

International Civil Aviation Organization



ICAO

**WORKING PAPER**

**ASIA AND PACIFIC (APAC)**

Twenty-Seventh Meeting of the Meteorology Sub-Group  
(MET SG/27)

Bangkok, Thailand, 04 to 08 September 2023

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**Agenda Item 2: Review outcomes from previous meetings**

**REVIEW OUTCOMES FROM MET SG/26**

(Presented by the Secretariat)

**SUMMARY**

This paper presents the status of follow-up action on outcomes from the Twenty-sixth Meeting of the Meteorology Sub-group (MET SG/26), which included two (2) Draft Conclusions for further consideration by APANPIRG, one (1) Conclusion and two (2) Decisions for action under the MET SG's terms of reference, and nine (9) new action items in the MET SG List of Actions, and invites the meeting to consider further actions, as necessary, to support the follow-up on the MET SG/26 outcomes.

**1. INTRODUCTION**

1.1 Under the terms of reference, the Meteorology Sub-group (MET SG) formulates Draft Conclusions and Draft Decisions on matters that will not be dealt with by the MET SG but will be forwarded for further consideration by the APAC Air Navigation Planning and Implementation Regional Group (APANPIRG).

1.2 MET SG also adopts Conclusions and Decisions on technical matters that, under the MET SG terms of reference, require the attention of States or action by the ICAO or relate to the internal working arrangements of the MET SG.

1.3 In addition, to facilitate progress on the work plan, MET SG agrees to and records specific actions in the MET SG List of Actions.

1.4 The meeting will review the status of follow-up action on the above MET SG/26 outcomes and consider further actions, as necessary, to support the follow-up action on the MET SG/26 outcomes.

**2. DISCUSSION**

2.1 Outcomes from the Twenty-sixth Meeting of the Meteorology Sub-group (MET SG/26), held online from 1 to 5 August 2022, included the following: two (2) Draft Conclusions for further consideration by APANPIRG; one (1) Conclusion and two (2) Decisions, for action under the MET SG's terms of reference; and nine (9) new action items, recorded in the MET SG List of Actions.

MET SG/26 – Draft Conclusions

2.2 The Draft Conclusions formulated by MET SG/26 are listed below:

- Draft Conclusion MET SG/26/03 – *WAFS, SADIS and WIFS upgrades*
- Draft Conclusion MET SG/26/04 – *0.25-degree WAFS hazard data*

2.3 The Draft Conclusions above were subsequently presented to and considered by the Thirty-third Meeting of APANPIRG (APANPIRG/33), held in Bali, Indonesia, from 22 to 24 November 2022. For further discussion on the APANPIRG/33 outcomes on the above Draft Conclusions, please refer to WP/03.

MET SG/26 – Conclusion and Decisions

2.4 The Conclusion and Decisions adopted by MET SG/26 are reproduced in **Appendix A** and listed below:

- Decision MET SG/26-01 – *Updates to Regional SIGMET Guide;*
- Decision MET SG/26-02 – *Update the Regional Guidance for Tailored Meteorological Information and Services to Support ATM Operations;* and
- Conclusion MET SG/26-05 – *Encourage States to provide input on the online repository on SIGMET Coordination and the consolidation document on SIGMET Coordination Practices in the APAC region.*

2.5 The status of follow-up action on the above Conclusion and Decisions is indicated in **Appendix A**.

MET SG/26 – List of Actions

2.6 The new actions agreed to by MET SG/26 are recorded in **Appendix B**, which also indicates the status of follow-up action on the MET SG List of Actions.

**3. ACTION BY THE MEETING**

3.1 This paper invites the meeting to:

- a) Note the information in this paper;
- b) Review and update the status of follow-up action on the MET SG/26 Conclusion and Decisions in **Appendix A** and MET SG List of Actions in **Appendix B**;
- c) Identify further actions, as necessary, to support the follow-up action on the MET SG/26 outcomes; and
- d) Discuss any relevant matters as appropriate.

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## **APPENDIX A**

### **MET SG/26 – Conclusion and Decisions**

<b>Conclusion MET SG/26/05</b> – <i>Encourage States to provide input on the online repository on SIGMET Coordination and the consolidation document on SIGMET Coordination Practices in the APAC region</i>		
What: a) States be invited to provide updates to the online repository on SIGMET Coordination and supplement its local SIGMET issuance practices to the consolidation document on SIGMET Coordination practices in the APAC region (using the contact details provided in the documents); and b) The ICAO Asia/Pacific Regional Office will notify the States/Administrations of the availability and location of the above documents and invite States' inputs to the consolidation document by issuing a State Letter.	That,	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To enhance the SIGMET coordination in the Region by gathering lessons learnt from existing SIGMET coordination activities to facilitate more efficient and better coordinated SIGMET service to meet aviation users' expectations and operational requirements in the Region.		Follow-up: <input type="checkbox"/> Required from States
When: Now		Status: Adopted by Subgroup
Who: <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: ROs		

