

**INTERNATIONAL CIVIL AVIATION ORGANISATION**



**REPORT OF THE  
TWENTY-FOURTH MEETING OF THE  
METEOROLOGICAL INFORMATION EXCHANGE WORKING GROUP  
(MET/IE WG/24)**

(Nadi, Fiji, 21 – 24 April 2026)

The views expressed in this Report are those of the Meeting  
and not the Organisation.

Approved by the Meeting and published by the ICAO Asia and Pacific Office, Bangkok

REPORT OF MET/IE WG/24  
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## HISTORY OF THE MEETING

### 1. Dates and venue

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 conjunction with the Thirteenth Meeting of the Aeronautical Communication Services Implementation Coordination Group (ACSICG/13), in Nadi, Fiji, from 21 to 24 April 2026.

1.2. A conjoint session of MET/IE WG/24 and ACSICG/13 was conducted on 22 April 2026 to discuss issues of concern to both groups jointly, including readiness of the Air Traffic Services Message Handling System (AMHS) to support disseminating meteorological information in the ICAO Meteorological Information Exchange Model (IWXXM) form.

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>).

1.4. 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.

### 2. Attendance

2.1. Forty-five (45) participants attended the MET/IE WG/24 Meeting from sixteen (16) States/Special Administrative Regions and two (2) international organizations, including Australia, Hong Kong China, Macao China, Fiji, India, Indonesia, Japan, Kiribati, New Zealand, Papua New Guinea, Philippines, Republic of Korea, Singapore, Tonga, Tuvalu, Vanuatu, Pacific Aviation Safety Office (PASO), and ICAO. Notably, xxx (xx) participants from six (6) Pacific Small Island Developing States (PSIDS) attended. The list of participants is in **Appendix A**.

2.2. Eighty-eight (88) participants in total attended the MET/IE WG/24 and ACSICG/13 conjoint session. Further details of the ACSICG/13 attendance are available on the following ICAO website: <https://www.icao.int/APAC/meetingdocs?fid=42537#block-icao-page-title>.

### 3. Officers and Secretariat

3.1. Mr Tim Hailes, National Manager - Transport Customer Engagement, Australian Bureau of Meteorology, chaired the Meeting. Mr Marco Mang-Hin Kok, 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.

### 4. Language and Documentation

4.1. The working language of the Meeting was English, including all documentation and this report. The Meeting considered 29 Working Papers (WP), 5 Information Papers (IP), 1 Flimsy (FL), and 2 Slide Presentations (SP), including 9 WP, 3 IP, 1 FL, and 2 SP in the conjoint session. The list of WP, IP, FL and SP is in **Appendix B**.

### 5. Outcomes

*Draft Conclusions, Draft Decisions and Decisions*

5.1. Following established procedures of the APAC Air Navigation Planning and Implementation Regional Group (APANPIRG), the Meeting formulated proposals for action for further consideration and possible adoption by the Meteorology Sub-Group (MET SG) or APANPIRG, within the following definitions:

- a) **Draft Conclusions:** deal with matters that merit directly the attention of States, or on which further action is required to be initiated by the Secretariat;
- b) **Draft Decisions:** relate solely to matters dealing with the internal working arrangements of the APANPIRG and its contributory bodies.
- c) **Decisions:** relate solely to matters dealing with the internal working arrangements of the MET/IE WG.

5.2. The Meeting formulated the following two (2) Draft Conclusions as recorded in the Report on Agenda Items and tabulated in Appendix C:

- Draft Conclusion MET/IE WG/24-01:
- Draft Conclusion MET/IE WG/24-02:
- Decision MET/IE WG/24-03:

Action Items

5.3. Additionally, the Meeting agreed to 0 new action items for the MET/IE WG as recorded in the Report on Agenda Items and tabulated in Appendix D.

— END OF SECTION —

## REPORT ON AGENDA ITEMS

### 1. Organisational matters

#### *WP/01 – PROVISIONAL AGENDA (Secretariat)*

1.1. This paper presented the provisional agenda for the meeting, outlining the proposed sequence of agenda items. The agenda was structured to address organizational matters, review of follow-up actions from previous meetings, quality control and monitoring of meteorological information exchange, updates to regional guidance material, SWIM- and IWXXM-related matters (including items identified for the conjoint session), review of the Terms of Reference and work plan, arrangements for the next meeting, and any other business.

1.2. The Meeting noted the provisional agenda and agreed to adopt it as presented, comprising the following items:

- Agenda Item 1: Organizational 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

1.3. Agenda Items 5 & 6 were discussed in the Conjoint session with the ACSICG.

1.4. 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. **[ACTION MET/IE WG/24-01]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 01	<b>Review Agenda Sequencing for SWIM and IWXXM Items</b> 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.	Prior to finalization of the provisional agenda for the next MET/IE WG meeting	MET/IE WG Chair, in coordination with the ICAO Secretariat

### 2. Review of Follow-up Actions from Previous Meetings

#### *WP/02 – FOLLOW-UP ACTION FROM MET/IE WG/23 (Secretariat)*

2.1. The Secretariat presented WP/02, which reviewed the follow-up status of outcomes from MET/IE WG/23, including two Draft Conclusions, one Decision, and associated action items, as well as unresolved outcomes from earlier meetings. It outlined the purpose of maintaining consolidated lists of Decisions and Actions, reflecting recent updates and removing items agreed as completed, superseded, closed, or redundant, and invited the meeting to review progress and confirm any necessary revisions.

2.2. The meeting noted that the paper 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. The meeting agreed that the paper would be revisited and that the status of action item follow-up would be reviewed and confirmed before the closing of the meeting.

2.3. In reviewing the consolidated lists, the meeting noted that Draft Conclusion 22-01 on *Availability and Timeliness of TAC and IWXXM Meteorological Information* and Draft Conclusion 22-02 on *Review of APAC Region IWXXM Implementation Status/Readiness* had been adopted as MET SG conclusions. The meeting agreed that follow-up on these conclusions would be managed through the MET SG forum.

***WP/03 – FOLLOW-UP ACTION FROM MET SG/29 (Secretariat)***

2.4. The Secretariat presented WP/03, which reviewed the follow-up status of Draft Conclusions, Conclusions, Decisions, and action items arising from MET SG/29, as well as unresolved outcomes from previous MET SG meetings. It provided consolidated follow-up information in updated lists, highlighting recent changes and removing items agreed as completed, superseded, closed, or redundant. The meeting considered the paper as a status review intended to support effective monitoring and timely follow-up, with final review and endorsement of updates remaining the responsibility of MET SG.

2.5. The meeting noted the proposed updates were subject to confirmation by MET SG, and 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.

2.6. The meeting reviewed the follow-up status information and proposed adjustments as necessary to ensure clarity and accuracy. It was agreed that the consolidated lists would be finalized through the MET SG, consistent with the purpose of the paper and established follow-up processes.

***WP/04 – FOLLOW-UP ACTION FROM APANPIRG/36 (Secretariat)***

2.7. The Secretariat presented WP/04, which reviewed outcomes from APANPIRG/36 that are relevant to the work of the MET SG, MET/IE WG, and MET/R WG. It focused on seven Conclusions requiring follow-up on matters including updates to the APAC ANP, publication of MET seminar materials, management of obsolete guidance documents, the IWXXM update notification process, sharing of turbulence reports, enabling the use of QVA by airlines, and updates to air navigation deficiencies reporting. Five of these Conclusions originated from Draft Conclusions developed by the MET SG and MET/IE WG.

2.8. The paper also noted that APANPIRG/36 did not adopt the proposal to establish a new group to address long-standing air navigation deficiencies. Instead, Sub-Group Chairs and the Secretariat were tasked to work collaboratively to develop practical and sustainable approaches, particularly to support PSIDS, with progress to be reported to APANPIRG/37. An action plan and related supporting material were provided in the appendices.

2.9. The meeting reviewed the follow-up status of the APANPIRG/36 Conclusions as presented. It noted that, while the target date for most Secretariat deliverables—particularly the issuance of State Letters in response to these 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. The meeting noted the information provided

### 3. Quality Control, Monitoring, and Management of Meteorological Information Exchange

#### *IP/02 – BENEFITS AND OUTCOMES FROM AEROTHAI VISIT TO FIJI AIRPORTS (Fiji)*

3.1. The meeting noted the benefits and outcomes of a work visit by Aeronautical Radio of Thailand LTD to Fiji Airports, undertaken in support of ICAO provisions on quality management, performance monitoring, and the transition to IWXXM, in the context of the MET/IE WG/24 meeting held in Nadi, Fiji, from 20 to 24 April 2026.

3.2. The meeting noted that the visit focused on reviewing current practices for monitoring performance indices related to meteorological information exchange. Key areas discussed included data collection, analysis, and reporting of OPMET performance indicators, such as the timeliness of METAR and TAF dissemination, data accuracy, compliance monitoring, and monthly performance reporting practices. Opportunities to enhance data tracking and reporting through improved system integration and automation were also noted.

