

*International Civil Aviation Organization*



ICAO

**WORKING PAPER**

**Asia and Pacific (APAC)  
Twentieth Meeting of the Meteorological Information  
Exchange Working Group (MET/IE WG/20)**

Online, 28 to 30 March 2022

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**Agenda Item 7: Future work program and terms of reference**

**REVIEW MET/IE WG WORK PROGRAM AND TERMS OF REFERENCE**

(Presented by the Secretariat)

**SUMMARY**

This paper presents the terms of reference and work program of the Meteorological Information Exchange Working Group (MET/IE WG) and invites the meeting to review and propose updates as necessary for possible approval by the Meteorology Subgroup (MET SG).

**1. INTRODUCTION**

1.1 The MET/IE WG supports the MET SG (and APANPIRG) to improve the availability, reliability and compliance of OPMET in the Asia/Pacific Region.

1.2 This paper invites the meeting to review the terms of reference and work program of the group and to propose updates as necessary to ensure the MET/IE WG continues to meet its objectives to support increased safety, efficiency and capacity of the global air traffic system.

**2. DISCUSSION**

2.1 A copy of the MET/IE WG terms of reference and work plan document, last reviewed by the Twenty-fifth Meeting of the Meteorology Sub-Group (MET SG/25), is provided at the **Appendix A** to this paper.

2.2 In relation to the MET/IE WG work plan Activities 1 and 2 on OPMET availability, timeliness, compliance and regularity, the document includes proposed updates to address the following unresolved actions agreed by previous meetings:

ACTION ITEM	DESCRIPTION	BY DATE	RESPONSIBILITY	STATUS/ REMARKS
MET/IE WG/18 and MET/S WG/10 [07]	<b>OPMET performance indices – States’ follow-up:</b> Inform States concerned of the locations with low performance indices and advise the States to take appropriate corrective actions; address the above communication also the Regional OPMET Centres (ROCs) responsible for the collection of OPMET messages from the originating stations [ref: para. 3.4. and 3.5.]	Sep 2020	Secretariat	<del>IN PROGRESS</del> Ref: MET/IE WG, 5. Work Plan, Activity 1 and Activity 2 Superseded; included in work plan, Activity 1.8 and 2.6
MET/IE WG/17 [17/13]	In conjunction with the outstanding action item 16/5: (a) Prepare a checklist to assist States in systematically addressing the OPMET issues at locations with low PIs in the monitoring data; and (b) Provide the checklist as guidance to the States concerned. <i>[Report of MET/IE WG/17, para. 5.11 – 5.14, refers]</i>	Next meeting MET/IE WG	Secretariat and Thailand	<del>IN PROGRESS</del> Superseded; included in work plan, Activity 1.8 and 2.6

### 3. ACTION BY THE MEETING

3.1 This paper invites the meeting to review the terms of reference and work program of the MET/IE WG at the **Appendix A** to this paper and propose further updates, as necessary, based on the agreements reached by the meeting for further review and possible approval by MET SG.

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## ICAO ASIA AND PACIFIC METEOROLOGICAL INFORMATION EXCHANGE WORKING GROUP (MET/IE WG)

### TERMS OF REFERENCE AND WORK PLAN

Last reviewed by MET SG/25, 18-22 October 2021

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

### TERMS OF REFERENCE

1. MEMBERSHIP
<p>The MET/IE WG is made up of experts from the following bodies:</p> <ul style="list-style-type: none"> <li>• APAC Regional OPMET Data Banks (RODBs): Brisbane, Nadi, Tokyo, Singapore and Bangkok;</li> <li>• APAC Regional OPMET Centres (ROCs);</li> <li>• World Area Forecast Centres (WAFCs), London and Washington;</li> <li>• Secure Aviation Data Information Service (SADIS) and WAFS Internet File System (WIFS) Provider States, United Kingdom and United States;</li> <li>• APAC Volcanic Ash Advisory Centres (VAACs): Darwin, Tokyo and Wellington;</li> <li>• Designated focal points for SIGMET tests and regional OPMET bulletin exchange (ROBEX);</li> <li>• Pacific Islands Aviation Weather Services (PIAWS) Panel; and</li> <li>• International Air Transport Association (IATA).</li> </ul>

