

International Civil Aviation Organization

ICAO

WORKING PAPER (WP/03)

ICAO ASIA AND PACIFIC (APAC)
THIRTIETH MEETING OF THE METEOROLOGY
SUB-GROUP (MET SG/30)

Bangkok, Thailand, 20 - 24 July 2026

Agenda Item 2: Review outcomes of related meetings**REVIEW OUTCOMES FROM MET/IE WG/24**

(Presented by the Chairs of MET/IE WG)

SUMMARY

This paper presents a summary of the 24th meeting of the Meteorological Information Exchange Working Group (MET/IE WG/24), held 21 – 24 April 2026. It includes an updated action list, revised terms of reference and work plan of the MET/IE WG.

1. INTRODUCTION

1.1 Fiji Airports, in collaboration with the ICAO Asia and Pacific (APAC) Office, hosted the Twenty-Fourth Meeting of the Meteorological Information Exchange Working Group (MET/IE WG/24), in Nadi, Fiji, from 21 to 24 April 2026.

1.2 The Meeting included a conjoint session with the Thirteenth Meeting of the Aeronautical Communication Services Implementation Coordination Group (ACSICG/13) on 22 April 2025 to discuss agenda items of interest to both groups jointly.

1.3 In addition, Fiji Airports hosted the ICAO APAC Workshop: Supporting State Implementation of Meteorological Services, in conjunction with and preceding MET/IE WG/24, in Nadi, Fiji, on 20 April 2026 (further details: <https://www.icao.int/APAC/meetingdocs?fid=59672>). Topics of presentations in the workshop are provided in **Appendix C** to this paper for reference.

1.4 The meeting was attended by 65 participants from 19 States / Special Administrative Regions, and ICAO. The Meeting Chair was Mr Tim Hailes, National Manager, Transport Customer Engagement, Bureau of Meteorology, Australia. Mr Marco Mang-Hin Kok, Acting Senior Scientific Officer, Hong Kong Observatory, assisted him in the role of Vice Chair of the Meeting. The Secretary for the Meeting was Mr Peter Dunda, Regional Officer Aeronautical Meteorology and Environment, ICAO APAC Office.

1.5 Hosting the meeting and workshop in Nadi, Fiji enabled greater participation by Pacific States, providing targeted technical support and direct engagement between ICAO experts. It also strengthened regional collaboration by facilitating valuable exchanges between Pacific Island experts and ICAO experts, supporting the development of aeronautical communication services and meteorological information exchange.

1.6 The Meeting considered 29 Working Papers (WP), 5 Information Papers (IP), 1 Flimsy

(FL), and 2 Slide Presentations (SP), including 9 WPs, 3 IPs, and 2 SPs in the conjoint session.

2. DISCUSSION

2.1 A copy of the full meeting report, and all related meeting documentation, is available at the following website: <https://www.icao.int/APAC/meetingdocs?fid=59662>

2.2 The Meeting adopted the agenda as listed below:

- Agenda Item 1: Organisational Matters
- Agenda Item 2: Review of Follow-up Actions from Previous Meetings
- Agenda Item 3: Quality Control, Monitoring, and Management of Meteorological Information Exchange
- Agenda Item 4: Guidance Material Related to Meteorological Information Exchange
- Agenda Item 5: Meteorological Information Exchange in a SWIM Environment
- Agenda Item 6: Meteorological Information Exchange in IWXXM Form
- Agenda Item 7: Future Work Program and Terms of Reference
- Agenda Item 8: Next Meeting
- Agenda Item 9: Any Other Business

2.3 Agenda Items 5 & 6 were discussed in the Conjoint session with the ACSICG. The Chair suggested that future meetings consider adjusting the order of agenda items by discussing IWXXM-related matters before SWIM-related matters, to better reflect the logical progression toward the aviation SWIM environment.

Agenda Item 2: Review of follow-up from previous meetings

2.4 The Meeting reviewed the follow-up status of outcomes from MET/IE WG/24, including two Draft Conclusions, one Decision, and associated action items, as well as unresolved outcomes from earlier meetings. The meeting noted that the paper (WP/23) presented by the Secretariat did not provide a clear, current status of follow-up for the action items. The Secretariat advised that updates on the status of action items would be prepared during the meeting, drawing on feedback from participants involved in progressing the actions, together with further review of actions taken and discussions on the work of the group during the meeting.

2.5 Before the closing of the meeting, the meeting returned to review several proposed updates to the status of action items in the MET/IE WG List of Actions presented by the Secretariat before the closing of the meeting.

2.6 Noting that several action items related to ROBEX Handbook updates remained open from earlier meetings, the Chair observed that these could be unintentionally duplicated in subsequent update proposals. To address this, the Chair recommended that Secretariat papers on ROBEX Handbook updates routinely address all open ROBEX-related action items, in order to maintain currency, avoid duplication, and support more timely completion. The meeting noted this recommendation.

2.7 The meeting noted that Action Item 23/16, concerning automated notification of updates to the Online Register of APAC IWXXM Exchange Status, had been implemented. Although the notification process is not automated due to technical complexity, the meeting considered the current manual approach acceptable and agreed to close the action.

2.8 With respect to Action Item 23/18 on OPMET performance indices for ROCs, NOCs, and States/Administrations, the meeting noted that the action had been partially completed through the provision of State-level Performance Indices (PIs) by Thailand. However, further work is required to

examine the feasibility of developing Regional OPMET Centre (ROC) and National OPMET Centre (NOC) level PIs. The meeting therefore agreed to keep the action open and noted that the additional PIs, particularly ROC-level PIs, would be beneficial.

2.9 The meeting also noted concerns regarding several unresolved Secretariat action items. The capacity of the Secretariat was once again discussed and it was agreed that progress on these actions would continue to be monitored and reviewed at MET SG/30.

2.10 The updated MET/IE WG List of Actions is presented in **Appendix A**.

2.11 The meeting reviewed the MET SG/29 outcomes. The meeting noted the proposed updates were subject to confirmation by MET SG. The meeting proposed adjustments as necessary to ensure clarity and accuracy, which would be further reviewed and agreed upon by MET SG/30. It proposed that unresolved Decision 28-04, concerning the transfer of actions from the long-disbanded MET/S WG to the MET SG, be considered closed. This was noted as a practical reflection of the current arrangements, subject to confirmation from the Secretariat that relevant actions were already being addressed under the MET SG framework. The meeting discussed how best the MET/IE WG should track and monitor progress on MET SG- and APANPIRG-level outcomes, that would require action or attention by the MET/IE WG.

2.12 The meeting also discussed the outcomes from APANPIRG/36. The meeting noted that, while the target date for most Secretariat deliverables—particularly the issuance of State Letters in response to Conclusions—was February 2026, the Secretariat advised that this work was still in progress. The Secretariat informed the meeting that it was continuing efforts to ensure alignment across Conclusions, consistency with ongoing regional activities, and appropriate coordination with relevant partners, and that the State Letters would be issued as soon as practicable. APANPIRG/36 outcomes will be further discussed in MET SG/30 - WP/02.

Agenda Item 3: Quality Control, Monitoring, and Management of Meteorological Information Exchange

SIGMET Tests

2.13 The WS/LS SIGMET Test 2025 was conducted on 26 November 2025. 26 of 29 States (90 per cent) participated in the test, an improvement from 83% in 2024. Reception rates at APAC Regional OPMET Databanks (RODBs) were generally high, at around 90 per cent or above, although lower reception was recorded at WAFC London and none at WAFC Washington. Singapore advised that it has reached out to WAFC Washington, but it has not received a response. Singapore will reach out to the WAFC Washington prior to the future SIGMET tests.

2.14 14 States (48%) also issued LS SIGMET messages (IWXXM format), higher than 34% in 2024, indicating continued improvement in IWXXM dissemination. Noting limited SIGMET reception, particularly in IWXXM form, in the European (EUR) ROC reception data, the meeting requested the Secretariat to share the results with the ICAO EUR Region and seek assistance in identifying the cause.

2.15 The WC/LY and WV/LV SIGMET Tests 2025 were conducted on 12 and 19 November 2025 respectively. Of the 50 WC test bulletins expected, 38 were received, giving an overall availability of 73.1%, slightly lower than in 2024. Of the 55 WV test bulletins expected, 51 were received, giving an overall availability of 92.7%, which was an improvement compared with 2024.