<b>Follow-up action on Conclusion MET SG/26/05</b>	<b>Responsibility</b>	<b>Status</b>
i) Issued State letter (Ref.: T 4/3.2 – AP128/23 (MET), dated 30 August 2023) ii) Published 'Online repository on SIGMET Coordination' on the ICAO APAC website: <a href="https://www.icao.int/APAC/Pages/eDocs.aspx">https://www.icao.int/APAC/Pages/eDocs.aspx</a>	Secretariat	Completed

<b>Decision MET SG/26/01</b> – <i>Updates to Regional SIGMET Guide</i>		
What: That, the MET SG approves the updates to the SIGMET Guide as presented in Appendix A of WP/09 for use by States and publishing on the ICAO APAC Office website.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-Regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical	
Why: to make the latest updates to the SIGMET Guide available for use by the States	Follow-up: <input type="checkbox"/> Required from States	
When: Now	Status: Adopted by MET SG	
Who: <input type="checkbox"/> Sub Groups <input type="checkbox"/> RASG-APAC <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:		

<b>Follow-up action on Decision MET SG/26/01</b>	<b>Responsibility</b>	<b>Status</b>
Published 'APAC Regional SIGMET Guide, Tenth Edition — October 2022' on the ICAO APAC website: <a href="https://www.icao.int/APAC/Pages/eDocs.aspx">https://www.icao.int/APAC/Pages/eDocs.aspx</a> .	Secretariat	Completed

<b>Decision MET SG/26/02</b> – <i>Update the Regional Guidance for Tailored Meteorological Information and Services to Support ATM Operations</i>		
<b>What:</b> That, the MET SG approves the proposed updates to the <i>Asia/Pacific Regional Guidance for Tailored Meteorological Information and Services to Support Air Traffic Management Operations</i> .		<b>Expected impact:</b> <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
<b>Why:</b> To provide States with up-to-date guidance material and make the updated version available on the ICAO APAC eDocuments website	<b>Follow-up:</b> <input type="checkbox"/> Required from States	
<b>When:</b> As soon as practicable	<b>Status:</b> Adopted by Subgroup	
<b>Who:</b> <input type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:		

Follow-up action on Decision MET SG/26/02	Responsibility	Status
Published ‘APAC Regional Guidance for Tailored Meteorological Information and Services to support Air Traffic Management Operations, Third Edition — August 2022’ on the ICAO APAC website: <a href="https://www.icao.int/APAC/Pages/eDocs.aspx">https://www.icao.int/APAC/Pages/eDocs.aspx</a> .	Secretariat	Completed

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## APPENDIX B

### MET SG – LIST OF ACTIONS

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

#### New action items recorded by MET SG/26

MET SG – LIST OF ACTIONS				
Action No.	Detailed description of actions	Responsibility	Target date	Status
26/01	<p><b>MET Deficiencies template and guidance documents:</b> Finalise and publish the <i>MET Deficiencies template and guidance</i> documents (from Appendix F of the Report of MET SG/25) as stand-alone documents on the ICAO APAC Office “eDocuments” webpage. [Ref: Report of MET SG/26, para. 2.4.]</p> <p>Ref: ‘MET Deficiency Report and Identification Guide’, uploaded to the ICAO APAC website: <a href="https://www.icao.int/APAC/Pages/eDocs.aspx">https://www.icao.int/APAC/Pages/eDocs.aspx</a></p>	Secretariat and ad hoc group on MET deficiencies	Nov 2022	<b>COMPLETED</b>
26/02	<p><b>Papers for MET/S WG on QMS:</b> Request papers for future meetings of the MET/S WG on issues concerning the implementation and monitoring the implementation of QMS in the Region. [Ref: Report of MET SG/26, para. 2.18.]</p> <p>Ref: MET/S WG/13; Agenda Item 4: Quality management of meteorological services; WP/05 – QMS Updates from Solomon Islands and Other Pacific Islands States (Solomon Islands); IP/07 – Quality Management System for Aviation Weather Services in Hong Kong, China (Hong Kong, China); and IP/08 – Implementation of QMS in Aeronautical Meteorology Service in Indonesia (Indonesia)</p>	Secretariat and Chair of MET/S WG	Dec 2022	<b>COMPLETED</b>
26/03	<p><b>Paper for CNS SG/26 on Draft Decision SWIM TF/06/01:</b> Submit a paper to CNS SG/26 highlighting that the MET SG/26 noted the importance of CNS SG/26 adopting the proposal in Draft Decision SWIM TF/06/01. [Ref: Report of MET SG/26, para. 2.31.]</p> <p>Ref: CNS SG/26, WP/34 – REVIEW OUTCOMES FROM MET SG/26</p>	Secretariat	Aug 2022	<b>COMPLETED</b>
26/04	<p><b>APANPIRG AN Deficiencies – requirements for WAFS forecasts:</b> Provide technical assistance to help the States concerned understand and determine the requirements for WAFS forecasts. [Ref: Report of MET SG/26, para. 3.2.]</p> <p>Ref: MET SG/27, WP/07 – Review APANPIRG Air Navigation Deficiencies</p>	Secretariat	Nov 2022	<b>IN PROGRESS</b>
26/05	<p><b>Location indicator for FIR Port Moresby in the SIGMET Guide:</b> Include the correct location indicator for FIR Port Moresby (as previously identified in Action No. 25/07) in the approved ICAO APAC Regional SIGMET Guide, Tenth Edition. [Ref: Report of MET SG/26, para. 4.5.]</p> <p>Ref: APAC Regional SIGMET Guide, Tenth Edition, uploaded to the ICAO APAC website: <a href="https://www.icao.int/APAC/Pages/eDocs.aspx">https://www.icao.int/APAC/Pages/eDocs.aspx</a></p>	Secretariat	Nov 2022	<b>COMPLETED</b>
26/06	<p><b>ROBEX Handbook amendments for the regular exchange of OPMET bulletins to ROC Beijing:</b> (a) Amend the ICAO APAC ROBEX Handbook as discussed in the Report of MET SG/26, para. 4.11.;</p>	Secretariat	Nov 2022	<b>COMPLETED</b>