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2. DESCRIPTION	
Objective	Increase OPMET availability and reliability needed for flight planning (efficiency) and in-flight re-planning (safety) in support of the Global Air Navigation Plan (GANP) framework and the Aviation System Block Upgrade (ASBUs) methodology.
Benefits	Increase in safety and efficiency (time and fuel savings).
Functions of the group	Under guidance from the ICAO APAC Secretariat: <ul style="list-style-type: none"> <li>a) Review the OPMET exchange schemes in the APAC and other regions and develop proposals for their optimization, taking into account the requirements by the aviation users and global OPMET exchange;</li> <li>b) Review and update of the procedures for inter-regional OPMET exchange and ensure the availability of the required APAC OPMET data for SADIS and WIFS;</li> <li>c) Report on deficiencies in the format and dissemination of OPMET messages;</li> <li>d) Monitor and participate in inter- and intra-regional trials of aeronautical meteorological information exchange in support of the implementation of IWXXM and SWIM;</li> <li>e) Conduct trials and develop standardized quality control, monitoring and management procedures related to exchange of IWXXM and TAC OPMET information;</li> </ul>

	<ul style="list-style-type: none"> <li>f) Participate in the implementation and promote awareness of the transition to digital exchange of OPMET (IWXXM) and System Wide Information Management (SWIM);</li> <li>g) Conduct regular regional VAAC back-up and SIGMET tests;</li> <li>h) Provide support for the APAC Volcanic Ash Exercises;</li> <li>i) Review and update the regional guidance material related to OPMET exchange, including relevant material on IWXXM, AMHS and SWIM;</li> <li>j) Liaise and consult with other appropriate bodies within ICAO and WMO dealing with communication and/or management aspects of the OPMET exchange; and</li> <li>k) Provide advice and report to the MET Sub-group on the above issues for further co-ordination through the ICAO Secretariat with other appropriate bodies.</li> </ul>
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**3. COMMUNICATION STRATEGIES**

Description	Target Audience	Delivery Method	Frequency / Date	Responsibility
Interim Work Program Progress Report	MET/IE WG Members	Web-conference E-mail	Quarterly/as determined by Chair	Chair and Secretariat
MET Chairs Coordination Meeting	Chairs of MET SG and its contributory working groups	Web-conference E-mail	reflect the requirement for an annual (quarterly) schedule of c	Chair and Secretariat
Major Work Program Progress Report	MET/IE WG Members	Working Paper (MET/IE WG meeting)	Annually/published 14-days or more before the meeting	Chair and Secretariat
General correspondence	MET/IE WG Members	E-mail	As required	MET/IE WG Members
New, specific proposal for action (WP)	MET/IE WG Meeting	Working Paper (MET/IE WG meeting)	Annually/submitted 28-days or more before the meeting (published 14-days or more before the meeting)	MET/IE WG Members or States
New, specific information (IP)	MET/IE WG Meeting	Information Paper (MET/IE WG meeting)	Annually/submitted 28-days or more before the meeting (published 14-days or more before the meeting)	MET/IE WG Members or States
Working Group Meeting Report	MET/IE WG Members and all APAC States	MET/IE WG Meeting Report	Annually/published 21-days or less after the meeting	Chair and Secretariat
Working Group Progress Report	MET SG Meeting	Working Paper (MET SG meeting)	Annually/submitted 28-days or more before the meeting (published 14-days or more before the meeting)	Chair and Secretariat

