



ICAO

*International Civil Aviation Organization*

**WORKING PAPER**

**Nineteenth Meeting of the Meteorological Information Exchange Working Group (MET/IE WG/19)**

Virtual meeting, 22 to 24 March 2021

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

**FOLLOW-UP ACTION FROM MET SG/24**

(Presented by the Secretariat)

**SUMMARY**

This paper presents a summary of outcomes from the Twenty-Fourth Meeting of the Meteorology Sub-group (MET SG/24). The meeting will consider further actions for MET/IE WG, as necessary, to support the work of MET SG, including a proposal to update the MET/IE WG work plan and updates to the status of follow-up action on the MET SG/24 outcomes.

**1. INTRODUCTION**

1.1 The ICAO Asia and Pacific (APAC) Office hosted the Twenty-Fourth Meeting of the Meteorology Sub-group (MET SG/24) as a virtual meeting from Bangkok, Thailand from 16 to 20 November 2020.

1.2 The meeting will review a summary of outcomes from MET SG/24 and consider further actions for MET/IE WG, as necessary, to support the work of MET SG.

**2. DISCUSSION**

2.1 The report from MET SG/24, and all related meeting documentation, is available at the ICAO APAC Office website ([www.icao.int/apac](http://www.icao.int/apac)>Meetings>Meeting List-2020>MET SG/24).

MET SG/24 – Draft Conclusions and Draft Decisions

2.2 MET SG/24 formulated four (4) Draft Conclusions and one (1) Draft Decision, for further consideration by the APAC Air Navigation Planning and Implementation Regional Group (APANPIRG), as follows:

- Draft Conclusion MET SG/24-02: *APAC Regional Air Navigation Plan (ANP), Volume III*
- Draft Conclusion MET SG/24-04: *Resolution of Air Navigation Deficiency AP-MET-01*
- Draft Conclusion MET SG/24-06: *0.25 degree WAFS hazard data*

**Agenda Item 2**

22-24/03/21

- Draft Conclusion MET SG/24-10: *Implementation of IWXXM*
- Draft Decision MET SG/24-17: *Updates to terms of reference and work plan of MET SG*

2.3 Further discussion on the outcomes of APANPIRG's consideration of the above Draft Conclusions and Draft Decision is presented in the separate working paper, WP/04 – *Follow-up action from APANPIRG/31*.

MET SG/24 – Conclusions and Decisions

2.4 MET SG/24 adopted six (6) Conclusions for the attention of States or action by the ICAO, eight (8) Decisions related to the internal working arrangements of the MET SG, as follows:

- Decision MET SG/24-01: *Updates to legacy FASID Table information*
- Conclusion MET SG/24-03: *Survey of State Meteorological Information Supporting Air Traffic Management*
- Decision MET SG/24-05: *MET Deficiencies*
- Decision MET SG/24-07: *November 2023 WAFS and SADIS Upgrades*
- Conclusion MET SG/24-08: *Volcanic Ash Information Conflict Reduction*
- Conclusion MET SG/24-09: *IWXXM Survey and Online Workshop*
- Conclusion MET SG/24-11: *IWXXM Exchange Approach*
- Conclusion MET SG/24-12: *Development of Online Register of the status of IWXXM Exchange*
- Decision MET SG/24-13: *Development of APAC User Requirements for SWIM-based MET Information Services Supporting ATFM*
- Decision MET SG/24-14: *Updates to Regional SIGMET Guide*
- Decision MET SG/24-15: *Updates to ROBEX Handbook*
- Decision MET SG/24-16: *Updates to Regional Guidance for Tailored Meteorological Information and Services to Support ATM Operations*
- Decision MET SG/24-18: *Updates to terms of reference and work plan of and MET/R WG, MET/IE WG and MET/S WG*
- Conclusion MET SG/24-19: *Amendments to Regional Guidance to reflect changes to location indicators for Hanoi FIR and Ho Chi Minh FIR*

2.5 For reference, a full copy of the above MET SG/24 Conclusions and Decisions is provided at the **Appendix A** to this paper.