3.3. The meeting further noted Fiji's recent procurement of the UBIMEX/CRONOS system, which is currently in the implementation (ghosting) phase. Upon full implementation, the system is expected to support the generation and exchange of meteorological information in IWXXM format, representing a significant step towards ICAO compliance and continued regional collaboration.

#### *WP/08 – UPDATE OF METEOROLOGICAL REPORTING SCHEDULES IN THE ROBEX MANUAL (Fiji)*

3.4. The meeting considered Working Paper WP/08, presented by Fiji, which proposed updates to the ROBEX Handbook to reflect revised meteorological station reporting hours and updated ROBEX focal point information for Fiji. The paper aimed to ensure that information published in the ROBEX Handbook accurately reflected current operational practices and designated points of contact, thereby supporting reliable and well-coordinated OPMET data exchange within the APAC Region.

3.5. The meeting noted that a review of meteorological operations within the Nadi ROC area of responsibility identified differences between published reporting hours and actual operations. In particular, the meeting noted that availability of aerodrome observations (METAR) for Tongan aerodromes in bulletin SAPS31 was limited to 00–06 UTC and 12–23 UTC daily, whereas the Air Navigation Plan indicated availability for the full 24 hours. It was further noted that Fiji routinely issued aerodrome forecasts (TAF) for these locations with 24-hour validity, which were subsequently cancelled during periods when corresponding METAR were not available. Fiji provided the Secretariat with additional updates concerning a Non-AOP Tongan aerodrome for inclusion in the ROBEX Handbook updates.

3.6. Recognizing this discrepancy, the Chair suggested that it would be preferable to remove the affected Tonga locations from the current bulletins and relocate them to other appropriate bulletins that accurately reflect the non-continuous availability of meteorological services. The meeting also noted Fiji's proposal to implement new bulletins SAPS34 NFFN and FTSP34 NFFN from the AIRAC cycle of 11 June 2026 to support NIUE automated observations issuing 30-minute METARs, as detailed in Appendix A.

3.7. The Chair proposed that ROC Nadi and Tonga review current TAF validity length periods, including consideration of each TAF, such that shorter duration TAFs may be issued to avoid having to cancel the TAF daily. This approach would ensure better alignment between advertised TAF service hours and operational delivery, reducing the risk of user confusion. **ACTION**

3.8. In addition, the meeting noted the updated ROBEX focal point information for Fiji to reflect current organizational responsibilities and contact details. The meeting noted the information presented,

reviewed the proposed updates to Tables A and B of the ROBEX Handbook, and agreed to further consider the proposed amendments in light of the discussion.

***WP/11 – ASIA/PAC INTER-REGIONAL OPMET GATEWAY BACKUP EXERCISE  
BETWEEN IROG SINGAPORE AND IROG BANGKOK (Singapore)***

3.9. The meeting considered Working Paper WP/11, presented by Singapore, which reported on the results of the eighth Asia/Pac inter-regional OPMET gateway backup exercise between IROG Singapore and IROG Bangkok. The exercise forms part of established procedures to maintain business continuity for the dissemination of ASIA/PAC OPMET data during unforeseen technical disruptions.

3.10. The meeting noted that the backup arrangements were originally established to ensure continued dissemination of OPMET data to WAFC London and were later expanded to include regular backup exercises. As part of this programme, the eighth real-time backup exercise was conducted on 24 September 2025, simulating prolonged technical difficulties at IROG Bangkok.

3.11. During the exercise, IROG Singapore assumed responsibility for relaying OPMET messages from the Asia Pacific Region to the Middle East and Africa-Indian Ocean Regions between 0200 UTC and 0800 UTC. The meeting noted that a total of 745 TAC OPMET messages were handled, comprising 662 METAR and 83 TAF bulletins, all of which were successfully transmitted, achieving a 100% success rate. Verification of IWXXM message relay was not conducted, as the relevant links remain pending.

3.12. The meeting noted that the exercise successfully validated the notification, handover, and takeover procedures between the two IROGs.

***WP/24 – ASIA/PAC INTER-REGIONAL OPMET GATEWAY BACK-UP EXERCISE  
BETWEEN IROG BANGKOK AND IROG SINGAPORE (Thailand)***

3.13. The meeting considered Working Paper WP/24, presented by Singapore on behalf of Thailand, which reported on the outcomes of the twentieth TAC real-time backup exercise and the first IWXXM real-time backup exercise conducted jointly between IROG Bangkok and IROG Singapore. The objective of the exercises was to evaluate and validate operational continuity arrangements in the event of technical disruptions at IROG Singapore.

3.14. The meeting noted that the backup procedures are based on arrangements established by the OPMET/M TF/3 Meeting and documented in the APAC ROBEX Handbook. In accordance with these procedures, real-time backup exercises are conducted annually to validate notification processes and the handover and takeover of responsibilities between the two IROGs.

3.15. The meeting noted that the exercises were conducted on 30 September 2025 for IWXXM data and 2 October 2025 for TAC data, with prior communication tests carried out before each exercise. During the exercises, IROG Bangkok assumed responsibility for relaying TAC and IWXXM OPMET messages from the Asia/Pacific Region to WAFC London between 0200 UTC and 0800 UTC.

3.16. The meeting noted that all 1,049 TAC and IWXXM bulletins were successfully transmitted, achieving a 100% success rate, and that IROG Bangkok has maintained consistently high performance in recent years. [new para] The meeting recalled a previous agreed action [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.

***WP/09 – REVIEW OF WS/LS SIGMET TEST 2025 (Singapore)***

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3.17. Singapore presented WP/09, reviewing the results of the WS/LS SIGMET Test conducted on 26 November 2025 in accordance with the APAC Regional SIGMET Guide and ICAO SIGMET testing procedures. The test assessed the issuance, dissemination, and reception of WS and LS SIGMET messages across the APAC Region.

3.18. The meeting noted strong participation in the WS SIGMET Test, with 26 of 29 States (90 per cent) participating, an improvement from 83% in 2024. A total of 49 WS SIGMET test messages were issued. Reception rates at APAC RODBs were generally high, at around 90 per cent or above, although lower reception was recorded at WAFC London and none at WAFC Washington. Ongoing issues related to incorrect priority indicators and transmission headers were also noted.

3.19. For the LS SIGMET Test, the meeting noted further improvement, with 14 States (48 per cent) issuing LS SIGMET messages, higher than 34% in 2024. A total of 31 LS SIGMET test messages were issued, and reception rates among participating RODBs ranged from 90 to 100 per cent, indicating continued improvement in IWXXM dissemination.

3.20. In response to the results, and noting limited SIGMET reception, particularly in IWXXM form, in the 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. [ACTION MET/IE WG/24-02]

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24-02	<p><b>Investigation of Limited IWXXM SIGMET Reception in EUR Region</b> 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.</p>	As soon as practicable	ICAO Secretariat

3.21. Papua New Guinea informed the meeting of its bilateral arrangement to issue SIGMET on behalf of Nauru and undertook to follow up on the absence in the test results of a SIGMET test message for FIR Nauru. Singapore also advised 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 (Ref: Action Item MET/IE WG/23-02).

*WP/10 – RESULTS OF SIGMET TESTS 2025 – TC and VA (Japan)*

3.22. The meeting considered Working Paper WP/10, presented by Japan, which reported the results of the ASIA/PAC SIGMET tests for tropical cyclone (WC/LY) and volcanic ash (WV/LV) conducted in November 2025. The tests were carried out in accordance with ICAO SIGMET testing procedures to assess the issuance, dissemination, and reception of SIGMET messages in the region.

3.23. The meeting noted that the WC SIGMET test was conducted on 12 November 2025, with TCACs issuing test advisories and MWOs issuing corresponding SIGMET messages, while RODBs and WAFCs recorded and summarised reception. A total of 50 WC test bulletins were expected, of which 38 were received, resulting in an overall availability of 73.1%, slightly lower than in 2024.

3.24. The meeting also noted that the WV SIGMET test was conducted on 19 November 2025. Of the 55 WV test bulletins expected, 51 were received, giving an overall availability of 92.7%, which was an improvement compared with 2024.

3.25. 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. Follow-up actions undertaken included corrective testing for identified transmission issues.

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3.26. The meeting noted the results of the SIGMET tests presented in WP/10 and observed continuing improvement in SIGMET issuance in the region; however, significant gaps in IWXXM format availability persist. 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 (Ref: Action Item MET/IE WG/23-02).

3.27. Noting that some TCAC and VAAC Provider States did not issue advisory test messages in IWXXM form, and that some advisories were indicated as not received, 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. **[ACTION MET/IE WG/24-03]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 03	<b>Investigation of Non-Receipt of Advisory Test Messages in SIGMET Tests</b> 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	Before the next SIGMET test cycle	SIGMET test focal point from Japan, in coordination with the ICAO Secretariat

***WP/12 – INVESTIGATION AND RECTIFICATION OF LOW OPMET PERFORMANCE INDICES FOR SINGAPORE (Singapore)***

3.28. The meeting considered Working Paper WP/12, presented by Singapore, which reported on the investigation and rectification actions taken to address low OPMET performance indices for METAR availability. The issue was identified during the MET Deficiencies Review presented at MET SG/29, based on the outcomes of the 2024 APAC Regional SIGMET Test and the 2024 TAF and METAR Performance Indices monitoring.