2.16 Issues were noted regarding the incorrect use of message priority and WMO headings, incomplete dissemination to all RODBs and WAFCs, and limited readiness among some States to issue

SIGMET test messages in IWXXM form.

2.17 The meeting reiterated the importance of maintaining strong participation in the regional SIGMET tests, noting that SIGMET test summaries from RODB Brisbane and RODB Nadi were not received. The meeting also noted that follow-up on the proposed inclusion of the United States, WAFC Washington, as a monitoring partner in future SIGMET tests remained open (Action Item MET/IE WG/23-02). Furthermore, the meeting requested the SIGMET test focal point from Japan, in coordination with the Secretariat, to expand the SIGMET test procedures to include investigation of results where advisory messages were not received.

OPMET Monitoring

2.18 Singapore reported on rectification actions taken to address low OPMET Performance Indices (PIs) for METAR availability in the 2024 OPMET Performance Indices monitoring. The low availability occurred because two aerodromes issuing hourly METAR observations were indicated as half-hourly reporters in the ROBEX handbook. The OPMET monitoring in 2025 confirmed the issue was resolved after regrouping the IWXXM METAR bulletins. The meeting was invited to consider removing Singapore from the list of deficiencies to be considered.

2.19 Indonesia presented a paper on actions taken to improve its Performance Indices for following potential deficiencies identified in the 2024 OPMET Performance Indices monitoring. After BMKG and AirNav Indonesia operationalised a new integrated OPMET system, Indonesian aerodromes achieved performance indices above 95%. Noting these improvements, the meeting was invited to consider removing Indonesia from the list of potential MET deficiencies.

2.20 The Secretariat clarified that no States were currently listed with deficiencies related to the dissemination of MET information in IWXXM form. However, the meeting noted that the MET SG had reviewed recent SIGMET test and OPMET monitoring results and identified cases where IWXXM-formatted messages were not available. In this context, and with reference to MET SG/29 Conclusions 29/06 and 29/07, the MET SG has recommended that the ICAO APAC Office review the information provided on the lack of IWXXM implementation for SIGMET and advisory issuance when assessing potential deficiencies.

2.21 The annual Asia-Pacific OPMET monitoring was conducted in November 2025. Monitoring covered both TAC and IWXXM data from five RODBs. Availability and timeliness calculations were based on the MET SG approved performance indices. The results were prepared by RODB Bangkok and are based on aerodromes listed in the appendices of the ROBEX Handbook nineteenth edition (February 2026).

2.22 Appendices in MET/IE WG/24 - WP/26 detail performance indices measured per aerodrome for TAC and IWXXM. It was clarified that, for November 2025, the IWXXM 2025-2 Availability Index and specific statistics were successfully processed using uploaded data; however, the Timeliness Index for IWXXM 2025-2 could not be calculated at that time.

2.23 The meeting also noted the positive development with United States APAC OPMET locations now included in the monitoring. Noting the low performance indices related to OPMET bulletins from ROC KWBC, the meeting requested IROG Tokyo to coordinate with its corresponding NAM Region IROG to investigate and resolve the issue.

2.24 Kiribati raised concerns regarding a 0.00 availability for METAR and SPECI from NGTA and PLCH. It was clarified that regular METAR and SPECI are provided; however, a communication problem was identified in transmitting the reports to ROC Nadi via the Fiji Meteorological Service. The reports will be emailed directly to ROC Nadi until the issue is fully

resolved.

2.25 Noting the low performance indices related to RODB Nadi, the meeting conducted a workshop session before the end of the meeting to assist the States concerned with interpreting the results, investigating the issues, and identifying corrective actions. A summary of the key outcomes is provided in **Appendix D** to this paper as a reference.

2.26 To support States' effective use of the monitoring results, the meeting requested Thailand to separate AOP and non-AOP OPMET State Performance Indices in future reporting results. The meeting also noted that the monitoring results suggested that timeliness and availability indices appeared to remain coupled and may not yet be calculated independently, as requested in MET/IE WG/23 Action Item 23-05.

2.27 The meeting further noted that the OPMET monitoring results and the SIGMET test results showed that States were actively investigating identified issues. The meeting encouraged States to continue reviewing the results and to seek clarification where needed.

2.28 In response to MET SG/29 Action 21, New Zealand, Australia, and the United States investigated appropriate methods for disseminating VONA messages from the APAC Region to ensure global accessibility. Recent New Zealand tests successfully distributed traditional alphanumeric code VONA messages to APAC RODBs, routed to the EUR Region, and made available on SADIS. Further testing for IWXXM-form VONA and routing to the Washington Inter-regional OPMET Gateway and WIFS was planned.

2.29 In considering how long VONA should be retained by RODBs, the meeting discussed whether VONA, which may be issued only very infrequently but remain valid until a subsequent update, should be retained for extended periods. The meeting noted that RODBs could retain VONA for about three months. Further, the same VONA WMO header may be used for multiple volcanoes. The meeting requested New Zealand to further investigate the available options for VONA retention and distribution and to report the outcomes to the MET SG.

2.30 Fiji presented a paper proposing updates to the ROBEX Handbook to align published meteorological station reporting hours with actual operations. This review revealed a discrepancy where Tongan aerodromes only provide part-time METARs despite being listed as 24-hour, resulting in Fiji to regularly cancel its corresponding 24-hour TAFs. To address these issues, the Chair suggested moving the affected Tongan locations to bulletins that reflect their non-continuous service availability. The Chair also recommended that ROC Nadi and Tonga review and potentially shorten TAF validity periods to match actual operational delivery and avoid daily cancellations.

2.31 Fiji presented on benefits of a work visit by Aeronautical Radio of Thailand LTD to Fiji Airports, which supported quality management, performance monitoring, and the transition to IWXXM. Additionally, Fiji is currently implementing its newly procured UBIMEX/CRONOS system, which will support IWXXM-format meteorological information exchange.

Backup Procedures

2.32 Thailand and Singapore presented outcomes of their Inter-Regional OPMET Gateway (IROG) back-up exercises conducted in September 2025 which demonstrated that the two IROGs successfully backup one another and exchanged 100% of the required data.

2.33 The meeting recalled a previous agreed action (Action Item MET/IE WG/23-04) to investigate the impact of an IROG outage at each of the IROGs, including Brisbane, Nadi and Tokyo, and the importance of implementing back-up arrangements.

Agenda Item 4: Guidance material related to meteorological information exchange

2.34 The ROBEX Handbook was last updated to the Nineteenth Edition (February 2026), based on the outcomes from the MET SG/29. The Secretariat confirmed that the nineteenth edition of the ROBEX Handbook would be published shortly on the ICAO APAC website to improve accessibility for States. This version is now published.

2.35 The Meeting reviewed and considered further updates as necessary. The meeting noted that any additional updates would be incorporated into the Twentieth Edition, subject to review and endorsement by the MET SG. The meeting was also informed of updates proposed by States, including focal point information for Hong Kong China, Fiji, Indonesia, Japan, New Zealand, Papua New Guinea, and Republic of Korea, and amendments to specified bulletins.

2.36 It is also noted that the current approach to OPMET monitoring is based on the latest published ROBEX Handbook, supplemented by proposed updates received between publications, to ensure monitoring reflects the most current known exchange arrangements.

2.37 Following a related discussion on the notification of changes to OPMET bulletins (issuance of METNO), the meeting requested specific actions to improve the communication of such changes with other regions, similar to what Europe has recently implemented.

2.38 New Zealand proposed to add a new Appendix to the ROBEX Handbook to list VONA headers in use. The meeting discussed whether the proposed list of VONA headers should be included in the ROBEX Handbook, the SIGMET Guide, or another location, such as a stand-alone resource. The meeting requested New Zealand to further investigate the most appropriate location for the proposed list of VONA headers, and requested the Secretariat to invite States with designated SVOs to provide additional information on VONA headers, as available.

2.39 The meeting reviewed proposed ROBEX Handbook updates from Thailand aimed at refining of the performance indices (PIs) used in OPMET monitoring, including clarification of timeliness definitions, and the use of the latest ROBEX data provided by the Secretariat as the benchmark for monitoring. The meeting requested the Secretariat to submit the proposed amendments to the MET SG for review and possible endorsement, pending a resolution by the Chair with the European Region regarding a time discrepancy of six-minute versus five-minute criteria. Additionally, the meeting agreed to delete a reference to "no AMD observations" in the next handbook update to align with current ICAO provisions.