2.6 With the adoption of Decision MET SG/24-01: *Updates to legacy FASID Table information*, Conclusion MET SG/24-12: *Development of Online Register of the status of IWXXM Exchange*, and Decision MET SG/24-15: *Updates to ROBEX Handbook*, MET/IE WG should ensure that updated information from the legacy Facilities and Service Implementation Document (FASID), Table MET 2A – *OPMET Information (METAR, SPECI and TAF) Required in SADIS and WIFS*, and a newly developed online register of the status of IWXXM exchange in the APAC Region are incorporated into the existing ICAO APAC Regional OPMET Bulletins Exchange (ROBEX) Handbook.

2.7 In view of the above, MET SG/24 approved appropriate updates to include the above activities at 6.4 and 6.5 of the MET/IE WG work plan (Appendix A to the WP/16 – *Review MET/IE WG Work Program and Terms of Reference*, refers).

2.8 With the adoption of Conclusion MET SG/24-09: *IWXXM Survey and Online Workshop*, MET SG/24 requested MET/IE WG to organize and conduct another regional survey on the status of

States' progress on the dissemination of meteorological information in IWXXM GML form, including the Aeronautical Fixed Service (AFS) connections supporting Air Traffic Service Message Handling System (AMHS) with File Transfer Body Part (FTBP) and Interpersonal Messaging Heading Extension (IHE), and States' requirements for another, Regional, IWXXM-specific seminar or workshop during 2021.

2.9 In view of the above, MET SG/24 approved appropriate updates to include the above activity at 7.2 of the MET/IE WG work plan (Appendix A to the WP/16 – *Review MET/IE WG Work Program and Terms of Reference*, refers).

2.10 With the adoption of Conclusion MET SG/24-11: *IWXXM Exchange Approach*, MET SG/24 requires that IWXXM exchange in APAC Region shall be aligned with *Guidelines for the Implementation of OPMET Data Exchange using IWXXM* (fourth edition, November 2020) and, specifically, that Regional OPMET Centres (ROCs) are responsible for the distribution of all types of IWXXM formatted OPMET data to States within the APAC Region.

2.11 In view of the above, the meeting might consider necessary updates to the ROBEX Handbook to ensure clarity of the guidance concerning ROCs' responsibilities for the distribution of IWXXM formatted OPMET data.

2.12 With the adoption of Decision MET SG/24-18: *Updates to terms of reference and work plan of and MET/R WG, MET/IE WG and MET/S WG*, MET SG 24 approved the updated terms of reference and work plan of the MET/IE WG (Appendix A to the WP/16 – *Review MET/IE WG Work Program and Terms of Reference*, refers).

#### MET SG – Agreed actions

2.13 In addition to all the above, MET SG/24 agreed to six (6) new actions in the MET SG Task List, in addition to the seven (7) actions from the previous, MET SG/23, meeting that were yet to be completed. The status of follow-up on the MET SG Task List agreed actions is indicated at the **Appendix B** to this paper.

### **3. ACTION BY THE MEETING**

3.1 This paper invites the meeting to:

- a) Review the outcomes from MET SG/24, as discussed above and presented at the **Appendix A** and **Appendix B** to this paper, and consider further actions for the MET/IE WG, as necessary, to support the follow-up work from MET SG/24;
- b) Propose appropriate updates to the MET/IE WG work plan to update the ROBEX Handbook to ensure clarity of the guidance concerning the ROCs' responsibilities for the distribution of IWXXM formatted OPMET data; and
- c) Provide updates, as necessary, on the status of follow-up action on the MET SG/24 outcomes.