3.29. The meeting noted that Singapore was identified as not meeting the required 95% METAR availability threshold due to a discrepancy affecting two aerodromes, Seletar (WSSL) and Paya Lebar (WSAP). Although both aerodromes issue hourly METAR observations, the ROBEX handbook indicated them as half-hourly reporters. This mismatch resulted in reduced calculated availability and led to the reported deficiency.

3.30. The meeting noted that Singapore investigated the issue promptly and implemented rectification measures, including coordination with Malaysia, which oversees METAR bulletin compilation in the region. Seletar and Paya Lebar were re-grouped from SAMS31 to SAMS38, with corresponding changes made to the IWXXM METAR bulletins. These changes took effect on 30 October 2025 at 0600 UTC, and were supported by a MET Notification to the APAC region.

3.31. The meeting noted that subsequent monitoring in November 2025 confirmed the issue had been resolved. The meeting was invited to note the information, consider removing Singapore from the list of deficiencies to be considered, and review the proposed updates to the ROBEX Handbook.

3.32. The Secretariat clarified that no States were currently listed with deficiencies related to 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

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assessing potential deficiencies. The Secretariat thanked Singapore for the updated information on its OPMET bulletin arrangement, which ensures the ongoing availability of its IWXXM-formatted OPMET messages.

3.33. The meeting noted the proposed updates to the ROBEX Handbook presented in WP/12 and agreed to the Secretariat's inclusion of these updates in the proposed ROBEX Handbook 20th Edition. [ACTION MET/IE WG/24-xx]

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 xx			

#### *WP/13 – INDONESIA PERFORMANCE INDICES IMPROVEMENT (Indonesia)*

3.34. The meeting considered Working Paper WP/13, presented by Indonesia, which outlined the actions taken to improve Indonesia's Performance Indices for OPMET data dissemination, particularly for METAR and TAF, in response to deficiencies identified in the 2024 APAC RODB Annual OPMET Monitoring. Indonesia had been listed among States not meeting the ICAO target of 95% for availability and timeliness.

3.35. The meeting noted that prior to 2025, more than half of Indonesia's aerodromes consistently recorded Performance Indices below 95%, largely due to challenges in integrating data collection, compilation, and dissemination, which were managed by different entities. To address this, BMKG and AirNav Indonesia jointly developed a new integrated OPMET system, linking AWOS directly to a dedicated bulletin compilation server and replacing manual AFTN inputs.

3.36. The meeting noted that system trials were conducted, with the final trial on 25 October 2025, and the system was operationalised on 31 October 2025. During the Annual OPMET Monitoring in November 2025, no significant issues were identified. Performance results showed that 27 Indonesian aerodromes achieved Performance Indices above 95% for METAR and TAF across several RODBs, representing a significant improvement compared to previous years.

3.37. The meeting noted the improvements achieved and was invited to consider removing Indonesia from the list of States with potential MET deficiencies and to discuss any related matters as appropriate. The Secretariat reiterated the clarification above on assessing potential deficiencies related to the dissemination of OPMET, and thanked Indonesia for the updated information on its OPMET performance results, which indicate significant improvement in the ongoing availability of its OPMET messages.

#### *WP/26 – ASIA/PACIFIC PERFORMANCE INDICES (Thailand)*

3.38. The Secretariat presented WP/26 on behalf of Thailand, informing the MET/IE WG/24 of the results of Asia/Pacific OPMET monitoring using agreed performance indices. Monitoring covered both TAC and IWXXM data from five RODBs—Bangkok, Brisbane, Nadi, Singapore and Tokyo—for the period 1–30 November 2025. The monitoring was conducted in line with the agreement of previous MET/IE meetings that Asia-Pacific monitoring be undertaken annually in November, using the OPMET Statistics Web Application.

3.39. The results were prepared by RODB Bangkok and are based on the ROBEX Handbook nineteenth edition (February 2026). Performance indices were calculated for both availability and timeliness, applying the updated methodology agreed under MET/SG 28-WP/07. The paper recalls the defined timeliness criteria for METAR and TAF (FT), including the treatment of observations,

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amendments and corrections. The monitored dataset comprised aerodromes listed in the relevant ROBEX Handbook appendices.

3.40. Appendix A (Tables A and B) presents the performance indices measured per aerodrome for TAC and IWXXM respectively. A technical note clarifies that, for November 2025, the IWXXM 2025-2 Availability Index and specific statistics were successfully processed using uploaded data; however, the Timeliness Index for this IWXXM schema version could not be calculated at that time, as timeliness depends on the System Timestamp within the live OPMET Operational System.

3.41. The meeting noted the information presented in WP/26 and thanked Thailand, in its absence, for conducting the monitoring and preparing the results and the working paper, as well as the supporting RODBs. 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.

3.42. RODB Singapore noted the NIL availability results for some states such as New Zealand (TAC) and the Republic of Korea (IWXXM). In New Zealand's case, it was identified the wrong recipient address was used and as a result these messages from New Zealand were not extracted during the PI monitoring exercise. RODB Singapore is receiving the Republic of Korea's IWXXM messages operationally and is still investigating the cause for NIL result during the PI monitoring exercise.

3.43. The meeting also noted the positive development with United States APAC OPMET locations now included in the monitoring.

3.44. 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. **[ACTION MET/IE WG/24-04]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 04	<b>Investigation of Low OPMET Performance Indices for ROC KWBC</b> 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.	As soon as practicable	IROG Tokyo, in coordination with the corresponding NAM Region IROG

3.45. Kiribati raised concerns regarding the OPMET monitoring results, which indicated a 0.00 availability for METAR and SPECI from NGTA and PLCH. It was clarified that regular METAR and SPECI are in fact provided, however a communication problem was identified in transmitting the reports to ROC Nadi via the Fiji Meteorological Service. An internal arrangement has now been made to include the ROC Nadi email address in METAR and SPECI reports from NGTA and PLCH until the issue is fully resolved. [new para] 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 X as a reference.

3.46. To support States' effective use of the monitoring results, the meeting also requested Thailand, in its absence, to separate AOP and non-AOP OPMET State Performance Indices in future reporting results. **[ACTION MET/IE WG/24-05]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 05	<b>Separation of AOP and Non-AOP OPMET Results for States' Performance indices in Future Monitoring</b> 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.	For the next Asia/Pacific OPMET monitoring cycle	Thailand (RODB Bangkok)

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3.47. The meeting 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.

3.48. The meeting further noted that the OPMET monitoring results, together with the SIGMET test results discussed under previous agenda items, showed that States were actively investigating identified issues. The meeting encouraged States to continue reviewing the results and to seek clarification where needed, including by engaging with experts during the meeting.

*WP/14 – UPDATE ON VONA DISTRIBUTION (New Zealand)*

3.49. This paper provides an update on work undertaken by New Zealand, Australia and the United States in response to MET SG/29 Action 21, which requested investigation of appropriate methods for disseminating VONA messages from the APAC Region to ensure global accessibility. It notes that, while Amendment 82 to Annex 3 made the use of the VONA template applicable in November 2025, there is currently no agreed method to ensure VONA availability outside the ICAO region in which it is generated.

3.50. The paper reports on two New Zealand test disseminations of VONA via the AFS in February and March 2026. The traditional alphanumeric code VONA was successfully received by all five APAC RODBs, routed to the EUR Region, and made available on SADIS. An IWXXM test was also disseminated, with an identified technical error that is being rectified, and further testing planned. Future tests are expected to include routing to the Washington Inter-regional OPMET Gateway, with possible availability on WIFS.

3.51. Issues identified include the need for States to notify SADIS and WIFS providers to enable VONA ingestion, consideration of further distribution to users via AFS, and the question of how long VONA should remain available on SADIS, WIFS and RODBs, particularly where volcanoes remain at aviation colour code green or unassigned.

3.52. The meeting noted the information provided in the paper and discussed the need to review how VONA messages are exchanged within the APAC Region, including the handling of VONA originating from other Regions. 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.

3.53. The meeting noted that no other OPMET data type requires long retention periods, with VONA unique in that each message remains in force until replaced, which could be many years under current PANS-MET requirements. The meeting noted that RODBs could retain VONA for periods of up to approximately three months.

3.54. In later discussions at the meeting, it was identified that the same VONA WMO header may be used for multiple volcanoes. It was highlighted that without mitigation the existing approach would not allow previous volcano data to be accessed by the existing ROBD request reply service.

3.55. In response to the invitation by the paper, 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 for review and appropriate action. **[ACTION MET/IE WG/24-06]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
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MET/IE WG/24 06	<b>Further Investigation of VONA Retention and Distribution</b> 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.	For the next MET SG meeting	New Zealand
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**4. Guidance Material Related to Meteorological Information Exchange\***

*WP/05 – ROBEX HANDBOOK UPDATES (Secretariat)*

4.1. This paper introduced the APAC ROBEX Handbook, Nineteenth Edition (February 2026), prepared by the Secretariat and provided to the meeting under Agenda Item 4. The Handbook reflects updates previously agreed by MET/IE WG/23 and MET SG/29, together with earlier decisions from MET SG/27 and MET SG/25. The paper was made available during the meeting, and the Nineteenth Edition had not yet been published on the ICAO website, meaning participants had limited time to review the document in advance and develop proposals.