2.40 The meeting agreed to the proposed ROBEX Handbook updates from New Zealand to include half-hourly METAR AUTO for Ōhakea Airport, and corresponding updates made to the FTNZ33 bulletin and related bulletins for Dunedin and Hamilton airports. The meeting requested the Secretariat to include them in the next ROBEX Handbook update for review and endorsement by MET SG/30.

2.41 Indonesia proposed updates to the ROBEX Handbook to consolidate the Jakarta ROC addressing to a single AFTN address (WIIYMYX), and adjust TAF validity periods for WABB and WARR airports. The meeting requested the Secretariat to include them in the next handbook update for review at MET SG/30. Additionally, recognising the operational impact of the Jakarta ROC address change, the meeting requested the Secretariat to work with ROC Jakarta to disseminate this address change to ensure that all relevant stakeholders are informed.

2.42 Hong Kong, China presented a prototype online spreadsheet to host the METAR and TAF bulletin tables from Appendices A and B of the ROBEX Handbook. This tool aims to provide

early visibility of pending updates submitted by States/Administrations while official, months-long publication processes on the e-documents website are completed. The meeting expressed general support for the proposal and requested Hong Kong, China to further develop the concept in coordination with the Secretariat, including change-management aspects, and to present the refined proposal to MET SG/30.

**Agenda Item 5: Meteorological Information Exchange in a SWIM Environment
(conjoint session with ACSICG/13)**

2.43 Australia provided an update on guidance documents endorsed by 6th Meeting of ICAO Meteorological Panel (METP/6) supporting the implementation of meteorological information exchange in a SWIM environment, including a new Guidelines for MET-SWIM Implementation, an updated MET-SWIM Roadmap, and the deprecation of the MET-SWIM Plan. The METP Working Group on Meteorological Information Exchange (WG-MIE) developed the Guidelines for MET-SWIM Implementation to assist information service providers and consumers in implementing MET-specific information services. It supports the provision of meteorological information through information services, which became a Recommended Practice under Annex 3 Amendment 81 in November 2024. The meeting noted that the MET-SWIM Roadmap indicates a transition to information services as the primary form of MET exchange during the period 2031 to 2036. This aligns with the proposed Amendment 83 to Annex 3 (applicable November 2030), which would remove TAC as a standard format requirement for international MET information exchange.

2.44 The SWIM TF Task Lead from Hong Kong, China presented a paper providing guidance material to assist APANPIRG Subsidiary Groups in reviewing and refining the APAC Common SWIM Information Services list, following its initial adoption by APANPIRG/36 in November 2025. The guidance outlines the specific technical and operational details required for each service entry. The meeting was invited to review the MET-specific entries. During the discussion, the meeting suggested that the SWIM TF may wish to consider addressing possible options for push “pub-sub” services and on-demand “request/reply” services as part of future refinement of the document. To support continued review and refinement of the MET-related entries, the meeting agreed to consider the document as a standing agenda item for future MET/IE WG meetings.

Agenda Item 6: Meteorological Information Exchange in IWXXM Form (conjoint session with ACSICG/13)

2.45 Hong Kong, China provided an update on the latest development for the IWXXM. The paper advised that IWXXM 2025-2 was published in November 2025 to align with Annex 3 Amendment 82 and PANS-MET. It recalled the WG-MIE decision that, following release of IWXXM 2025-2, only IWXXM 2023-1 and later versions should be used for operational exchange, and that future versions should be managed as independent packages. The meeting noted that the METP decision represents a recommendation to regions and States and does not have the status of an international mandate. Within States, responsibility for compliance with ICAO IWXXM version recommendations rests with designated regulators. While Annex 3 requires States to disseminate MET information in IWXXM form, it does not currently specify IWXXM versions, whereas IWXXM implementation guidance provides version compatibility with ICAO Annex 3 Amendments.

2.46 Acknowledging concerns raised by Tonga regarding the resource and capacity constraints faced by Pacific Small Island Developing States (PSIDS) in sustaining IWXXM compliance, the meeting requested the Secretariat and Tonga to coordinate an assessment of IWXXM implementation gaps and related assistance needs for Tonga and other PSIDS.

2.47 To address the issues raised concerning IWXXM version compatibility, the meeting formulated a Draft Conclusion:

Draft Conclusion MET/IE WG/24-01 – IWXXM VERSION COMPATIBILITY	
What: That, States are requested to ensure that MET service providers, air navigation service providers (ANSPs), airlines and other end users do the following: a) make the necessary system upgrades to support the IWXXM version, which complies with the latest amendment to Annex 3 as stated in the IWXXM compatibility table*; and b) prepare for future system upgrades to support future IWXXM versions driven by further amendments to Annex 3. *Link to the IWXXM capability table: https://wmo.int/iwxxm	Expected impact: ☐ Political / Global ☐ Inter -Regional ☒ Economic ☐ Environmental ☒ Ops/Technical
Why: Many States are exchanging IWXXM OPMET data in older versions of IWXXM which are no longer compliant with Amendments 82 to ICAO Annex 3. To avoid the potential impact on operations due to IWXXM version compatibility issues, States must upgrade the systems for generating, exchanging and consuming IWXXM reports to support the IWXXM version that complies with the latest amendment to Annex 3.	Follow-up: ☒ Required from States
When: As soon as practicable	Status: Draft to be adopted by MET SG
Who: ☒ Sub Groups ☐ RASG-APAC ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other: XXXX	

2.48 Australia and Hong Kong, China provided a review of the status of IWXXM-over-AMHS exchange capabilities in the APAC Region using the Online Register of APAC IWXXM Exchange Status. As of April 2026, regional implementation remains uneven: only 10 of 17 ROCs routinely disseminate IWXXM message, most NOCs cannot receive it, and several States lack the AMHS capabilities (FTBP and IHE) required for international transmission. This lack of communication infrastructure delays the global transition from TAC, which is proposed to cease international distribution from 2030. The meeting urged States to expedite AMHS upgrades and provide updates to the register. The meeting formulated a Draft Conclusion to address the above gaps:

Draft Conclusion MET/IE WG/24-02 – DISSEMINATION OF IWXXM	
What: That: a) APAC ROCs and IROGs, namely Bangkok, Brisbane, Colombo, Delhi, Karachi, Kolkata, Mumbai, Nadi, and Tokyo, expedite the implementation of network circuits and communication services necessary to enable the required regional global dissemination of meteorological information in the ICAO Meteorological Information Exchange Model (IWXXM) form including support for the Air Traffic Services Message Handling System (AMHS) with File Transfer Body Part (FTBP) and Interpersonal Message Heading Extension (IHE), and backup paths for redundancy purposes; and b) To support intra-regional exchange of IWXXM, the IROGs establish operational IWXXM exchange with IROGs in the ICAO AFI, MID, NAM and SAM Regions.	Expected impact: ☐ Political / Global ☒ Inter -Regional ☒ Economic ☐ Environmental ☒ Ops/Technical
Why: Following the provisions of ICAO Annex 3– Meteorological Service for International Air Navigation (applicable 2020), States shall ensure that certain meteorological information is disseminated to users in the IWXXM form. However, without suitable configured communication networks to	Follow-up: ☒ Required from States

support the necessary intra- and inter-regional exchange of IWXXM messages, global dissemination of meteorological information in IWXXM form will not be possible. Consequently, the migration of user and supplier systems from meteorological information in the traditional alphanumeric code (TAC) form to the IWXXM form, as required in Amendment 79 to Annex 3 (applicable Nov 2020), will remain inhibited.	
When: As soon as practicable	Status: Draft to be adopted by MET SG
Who: ☒ Sub Groups ☐ RASG-APAC ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other: XXXX	

2.49 The Secretariat for ACSICS provided an update on the APAC region's IWXXM implementation readiness. To streamline monitoring, the Secretariat consolidated various information sources as of March 2026 into a new tracking table. The MET/IE WG Chair clarified AMHS message size limits, explaining that the 4MB maximum limit (including FTBP) is sourced from the ICAO IWXXM Implementation Guidelines - October 2023. Based on this additional information, the ACSICG/13 Meeting reviewed and updated the new tracking table.

2.50 The meeting reviewed Indonesia's progress in upgrading to IWXXM 2025-2 and establishing a successful data routing and validation arrangement with the Hong Kong Observatory to overcome local AMHS limitations. While Indonesia requested removal from the list of States with potential IWXXM deficiencies, the Secretariat reiterated the clarification above on assessing potential deficiencies related to the dissemination of OPMET in IWXXM form.