-----

**Agenda Item 2**

22-24/03/21

**APPENDIX A****MET SG/24 Conclusions and Decisions**

<b>Decision MET SG/24-01: Updates to legacy FASID Table information</b>	
<b>What:</b> That, ICAO and States update and incorporate the required information from the legacy Facilities and Service Implementation Document (FASID) Tables relating to meteorology, into existing ICAO APAC regional guidance documentation as follows:	
<b>FROM: Legacy FASID Table</b>	<b>TO: Existing APAC regional guidance</b>
Table MET 2A - OPMET Information (METAR, SPECI and TAF) Required in SADIS and WIFS	APAC ROBEX Handbook
Table MET 3A - Tropical cyclone advisory centres	APAC Regional SIGMET Guide
Table MET 3B - Volcanic ash advisory centres	APAC Regional SIGMET Guide
Chart MET 1 - Areas of Responsibility of the TCACs	APAC Regional SIGMET Guide
Chart MET 2 - Map of Areas of Responsibility of VAAC and Corresponding FIR	APAC Regional SIGMET Guide
<b>Why:</b> To provide States with access to required up to date information, previously contained in the legacy ANP, FASID Tables, and not replicated in the current APAC ANP, based on June 2014, ICAO Council approved common template to be used for Regional ANPs.	
<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>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 checked="" 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:	

<b>Conclusion MET SG/24-03: Survey of State Meteorological Information Supporting Air Traffic Management</b>	
<b>What:</b> That, the MET SG approve the proposed terms of reference and the survey questionnaire at the <b>Appendix 6</b> to the MET SG/24 Report and inform ATM SG/8 in November 2020 and then circulate the survey questionnaire for States to respond in early 2021.	
<b>Why:</b> To inform ICAO (and States) of the provision of current and future meteorological (MET) information services by States specifically to support Air Traffic Management (ATM), in particular Air Traffic Flow Management (ATFM).	
<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>Follow-up:</b> <input checked="" type="checkbox"/> Required from States	
<b>When:</b> Early 2021	<b>Status:</b> Adopted by Subgroup
<b>Who:</b> <input checked="" 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: MET/R WG	

<b>Decision MET SG/24-05: MET Deficiencies</b>	
<b>What:</b> That a MET/S WG ad hoc group be formed* to work with relevant members of the MET/IE WG and, utilizing the guidance in the APANPIRG Procedural Handbook, Part V: <i>Uniform methodology for the identification, assessment and reporting of air navigation shortcomings and deficiencies</i> and other relevant ICAO documentation, assist the ICAO Secretariat with the following:	
<ol style="list-style-type: none"> <li>a) Define a process, based on the APANPIRG Procedural Handbook, for identifying, analysing, removing and proposing MET Deficiencies;</li> <li>b) Develop templates to be used for Deficiency Corrective Action Plans (CAP), Progress Reports and Final Reports;</li> </ol>	

c) Develop thresholds for Deficiencies based on OPMET Monitoring performance indicators and SIGMET testing; d) Review the analysis of the annual, and any ad hoc, OPMET Monitoring, and SIGMET Tests against agreed thresholds; e) Identify deficiencies from the OPMET Monitoring and SIGMET Test analysis, along with other tests and exercises, mission reports, analysis of differences against ICAO provisions, aircraft accident and incident reports and reports provided by users of air navigation services; f) Work with States concerned to develop a CAP, arrange for testing and monitoring and assist with the reporting to ICAO on the resolution of air navigation deficiencies; and g) Report recommended updates to MET Deficiencies, through MET/S WG, to MET SG.	
<b>Why:</b> To optimize the MET SG assistance to APANPIRG towards the identification and resolution of specific air navigation deficiencies in the field of aeronautical meteorological (MET) services.	
<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>Follow-up:</b> <input type="checkbox"/> Required from States	
<b>When:</b> November 2020	<b>Status:</b> Adopted by Subgroup
<b>Who:</b> <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: MET/S WG	

\*Ad hoc group Members (alphabetical order, surname):