4.2. The updates incorporated in the Nineteenth Edition include amendments to selected METAR and TAF bulletins, the addition of new bulletins, and State-notified and editorial changes. Specific changes include revisions to Appendix A and Appendix B bulletins agreed by MET SG/29 and MET/IE WG/23, the introduction of new bulletins, and amendments agreed at earlier MET SG meetings that were subsequently coordinated with the States concerned. The Handbook also includes updates to contact information, amendments to a METNO message format example, and correction of a minor typographical error.

4.3. The paper highlighted that all updates were identified within the Handbook itself, which was attached to the working paper. The meeting was invited to note the information presented and to consider whether further updates to the ROBEX Handbook were required. 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<sup>1</sup>, including focal point information for Appendix I and amendments to specified bulletins, as provided through working papers or to be submitted directly to the Secretariat.

4.4. In response to a question from the meeting, the Chair clarified 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.

4.5. The meeting was informed that Flimsy/01 would propose a more dynamic approach to sharing ROBEX updates, which, if agreed, would streamline access to the latest information for OPMET monitoring.

4.6. 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. **[ACTION MET/IE WG/24-07]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 07	<b>Collection of global focal point email contacts for OPMET bulletin notifications</b> Seek email contact details from each ICAO region for key focal points who wish to receive notifications of changes to APAC OPMET bulletins.	To be confirmed	ICAO Secretariat

\* Note: the discussion on Agenda Item 4 papers was conducted following the Conjoint session of ACSICG/13 and MET/IE WG/24.

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**[ACTION MET/IE WG/24-08]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 08	<b>Proposal to amend METNO procedure for OPMET bulletin notifications</b> Propose changes to the METNO procedure to include email notifications to key OPMET exchange focal points in all ICAO regions.	To be confirmed	MET/IE WG Chairs

*WP/15 – INCLUSION OF VONA HEADERS IN ROBEX HANDBOOK (New Zealand)*

4.7. New Zealand presented WP/15, proposing the inclusion of a new Appendix in the APAC ROBEX Handbook to catalogue VONA headers used by State Volcano Observatories (SVOs) in the Asia and Pacific Region. It recalled that the Recommended Practice for SVOs to use the VONA template became applicable in November 2025, following Amendment 82 to Annex 3, and noted that guidance on appropriate abbreviated headings for disseminating VONA via the AFS is available through WMO references.

4.8. The paper explained that, for VONA, headers take the form T1T2A1A2ii CCCC, using WM for TAC and LM for IWXXM, with geographic and series designators applied in accordance with existing conventions. As with other ROBEX bulletins, issuance of a new VONA bulletin requires a METNO. It was noted that catalogues of bulletin headers already exist in the ROBEX Handbook and related guidance material, and that such catalogues support common understanding between producers and users, as well as OPMET monitoring.

4.9. For VONA, a dedicated catalogue was proposed to support implementation monitoring, identify where assistance may be required, and highlight States able to share experience. The paper proposed adding a new Appendix to the ROBEX Handbook to list VONA headers in use, together with a minor editorial update to Section 8 to reference this Appendix. The meeting was invited to note the information, invite States with designated SVOs to provide additional header information, and agree to include the proposed new Appendix in the ROBEX Handbook.

4.10. 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 agreed in principle to the proposal to share a list of VONA headers and to consider this initiative alongside the Flimsy/01 ROBEX Handbook proposal, both of which reflect a move towards managing more dynamic information through separate, stand-alone repositories.

4.11. The meeting supported the proposals in WP/15 and requested New Zealand to further investigate the most appropriate location for the proposed list of VONA headers. It was also noted that we may wish to consider relocating the SIGMET and advisory headers from the SIGMET Guide.

4.12. The meeting also requested the Secretariat to invite States with designated SVOs to provide additional information on VONA headers for inclusion in the proposed table, as available. **[ACTION MET/IE WG/24-09]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 09	<b>Identification of optimal location for VONA header list</b> 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.	To be confirmed	New Zealand

**[ACTION MET/IE WG/24-10]**

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ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 10	<b>Collection of VONA header information from States</b> Invite States with designated SVOs, via State letter, to provide available information on VONA headers for inclusion in the proposed list.	To be confirmed	ICAO Secretariat, in coordination with New Zealand

***WP/25 – ROBEX HANDBOOK UPDATES IN ACCORDANCE WITH THE REVIEW OF THE PERFORMANCE INDICES (PIs) USED IN APAC OPMET MONITORING (Thailand)***

4.13. The Secretariat presented WP/25 on behalf of Thailand and the PI ad-hoc group under Agenda Item 4, presented proposed updates to the APAC ROBEX Handbook arising from the review of the performance indices (PIs) used in APAC OPMET monitoring. It recalled that OPMET monitoring in the ASIA/PACIFIC region is conducted annually by the five designated RODBs—Bangkok, Brisbane, Nadi, Singapore and Tokyo—and that the results are reported to the MET/IE meeting.

4.14. The paper outlined the background to the review, including earlier MET/IE and MET SG actions to examine the PIs, with particular attention to availability and timeliness criteria for METAR and TAF in both TAC and IWXXM forms. It noted agreement to apply a ninety-five per cent threshold to identify possible deficiencies and to consider the proper formation and translation of IWXXM messages. Subsequent meetings identified the need for consequential updates to the ROBEX Handbook, clarification of timeliness definitions, and the use of the latest ROBEX data provided by the Secretariat as the benchmark for monitoring.

4.15. As a result of this work, proposed amendments to the ROBEX Handbook, including updates to OPMET monitoring procedures and definitions in Appendix F, were presented in Appendix A to the paper. The meeting was invited to note the information contained in the paper and to discuss any necessary follow-up actions arising from the proposed amendments to the OPMET performance indices used in APAC OPMET monitoring. The meeting noted the information provided.

4.16. The MET/IE WG Chair informed the meeting that follow-up would be undertaken with counterparts in the EUR Region to clarify the reason for the difference between the six-minute and five-minute criteria used in OPMET monitoring procedures. In this context, the meeting requested the Secretariat to submit the proposed amendments to the MET SG for review and possible endorsement, subject to satisfactory resolution of the OPMET monitoring time discrepancy. **[ACTION MET/IE WG/24-11]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 11	<b>Submission of ROBEX Handbook PI amendments to MET SG</b> 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.	For consideration at MET SG/30	ICAO Secretariat, MET/IE WG Chair

4.17. In reviewing the proposed amendments to the ROBEX Handbook, the meeting noted that the Handbook contains a reference to “no AMD observations” messages, despite there being no ICAO provisions for the dissemination of observation AMD messages. To address this inconsistency, the meeting requested the Secretariat to include the deletion of the “no AMD observations” in the next ROBEX Handbook update proposal for review by the MET SG. **[ACTION MET/IE WG/24-12]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
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MET/IE WG/24 12	<b>Removal of “AMD observations” reference from ROBEX Handbook</b> Include the deletion of the “no AMD observations” indication for METAR in the next ROBEX Handbook update proposal for review by the MET SG.	For consideration at MET SG/30	ICAO Secretariat
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*WP/16 – ŌHAKEA METAR INFORMATION IN ROBEX HANDBOOK (New Zealand)*

4.18. New Zealand presented WP/16, providing an update to Appendix A of the APAC ROBEX Handbook to include information on bulletins containing METAR AUTO for Ōhakea Airport. The paper recalled that at MET SG/29 New Zealand advised of planned changes to METAR and TAF bulletins, including the proposed SANZ33 NZKL bulletin. At that time, it had not been confirmed whether this bulletin would contain manual METAR and SPECI during flight information service hours or half-hourly METAR AUTO reports. Following stakeholder consultation, dissemination of METAR AUTO was selected.

4.19. New Zealand reported that the SANZ33 NZKL bulletin commenced on 2 October 2025 and now provides half-hourly METAR AUTO for Ōhakea Airport. The implementation was advised by METNO, together with advice on the new FTNZ33 NZKL bulletin and changes to FT/SANZ32 affecting Dunedin and Hamilton airports.

4.20. Appendix A to the paper proposed corresponding updates to Appendix A, Table A, of the ROBEX Handbook. New Zealand confirmed that the proposed changes apply to both the SANZ33 and corresponding FTNZ33 bulletins.

4.21. The meeting noted the information provided and agreed to update the ROBEX Handbook accordingly. The meeting requested the Secretariat to include the proposed updates in the next ROBEX Handbook update for review and endorsement by MET SG/30. **[ACTION MET/IE WG/24-13]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 13	<b>Inclusion of Ōhakea METAR AUTO bulletin updates in ROBEX Handbook</b> 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.	For consideration at MET SG/30	ICAO Secretariat

*WP/18 – PROPOSALS FOR AMENDMENTS TO THE ROBEX IN INDONESIA (Indonesia)*

4.22. Indonesia presented WP/18, proposing amendments to the APAC ROBEX Handbook relating to Jakarta ROC addressing, TAF validity periods, and the ROBEX focal point for Indonesia. The paper noted that the ROBEX Handbook, Nineteenth Edition, contains details of OPMET bulletins and responsibilities of ROCs for METAR, SPECI, and TAF.