2.51 Republic of Korea's reported on its progress on IWXXM implementation, highlighting its operational use of IWXXM 2023-1 since August 2025 following validation using Hong Kong Observatory's tool, and successful testing on IWXXM message exchange over AMHS with China and Japan. The Republic of Korea plans to upgrade to IWXXM 2025-2 in 2026, expand IWXXM exchange with other States and transition to a fully operational AMHS system by 2028.

2.52 Indonesia provided an update on its progress in upgrading its AMHS to support ROC Jakarta in exchanging IWXXM data. To overcome current AMHS size limitations preventing the dissemination of its IWXXM 2025-2 data, Indonesia is upgrading its AMHS system to support files up to 4.0 MB by June 2026, with joint AirNav Indonesia and BMKG testing planned for late 2026. During the OPMET monitoring period in November 2025, Indonesia successfully mitigated this limitation by routing data through the Hong Kong Observatory's AMHS network.

2.53 Fiji reported that its new AMHS and IWXXM system is undergoing commissioning for a planned May 2026 launch. The upgraded system supports file attachments up to 4.0 MB (using FTBP), which will enable the Nadi RODB to exchange IWXXM bulletins with other RODBs.

2.54 Australia presented a paper on the secure exchange of IWXXM data when AMHS/FTBP is unavailable. To mitigate these gaps, the ICAO METP WG-MIE has endorsed the interim use of alternative, mutually agreed secure communication protocols between NOCs and ROCs, which will be reflected in a future revision of the IWXXM Guidelines. During discussions on how to assist States lacking AMHS/FTBP, the meeting reviewed the existing ROBEX Scheme and discussed the need to consider alternative pathways to mitigate operational risks. The meeting agreed to recruit a MET expert to support the ACSICG small task group in investigating alternative exchange pathways within the ROBEX Scheme.

2.55 Hong Kong, China highlighted that the planned international cessation of Traditional Alphanumeric Code (TAC) by November 2030 poses challenges for legacy systems like VOLMET and D-VOLMET, which cannot process IWXXM formatted data. Noting the current lack of ICAO guidance on adapting these broadcasting systems, the meeting discussed urging ICAO to develop relevant guidance to support the transition and avoid disruption to existing aeronautical broadcasting services. To clarify regional needs, the meeting requested the Secretariat to coordinate with IATA to consult airlines on the need to continue providing HF VOLMET broadcasts containing TAC-formatted MET information beyond 2030.

2.56 The AMHS to SWIM Transition Correspondence Group (ATSCG) presented a paper introducing a four-phase AMHS-to-SWIM transition model and raising key clarifications for MET/IE WG regarding (i) the need for IWXXM bridging between AMHS and SWIM; (ii) differences between IWXXM in AMHS and IWXXM in SWIM; and (iii) timeline and transition planning for MET Messages. MET/IE WG clarified that while AMHS exchanges bulletins, SWIM will exchange individual messages, and both systems are expected to run in parallel for at least a decade. Regarding communication channels, future MET/SWIM services will primarily use the public internet rather than the CRV to accommodate a very large number of anticipated users, though CRV remains an option by mutual agreement. Additionally, following METP WG-MIE's Decision MIE/13-04: Enabling IWXXM Exchange via Secure Communications, the meeting initiated an action item to seek further clarification on the communication medium suggested to be used for the secure transfer of IWXXM and associated guidelines. Noting that the regional and global availability of IWXXM remains insufficient for many users despite a AMHS readiness mandate in 2020, the meeting urged States to expedite their implementation for the aviation system to realise the benefits of digital MET information exchange.

Agenda Item 7: Future Work Program and Terms of Reference

2.57 The MET/IE WG members present in the meeting reviewed and proposed updates to the MET/IE WG Terms of Reference and Work Program. The proposed updates are presented in **Appendix B** to this paper. The meeting noted India's perspective on key priorities for MET/IE WG's future work.

Agenda Item 8: Next Meeting

2.58 The Chairs and Secretariat would coordinate with the ACSICG to plan the conduct of MET/IE WG/25 in conjunction with ACSICG/14 (ACSICG/14 was tentatively scheduled for 21 to 23 April 2027). The respective Chairs and Secretariat would jointly develop the programme and agenda to optimise the outcomes of the joint sessions. The meeting felt it would be highly beneficial to meet with the ACSICG in support of enabling IWXXM exchange over the AFS. Following the successful participation of Pacific States at this meeting, the meeting strongly encouraged ICAO to consider holding future meetings in the Pacific, including MET/IE WG/26 (2028).

Agenda Item 9: Any Other Business

2.59 Tonga requested that ICAO consider coordinating with the Pacific Meteorological Council (PMC) Pacific Islands Aviation Weather Services (PIAWS) Panel on assistance to support the implementation of current and future ICAO Annex 3 requirements and the activities of the PIAWS Panel.

2.60 Pacific States advised that the funding from the Weather Ready Pacific Programme (WRPP) enabled greater participation in this meeting and encouraged similar funding resources to be made available to support Pacific States attending subsequent MET/IE WG and similar ICAO meetings in the future. Further, funding to support hosting such meetings in the Pacific was identified as a key

enabler. The meeting participants, including ICAO, expressed their appreciation to Fiji for successfully hosting the meeting.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) consider the proposed Draft Conclusions in para. 2.47, and 2.48; and
- c) propose further updates, as necessary, to the Action List in **Appendix A**; and Terms of Reference and Work Programme of MET/IE WG in **Appendix B**.

APPENDIX A — List of Actions (MET/IE WG)

MET/IE WG/24 – List of Actions

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY	STATUS/REMARKS
MET/IE WG/24-01	Review Agenda Sequencing for SWIM and IWXXM Items Review and consider adjusting the order of SWIM- and IWXXM-related agenda items for future meetings to better reflect the logical progression toward the aviation SWIM environment. [Ref: MET/IE WG/24 Report, para. 1.4.]	Prior to finalization of the provisional agenda for the next MET/IE WG meeting	MET/IE WG Chair, in coordination with the ICAO Secretariat	
MET/IE WG/24-02	Update of ROBEX Handbook and Alignment of METAR/TAF Services a) review and update Tongan meteorological station reporting hours and ROBEX focal point information for Fiji to ensure consistency between published information in the ROBEX Handbook and actual operations; b) review the current allocation of Tongan aerodromes in ROBEX bulletins and take action, as appropriate, to relocate stations to bulletins that reflect non-continuous METAR availability; c) review TAF validity periods for affected aerodromes, with consideration of issuing shorter duration TAFs to better align with actual METAR availability and avoid routine cancellations; and d) incorporate the updated information, including new bulletins (SAPS34 NFFN and FTPS34 NFFN) and revised station details, into a ROBEX Handbook update proposal. [Ref: MET/IE WG/24 Report, para. 3.4.-3.7.]	As soon as practicable, and in time for the next ROBEX Handbook update cycle (including implementation from AIRAC 11 June 2026, where applicable)	Fiji, Tonga, and the ICAO Secretariat	
MET/IE WG/24-03	Investigation of Limited IWXXM SIGMET Reception in EUR Region Share the results of the WS/LS SIGMET Test 2025 with the ICAO EUR Region and seek assistance to identify the cause of the limited reception of SIGMET test messages, particularly in IWXXM form, indicated in the EUR ROC reception data. [Ref: MET/IE WG/24 Report, para. 3.18.-3.21.]	As soon as practicable	ICAO Secretariat	
MET/IE WG/24-04	Investigation of Non-Receipt of Advisory Test Messages in SIGMET Tests Expand the SIGMET test procedures to include investigation of test results indicating that TC and VA advisory messages were not received, including cases where advisory test messages were not issued in IWXXM form and include such results in future SIGMET test reports. [Ref: MET/IE WG/24 Report, para. 3.23.-3.28.]	Before the next SIGMET test cycle	SIGMET test focal point from Japan, in coordination with the ICAO Secretariat	
MET/IE WG/24-05	Update of ROBEX Handbook for Singapore METAR Reporting incorporate the updated ROBEX bulletin arrangements and reporting characteristics for Singapore aerodromes (WSSL and WSAP), including their reallocation from SAMS31 to SAMS38 and corresponding IWXXM bulletin updates, into the ROBEX Handbook (20th Edition). [Ref: MET/IE WG/24 Report, para. 3.29.-3.31. and 3.34.]	As soon as practicable, and in time for publication of the ROBEX Handbook 20th Edition	ICAO Secretariat	
MET/IE WG/24-06	Investigation of Low OPMET Performance Indices for ROC KWBC Coordinate with the corresponding NAM Region IROG to investigate the low performance indices related to OPMET bulletins from ROC KWBC and identify measures to resolve the issue. [Ref: MET/IE WG/24 Report, para. 3.44. to 3.45.]	As soon as practicable	IROG Tokyo, in coordination with the corresponding NAM Region IROG	
MET/IE WG/24-07	Separation of AOP and Non-AOP OPMET Results for States' Performance indices in Future Monitoring Separate AOP and non-AOP OPMET State Performance Indices results in future Asia/Pacific OPMET monitoring reports to support clearer interpretation and use of the results by States. [Ref: MET/IE WG/24 Report, para. 3.39. to 3.48.]	For the next Asia/Pacific OPMET monitoring cycle	Thailand (RODB Bangkok)	