MET SG – LIST OF ACTIONS				
Action No.	Detailed description of actions	Responsibility	Target date	Status
	<p>(b) Assist China with consulting with India concerning India's agreement to regular exchange of OPMET bulletins to ROC Beijing; and</p> <p>(c) Subject to India's agreement, Amend the ROBEX Handbook as discussed in the Report of MET SG/26, para. 4.12. [Ref: Report of MET SG/26, para. 4.13.]</p> <p>Ref: APAC ROBEX Handbook, Fifteenth Edition, March 2023, uploaded to the ICAO APAC website: <a href="https://www.icao.int/APAC/Pages/eDocs.aspx">https://www.icao.int/APAC/Pages/eDocs.aspx</a></p>			
26/07	<p><b>APAC ANP, Volume III amendment – examples from other ICAO Regions:</b></p> <p>Consider examples of Volume III adopted by other ICAO Regions in the MET work plan on a proposal for amendment of MET-specific material in the APAC ANP, Volume III. [Ref: Report of MET SG/26, para. 5.8.]</p> <p>Ref: MET SG/27, WP/14 – Review of the Asia/Pacific Air Navigation Plan</p>	Secretariat and MET/R WG	Nov 2022	<b>IN PROGRESS</b>
26/08	<p><b>APAC ANP, Volume II amendment – Nepal:</b></p> <p>Initiate an appropriate proposal for amendment of the ANP Volume II, to reflect the requirements for aerodrome meteorological offices in Nepal. [Ref: Report of MET SG/26, para. 5.9.]</p> <p>Ref: MET SG/27, WP/14 – Review of the Asia/Pacific Air Navigation Plan</p>	Secretariat and Nepal	Nov 2022	<b>IN PROGRESS</b>
26/09	<p><b>Outdated WAFS Service Document:</b></p> <p>Remove the WAFS Service Document, which dated back to 2012, from the ICAO APAC Office eDocuments webpage. [Ref: Report of MET SG/26, para. 8.3.]</p> <p>Ref: WAFS Service Document removed from the ICAO APAC Office eDocuments webpage</p>	Secretariat	Nov 2022	<b>COMPLETED</b>

### Unresolved action items recorded by MET SG/25

MET SG – LIST OF ACTIONS				
Action No.	Detailed description of actions	Responsibility	Target date	Status
25/04	<p><b>Revise the Work Plan of MET/R</b> to take the lead in developing the proposed amendment to ANP Volume III in coordination with MET/IE and MET/S [Ref: para. 2.5.]</p> <p>Ref: MET/R WG/12 Report, Appendix B, Terms of Reference and Work Program, Deliverable 5: Coordinated review of the APAC ANP Volume III, including proposals for improvements to the ANRF and other parts of Volume III, to clarify the MET-related implementation planning guidance</p>	Secretariat and MET/R WG	Nov 2021	<b>COMPLETED TO COMMENCE</b>
25/05	<p><b>Reach out to States concerned with air navigation deficiencies</b> to identify and record target dates for resolving their respective air navigation deficiencies [Ref: para. 4.3.]</p> <p>Ref: MET SG/27, WP/07 – Review APANPIRG Air Navigation Deficiencies</p>	Secretariat	Nov 2021	<b>IN PROGRESS</b>
25/06	<p><b>Finalise the proposals for amendment of the APAC ANP (Vol I and II) and ROBEX Handbook</b> as agreed in previous meetings to ensure accuracy of the requirements specifications against which the OPMET monitoring is analysed [Ref: para. 4.6.-4.7.]</p>	Secretariat	Nov 2021	<b>IN PROGRESS</b>