4.23. Indonesia proposed updating Appendix A (Table A) and Appendix B (Table B) of the ROBEX Handbook to address inconsistencies in the listed addressing for Jakarta ROC. In line with changes to national communication and data collection systems, the Jakarta ROC address was consolidated to a single designated address, WIIIMYX.

4.24. The paper also proposed amendments to TAF validity periods in FTSR31, changing WABB from 30 hours to 24 hours and WARR from 24 hours to 30 hours, reflecting changes in operational requirements based on flight traffic and airport status. In addition, a change to the ROBEX focal point for Indonesia was proposed due to the retirement of the current officer.

4.25. The meeting noted the information provided and agreed that the proposed amendments should be progressed. Accordingly, the meeting requested the ICAO Secretariat to include the proposed

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updates in the next ROBEX Handbook update for review at MET SG/30. [ACTION MET/IE WG/24-14]

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 14	<b>Inclusion of Indonesia ROBEX Handbook amendments</b> 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.	For consideration at MET SG/30	ICAO Secretariat

4.26. The meeting also noted the significant update to the AFTN address for ROC Jakarta and discussed the need to ensure that all relevant stakeholders are informed. In particular, the meeting considered the importance of notifying other ROCs and operational units that exchange MET information with ROC Jakarta to ensure continuity of operations. Indonesia informed the meeting that the updated AFTN address has been disseminated to the aeronautical information publication (AIP) in Airac AIP 159 on 15 May 2025. The meeting requested the Secretariat to work with ROC Jakarta to take appropriate steps to disseminate this information. [ACTION MET/IE WG/24-15]

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 15	<b>Notification of updated ROC Jakarta AFTN address</b> Inform relevant stakeholders, including other ROCs and operational units, of the updated AFTN address for ROC Jakarta to support continued exchange of MET information.	To be confirmed	ICAO Secretariat and Indonesia

*FL/01 – ONLINE METAR/TAF TABLES OF ROBEX HANDBOOK (Hong Kong China)*

4.27. Hong Kong, China presented Flimsy/01, demonstrating the development of an online spreadsheet to host the METAR and TAF bulletin tables contained in Appendix A and Appendix B of the APAC ROBEX Handbook. The purpose is to enable more timely sharing of the latest METAR/TAF bulletin updates submitted by States and Administrations.

4.28. The paper noted that updates to ROBEX bulletin tables can take many months to be reflected through the formal publication process on the e-documents website. To address this, an online spreadsheet was proposed to provide early visibility of pending updates while official revisions are being processed. A prototype online version of the METAR/TAF tables was demonstrated and made available through a publicly accessible link hosted on Microsoft OneDrive.

4.29. Regarding maintenance, it was suggested that the online spreadsheet could be hosted on the Secretariat's OneDrive, with a small number of volunteer contact points granted editing access to support updates.

4.30. The meeting was invited to note the information, consider the value of the proposed online spreadsheet in improving the maintenance and communication of METAR and TAF bulletin tables, and discuss any follow-up actions. The meeting expressed general support for the proposal and requested Hong Kong, China to further develop the concept in coordination with the Secretariat, with particular attention to change-management aspects, and to present the refined proposal for review and appropriate action by MET SG/30. Further the meeting suggested this task consider whether the spreadsheet includes only pending changes, or fully replace the contents of Appendix A and Appendix B of the APAC ROBEX Handbook [ACTION MET/IE WG/24-16]

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
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MET/IE WG/24 16	<b>Further development of online METAR and TAF bulletin tables</b> 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.	For consideration at MET SG/30	Hong Kong, China (in coordination with the ICAO Secretariat)
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4.31. Recalling the earlier discussion on VONA headers in WP/15, the meeting noted the similarities between the initiatives but agreed that they should remain separate at this stage, pending further development and resolution of more specific issues for each proposal.

**Start of Conjoint session of ACSICG/13 and MET/IE WG/24 (22 April 2026)**

**5. Meteorological Information Exchange in a SWIM Environment<sup>†</sup>**

*WP/20 – UPDATE MET-SWIM DOCUMENTATION (Australia)*

5.1. Australia presented WP/20, providing an update on guidance documents supporting the implementation of meteorological information exchange in a SWIM environment. It informed the meeting of the development of new and updated documentation by the WG-MIE to support MET-SWIM implementation, including a new Guidelines for MET-SWIM Implementation, an updated MET-SWIM Roadmap, and the deprecation of the MET-SWIM Plan.

5.2. The paper recalled that the provision of meteorological information through information services became a Recommended Practice with the applicability of Amendment 81 to Annex 3 in November 2024. In response, the WG-MIE developed Version 1 of the Guidelines for MET-SWIM Implementation to assist information service providers and consumers in implementing MET-specific information services, aligned with Doc 10203 and complementary to the MET-SWIM Roadmap. These Guidelines were endorsed by METP/6 as informal guidance and made available via the ICAO APAC e-documents portal.

5.3. The paper also reported that Version 3 of the MET-SWIM Roadmap was developed and endorsed by METP/6 to reflect updated capabilities, planning assumptions, and timelines for the transition from TAC exchange to information services.

5.4. The meeting noted the information provided in WP/20 and discussed the updated MET-SWIM documentation, including the revised Roadmap. The meeting noted that the Roadmap indicates a transition to information services as the primary form of MET exchange during the period 2031 to 2036.

5.5. The meeting further noted that this transition aligns with the proposed Amendment 83 to Annex 3, currently under development, which would remove TAC as a standard format requirement for international MET information exchange, with applicability from November 2030. The Chair clarified the ICAO Annex 3 amendment process and the expected timeframes for these changes.

*WP/27 – GUIDANCE MATERIAL TO ASSIST APANPIRG SUBSIDIARY GROUPS IN  
REVIEWING AND UPDATING THE LIST OF APAC COMMON SWIM INFORMATION  
SERVICES (SWIM TF)*

5.6. The SWIM Task Force presented WP/27, requesting APANPIRG Subsidiary Groups to review and update or refine the list of APAC Common SWIM Information Services planned for future regional implementation. It recalled that the First Version of the Business Functionality for APAC Common SWIM Information Services was adopted by APANPIRG/36 in November 2025, following

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<sup>†</sup> Note: The discussion on WP/20 and WP/27 was conducted after IP/07 (from ACSICG/13) and before WP/21.

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significant contributions from Subsidiary Groups. However, differing levels of detail across information domains were noted.

5.7. To address this, the paper presented guidance material developed under SWIM TF Task 6 to illustrate the type and level of detail required for each information service, including business functionality, service description, information exchanged, exchange model, message exchange pattern, and priority. A worked example was provided for illustration only. Subsidiary Groups were invited to use the guidance to review the draft Second Version of the document and submit proposed updates using track changes for consolidation by SWIM TF.

5.8. The paper summarised feedback from FF-ICE/4, SURSG/5, SURICG/11, and ATFM & A-CDM/SG/16, noting agreement on several improvements and no proposed changes in some domains. MET/IE WG/24 was specifically invited to review and update the MET-related entries in Appendix B.

5.9. The meeting noted the information presented in WP/27 and reviewed the guidance material provided by the SWIM TF. 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.

5.10. The meeting agreed to consider the document as a standing agenda item for future MET/IE WG meetings to support continued review and refinement of the MET-related entries. **[ACTION MET/IE WG/24-17]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 17	<b>Continued Review of APAC Common SWIM Information Services Guidance</b> Include the review of the APAC Common SWIM Information Services document as a standing agenda item at future MET/IE WG meetings	Prior to next MET/IE WG meeting	ICAO Secretariat and MET/IE WG Chairs

## 6. Meteorological Information Exchange in IWXXM Form

### *WP/23 – LATEST STATUS OF IWXXM (Hong Kong China)*

6.1. Hong Kong, China presented WP/23, providing an update on the latest status of the ICAO Meteorological Information Exchange Model (IWXXM) and highlighted relevant decisions of the ICAO METP Working Group on Meteorological Information Exchange (WG-MIE) concerning operational use of IWXXM versions to ensure interoperability among producers and consumers.

6.2. The paper informed the meeting that the WMO Task Team on Aviation Data published IWXXM 2025-2 in November 2025 to support changes introduced by Amendment 82 to Annex 3 and PANS-MET. It summarised the major updates in IWXXM 2025-2, including the introduction of the Quantitative Volcanic Ash Concentration Information and VONA packages, updates to METAR/SPECI, Volcanic Ash Advisory and Space Weather Advisory packages, enhancements to allow unlimited RVR and temperature in tenths of a degree, changes to the Meteorological Feature and WAFS Significant Weather Forecast packages, and documentation updates to reflect PANS-MET.

