action plan	To implement IWXXM for OPMET Data Exchange, no corrective action plan is provided by the State	IRAN	Dec 2025	A

[(1)] Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

IRAQ

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 3; Para 2.2	QMS Implementation	Lack of Implementation of QMS	Sep 2014	-	O	Corrective Action Plan has not been formally provided by the State	Iraq	Dec 2022	A
2	Annex 3; Para 9.1.4, 9.3.1, 9.4.1 and Appendix 2, 2.1.1	WAFS forecasts required for briefing and flight documentation	SADIS FTP not available	January 2021	SADIS Provider	F	Corrective Action Plan has not been formally provided by the State	Iraq	Dec 2022	A
3	Annex 3 App 3 2.1.3 App 5 1.1.2 App 6 1.1.6 App 6 2.1.6	IWXXM translation	IWXXM is not implemented for OPMET Data Exchange	Sep 2025	The state provides no official corrective action plan	F	Corrective Action Plan has not been formally provided by the State	Iraq	Dec 2025	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

JORDAN

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action

No Deficiencies Reported

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

KUWAIT

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
1.	Annex 3 App 3 2.1.3 App 5 1.1.2 App 6 1.1.6 App 6 2.1.6	IWXXM translation	IWXXM is not implemented for OPMET Data Exchange	Sep 2025	The state provides no official corrective action plan	To implement IWXXM for OPMET Data Exchange, no corrective action plan is provided by the State	KUWAIT	Dec 2025	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

LEBANON

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 3; Para 2.2	QMS Implementation	Lack of Implementation of QMS	Sep 2014	(USOAP – CMA finding)	O	Corrective Action Plan has not been formally provided by the State	Lebanon	Dec 2022	A
2	Annex 3; Para 9.1.4, 9.3.1, 9.4.1 and Appendix 2, 2.1.1	WAFS forecasts required for briefing and flight documentation	SADIS FTP not available	May 2016	-	O	Corrective Action Plan has not been formally provided by the State	Lebanon	Dec 2022	A
3	Annex 3 App 3 2.1.3 App 5 1.1.2 App 6 1.1.6 App 6 2.1.6	IWXXM translation	IWXXM is not implemented for OPMET Data Exchange	Sep 2025	The state provides no official corrective action plan	F	Corrective Action Plan has not been formally provided by the State	Lebanon	Dec 2025	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

LIBYA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 3; Para 2.2	QMS Implementation	Lack of Implementation of QMS	Sep 2014	(USOAP – CMA finding)	O	Corrective Action Plan has not been formally provided by the State	Libya	Dec 2022	A
2	MID eANP VOL II, MET Table II-2	HLLB and HLLT METAR and 24-hour TAF; HLLS METAR	HLLB and HLLT METAR and 24-hour TAF; HLLS METAR not available internationally	Nov 2021	ROC Jeddah monthly OPMET monitoring	S	Corrective Action Plan has not been formally provided by the State	Libya	Dec 2022	A
3	Annex 3 App 3 2.1.3 App 5 1.1.2 App 6 1.1.6 App 6 2.1.6	IWXXM translation	IWXXM is not implemented for OPMET Data Exchange	Sep 2025	The state provides no official corrective action plan	F	Corrective Action Plan has not been formally provided by the State	Libya	Dec 2025	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

OMAN

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**	**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
1.	Annex 3 App 3 2.1.3 App 5 1.1.2 App 6 1.1.6 App 6 2.1.6	IWXXM translation	IWXXM is not implemented for OPMET Data Exchange	Sep 2025	The state provides no official corrective action plan	To implement IWXXM for OPMET Data Exchange, no corrective action plan is provided by the State	OMAN	Dec 2025	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

QATAR

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action

No Deficiencies Reported

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

SAUDI ARABIA

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action

No Deficiencies Reported

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

SUDAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	MID eANP VOL II, MET Table II-2	HSSK and HSPN METAR and 30-hour TAF; HSOB and HSNN METAR	HSSK and HSPN METAR and 30-hour TAF; HSOB and HSNN METAR not available internationally	Oct 2021	ROC Jeddah monthly OPMET monitoring	S	Corrective Action Plan has not been formally provided by the State	Sudan	Dec 2022	A
2	Annex 3 App 3 2.1.3 App 5 1.1.2 App 6 1.1.6 App 6 2.1.6	IWXXM translation	IWXXM is not implemented for OPMET Data Exchange	Sep 2025	The state provides no official corrective action plan	F	Corrective Action Plan has not been formally provided by the State	Sudan	Dec 2025	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

SYRIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	MID eANP VOL II, MET Table II-2	OSAP METAR and 24-hour TAF	OSAP METAR and 24-hour TAF not available internationally	Nov 2013	-	O	Corrective Action Plan has not been formally provided by the State	Syria	Dec 2022	A
2	Annex 3; Para 2.2	QMS Implementation	Lack of Implementation of QMS	Sep 2014	(USOAP – CMA finding)	O	Corrective Action Plan has not been formally provided by the State	Syria	Dec 2022	A
3	Annex 3; Para 7.1	SIGMET Implementation	Non-Issuance of SIGMET information	Nov 2017	(USOAP – CMA finding)	O	Corrective Action Plan has not been formally provided by the State	Syria	Dec 2022	A
4	Annex 3 App 3 2.1.3 App 5 1.1.2 App 6 1.1.6 App 6 2.1.6	IWXXM translation	IWXXM is not implemented for OPMET Data Exchange	Sep 2025	The state provides no official corrective action plan	F	Corrective Action Plan has not been formally provided by the State	Syria	Dec 2025	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

UAE

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action

No Deficiencies Reported

[1] Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

YEMEN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 3; Para 2.2	QMS Implementation	Lack of Implementation of QMS	Sep 2014	-	F H	A contract is being signed with an external quality consultant to assist in establishment & implementation of QMS in the provision of MET service by the end of year 2022.	Yemen	Dec 2022	A
2	Annex 3; Para 7.1	SIGMET Implementation	Non-issuance of SIGMET information	Nov 2017	-	S	All OPMET (SIGMET) information is issued internally but not transmitted internationally due to war, considering a reconnection with another MET regional centre other than Jeddah.	Yemen	Dec 2022	A
3	MID eANP VOL II, MET Table II-2	OYAA METAR and 30-hour TAF; OYHD, OYRN, OYSN, OYTZ METAR and 24-hour TAF	OYAA METAR and 30-hour TAF; OYHD, OYRN, OYSN, OYTZ METAR not available internationally	Dec 2019	Annual OPMET monitoring	S	All OPMET information is issued internally but not transmitted internationally due to war, considering a reconnection with another MET regional centre other than Jeddah. OPMET for OYAA is received at ROC Jeddah via NOC Oman as of 22 October 2023. ROC Jeddah plans to distribute this information to other ROCs for global availability via SADIS.	Yemen	Dec 2022	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
4	Annex 3 App 3 2.1.3 App 5 1.1.2 App 6 1.1.6 App 6 2.1.6	IWXXM translation	IWXXM is not implemented for OPMET Data Exchange	Sep 2025	The state provides no official corrective action plan	F	Corrective Action Plan has not been formally provided by the State	Yemen	Dec 2025	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Note:* Priority for action to remedy a deficiency is based on the following safety assessments:

'U' priority = Urgent requirements having a direct impact on safety and requiring immediate corrective actions.

Urgent requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is urgently required for air navigation safety.

'A' priority = Top priority requirements necessary for air navigation safety.

Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

'B' priority = Intermediate requirements necessary for air navigation regularity and efficiency.

Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.

Definition:

A deficiency is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation.

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(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

METEOROLOGY SUB-GROUP (MET SG)

TERMS OF REFERENCE

1. Terms of Reference

1.1 The terms of reference of the MET Sub-Group are:

a) ensure that the implementation of MET in the MID Region is coherent and compatible with developments in adjacent regions, and is in line with the Global Air Navigation Plan (GANP), the Aviation System Block Upgrades (ASBU) framework and the MID Region Air Navigation Strategy;

b) monitor the status of implementation of the MID Region MET-related ASBU threads/elements included in the MID Region Air Navigation Strategy as well as other required MET facilities and services, identify the associated difficulties and deficiencies and provide progress reports, as required;

c) keep under review the MID Region MET performance objectives/priorities, develop action plans to achieve the agreed performance targets and propose changes to the MID Region MET plans/priorities, through the MIDANPIRG as appropriate;

d) seek to achieve common understanding and support from all stakeholders involved in or affected by the MET developments/activities in the MID Region;

e) provide a platform for harmonization of developments and deployments in the MET domain;

f) monitor and review the latest MET developments that support Air Navigation and provide expert inputs for the implementation of the Air Navigation Systems related to MET based on ATM operational requirements;

g) provide regular progress reports to the MIDANPIRG concerning its work programme; and

h) review periodically its Terms of Reference and propose amendments, as necessary.