**WORK PROGRAM**

Activity	Time Frame	Responsibility	Status
Activity 1: Availability of OPMET information	Ongoing	MET/IE WG	
Activity 2: Timeliness, compliance and regularity of OPMET exchange	Ongoing	MET/IE WG	
Activity 3: SIGMET and Advisory Tests	Ongoing	MET/IE WG	
Activity 4: VAAC Backup Tests	Ongoing	MET/IE WG	
Activity 5: IROG Backup Tests	Ongoing		
Activity 6: Regional guidance material related to data exchange	Ongoing	MET/IE WG	
Activity 7: IWXXM implementation	2021-2023	MET/IE WG	
Activity 8: MET information exchange scheme	2021-2026	MET/IE WG	
Activity 9: MET information in SWIM	2021-2026		

**5. WORK PLAN**

Activity / Milestone	Accountability	Predecessors	Date	Status
<b>Activity 1: Availability of OPMET information</b>				
Activity 1.1: Perform real time monitoring if required	IATA	-	If required	

<b>5. WORK PLAN</b>				
<b>Activity / Milestone</b>	<b>Accountability</b>	<b>Predecessors</b>	<b>Date</b>	<b>Status</b>
Activity 1.2: Monitor and score SADIS/WIFS OPMET reception.	IATA	-	Annually Jan	
Activity 1.3: Capture OPMET monitoring,	RODBs	1.2	Annually Oct/Nov	
Activity 1.4: Assess TAC OPMET monitoring results and share results with RODBs	RODB Bangkok	1.3	Annually Oct/Nov	
Activity 1.6: Prepare paper reporting results and deficiencies to MET/IE WG meeting.	IATA and RODB Bangkok	1.4	Annually Feb	
Activity 1.7: Report summary of OPMET availability results to MET SG	Secretariat and Chair	1.5	Annually May	
Activity 1.8: Advise States of OPMET deficiencies and corrective actions. Inform States concerned of the locations with low performance indices and advise the States to take appropriate corrective actions; address the above communication also the Regional OPMET Centres (ROCs) responsible for the collection of OPMET messages from the originating stations. Prepare a checklist to assist States in systematically addressing the OPMET issues at locations with low PIs in the monitoring data; and Provide the checklist as guidance to the States concerned.	Secretariat	1.6	Annually Jun	
Activity 1.9: Actively engage States with corrective against deficiencies.	ROCs	1.7	As required	
<b>Milestone 1:</b> Achieve 95% (90%) or greater OPMET availability for AOP (non-AOP) aerodromes at RODBs and WAFS.	MET/IE WG	1.8	Annually Jun	
<b>Activity 2: Timeliness, compliance and regularity of OPMET exchange</b>				
Activity 2.1: Monitor and collate OPMET data.	RODBs and IATA	-	Annually Dec	
Activity 2.2: Score RODB OPMET reception against PI thresholds.	RODB Bangkok	-	Annually Jan	
Activity 2.3: Analyse data and share results with RODBs	RODB Bangkok	2.2	Annually Jan	
Activity 2.4: Prepare paper report results to MET/IE WG meeting and identify corrective actions	RODB Bangkok	2.3	Annually Feb	
Activity 2.5: Report summary of OPMET timeliness, compliance and regularity results to METSG	Chair	2.4	Annually May	
Activity 2.6: Inform States of non-compliance and corrective actions. Inform States concerned of the locations with low performance indices and advise the States to take appropriate corrective actions; address the above communication also the Regional OPMET Centres (ROCs) responsible for the collection of OPMET messages from the originating stations. Prepare a checklist to assist States in systematically addressing the OPMET issues at locations with low PIs in the monitoring data; and Provide the checklist as guidance to the States concerned.	Secretariat	2.5	Annually Jun	