6.3. The paper highlighted that continued use of outdated IWXXM versions may result in non-compliance with applicable ICAO provisions and increased operational complexity for consumers. 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. A compatibility table reflecting this decision was included.

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6.4. The meeting noted the information presented in WP/23 and discussed the implications of the WG-MIE decision on the operational use of IWXXM versions. The meeting noted that the METP decision will be contained in guidance and therefore 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. The meeting further noted that, while Annex 3 requires States to disseminate MET information in IWXXM form, it does not currently specify IWXXM versions, whereas IWXXM implementation guidance provides information on version compatibility with ICAO Annex 3 Amendments.

6.5. During the discussion on IWXXM implementation and existing gaps, Tonga highlighted the challenges faced by small MET service providers in the Pacific Islands in building and sustaining the capacity and resources needed to meet IWXXM requirements, noting that these challenges are expected to increase. In response, the meeting requested the Secretariat and Tonga to coordinate an assessment of IWXXM implementation gaps and related assistance needs for Tonga and other PSIDS to support sustainable compliance with the IWXXM SARPs. [ACTION MET/IE WG/24-18]

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 18	<b>Assessment of IWXXM Implementation Gaps and Assistance Needs for PSIDS</b> 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.	For consideration by the next MET Sub-Group meeting	ICAO Secretariat, in coordination with Tonga

6.6. To address the issues raised in WP/23 concerning IWXXM version recommendations and compatibility, the meeting formulated a draft conclusion for further consideration:

<b>Draft Conclusion MET/IE WG/24-01 – IWXXM Version Compatibility</b>	
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: <a href="https://github.com/wmo-im/iwxxm/wiki/Package-Compatibility">https://github.com/wmo-im/iwxxm/wiki/Package-Compatibility</a> )	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter -Regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> 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: <input checked="" type="checkbox"/> Required from States

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When: As soon as practicable	Status: Draft to be adopted by MET SG
Who: <input checked="" type="checkbox"/> Sub Groups <input type="checkbox"/> RASG-APAC <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

***WP/22 – STATUS OF APAC IWXXM MESSAGE EXCHANGE OVER AMHS (Australia and Hong Kong, China)***

6.7. This paper, presented by Australia and Hong Kong, China under Agenda Item 6, reviewed the latest status of exchange of IWXXM-formatted meteorological information over AMHS in the APAC Region, based on data recorded in the Online Register of APAC IWXXM Exchange Status. The register enables ROCs and NOCs to share up-to-date information on readiness to receive IWXXM, AMHS capabilities, dissemination destinations, and IWXXM data generation.

6.8. The review showed that, as of April 2026, implementation remained uneven across the region. Of the seventeen ROCs, only ten were routinely disseminating IWXXM messages and seven were not able to disseminate IWXXM messages over AMHS. Most NOCs were not yet capable of receiving IWXXM, and some States could generate IWXXM data but lacked AMHS with the required FTBP and IHE to disseminate messages internationally. Inter-regional IWXXM exchange had been implemented only between APAC and EUR Regions via IROG Singapore and IROG London.

6.9. The paper noted that insufficient communication capability continues to hinder global availability of IWXXM and delays the transition from TAC, which is proposed to cease international distribution from 2030. States were reminded to expedite implementation of the necessary AMHS services and to provide readiness updates to ICAO.

6.10. The meeting noted the progress reported, encouraged States to provide timely updates to the online register, and discussed ways to further support and expedite regional and inter-regional implementation of IWXXM exchange over AMHS. In response to the invitation by the paper, the meeting recalled the previously agreed action on a notification method for enhanced ROC AMHS capability (Ref: MET/IE WG/23 Action Item 23-16) and was informed that this action had been implemented through manual email notifications to ROCs when updates to the register are received and accepted, rather than through an automated process. On this basis, the meeting formulated a targeted Draft Conclusion:

<b>Draft Conclusion MET/IE WG/24-01 –Dissemination of IWXXM</b>	
<p>What: That</p> <ol style="list-style-type: none"> <li>1. APAC <b>ROCs</b> and <b>IROGs</b>, namely <i>Bangkok, Brisbane, Colombo, Delhi, Karachi, Kolkata, Mumbai, Nadi, and Tokyo</i>, 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.</li> <li>2. To support intra-regional exchange of IWXXM, the IROGs establish operational IWXXM exchange</li> </ol>	<p>Expected impact:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Political / Global</li> <li><input checked="" type="checkbox"/> Inter -Regional</li> <li><input checked="" type="checkbox"/> Economic</li> <li><input type="checkbox"/> Environmental</li> <li><input checked="" type="checkbox"/> Ops/Technical</li> </ul>

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with IROGs in the ICAO AFI, MID, NAM and SAM Regions.	
<p>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 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.</p>	Follow-up: <input checked="" type="checkbox"/> Required from States
When: As soon as practicable	Status: Draft to be adopted by MET SG
<p>Who: <input checked="" type="checkbox"/> Sub Groups <input type="checkbox"/> RASG-APAC <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ  <input type="checkbox"/> Other:</p>	

**ACSICG/13 – WP/10 – REVIEW OF ASIA AND PACIFIC REGION IWXXM IMPLEMENTATION STATUS/ READINESS (Secretariat)**

6.11. The paper presented the IWXXM implementation status and the Asia/Pacific Region's readiness to fully implement IWXXM data exchange and encouraged States/Administrations to review and update the IWXXM implementation status as required.

6.12. To provide a clearer overview of the implementation status, the ICAO Secretariat created a new table using data from the previous AMHS Readiness Table for Supporting IWXXM Traffic, information received by email, and AMHS Routing Directory Tables from the ATS Messaging Management Center (AMC) as of March 2026.

6.13. It was observed that the table contained several columns with information that may not require ongoing monitoring. The meeting requested clarification of the terminology within the table to support its update so that only essential data is collected, a task which was accomplished during the Meeting.

6.14. There was a request to clarify the two AMHS message sizes referenced in this sentence:

*“AMHS with File Transfer Body Part (FTBP) and Interpersonal Messages Heading Extension (IHE), which can support the exchange of AMHS message size of a **minimum of 2MB and a maximum of 4MB for FTBP.**”*

6.15. The MET/IE WG Chair provided an overview of the historical context behind the introduction of size numbers for IWXXM messages. Additionally, it was shared that the size number of up to 4 MB (including FTBP) can be found in the [‘GUIDELINES FOR THE IMPLEMENTATION](#)

[OF OPMET DATA EXCHANGE USING IWXXM, Fifth EDITION – October 2023](#)'. The following excerpt of the text is provided for reference:

*The number of FTBPs and the **maximum message size are subject to the AMHS specifications and recipients User Capabilities.** It would be highly desirable to have a **common agreed maximum limit size for AMHS messages between all ICAO Regions.** A total size of AMHS message (including FTBP) **up to 4MB should be considered,** as already defined in some Regions. The available network path between the Originator and Recipient must be completely AMHS with FTBP support for successful message delivery. **It does not necessarily require each COM Centre in the path to operate AMHS in Extended Services to relay an AMHS message with FTBP.** To ensure that delivery is within the capabilities of the recipient, **it is advised that the User Capabilities are coordinated before the establishment of regular communications.** In some Regions, this information may be available through Directory Services (X.500/EDS). The available bandwidth for each 'hop' in the network should be considered by COM Centres when switching to AMHS FTBP operations.*

6.16. Based on this additional information, the ACSICG/13 Meeting modified the format of the table and reviewed and updated the new Table. The duly filled table is provided in Appendix C to the ACSICG/13 Meeting Report.

***WP/17 – IWXXM IMPLEMENTATION PROGRESS IN INDONESIA (Indonesia)***

6.17. Indonesia presented WP/17, reported progress in the development and implementation of IWXXM in Indonesia and outlined recent results from international exchange and testing activities. It recalled that international exchange of IWXXM-formatted OPMET information has been standard practice under Annex 3 since November 2020, and that Indonesia had previously been identified as having potential deficiencies in IWXXM implementation based on earlier SIGMET monitoring results.

6.18. The paper described the development of an in-house IWXXM generator by Indonesia since 2019 and subsequent upgrades to IWXXM 2025-2. Due to limitations of the existing AMHS, Indonesia coordinated with the Hong Kong Observatory to route IWXXM data for validation and dissemination. Initial version incompatibility was resolved in January 2026, after which IWXXM data was confirmed as valid by the Bangkok RODB and has continued to be disseminated via HKO. The paper also acknowledged support from the Hong Kong Observatory and Meteorological Service Singapore in facilitating IWXXM exchange and data conversion.

6.19. The paper further reported Indonesia's participation in the 2025 SIGMET Test, during which SIGMET messages were issued in IWXXM format and disseminated through the HKO AMHS network. Based on these developments, Indonesia proposed that it be removed from the list of APAC States with potential deficiencies in IWXXM implementation.