- Paula ACETHORP, *Rapporteur* (New Zealand)
- CHEONG Wee Kiong (Singapore, RODB Singapore)
- Jarrad DENMAN (Australia, VAAC Darwin)
- Mike GRAF (United States)
- Keiko ITO (Japan)
- Christy Y.Y. LEUNG (Hong Kong, China)
- Sujin PROMDUANG (Thailand, ROC Bangkok)
- THAM Yap Fung (Singapore, RODB Singapore)
- Kentaro TSUBOI (Japan, RODB Tokyo)

<b>Decision MET SG/24-07:</b> <i>November 2023 WAFS and SADIS Upgrades</i>	
<b>What:</b> That MET/S WG develops appropriate actions to facilitate WAFS and SADIS user States' preparations for the proposed WAFS and SADIS changes planned for November 2023.	
<b>Why:</b> Significant changes to the data provided on SADIS are coming in November 2023	
<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>Follow-up:</b> <input checked="" type="checkbox"/> Required from States	
<b>When:</b> November 2020	<b>Status:</b> Adopted by Subgroup
<b>Who:</b> <input checked="" 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:	

<b>Conclusion MET SG/24-08:</b> <i>Volcanic Ash Information Conflict Reduction</i>	
<b>What:</b> That the ICAO APAC Volcanic Ash Exercises Steering Group (VOLCEX/SG) supports the Informal South Pacific ATS Coordination Group in conducting a workshop to discuss proactive measures which could be used to minimise the likelihood of conflicting volcanic ash information.	
<b>Why:</b> To support aviation safety during volcanic eruptions, by reducing the likelihood of conflicting volcanic ash information being supplied to aviation.	
<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>Follow-up:</b> <input type="checkbox"/> Required from States	
<b>When:</b> On request from ISPACG (likely 2021)	<b>Status:</b> Adopted by Subgroup

**Agenda Item 2**

22-24/03/21

<b>Who:</b> <input checked="" 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:	
<b>Conclusion MET SG/24-09: IWXXM Survey and Online Workshop</b>	
<b>What:</b> That MET/IE, organize and conduct another regional survey on the following: a) Status of States' progress on the planning and implementation of the following: i. dissemination of meteorological information in IWXXM GML form; and ii. AFS connections supporting AMHS with FTBP and IHE; and b) States' requirements for another Regional IWXXM-specific seminar or workshop during 2021.	
<b>Why:</b> Amendment 79 to Annex 3 specifies that, applicable from 5 November 2020, States shall disseminate specific meteorological information (i.e., METAR/SPECI, TAF, SIGMET, AIRMET and volcanic ash, tropical cyclone and space weather advisory information) in IWXXM GML form. To date, it is apparent that few States (in APAC) are currently operationally exchanging IWXXM formatted data.	
<b>Expected impact:</b> <input type="checkbox"/> Political / Global <input checked="" type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical	
<b>Follow-up:</b> <input checked="" type="checkbox"/> Required from States	
<b>When:</b> Now	<b>Status:</b> Draft to be adopted by PIRG
<b>Who:</b> <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

<b>Conclusion MET SG/24-11: IWXXM Exchange Approach</b>	
<b>What:</b> That, IWXXM exchange in APAC Region shall be aligned with <i>Guidelines for the Implementation of OPMET Data Exchange using IWXXM</i> (fourth edition, November 2020) and, specifically, that Regional OPMET Centres (ROCs) are responsible for the distribution of all types of IWXXM formatted OPMET data to States within the Asia Pacific Region.	
<b>Why:</b> While the ICAO provisions for the dissemination of meteorological information in both TAC and IWXXM form coexist, due to technical differences between the old and new formats, the Regional OPMET exchange scheme for IWXXM formatted data shall necessarily differ from the traditional OPMET exchange scheme for TAC messages.	
<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>Follow-up:</b> <input checked="" type="checkbox"/> Required from States	
<b>When:</b> As soon as practicable	<b>Status:</b> Adopted by Subgroup
<b>Who:</b> <input checked="" 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: MET/IE WG	