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ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY	STATUS/REMARKS
MET/IE WG/24-08	Further Investigation of VONA Retention and Distribution Investigate options for the retention and distribution of VONA, including appropriate retention periods, access via RODBs, and report the findings to the MET SG for review and further consideration. [Ref: MET/IE WG/24 Report, para. 3.51. to 3.57.]	For the next MET SG meeting	New Zealand	
MET/IE WG/24-09	Collection of global focal point email contacts for OPMET bulletin notifications Seek email contact details from each ICAO region for key focal points who wish to receive notifications of changes to APAC OPMET bulletins. [Ref: MET/IE WG/24 Report, para. 4.6.]	To be confirmed	ICAO Secretariat	
MET/IE WG/24-10	Proposal to amend METNO procedure for OPMET bulletin notifications Propose changes to the METNO procedure to include email notifications to key OPMET exchange focal points in all ICAO regions. [Ref: MET/IE WG/24 Report, para. 4.6.]	To be confirmed	MET/IE WG Chairs	
MET/IE WG/24-11	Identification of optimal location for VONA header list Further investigate the most appropriate location for the proposed list of VONA headers, and add a link to the location in SIGMET Guide when the location is identified. [Ref: MET/IE WG/24 Report, para. 4.7. to 4.12.]	To be confirmed	New Zealand	
MET/IE WG/24-12	Collection of VONA header information from States Invite States with designated SVOs, via State letter, to provide available information on VONA headers for inclusion in the proposed list. [Ref: MET/IE WG/24 Report, para. 4.7. to 4.12.]	To be confirmed	ICAO Secretariat, in coordination with New Zealand	
MET/IE WG/24-13	Submission of ROBEX Handbook PI amendments to MET SG Submit the proposed amendments to the ROBEX Handbook related to OPMET performance indices to the MET SG for review and possible endorsement, subject to satisfactory clarification of the OPMET monitoring time discrepancy between the APAC and EUR Regions. [Ref: MET/IE WG/24 Report, para. 4.13. to 4.16.]	For consideration at MET SG/30	ICAO Secretariat, MET/IE WG Chair	
MET/IE WG/24-14	Removal of “AMD observations” reference from ROBEX Handbook Include the deletion of the “no AMD observations” indication for METAR in the next ROBEX Handbook update proposal for review by the MET SG. [Ref: MET/IE WG/24 Report, para. 4.17.]	For consideration at MET SG/30	ICAO Secretariat	
MET/IE WG/24-15	Inclusion of Ōhakea METAR AUTO bulletin updates in ROBEX Handbook Include the proposed updates to Appendix A, Table A, of the ROBEX Handbook for the SANZ33 and FTNZ33 bulletins in the next ROBEX Handbook update for review and endorsement by MET SG/30. [Ref: MET/IE WG/24 Report, para. 4.18. to 4.21.]	For consideration at MET SG/30	ICAO Secretariat	
MET/IE WG/24-16	Inclusion of Indonesia ROBEX Handbook amendments Include the proposed amendments relating to Jakarta ROC addressing, TAF validity periods, and the ROBEX focal point for Indonesia in the next ROBEX Handbook update for review at MET SG/30. [Ref: MET/IE WG/24 Report, para. 4.22. to 4.25.]	For consideration at MET SG/30	ICAO Secretariat	

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ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY	STATUS/REMARKS
MET/IE WG/24-17	Notification of updated ROC Jakarta AFTN address Inform relevant stakeholders, including other ROCs and operational units, of the updated AFTN address for ROC Jakarta to support continued exchange of MET information. [Ref: MET/IE WG/24 Report, para. 4.26.]	To be confirmed	ICAO Secretariat and Indonesia	
MET/IE WG/24-18	Further development of online METAR and TAF bulletin tables Further develop the proposed online spreadsheet for METAR and TAF bulletin tables, in coordination with the Secretariat, with particular focus on change-management considerations, and present the refined proposal to MET SG/30 for review and appropriate action. [Ref: MET/IE WG/24 Report, para. 4.27. to 4.30.]	For consideration at MET SG/30	Hong Kong, China (in coordination with the ICAO Secretariat)	
MET/IE WG/24-19	Continued Review of APAC Common SWIM Information Services Guidance Include the review of the APAC Common SWIM Information Services document as a standing agenda item at future MET/IE WG meetings. [Ref: MET/IE WG/24 Report, para. 5.6. to 5.10.]	Prior to next MET/IE WG meeting	ICAO Secretariat and MET/IE WG Chairs	
MET/IE WG/24-20	Assessment of IWXXM Implementation Gaps and Assistance Needs for PSIDS Coordinate an assessment of IWXXM implementation gaps and related assistance needs for Tonga and other PSIDS to support sustainable compliance with the IWXXM SARPs, taking into account capacity and resource constraints. [Ref: MET/IE WG/24 Report, para. 6.5.]	For consideration by the next MET Sub-Group meeting	ICAO Secretariat, in coordination with Tonga	
MET/IE WG/24-21	Support to ACSICG Task Group on Alternative Pathways for IWXXM Exchange Coordinate the recruitment of a suitable MET expert/s to support the ACSICG small task group in investigating the feasibility of alternative pathways for MET information exchange within the context of the ROBEX Scheme, including options to improve redundancy and mitigate risks where AMHS/FTBP is not available. [Ref: MET/IE WG/24 Report, para. 6.34. to 6.35.]	As soon as practicable	MET/IE WG Chair and ICAO Secretariat	
MET/IE WG/24-22	Consultation with Airlines on Post-2030 HF VOLMET Requirements Seek advice from airlines, through coordination with IATA, on expectations regarding the need to continue providing HF VOLMET services containing TAC-formatted MET information beyond 2030, to inform consideration of transitional arrangements for the cessation of TAC. [Ref: MET/IE WG/24 Report, para. 6.36. to 6.40.]	Before the next meeting of the MET Sub-Group	ICAO Secretariat	

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Note: Action Items previously reported as completed, closed, or superseded have been removed from the list.