6.20. The meeting noted the information provided and considered the proposal, as invited by the paper. The Secretariat clarified that no States were currently listed with deficiencies related to the dissemination of MET information in IWXXM form. However, the meeting was informed that the MET SG had reviewed recent SIGMET test and OPMET monitoring results and had 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 information related to the lack of IWXXM implementation for SIGMET and advisory issuance when assessing potential deficiencies. The Secretariat thanked Indonesia for the updated information on its IWXXM validation and dissemination arrangements, which ensure the continued availability of its IWXXM-formatted SIGMET messages.

***IP/03 – STATUS AND PLANS FOR THE IMPLEMENTATION OF OPMET DATA EXCHANGE USING IWXXM IN THE REPUBLIC OF KOREA (Republic of Korea)***

6.21. Republic of Korea presented IP/03, describing the current status and future plans for implementation of OPMET data exchange using IWXXM. It outlined the role of the Aviation Meteorological Office (AMO) of the Korea Meteorological Administration, acting as both the National and Regional OPMET Centre, in cooperation with the Ministry of Land, Infrastructure and Transport.

6.22. The paper reported that IWXXM version 2023-1 was developed by the AMO in December 2023, followed by extensive integrity checks through February 2025, supported by the Hong Kong Observatory's validation tool. IWXXM data has been provided via an open API service since April 2016, with operational provision of IWXXM 2023-1 through the KMA API Hub commencing in August 2025.

6.23. It further noted progress in IWXXM exchange through AMHS, including completion of international AMHS connections with China and Japan, implementation of a pilot AMHS system in September 2025, exchange testing with Japan and China, and real-time transmission of IWXXM-formatted OPMET data to multiple RODBs during the November 2025 monitoring period.

6.24. The paper outlined future plans, including upgrading to IWXXM 2025-2 in 2026, further enhancement of the pilot AMHS system, expansion of IWXXM exchange to additional States, and transition to a fully operational AMHS system by 2028.

6.25. The meeting noted the information provided and thanked the Republic of Korea for sharing its progress and plans, which enhance the Region's understanding of the current and planned status of IWXXM implementation for MET information exchange.

*ACSICG/13 – IP/04 – INDONESIA AMHS UPGRADE TO SUPPORT IWXXM (Indonesia)*

6.26. Indonesia presented the progress of Indonesia in upgrading its AMHS to support the ROC Jakarta in exchanging IWXXM with RODBs and designated ROCs.

6.27. The Meeting was informed that Indonesia has developed an in-house IWXXM 2025 2 generator but cannot disseminate products to RODBs due to the current AMHS size limitations. To resolve this, Indonesia is upgrading the AMHS system as part of the modernization of the ATM Automation System to support files up to 4.0 MB (including FTBP). During the ICAO monitoring period in November 2025, Indonesia mitigated the issue by collaborating with the Hong Kong Observatory (HKO) to successfully route data submissions via HKO's AMHS network. The Meeting was informed that the AMHS upgrade is underway and targeted for full implementation in June 2026, with a structured trial and testing plan scheduled through Q3-Q4 2026 involving AirNav Indonesia and BMKG.

*ACSICG/13 – IP07 – UPDATES ON FIJI'S AMHS SYSTEM UPGRADE (Fiji)*

6.28. Fiji presented the progress of upgrading its AMHS to support both the Basic ATS services and the Extended ATS services in the exchange of file attachment using File Transfer Body Parts (FTBP) to support the exchange of IWXXM messages. The Meeting noted that Fiji Airports hosted the Nadi RODB, one of the 5 RODB in the APAC region, and that AMHS was required to support the exchange of the ROBEX IWXXM bulletin with other RODB, as mandated by ICAO in 2020. To support this requirement, the new AMHS can handle files up to 4.0 MB, including FTBP.

6.29. The Meeting was informed that Fiji's new AMHS & IWXXM system is currently undergoing its commissioning process and plans to commission the new system in May 2026. With the commissioning of the new system, the Nadi RODB will be capable of supporting the exchange of the IWXXM ROBEX bulletin with the 4 other RODBs in the APAC region and of complying with the ICAO mandate.

**WP/21 – SECURE IWXXM EXCHANGE IN THE ABSENCE OF AMHS/FTBP (Australia)**

6.30. Australia presented WP/21, addressing issues affecting the exchange of IWXXM where AMHS with File Transfer Body Part (FTBP) capability is not available. It recalled that the IWXXM Guidelines specify the use of AMHS/FTBP for regional and inter-regional exchange of IWXXM, in accordance with ICAO Annex 3. However, it noted that while some States are generating IWXXM, they face difficulties accessing networks with the required protocols to support such exchange.

6.31. The paper explained that regional exchange of IWXXM depends on both messaging capabilities, including AMHS with FTBP at Inter-Regional Gateways and ROCs, and the availability of meteorological information in IWXXM form. In practice, some States lack AMHS/FTBP connections between their NOCs and ROCs, preventing onward regional and global dissemination. To address this as an interim measure, the ICAO METP WG-MIE discussed and endorsed the use of other secure communication protocols for exchanging IWXXM between NOCs and ROCs, or within a State, where mutually agreed through bilateral arrangements. ROCs, however, are not required to support such alternatives.

6.32. The paper highlighted WG-MIE Decision MIE/13-04, which agreed that the IWXXM Guidelines should include support for secure transfer of IWXXM via such protocols where mutually agreed, with this update expected in a future revision of the Guidelines.

6.33. The meeting noted the information presented in WP/21 and considered whether updates to the ROBEX Handbook were required to support short-term use of other secure protocols for IWXXM exchange. The Chair clarified that a future revision of the IWXXM Guidelines is likely to be non-prescriptive regarding the specific protocols to support secure transfer of IWXXM between NOCs and ROCs, noting that such arrangements would need to be mutually agreed, and that the intent remains for transfer and processing to be fully automated.

6.34. In response to a question from Cambodia regarding feasible solutions in the absence of suitable AMHS/FTBP, the meeting reviewed the existing ROBEX Scheme and discussed the need to consider alternative pathways to improve redundancy and mitigate operational risks. In this context, the meeting considered whether the CRV could provide an effective alternative virtual pathway as part of a business continuity approach to connect to a State with the required AMHS/FTBP capability.

6.35. The meeting noted that the ROBEX Handbook currently references the IWXXM Guidelines and agreed that this was sufficient at present. Further to the issue raised by Cambodia, the meeting requested the MET/IE WG Chair and the Secretariat to 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. **[ACTION MET/IE WG/24-20]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 20	<p><b>Support to ACSICG Task Group on Alternative Pathways for IWXXM Exchange</b></p> <p>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.</p>	As soon as practicable	MET/IE WG Chair and ICAO Secretariat

**WP/19 – CESSATION OF THE USE OF LEGACY TEXT-BASED FORMAT - TRADITIONAL ALPHANUMERIC CODE (TAC) (Hong Kong China)**

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6.36. Hong Kong, China presented WP/19, highlighting the planned cessation of the Traditional Alphanumeric Code (TAC) for international meteorological information exchange and outlined potential impacts on existing systems and services that rely on TAC. TAC has long been the standard format for OPMET products such as METAR, SPECI, TAF and SIGMET, and remains the sole data source for aeronautical broadcasting services including VOLMET and D-VOLMET.

6.37. The paper recalled that METP/6 recommended amendments to Annex 3 and PANS-MET to support the removal of the requirement to internationally exchange legacy text-based formats, in November 2030 and applicability embedded through Amendment 83 to Annex 3 and Amendment 1 to PANS-MET. While the transition to IWXXM aligns with the broader SWIM implementation and digital data exchange, it raises specific challenges for services and systems designed exclusively for TAC.

6.38. It was noted that current VOLMET and D-VOLMET systems cannot process IWXXM data. Without suitable upgrades or conversion mechanisms, the cessation of TAC would remove the primary data source for these critical broadcasting services. The paper further noted the absence of ICAO guidance on adapting broadcasting services for TAC cessation.

6.39. The meeting noted the information presented in WP/19 and acknowledged the current lack of ICAO guidance on how systems such as VOLMET would be managed following the unavailability of globally exchanged TAC. The meeting considered urging ICAO to develop relevant guidance, in coordination with stakeholders, to support an orderly transition and avoid disruption to existing aeronautical broadcasting services.

6.40. The meeting sought to clarify the implications of TAC no longer being an ICAO standard MET information exchange format from 2030, particularly for VOLMET broadcasts that rely on TAC-formatted MET information. To better understand the potential regional implications, the meeting considered it prudent to consult end users and, in this context, requested the Secretariat to seek further advice from airlines, through coordination with IATA, on expectations regarding the need to continue providing HF VOLMET containing TAC-formatted MET information beyond 2030. **[ACTION MET/IE WG/24-21]**

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY
MET/IE WG/24 21	<b>Consultation with Airlines on Post-2030 HF VOLMET Requirements</b> 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.	Before the next meeting of the MET Sub-Group	ICAO Secretariat

*ACSICG/13 – WP/11 – MET IE WG clarification for SWIM related to IWXXM messages (ATSCG Chair)*

6.41. This paper consolidated ATSCG observations, questions raised during ATSCG Meetings, and the agreed Phase-based AMHS–SWIM transition model, with the objective of facilitating focused discussion with MET IE on MET-specific transition considerations.