1.2 In order to meet the Terms of Reference, the MET Sub Group shall:

a) monitor the status of implementation of the required MET facilities and services in the MID Region;

b) provide necessary assistance and guidance to States to ensure harmonization and interoperability in line with the GANP, the MID ANP and ASBU framework;

c) provide necessary inputs to the MID Region Air Navigation Strategy through the monitoring of the agreed Key Performance Indicators related to MET;

d) identify and review those specific deficiencies and problems that constitute major obstacles to the provision of efficient MET services, and recommend necessary remedial actions;

e) keep under review the adequacy of ICAO SARPs requirements in the area of MET, taking into account, inter alia, changes in user requirements, the evolution of operational requirements and technological developments;

f) develop proposals for the updating of relevant ICAO documentation related to MET, including the amendment of relevant parts of the MID ANP, as deemed necessary;

g) monitor and review technical and operating developments in the area of MET and foster their implementation in the MID Region in a harmonized manner;

h) foster the integrated improvement of MET services through proper training and qualification of the MET personnel;

i) coordinate with relevant MIDANPIRG and RASG-MID Subsidiary bodies for issues with common interests; and

j) liaise with other States providing services and/or serve as inter-regional exchange of meteorological information for international civil aviation (e.g. SADIS (U.K.), VAAC Toulouse (France), TCAC New Delhi (India), Regional OPMET Centre Vienna (Austria)).

2. Composition

2.1 The Sub-Group is composed of:

a) MIDANPIRG Member States;

b) World Meteorological Organization (WMO) and other concerned International and Regional Organizations as observers; and

c) other representatives from provider States and Industry may be invited on ad hoc basis, as observers, when required.

3. Working Arrangements

3.1 The Chairperson, in close co-operation with the Secretary, shall make all necessary arrangements for the most efficient working of the Subgroup. The Subgroup shall at all times conduct its activities in the most efficient manner possible with a minimum of formality and paper work (paperless meetings). Permanent contact shall be maintained between the Chairperson, Secretary and Members of the Subgroup to advance the work. Best advantage should be taken of modern communications facilities, particularly video-conferencing (Virtual Meetings) and e-mails.

3.2 Face-to-face meetings will be conducted when it is necessary to do so.

ATTACHMENT A

ICAO MID

Thirteenth Meeting of the MIDANPIRG MET Sub-Group (MET SG/13)
(Cairo, Egypt, 16 - 17 December 2025)

List of Participants

State Org/Industries		Name	Title
Egypt	1.	Yasser Abdel Gwad El Sayed	Director of Cairo MWO
	2.	Adel Fouad Badwy El-Batanony	MET Inspector
	3.	Mohamed Essam Ahmed Elnayeb	ANS Inspector / Regulator
	4.	Nadia Abdel Fattah Elsebaey	Director of Int'l Authorities and Conferences Directorate - EMA
Kuwait	5.	Ameera F. Al-Azmi	Head of MET Aviation
Saudi Arabia	6.	Sami Mansour Alwafi	Manager of MET Service Aviation
	7.	Majed Khalid Mahjoub	Data Traffic Officer
	8.	Waleed Yusef Alsulaim	Head of Air Navigation Meteorology
Sudan	9.	Salma Mahgoub Hussein Ahmed	MET Inspector
	10.	Mohamed Eltayeb	ANRD Director
United States (FAA)	11.	Lynette Jamison (virtual)	Air Traffic Control Specialist
Yemen	12.	Fares Abdulmalek Saeed Gaizan	Director of MET Department
WMO	13.	Stephanie Wigniolle (virtual)	Scientific Officer | Services for Aviation | Services Department
SADIS-WAFS &VAAC	14.	Karen Shorey (virtual)	WAFS London, SADIS Maneger
VAAC Toulouse	15.	Sarah Puginier (virtual)	Météo-France ----- DSM/AERO/PREVI/D
ATO International FAA	16.	Kristle Newman (virtual)	
ICAO HQ, MID & EUR/NAT	17.	Jun Ryuzaki (virtual)	Technical Officer Meteorology Airport Operations and Infrastructure Section ANB – ICAO HQ
	18.	Mrs. Nino Gelovani	RO/MET – ICAO EUR/NAT
	19.	Mr. Radhouan Aissaoui	RO/IM – ICAO MID
	20.	Mrs. Manal Wissa	Programme Analysis Associate

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