<b>Conclusion MET SG/24-12: Development of Online Register of the status of IWXXM Exchange</b>	
<b>What:</b> That, the MET SG supports the development of an online register of the status of IWXXM exchange in the APAC Region to collate and maintain reliable information about implementation status of AMHS and FTBP between the annual ROBEX Handbook update, and to facilitate the States to identify the possible alternate dissemination paths for IWXXM exchange so that ROCs could distribute the IWXXM to other capable ROCs in the APAC region as far as possible.	
<b>Why:</b> ROCs need a channel to share timely updates of their status of implementation of IWXXM exchange, including their IWXXM-capable AMHS addresses and readiness to receive IWXXM, supported file size, AMHS status and the status in transmitting NOC's IWXXM report.	
<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>Follow-up:</b> <input checked="" type="checkbox"/> Required from States	
<b>When:</b> As soon as practicable	<b>Status:</b> Adopted by Subgroup
<b>Who:</b> <input checked="" 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: MET/IE WG	

<b>Decision MET SG/24-13:</b> <i>Development of APAC User Requirements for SWIM-based MET Information Services Supporting ATFM</i>	
<b>What:</b> That, the MET SG approves the terms of reference at the <b>Appendix 8</b> to the MET SG/24 Report regarding the scope and objectives of the MET/R ad hoc group to develop SWIM-based MET information services specifically addressing the needs of ATFM in the APAC Region.	
<b>Why:</b> To support efforts for effective MET/ATM integration, provide the baseline for further development of the regional SWIM data catalogue and service catalogue and support the development of future MET Information Exchange Services in the Region	
<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>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 checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: MET/R WG	

<b>Decision MET SG/24-14:</b> <i>Updates to Regional SIGMET Guide</i>	
<b>What:</b> That, the MET SG approves the updates to the SIGMET Guide presented in <b>Appendix 9</b> to the MET SG/24 Report for use by States and publishing on the ICAO APAC Office website.	
<b>Why:</b> To realign the SIGMET Guide with the Amendment 79 to Annex 3, update the SIGMET test procedure, reflect changes to MWOs designated by Australia, apply minor corrections and include the legacy ANP FASID Table information (ref: Decision MET SG/24-1).	
<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>Follow-up:</b> <input type="checkbox"/> Required from States	
<b>When:</b> November 2020	<b>Status:</b> Adopted by Subgroup
<b>Who:</b> <input checked="" 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: MET/S WG	

<b>Decision MET SG/24-15:</b> <i>Updates to ROBEX Handbook</i>	
<b>What:</b> That, the MET SG approves the updates to the ROBEX Handbook at the <b>Appendix 10</b> to the MET SG/24 report for use by States and publishing on the ICAO APAC Office website.	
<b>Why:</b> To (a) reflect changes made by Australia, Republic of Korea and Thailand to ROBEX Bulletins compiled by Regional OPMET Centres (ROCs) Brisbane (YBBN) (effective on 5 November 2020), Incheon (RKSI) and Bangkok (VTBB) (effective on 14 May 2020); (b) align the “Changes to OPMET Bulletin Procedures” (METNO procedures) with the equivalent procedures in the ICAO EUR Region; and update the States’ ROBEX Focal Point information; (c) include the information from the legacy ANP FASID Tables (ref: Decision MET SG/24-1); and include a link to the online register provided by the APAC ROCs for IWXXM-exchange-capability (ref: Conclusion MET SG/24-12)	
<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>Follow-up:</b> <input type="checkbox"/> Required from States	
<b>When:</b> November 2020	<b>Status:</b> Adopted by Subgroup
<b>Who:</b> <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: MET/IE WG	

<b>Decision MET SG/24-16:</b> <i>Updates to Regional Guidance for Tailored Meteorological Information and Services to Support ATM Operations</i>	
<b>What:</b> That, the MET SG approve the proposed updates to the APAC Regional Guidance for Tailored Meteorological Information and Services to Support Air Traffic Management Operations at the <b>Appendix 11</b> to the MET SG/24 report for use by States and publishing on the ICAO APAC Office website.	