6.42. It was noted that ATSCG has proposed a four-phase transition model (Phase 0 to Phase 3) to guide the gradual coexistence of AMHS and SWIM. Phase 0 is AMHS baseline; Phase 1 introduces early SWIM adoption; Phase 2 involves mixed-mode operations; and Phase 3 is SWIM-Enable predominance. Given that MET messages, especially IWXXM, are expected to be early adopters of SWIM, ATSCG raises key clarifications for the ICAO MET IE community:

- The need for IWXXM bridging between AMHS and SWIM

- Differences between IWXXM in AMHS and IWXXM in SWIM
- Timeline and transition planning for MET Messages

6.43. The Meeting noted ATSCG observes that mixed-mode operations for MET exchange are anticipated to persist for a considerable period in the APAC Region due to asynchronous readiness. Differences in current interpretations and expectations regarding MET bridging and exchange arrangements may increase the risk of fragmented implementation, inconsistent operational behaviors, and interoperability challenges at international boundaries. ATSCG emphasized that its role is not to mandate solutions, but to facilitate shared understanding, minimum safeguards, and regional coordination during the transition period.

6.44. Owing to time constraints, this paper could not be discussed in detail. Nevertheless, MET IE WG/24 clarified that IWXXM in over SWIM and AMHS will be different. SWIM will exchange individual messages whereas AMHS will exchange bulletins. It is expected that AMHS and SWIM services will operate in parallel for many years. Additionally, it was reported that some States are already transmitting IWXXM messages via the internet.

6.45. The Meeting referred to [WP/21 of MET IE WG/24](#), which specified that to support expedited exchange of IWXXM, alternate secure protocols have been agreed by METP WG-MIE where bilateral agreements are reached. The ACSICG/13 Meeting was informed about **Decision MIE/13-04: Enabling IWXXM Exchange via Secure Communications**. The ACSICG/13 Meeting requested clarification on the communication medium suggested to be used for the secure transfer of IWXXM and associated guidelines. It was informed that more details will be shared in future Meetings. [ACTION ITEM ACSICG/13-12]

6.46. The ACSICG/13 Meeting highlighted the importance of determining which MET messages are recommended for exchange via CRV and which should be transmitted over the internet. It was clarified that the exchange of MET messages over AFS has already been specified in the ROBEX handbook, whereas MET-SWIM exchange will primarily occur over the internet. This will not preclude States exchange MET information over the CRV where mutually agreed.

6.47. The meeting was informed that, from the METP perspective, future MET/SWIM services are expected to be predominantly exchanged over the Internet, reflecting the very large number of anticipated users and the limitations of managing user addressing via the CRV. The MET/SWIM Roadmap was recalled as providing guidance on the timeline for transition from AMHS to SWIM. The MET/IE WG Chair noted that the timeline for AMHS readiness for IWXXM exchange was 2020, aligned with ICAO Annex 3 IWXXM standard, and expedited implementation is required. The meeting also noted that the current regional and global availability of IWXXM-formatted MET information remains insufficient for many users, and that more rapid implementation by States is needed for the aviation system to realise the benefits of digital MET information exchange.

6.48. After detailed deliberations, it was concluded that AMHS is expected to be used for MET messages transmission for at least a decade.

#### **—End of Conjoint session of ACSICG/13 and MET/IE/WG/24—**

### **7. Future Work Program and Terms of Reference**

#### ***REVIEW: WP/02 – FOLLOW-UP ACTION FROM MET/IE WG/23 (Secretariat)***

7.1. The meeting returned to WP/02 to review the outcomes from MET/IE WG/23, which had been discussed earlier under Agenda Item 2 but were deferred pending the provision of additional information by the Secretariat. The Secretariat presented several proposed updates to the status of action

items in the MET/IE WG List of Actions. The meeting reviewed and endorsed these updates as presented in **Appendix D**.

7.2. 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.

7.3. 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.

7.4. 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 PIs by Thailand. However, further work is required to examine the feasibility of developing ROC- and 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.

7.5. 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.

***REVIEW: WP/03 – FOLLOW-UP ACTION FROM MET SG/29 (Secretariat)***

7.6. The meeting returned to WP/03 to review updates to the follow-up status on outcomes from MET SG/29, as proposed by the Secretariat. The meeting reviewed and the updates, which would be reviewed and agreed upon by MET SG/30. 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.

***WP/06 – REVIEW MET/IE WG TERMS OF REFERENCE AND WORK PLAN (Secretariat)***

7.7. This Secretariat presented WP/06, inviting the meeting to review the Terms of Reference and Work Plan of the Meteorological Information Exchange Working Group (MET/IE WG). The objective was to ensure that the working group remains relevant, effective, and aligned with regional priorities and global requirements for meteorological information exchange. The review considered the scope, objectives, membership, and planned activities of the group, as last updated by MET SG/29.

7.8. The paper recalled that the MET/IE WG operates under the Meteorology Sub-Group of APANPIRG and supports States in improving the quality, availability, and timeliness of meteorological information required for flight planning and in-flight re-planning, in accordance with ICAO Annex 3. Periodic review of the Terms of Reference and Work Plan was noted as necessary to confirm the continued relevance of the group and to ensure its activities remain focused on aviation safety, operational efficiency, and environmental sustainability in the APAC region.

7.9. The current version of the Terms of Reference and Work Plan, reflecting updates approved by MET SG/29, was provided in Appendix A for consideration. These documents define the remit, organization, reporting arrangements, membership, communication mechanisms, and planned deliverables of the MET/IE WG.

7.10. The meeting was invited to review the documents in Appendix A and to agree on any necessary updates for submission to the Meteorology Sub-Group for further consideration and possible

approval. A break-out session drafted a range of updates to the objectives, membership, functions of the group and activities. The meeting subsequently reviewed these updates and noted the information provided. The updates proposed during the MET/IE WG/24 review above are presented in **Appendix F** of this Report.

*WP/07 – INDIA’S PERSPECTIVE ON FUTURE WORK PROGRAMME AND TERMS OF REFERENCE FOR METEOROLOGICAL INFORMATION EXCHANGE IN APAC (India)*

7.11. India presented WP/07, providing India’s perspective on the future work programme and the review of the Terms of Reference (ToR) of the MET/IE Working Group. It highlighted the continuing importance of the MET/IE WG in supporting timely, accurate and interoperable meteorological information exchange across the APAC region, particularly in the context of increasing air traffic and the transition towards digital exchange.

7.12. The paper identified key priority areas for future work, including the phased transition to digital meteorological information exchange using IWXXM, implementation of SWIM-compliant services, strengthening monitoring of data quality and timeliness, capacity building, and ensuring data security. While pilot implementations of IWXXM and early SWIM services have begun in India and some APAC States, the paper noted that integration with legacy systems, full operational deployment, and real-time dissemination remain ongoing challenges requiring coordinated regional action.

7.13. India emphasized that the MET/IE WG’s future work programme should focus on regional collaboration, technical trials, and continuous evaluation to support interoperability and operational efficiency. It further proposed that the ToR be updated to reflect evolving technological developments, clearly define roles and responsibilities, and establish structured monitoring and reporting mechanisms.

7.14. The meeting was invited to note the information, consider the proposed priorities for the future work programme, and review and update the Terms of Reference accordingly. The meeting noted the information presented.

## **8. Next Meeting**

8.1. The meeting noted that the Chairs and Secretariat would coordinate with the ACSICG to plan the conduct of MET/IE WG/25 in conjunction with ACSICG/14 in 2027, with tentative dates in March and April 2027. The respective Chairs and Secretariat would jointly develop the meeting programme and agenda to optimise the outcomes of the joint sessions.

8.2. The meeting felt it would be highly beneficial to meet with the ACSICG in support of enabling IWXXM exchange over the AFS. Joint sessions with the SWIM/TF would be pursued once the SWIM architecture was more mature.

8.3. The meeting reflected on the value of holding this meeting in the Pacific, enabling many Pacific States to attend and resolve implementation issues and strongly encouraged ICAO to consider holding subsequent meetings in the Pacific. Further, it was recommended that MET/IE WG/26 (2028) be considered for being held in the Pacific.

## **9. Any Other Business**

9.1. Tonga requested that ICAO consider coordinating with the PMC PIAWS Panel on assistance to support the implementation of current and future ICAO Annex 3 requirements and the activities of the PIAWS Panel.

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9.2. Pacific States advised that the funding provided by 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.

9.3. Further, funding to support hosting such meetings in the Pacific was identified as a key enabler. The meeting participants, including ICAO, greatly appreciated Fiji's hosting of this successful meeting.

— END OF SECTION —

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<sup>ii</sup> Hong Kong, China - Appendix I focal point information (email)  
Fiji - SAPS/FTPS31, SAPS/FTPS32, SAPS/FTPS33, SAPS/FTPS34, Appendix I focal point information (WP/08)  
Indonesia - Appendix I focal point information (WP/18)  
Japan - Appendix I focal point information (email)  
New Zealand - Appendix I focal point information (email)  
Papua New Guinea - Appendix I focal point information (email)  
Republic of Korea - Appendix I focal point information (email)