MET/IE WG/23 – List of Actions

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY	STATUS/REMARKS
MET/IE WG/23 01	<u>Updating MET-related regional guidance documents</u> Document a process to clarify how States should initiate required changes to all the relevant (MET-related) regional guidance documents. [Ref: para. 2.4.]	tbc	Secretariat, with assistance from the Chair and New Zealand	COMPLETED [Decision MET SG/29/09, MET SG Action 29/05 and 29/06]
MET/IE WG/23 02	<u>Including WIFS in the annual SIGMET tests</u> Respond to the action item (MET SG/28 28/06: Consider the feasibility of including WIFS in the annual SIGMET tests) for consideration by MET SG/29 [Ref: para. 2.6.]	MET SG/29	SIGMET test focal points, Japan and Singapore	
MET/IE WG/23 03	<u>Including IWXXM results in the SIGMET test reports</u> Include the IWXXM results in future SIGMET test reports. [Ref: para. 3.2.]	MET/IE WG/24	Singapore	
MET/IE WG/23 04	<u>Investigating IROG back-up arrangements</u> Investigate the impact of an IROG outage at each of the IROGs, including Brisbane, Nadi and Tokyo, and the importance of implementing back-up arrangements. [Ref: para. 3.9.]	tbc	IROG provider States	
MET/IE WG/23 05	<u>Increasing IWXXM-specific (Availability and Timeliness) PI independence</u> Review the IWXXM-specific Performance Indices (PI) algorithms to increase the independence of the Availability and Timeliness results. [Ref: para. 3.13.]	tbc	Thailand	
MET/IE WG/23 06	<u>Identifying non-operational ICAO APAC OPMET website documents</u> Ensure historic OPMET-related documents (e.g., FASID Tables) on the ICAO APAC Office website are clearly identified as obsolete and non-operational. [Ref: para. 4.3.]	tbc	Secretariat	IN PROGRESS
MET/IE WG/23 07	<u>Managing ICAO APAC web documents archive</u> Prepare a Draft Conclusion proposing that ICAO take appropriate action to manage the archive of obsolete and historic planning and guidance documents on its website, including those related to MET and other AN fields. [Ref: para. 4.4.]	tbc	tbc	COMPLETED [Draft Conclusion MET SG/29/02 => Conclusion APANPIRG/36/15]
MET/IE WG/23 08	<u>Submitting ROBEX Handbook update proposals</u> Invite the USA to submit the ROBEX Handbook update proposals for its aerodromes in the APAC Region. [Ref: para. 4.5.]	tbc	Secretariat	COMPLETED [Ref: ROBEX HB, 19 TH Ed]
MET/IE WG/23 09	<u>Proposing ROBEX Focal Point updates</u> Propose necessary updates to the ROBEX Handbook, Appendix I, Focal Point information. [Ref: para. 4.6.]	tbc	Secretariat, Republic of Korea, Hong Kong China, Fiji, Japan, Malaysia, and Singapore	COMPLETED [Ref: ROBEX HB, 18 TH Ed]
MET/IE WG/23 10	<u>Completing previous ROBEX Handbook update proposals</u> Prepare previously proposed but uncompleted updates to the ROBEX Handbook for review and possible adoption by MET SG/29. [Ref: para. 4.8.]	MET SG/29	Secretariat	IN PROGRESS
MET/IE WG/23 11	<u>Publishing updates in the ROBEX Handbook, 18th Edition</u> Publish the updates presented in MET/IE WG/23, WP/11, Appendix A, in the ROBEX Handbook, 18th Edition, dated March 2025, and include the available focal point updates in the 18th Edition of the ROBEX Handbook. [Ref: para. 4.11.]	tbc	Secretariat	COMPLETED [Ref: ROBEX HB, 18 TH Ed]
MET/IE WG/23 12	<u>Publishing updates in the ROBEX Handbook, 18th Edition</u> Publish the updates presented in MET/IE WG/23, WP/17, Appendices A and B, in the ROBEX Handbook, 18th Edition, dated March 2025. [Ref: para. 4.14.]	tbc	Secretariat	COMPLETED [Ref: ROBEX HB, 18 TH Ed]

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ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY	STATUS/REMARKS
MET/IE WG/23 13	<u>Updating the ICAO Asia/Pacific Regional SIGMET Guide, Appendix E</u> Ensure the proposed updates in MET/IE WG/23, WP/12, concerning WMO headers for Tropical Cyclone Advisories from TCAC Darwin, are included in the next revision of the ICAO Asia/Pacific Regional SIGMET Guide, Appendix E. [Ref: para. 4.16.]	tbc	Secretariat, in collaboration with the ad hoc group on the SIGMET Guide	COMPLETED [Ref: SIGMET Guide, 12 TH Ed]
MET/IE WG/23 14	<u>Publishing updates to the IWXXM Implementation FAQs</u> Publish the updated version of the "IWXXM Implementation in APAC Region – FAQs" on the ICAO APAC Office website (States are invited to provide feedback on the amendments within a two-week period, which will be reviewed and addressed by Australia and Hong Kong China before the amendments are published. Any contentious issues will be deferred for further review at MET SG/29). [Ref: para. 4.18.]	MET SG/29	Secretariat, Australia and Hong Kong China	COMPLETED [Ref: IWXXM FAQs, 3 rd Ed]
MET/IE WG/23 15	<u>Proposing updates to the APAC Common SWIM Information Services list</u> Propose updates to the draft list of business functionalities for APAC Common SWIM Information Services to reflect outcomes from the recent METP/6 meeting, the information service priorities, and include consistent use of the term "information service" for further review and consideration by the SWIM TF. [Ref: para. 5.7.]	SWIM TF/10	tbc	
MET/IE WG/23 16	<u>Automating notification of updates to the APAC IWXXM Exchange Status</u> Develop the <i>Online Register of APAC IWXXM Exchange Status</i> , accessible on the ICAO APAC e-docs webpage under MET, to enable Regional OPMET Centres (ROCs) and National OPMET Centres (NOCs) to update the register and automatically notify other ROCs and NOCs of enhanced AMHS capability to disseminate IWXXM reports. [Ref: para. 6.1.25.]	tbc	Australia and Hong Kong, China	CLOSED [Ref: Paragraph 7.3 of MET/IE WG/24 report]
MET/IE WG/23 17	<u>Providing an IWXXM update notification process</u> Prepare a Draft Conclusion proposing that ICAO seek support from WMO to provide an IWXXM update notification process for all relevant stakeholders, including IWXXM consumers and system vendors. [Ref: para. 6.7.]	tbc	tbc	COMPLETED [Draft Conclusion MET SG/29/03 => Conclusion APANPIRG/36/16]
MET/IE WG/23 18	<u>Producing PIs for ROCs, NOCs, or States/Administrations</u> Investigate the advantages and disadvantages of producing State performance indices (PIs) for Regional OPMET Centres (ROCs), National OPMET Centres (NOCs) or States/Administrations. [Ref: para. 6.9.]	tbc	Thailand	

MET/IE WG/22 – List of Actions

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY	STATUS/REMARKS
MET/IE WG/22 03	<u>ROBEX Handbook updates – procedure for OPMET monitoring</u> Include the procedure for obtaining the latest ROBEX data, i.e., from the Secretariat (rather than from the published ROBEX Handbook) for use as the benchmark for OPMET monitoring, in the next proposed update to the ROBEX Handbook. [Ref: Report of MET/IE WG/22, para. 2.4.]	1 month before MET SG/28	Secretariat	TO COMMENCE
MET/IE WG/22 07	<u>IWXXM dissemination – issues for non-ROBEX locations</u> Forward the MET/IE WG/22 discussion outcomes concerning the issue of disseminating METAR/SPECI in the IWXXM form for weather stations not listed in the ROBEX handbook (as presented in MET/IE WG/22 WP/15) to the MET Panel for further consideration. [Ref: Report of MET/IE WG/22, para. 4.4.]	April 2024	Secretariat and Chair	IN PROGRESS
MET/IE WG/22 09	<u>ROBEX Handbook updates – focal points</u> Review the membership of the ROBEX Handbook focal points and clarify the purpose of these contacts; propose appropriate updates to the ROBEX Handbook. [Ref: Report of MET/IE WG/22, para. 6.10.]	1 month before MET SG/29	Secretariat	IN PROGRESS
MET/IE WG/22 17	<u>MET/IE WG meeting – timeliness of papers</u> Review the timeliness of availability and submission of papers at future MET/IE WG meetings [Ref: Report of MET/IE WG/22, para. 9.1.]	MET/IE WG/23	Secretariat and Chairs	IN PROGRESS

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MET/IE WG/21 – List of Actions

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY	STATUS/REMARKS
MET/IE WG/21 12	Incorporate the changes to Table B format (as proposed by New Zealand in MET/IE WG/21, WP/12, and subject to the minor change suggested by the Meeting) in the proposal for updates to follow the publication of the ROBEX Handbook, Fifteenth Edition. [Ref: MET/IE WG/21 Report, para 6.11]	1 month before MET SG/29	Secretariat	IN PROGRESS
MET/IE WG/21 16	Contact the listed members that were not in attendance at MET/IE WG/21 to confirm their membership status on the MET/IE WG [Ref: MET/IE WG/21 Report, para 7.2]	MET SG/27	Secretariat	IN PROGRESS