MET SG – LIST OF ACTIONS				
Action No.	Detailed description of actions	Responsibility	Target date	Status
	Ref: MET SG/27, WP/14 – Review of the Asia/Pacific Air Navigation Plan, and WP/09 – Updates to the ICAO APAC ROBEX Handbook			
25/07	<p><b>Finalise a proposal for amendment of the APAC ANP (Table MET II-1) and consequential amendment to the APAC Regional SIGMET Guide</b> as necessary to ensure the correct use of FIR indicator for Port Moresby [Ref: para. 4.12.-4.14.]</p> <p>Ref: MET SG/27, WP/14 – Review of the Asia/Pacific Air Navigation Plan, and APAC Regional SIGMET Guide, Tenth Edition, uploaded to the ICAO APAC website: <a href="https://www.icao.int/APAC/Pages/eDocs.aspx">https://www.icao.int/APAC/Pages/eDocs.aspx</a></p>	Secretariat	Nov 2021	<b>IN PROGRESS</b> ANP amendment pending; SIGMET Guide amended, 9 <sup>th</sup> Ed.
25/09	<b>Review SIGMET Guide</b> as necessary to guide MWOs to handle cases when VAAC would not hand over to the neighbouring VAAC even if the ash cloud is expected to cross the AoR [Ref: para. 4.12.-4.14.]	MET/S	Mar 2023	<b>TO COMMENCE</b>
25/10	<p><b>Assist the Solomon Islands in aligning procedures with ICAO Annex 3, conducting SIGMET monitoring by RODBs and follow-up SIGMET tests</b> to demonstrate ICAO-compliant content, format and timeliness of SIGMET information service and its sustainability [Ref: para. 4.15.-4.18.]</p> <p>Ref: APANPIRG/33, IP/08 – Rectification of APANPIRG AN Deficiency AP-MET-23</p>	Solomon Islands, Secretariat, Australia and New Zealand	Feb 2022	<b>COMPLETED</b> <b>IN PROGRESS</b> Ref: MET/S WG/12 IP/11
25/11	<p><b>Coordinate removal of AN deficiency AP-MET-23 from the open list</b> with the relevant ICAO bodies (MET/S WG, MET SG and APANPIRG) after receipt of the additional evidence and report from Solomon Islands [Ref: para. 4.19.]</p> <p>Ref: APANPIRG/33 Report, paragraphs 3.5.8, 4.1.3-4, and Conclusion APANPIRG/33/14 – Update of Information in APANPIRG Air Navigation Deficiencies Reporting Form</p>	Secretariat	Mar 2022	<b>COMPLETED</b> <b>TO COMMENCE</b>
25/12	<b>Provide updates to the contact lists in the ICAO Doc 9766-AN/968 (Handbook on the International Airways Volcano Watch (IAVW))</b> to the ICAO METP [Ref: para. 5.15.]	MET SG, MET/S WG, MET/IE WG	Mar 2022	<b>TO COMMENCE</b>
25/13	<p><b>Coordinate possible SWX advisory exercise/s and training workshop/s</b> with the appropriate body under METP for [Ref: para. 5.28.]</p> <p>Ref: ICAO APAC webinar on space weather information service (TBD in Q3/Q4 2022); Secretariat to coordinate with Australia [MET/IE WG/20 - ACTION 01]; MET/R WG new deliverable #7 to promote user education on SWX service.</p>	Secretariat MET/S WG, MET/IE WG	Nov 2021	<b>IN PROGRESS</b>
25/14	<p><b>Finalise the proposed amendment to the ROBEX Handbook, Table A, Appendix A</b>, to reflect the requirement of China for regular exchange of OPMET bulletins with Sri Lanka, Indonesia, Malaysia and India in consultation with States concerned [Ref: para. 6.1.-6.2.]</p> <p>Ref: APAC ROBEX Handbook, Fifteenth Edition, March 2023, uploaded to the ICAO APAC website: <a href="https://www.icao.int/APAC/Pages/eDocs.aspx">https://www.icao.int/APAC/Pages/eDocs.aspx</a></p>	Secretariat	Nov 2021	<b>IN PROGRESS</b> <b>COMPLETED</b>

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