**Agenda Item 2**

22-24/03/21

<b>Why:</b> To provide States with updated examples from Hong Kong, China, Republic of Korea and Singapore and make a few improvements to the main part of document published for use by States the ICAO APAC eDocuments website ( <a href="https://www.icao.int/APAC/Pages/eDocs.aspx">https://www.icao.int/APAC/Pages/eDocs.aspx</a> ).	
<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>Follow-up:</b> <input type="checkbox"/> Required from States	
<b>When:</b> November 2020	<b>Status:</b> Adopted by Subgroup
<b>Who:</b> <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: MET/R WG	

<b>Decision MET SG/24-18:</b> <i>Updates to terms of reference and work plan of MET/R WG, MET/IE WG and MET/S WG</i>	
<b>What:</b> That, the MET SG approve the updated terms of reference and work plan documents for MET/R WG, MET/IE WG and MET/S WG at the <b>Appendix 3, Appendix 4</b> and <b>Appendix 5</b> to the Report of MET SG/24.	
<b>Why:</b> To ensure alignment of the work of the MET SG and it's contributory bodies.	
<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>Follow-up:</b> <input type="checkbox"/> Required from States	
<b>When:</b> November 2020	<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 checked="" type="checkbox"/> Other: MET WGs	

<b>Conclusion MET SG/24-19:</b> <i>Amendments to Regional Guidance to reflect changes to location indicators for Hanoi FIR and Ho Chi Minh FIR</i>	
<b>What:</b> That, Vietnam in coordination with the Secretariat, initiate appropriate proposals for amendment of Regional Guidance Material and the APAC ANP to reflect the current requirements in Vietnam concerning the location indicators for Hanoi FIR and Ho Chi Minh FIR.	
<b>Why:</b> To ensure alignment of the Regional Guidance material with the current requirements in Vietnam	
<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>Follow-up:</b> <input type="checkbox"/> Required from States	
<b>When:</b> November 2020	<b>Status:</b> Adopted by Subgroup
<b>Who:</b> <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: MET WGs	

-----

## APPENDIX B

## MET SG Task List

Action No.	Detailed description of actions	Responsibility	Target date	Status
24/01	<p><u>Terms of Reference and Work Plan</u></p> <p>a) Adjust the references to “APAC Seamless ATM Plan” to reflect the re-named APAC Seamless “ANS Plan”.</p> <p>b) Add a column in the work plan table to enable the Sub-group to record the current status of progress on the work plan deliverables.</p> <p>c) Add timing of invitation (State Letter) and reminders for paper submissions</p> <p>[Ref: MET SG/24 Report, para. 1.5]</p>	Secretary	Nov 2020	In progress
24/02	<p><u>Follow-up on Decision MET SG/23-3: Improved Regional guidance for SIGMET for volcanic ash forecast to cross FIR boundaries</u></p> <p>Examine the report of the volcanic ash exercise APAC VOLCEX 18/02 and, based on the challenges encountered / reported by the participants of the exercise, consider developing examples of how to coordinate the issuance of SIGMET information for volcanic ash which is forecast in adjacent FIRs.</p> <p>[Ref: MET SG/24 Report, para. 2.5]</p>	MET/S WG	MET/S WG/11 (Mar 2021)	In progress
24/03	<p><u>Availability of Annex 3</u></p> <p>Investigate the late the late availability of the Annex 3 amendment 79, which led to States having inadequate time to implement necessary changes.</p> <p>[Ref: MET SG/24 Report, para. 3.10]</p>	Secretary	APANPIRG/31 (Dec 2020)	In progress
24/04	<p><u>Operational MWO Phnom Penh – Consequential updates to the Regional guidance material</u></p> <p>Delete the notes indicating the arrangement for issuance of SIGMET on behalf of MWO Phnom Penh by MWO Chengdu from the legacy APAC FASID, Table MET 3A – Tropical cyclone advisory centres, and Table MET 3B – Volcanic ash advisory centres and SIGMET Guide.</p> <p>[Ref: MET SG/24 Report, para. 3.16]</p>	Secretariat	Nov 2020	Completed In progress
24/05	<p><u>SIGMET Guide updates</u></p> <p>Coordinate future proposals to update the SIGMET Guide with the other ICAO Regions and include guidance relevant to SIGMET information in IWXXM GML form.</p> <p>[Ref: MET SG/24 Report, para. 6.4]</p>	MET/S WG	MET/S WG/11 (Mar 2021)	To begin
24/06	<p><u>Election of Chairperson</u></p> <p>Include in the agenda for the next meeting the election of Chairperson and Vice-Chairperson. Members to submit nominations of suitable candidates no later than 2-months prior to the next meeting.</p> <p>[Ref: MET SG/24 Report, para. 8.5]</p>	Chair and Secretary	2-months before MET SG/25	To begin