MET/IE WG/20 – List of Actions

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY	STATUS/REMARKS
MET/IE WG/20 02	Coordinate the consequential amendments to the ANP (Volume II, Table MET II-2 – Aerodrome Meteorological Offices) to reflect the requirements for MET service at QUANG NINH/Van Don International Airport (ICAO location indicator VVVD). [Ref: Report of MET/IE WG/20, para. 3.5.] (a) Ref: MET SG/27, WP/14 - Review of the APAC ANP (b) Ref: ROBEX HB 15 th Ed.	1 month before MET SG/29	Secretariat	COMPLETED [Ref: APAC.II.25/25-MET]
MET/IE WG/20 10	Coordinate with Indonesia to: a) Validate the proposed updates in WP/08, which concerned aerodrome names that were not reflected in the ANP, Table AOP I-1 – <i>International Aerodromes Required in the APAC Regions</i> ; and b) Include the validated proposals in the next update of the ROBEX Handbook. [Ref: Report of MET/IE WG/20, para. 6.9.] Ref: MET SG/27, WP/14 - Review of the APAC ANP	1 month before MET SG/29	Secretariat, in coordination with participants from Indonesia	IN PROGRESS [Ref: APAC.II.25/25-MET]
MET/IE WG/20 13	Convene a quarterly meeting of the MET/IE WG (core) members to progress updates to the work plan and terms of reference, including assigning specific dates and responsibilities (incl. identifying a lead and supporting resources for activities) and merging Activities 1 and 2 in the work plan. After the Secretariat and Chairs of MET SG and WGs have prepared the integrated reporting template. [Ref: Report of MET/IE WG/20, para. 7.5.]	Before MET SG/27	Chair MET/IE WG and Secretariat	IN PROGRESS
MET/IE WG/20 15	Concerning the inclusion of MWOs not located in the APAC Region, perform a cross-check of the ICAO APAC SIGMET Test Procedures against the legacy FASID Tables MET 3A – <i>Tropical Cyclone Advisory Centres</i> and 3B – <i>Volcanic Ash Advisory Centres</i> . [Ref: Report of Conjoint Session of MET/IE WG/20 and MET/S WG/12, para. 2.17.]	1 month before MET SG/29	Secretariat	IN PROGRESS
MET/IE WG/20 17	Follow up with Myanmar on the appropriate addressing of letters from ICAO inviting participation in SIGMET tests. [Ref: Report of Conjoint Session of MET/IE WG/20 and MET/S WG/12, para. 2.23.]	Before MET SG/27	Secretariat, in coordination with participants from Myanmar	IN PROGRESS

MET/IE WG/18 and MET/S WG/10 – List of Actions

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY	STATUS/REMARKS
18	ROBEX Handbook and SIGMET Guide updates – Legacy FASID information: Prepare the consequential updates of the required information from the legacy FASID Tables relating to meteorology, apart from Table MET 1A, Table MET 1B and Table MET 3C, and the existing ICAO APAC regional guidance documentation, according to the proposal in WP/11 and the Draft Decision [ref: para. 4.16.]	1 month before MET SG/29	Secretariat	IN PROGRESS Ref: MET/IE WG, 5. Work Plan, Activity 6

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ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY	STATUS/ REMARKS
19	ANP and ROBEX Handbook updates – Vietnam NOC: Coordinate on the implementation of the Vietnam NOC, including development of proposed updates to the APAC ANP [ref: para. 3.7.] Ref: MET SG/27, WP/14 - Review of the APAC ANP	1 month before MET SG/29	Vietnam and Thailand	COMPLETED [Ref: APAC.II.25/25-MET]
20	ANP and ROBEX Handbook updates – Indonesia new aerodromes: Determine any requirement (based on IP/09) to update the ICAO APAC (a) ANP and/or (b) ROBEX Handbook [ref: para. 8.27.] (a) Ref: MET SG/27, WP/14 - Review of the APAC ANP (b) Ref: MET SG/27, WP/09 - ROBEX HB UPDATES	1 month before MET SG/29	Secretariat and Indonesia	IN PROGRESS Ref: MET/IE WG, 5. Work Plan, Activity 6 [Ref: APAC.II.25/25-MET]

MET/IE WG/17 – List of Actions

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY	STATUS/ REMARKS
17/1	Coordinate all necessary notifications concerning the planned handover of the provision of SIGMET service valid for Phnom Penh FIR from MWO Chengdu to MWO Phnom Penh, including the following: updates to the ANP, including the legacy FASID tables, and the Regional SIGMET Guide. <i>[Report of MET/IE WG/17, para. 3.1 – 3.4, refers]</i>	1 month before MET SG/29	Secretariat	IN PROGRESS
17/10	Liaise with the SADIS Provider concerning obtaining OPMET availability statistics on SADIS for future meetings of the MET/IE WG. Propose appropriate actions to apply the statistics to improve OPMET availability. <i>[Report of MET/IE WG/17, para. 4.21, refers]</i>	Before MET SG/27	Secretariat	IN PROGRESS
17/20	Propose updates to all required APAC documentation regarding the originating address of Australian WV SIGMETs (i.e., YMMC, rather than AMMC). <i>[Report of conjoint session of MET/IE WG/17 and MET/S WG/9, para. 2.24, refers]</i>	1 month before MET SG/29	Secretariat	COMPLETED [Ref: APAC.II.25/25-MET]

APPENDIX B — MET/IE WG Terms of Reference and Work Plan

(Note: Proposed updates are indicated with ~~strikethrough~~ and **highlighted** text)

TERMS OF REFERENCE

The MET/IE WG is made up of experts from the following entities:

- APAC Regional OPMET Data Banks (RODBs): Brisbane, Nadi, Tokyo, Singapore and Bangkok;
- APAC Regional OPMET Centres (ROCs);
- Secure Aviation Data Information Service (SADIS) and WAFS Internet File System (WIFS) Provider States, United Kingdom and United States;
- Designated focal points for SIGMET tests and regional OPMET bulletin exchange (ROBEX);
- User representatives, such as the International Air Transport Association (IATA).

Representatives from any APAC States are welcome to join the MET/IE WG meetings. Core membership of the working group is as follows:

1. CORE MEMBERSHIP		
State or Org./Name	Title/Organization	Contact information
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REPUBLIC OF KOREA Ms. Hee-ju JEONG (ROBEX)	Assistant Director, Aviation Meteorological Office (AMO) of Korea Meteorological Administration (KMA), 2F-0023, 444, Je2terminal-daero, Jung-gu, Incheon, REPUBLIC OF KOREA	Tel: +82 (32) 222 3079 Fax: +82 (32) 740 2807 E-mail: av_isd@korea.kr ; jeonghj94@korea.kr

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1. CORE MEMBERSHIP		
State or Org./Name	Title/Organization	Contact information
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2. DESCRIPTION	
Objective	Increase quality, availability and timeliness of Meteorological Information needed for flight planning (efficiency) and in-flight re-planning (safety) in support of the services defined in ICAO Annex 3 and the transition to information services as defined in GANP.
Benefits	Increase in safety and efficiency (time and fuel savings), supporting environmental sustainability.
Functions of the group	Under guidance from the ICAO APAC Secretariat: a) Review the OPMET exchange schemes in the APAC and other regions and develop proposals for their optimization, taking into account the requirements by the aviation users and global OPMET exchange; b) Review and update of the procedures for inter-regional OPMET exchange and ensure the availability of the required APAC OPMET data for SADIS and WIFS; c) Monitor the quality, availability and timeliness of OPMET; d) Monitor and participate in inter- and intra-regional trials and implementation of aeronautical meteorological information exchange in support of the implementation of System Wide Information Management (SWIM); e) Develop standardized quality control, monitoring and management procedures related to exchange of OPMET; f) Promote awareness of the transition from TAC to IWXXM and in support of SWIM; g) Conduct regular regional IROG back-up and SIGMET tests; h) Provide support for the APAC MET exercises; i) Review and update the regional guidance material related to OPMET exchange, including relevant material on IWXXM, AMHS and SWIM; j) Liaise and consult with other appropriate bodies within ICAO and WMO dealing with communication and/or management aspects of the OPMET exchange; k) Coordinate and seek support from other enabling ICAO groups (e.g. SWIM TF, ACSICG, CRV OG, etc.) to support MET information exchange initiatives; and l) Provide advice and report to the MET Sub-group on the above issues for further co-ordination through the ICAO Secretariat with other appropriate bodies. m) Support implementation planning for the cessation of international TAC exchange, including identifying transitional risks and coordination with relevant ICAO bodies. n) Monitor regional readiness for IWXXM versions approved by ICAO METP/WG-MIE and promote timely upgrades to maintain interoperability.