<b>5. WORK PLAN</b>				
<b>Activity / Milestone</b>	<b>Accountability</b>	<b>Predecessors</b>	<b>Date</b>	<b>Status</b>
Activity 2.7: Provide support for States to rectify deficiencies if requested.	RODBs	2.6	As required	
<b>Milestone 2:</b> Achieve 95% (90%) or greater OPMET timeliness, compliance and regularity for AOP (non-AOP) aerodromes at RODBs, SADIS and WIFS.	MET/IE WG	2.7	Annually Jun	
<b>Activity 3: SIGMET and Advisory Tests</b>				
Activity 3.1: Review SIGMET Test procedures	MET/IE WG	-	Annually Aug	
Activity 3.2: State Letter regarding SIGMET Tests	Secretariat	3.1	Annually Sep	
Activity 3.3: Email States regarding SIGMET Tests	Secretariat	3.2	Annually	Last Wed in Oct
Activity 3.4: Conduct and collate data for WC SIGMET Tests	RODBs	3.2	Annually	2 <sup>nd</sup> Wed in Nov
Activity 3.5: Conduct and collate data for WV SIGMET Tests	RODBs	3.2	Annually	3 <sup>rd</sup> Wed in Nov
Activity 3.6: Conduct and collate data for WS SIGMET Tests	RODBs	3.2	Annually	4 <sup>th</sup> Wed in Nov
Activity 3.7: Analyse test data	RODB Singapore and Tokyo	3.4 - 3.6	Annually Jan	
Activity 3.8: Assess SIGMET test results to identify corrective actions from Nov tests	RODB Singapore and Tokyo	3.4 - 3.6	Annually Feb	
Activity 3.9: Report to MET/IE WG	RODB Singapore and Tokyo	3.8	Annually Mar	
Activity 3.10: Report on SIGMET Test Results to MET SG.	Chair	3.9	Annually May	
Activity 3.11: Advise States of SIGMET deficiencies	Secretariat	3.9	Annually Jun	
<b>Milestone 3:</b> Improved issuance and compliance of SIGMETs	MET/IE WG	3.11	Annually Jun	
<b>Activity 4: VAAC Back-up Tests</b>				
Activity 4.1: Review and Update VAAC Back-up Test procedures	MET/IE WG and VAACs		Annually	2 months prior to test
Activity 4.2: Issue Notice of VAAC Back-up Tests	Secretariat/VAACs	4.1	Annually Aug	
Activity 4.3: Conduct VAAC Back-up Test between Darwin and Tokyo	VAACs	4.2	Annually Oct – TBC	
Activity 4.4: Conduct VAAC Back-up Test between Darwin and Wellington	VAACs	4.2	Annually Oct – TBC	
Activity 4.5: Collect test results and send to VAAC Provider State members	RODBs	4.3	Annually Oct – TBC	
Activity 4.6: Analyse Test results	VAAC Back-up Focal Points Members	4.5	Annually Nov	
Activity 4.7: Report to MET/IE WG	VAAC Back-up Focal Points Members	4.6	Annually Feb	
Activity 4.8: Report to MET SG.	Chair	4.7	Annually May	