**Agenda Item 2**

22-24/03/21

Action No.	Detailed description of actions	Responsibility	Target date	Status
23/01	Coordinate the necessary Draft proposals for amendment of the ANP Volume I and Volume II, in coordination with States concerned (Ref. Work plan of MET SG: <i>Draft amendment proposal for APAC ANP to fulfil missing data in Tables MET</i> ) [Report, para. 2.8]	Secretariat	As soon as practicable	In progress
23/03	Conduct a coordinated review and update of the terms of reference and work plans to realign the working groups with the work plan of the MET SG [Report, para. 2.10]	Chairs MET/IE WG, MET/S WG, MET/R WG and MET SG, in conjunction with Secretariat	Before APANPIRG/30	Completed <del>In progress</del>
23/04	Distribute the following documents, as endorsed by the ICAO METP/4, by State letter in order to publicize the content and purpose of each document and to invite feedback from relevant stakeholders: a) <i>MET-SWIM Plan</i> ; b) <i>Guidelines for the Implementation of OPMET Data Exchange Using IWXXM</i> ; c) <i>Roadmap for International Airways Volcano Watch (IAVW) in Support of International Air Navigation</i> ; and d) <i>“White Paper” on Future Aeronautical Meteorology Information Service Delivery</i> [Report, para. 2.20]	Secretariat	As soon as practicable	In progress
23/08	Assist Solomon Islands to perform OPMET monitoring to support the validation of the corrective action to resolve the APANPIRG air navigation deficiencies and to prepare the full report to enable APANPIRG to remove the deficiencies. [Report, para. 4.7.]	Secretariat, in conjunction with Solomon Islands and States (including Australia)	As soon as practicable	In progress
23/12	Incorporate the <i>Guidelines for Operational SIGMET Coordination</i> into the SIGMET Guide and to keep it under review and propose updates as necessary [Report, para. 6.9.]	MET/S WG (SIGMET Guide) ad-hoc group	As soon as practicable	Completed <del>In progress</del>
23/13	Continue to develop the draft survey questionnaire (on the provision of current and future MET information and services by States specifically to support ATM and, in particular, ATFM operations) based on feedback from MET SG/23, including developing more clear terms of reference and ensuring alignment with the scope of work of the MET/R WG [Report, para. 6.11.-6.13.]	MET/R WG ad-hoc group (rapporteur Australia)	Next MET/R WG meeting	In progress
23/14	Conduct an ATM-focussed review on the <i>Asia/Pacific Regional Guidance for Tailored Meteorological Information and Services to Support Air Traffic Management (ATM) Operations</i> [Report, para. 6.14.]	Secretariat	Before ATM/SG/7	In progress

-----