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3. Communication Strategies				
Description	Target Audience	Delivery Method	Frequency / Date	Responsibility
Annual working group meeting	All APAC States	In person	Annual / March	Chair(s) and Secretariat
Interim Work Program Progress Report	MET/IE WG Members	Web-conference E-mail	Quarterly/as determined by Chair	Chair(s) and Secretariat
MET Chairs Coordination Meeting	Chairs of MET SG and its contributory working groups	Web-conference E-mail	Quarterly/as determined by MET SG Chairs	Chair(s) and Secretariat
General correspondence	MET/IE WG Members	E-mail	As required	MET/IE WG Members
New, specific proposal for action (WP)	MET/IE WG Meeting	Working Paper (MET/IE WG meeting)	Annually/submitted 28-days or more before the meeting (published 14-days or more before the meeting)	MET/IE WG Members or States
New, specific information (IP)	MET/IE WG Meeting	Information Paper (MET/IE WG meeting)	Annually/submitted 28-days or more before the meeting (published 14-days or more before the meeting)	MET/IE WG Members or States
Working Group Meeting Report	MET/IE WG Members and all APAC States	MET/IE WG Meeting Report	Annually/published 21-days or less after the meeting	Chair(s) and Secretariat
Working Group Progress Report	MET SG Meeting	Working Paper (MET SG meeting)	Annually/submitted 28-days or more before the meeting (published 14-days or more before the meeting)	Chair(s) and Secretariat

4. WORK PROGRAM			
Activity	Time Frame	Responsibility	Status
Activity 1: Quality, Availability and Timeliness of OPMET exchange	Ongoing	MET/IE WG	
Activity 2: SIGMET and Advisory Tests	Ongoing	MET/IE WG	
Activity 3: IROG Backup Tests	Ongoing		
Activity 4: Regional guidance material related to data exchange	Ongoing	MET/IE WG	
Activity 5: MET information exchange scheme	Ongoing	MET/IE WG	
Activity 6: MET information in SWIM	Ongoing	MET/IE WG	

5. WORK PLAN			
Activity / Milestone	Accountability	Date	Status
Activity 1: Quality, Availability and Timeliness of OPMET exchange			
Activity 1.1: Monitor and collate OPMET data.	RODBs and IATA	Annually Nov	
Activity 1.2: Assess RODB OPMET reception.	RODB Bangkok	Annually Jan	
Activity 1.3: Analyse data and share results with RODBs	RODB Bangkok	Annually Jan	
Activity 1.4: Prepare paper report results to MET/IE WG meeting	RODB Bangkok	Annually Feb	
Activity 1.5: Report summary of OPMET quality, availability and timeliness results to MET SG (via annual MET/IE WG report)	Chair	Annually before MET SG	
Activity 1.6: Provide support for States to support corrective actions if requested.	RODBs	As required	
Activity 2: SIGMET and Advisory Tests			
Activity 2.1: Review SIGMET Test procedures	MET/IE WG	Annually Aug	
Activity 2.2: State Letter regarding SIGMET Tests	Secretariat	Annually Sep	
Activity 2.3: Email participating MWOs, RODBs, VAACs, TCACs and SVOs regarding SIGMET Tests	Secretariat	Annually	Last Wed in Oct
Activity 2.4: Conduct and collate data for TC SIGMET Tests	RODBs	Annually	2 nd Wed in Nov
Activity 2.5: Conduct and collate data for VA SIGMET Tests	RODBs	Annually	3 rd Wed in Nov

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5. WORK PLAN			
Activity / Milestone	Accountability	Date	Status
Activity 2.6: Conduct and collate data for other SIGMET Tests	RODBs	Annually	4 th Wed in Nov
Activity 2.7: Analyse test data	RODB Singapore and Tokyo	Annually Jan	
Activity 2.8: Report to MET/IE WG	RODB Singapore and Tokyo	Annually Mar	
Activity 2.9: Report on SIGMET Test Results to MET SG (via annual MET/IE WG report).	Chair	Annually May	
Activity 3: IROG Back-up Tests			
Activity 3.1: Update IROG Back-up Procedures in ROBEX Handbook, including support for IWXXM.	Secretariat	As required	
Activity 3.2: Identify list of OPMET to monitor.	IROG Bangkok and Singapore	Annually Jul/Aug	
Activity 3.3: Conduct IROG Back-up Test of Bangkok and analyse results	IROG Bangkok and Singapore	Annually Sept/Oct	
Activity 3.4: Conduct IROG Back-up Test of Singapore and analyse results	IROG Bangkok and Singapore	Annually Sep/Oct	
Activity 3.5: Report to MET/IE WG	IROG Bangkok and Singapore	Annually Mar	
Activity 4: Regional guidance material related to data exchange			
Activity 4.1: Propose updates to the ROBEX Handbook	MET/IE WG and Secretariat	As required	
Activity 4.2: Share draft updates to the ROBEX Handbook	Secretariat	Annually, at least one month before the MET/IE WG and MET SG	
Activity 4.3: Publish updates to the ROBEX Handbook	Secretariat	Annually Two weeks after the MET/IE WG and MET SG	
Activity 5: MET Information Exchange Scheme			
Activity 5.1: Review ROBEX Scheme diagram	All RODBs, Secretariat	Annually May	
Activity 5.2: Maintain IWXXM online register	Australia, Hong Kong China and Secretariat	As required	
Activity 5.3: Monitor the availability of AMHS with FTBP readiness	MET/IE WG	As required	
Activity 6: MET information in SWIM			
Activity 6.1: Provide education and develop guidance to support States' implementation of MET information services	MET/IE WG	As required	

APPENDIX C

ASIA AND PACIFIC (APAC) WORKSHOP: SUPPORTING STATE IMPLEMENTATION OF METEOROLOGICAL SERVICES

Nadi, Fiji, 20 April 2026

SLIDE PRESENTATIONS

SP/01 – Overview of workshop purpose, expected outcomes, and agenda (Peter Dunda, ICAO APAC Office)

SP/02 – Overview of ICAO Annex 3 Amendment 82 – Roles of the Meteorological Authority (MA) and Meteorological Service Provider (MSP) (Peter Dunda, ICAO APAC Office)

SP/03 – State obligations related to compliance demonstration, oversight, and national certification (Narend Kumar, PASO)

SP/04 – MET Deficiencies: What they are and how to avoid them! (Paula Acethorp, CAA NZ/Chair MET/SG)

SP/05 – Tonga Country Report (Laitia Fifita, Tonga MET Services)

SP/06 – Exchange of and user access to meteorological information (Goh Wee Poh, MET Service Singapore/Vice-Chair MET SG)

SP/07 – Implementation of MET information exchange in IWXXM form (Marco Kok, Hong Kong Observatory/Vice-Chair MET/IE WG)

SP/08 – Modernization of Aeronautical MET services (Tim Hailes, Australian Bureau of Meteorology/Chair MET/IE WG)

SP/09 – Weather Ready Pacific Programme – Building and sustaining technical capacity in resource-constrained environments ('Ofa Fa'anunu, WRPP/SPREP)

APPENDIX D – Summary of Pacific OPMET Discussion

- **OPMET Provision From NOCs**

- Emailing of OPMET, while largely successful, can result in delays in ingestion (someone may be away from their desk/otherwise busy) – however, the sender won't know if there's a delay, so a backup method may not be enacted.
- With their new system, ROC Nadi may be able to provide AMHS 'user agents' other States can use – recommendation to test this, once possible. ROC Nadi expects to provide advice on this by the end of May 2026.
- Alternatively, US NWS data ingestion (EDIS) may be an alternative method for METAR sending, using email. This could also function as a backup (noting backups should be tested regularly).
- If ceasing emailing of METAR, ideally don't stop sending without talking to the people it's sent to. From an aviation point of view, each part should recall who they should send it to and where it should go.

- **ROC Coordination**

- Sharing of performance reports by ROC Nadi to the contributing MET agencies is seen as a valuable service.
- Important for ROCs to reach out to their contributing MET agencies, so everyone is aware of what is working well and what needs improving.
 - PIAWS Panel may be a useful forum for this, for Nadi ROC.

- **IWXXM Form OPMET**

- For IWXXM translation, the system that does the conversion should alert on any errors (as per IWXXM guidelines). MET agencies getting data translated should ask for feedback from their translation service providers – either real time or a regular log of issues.
- For future observation system upgrades start thinking about how to get AWOS (or the associated comms hardware) to provide IWXXM directly – to provide data straight into aviation systems.