<b>5. WORK PLAN</b>				
<b>Activity / Milestone</b>	<b>Accountability</b>	<b>Predecessors</b>	<b>Date</b>	<b>Status</b>
Activity 4.9: Advise relevant States, VAACs and RODBs of any deficiencies.	Secretariat	4.7	Annually Jun	
<b>Milestone 4:</b> VAAC Back-up Tests conducted, analysed and report complete.	VAAC Back-up Focal Points Members	4.8	Annually Jun	
<b>Activity 5: IROG Back-up Tests</b>				
Activity 5.1: Investigate the feasibility and benefits of back-up arrangements of IROG Tokyo, Nadi and Brisbane	IROG Nadi, Tokyo and Brisbane	-	Nov 2020	
Activity 5.2: Review IROG Back-up Test procedures to include all IROG.	IROG Bangkok and Singapore	-	Apr 2019, Annually Feb	
Activity 5.3: Updated IROG Back-up Procedures in ROBEX Handbook.	Secretariat	5.2	Annually May	
Activity 5.4: Identify list of MET Bulletins to monitor.	IROG Bangkok and Singapore	-	Annually Jan/Feb	
Activity 5.5: Conduct IROG Back-up Test of Bangkok and analyse results	IROG Bangkok and Singapore	5.4	Annually Sept/Oct	
Activity 5.6: Conduct IROG Back-up Test of Singapore and analyse results	IROG Bangkok and Singapore	5.4	Annually Jan/Feb	
Activity 5.8: Report to MET/IE WG	IROG Bangkok and Singapore	5.7	Annually Mar	
<b>Milestone 5:</b> IROG Back-up Tests conducted, analysed and report complete.	IROG Bangkok and Singapore	5.7	Annually Mar	
<b>Activity 6: Regional guidance material related to data exchange</b>				
Activity 6.1: Review monitoring procedure in ROBEX Handbook and update as necessary.	All RODBs	-	Annually Apr	
Activity 6.2: Changes to RODB monitoring procedures and updates to Appendix A and B in ROBEX Handbook.	Secretariat	6.1	Annually May	
Activity 6.3: Document roles for monitoring IWXXM performance in APAC	WG		Nov 2021	
Activity 6.4: Define quality threshold for translated data	IATA, Chair WG		Nov 2021	
Activity 6.5: Advise Secretariat of changes to ROBEX Handbook.	All States	-	Annually Apr	
Activity 6.6: Complete update of ROBEX Handbook including Table MET 2A.	Secretariat	-	Annually May	
Activity 6.7: Review ANP Tables (initially MET II-2) and ensure all necessary aerodromes are contained in OPMET bulletins	WG	-	May Annually	
Activity 6.8: Seek MET/SG endorsement of the updated ROBEX Handbook.	Secretariat	-	Annually Jun	
Activity 6.9: Support MET SG with development of MET-specific requirements in the ANP, Volume III	WG		As required	
<b>Milestone 6:</b> RODB Monitoring procedures published in ROBEX Handbook	Secretariat	6.7	Annually Sep	
<b>Activity 7: IWXXM Implementation</b>				
Activity 7.1: Monitor migration to IWXXM.	WG	-	As required	

<b>5. WORK PLAN</b>				
<b>Activity / Milestone</b>	<b>Accountability</b>	<b>Predecessors</b>	<b>Date</b>	<b>Status</b>
Activity 7.2: Conduct survey to determine status of IWXXM Implementation.	Secretariat		May 2021	
Activity 7.3: Report to MET SG on APAC States' IWXXM implementation status and need/timing for another APAC IWXXM Workshop.	Secretariat/Chair, WG	7.2	Next meeting MET SG	
Activity 7.4: Increase awareness of the requirement for States to exchange of OPMET data in IWXXM format and the impact of inability to do so.	WG		As required	
Activity 7.5: Support States with the planning and implementation of the dissemination of the required meteorological information in IWXXM form, in particular at the designated APAC Regional OPMET Centres (ROCs) and Regional OPMET Databanks (RODBs).	WG		As required	
Activity 7.6: Conduct IWXXM tests and report to MET/IE WG and RODB Singapore on the status of the testing and implementation of digital OPMET exchange.	WG		Annually Mar	
Activity 7.7: Maintain a register of IWXXM tests conducted, detailing Met software, UAs and MTAs tested	RODB Singapore	7.5	As required	
Activity 7.8: Arrange provision for the next IWXXM Workshop in APAC	Secretariat/Chair, WG	7.2	Sep 2021	
Activity 7.9: Actively participate in the next APAC IWXXM Workshop	Secretariat/Chair, WG	7.7	Oct 2021	
Activity 7.10: Prepare information (e.g. issues, CONOPS) for MET/P WG-MIE	WG		As required	
Activity 7.11: Development and Publishing AMHS/FTBP network map	Pierre, Secretariat		Monthly	
Activity 7.12: State IWXXM status register	Secretariat		Monthly	
<b>Milestone 7:</b> Report to MET/IE WG and MET SG on IWXXM exchange and testing.	Secretariat and Chair	7.5, 7.6 and 7.8	Annually May	
<b>Activity 8: MET Information Exchange Structure</b>				
Activity 8.1: Review ROBEX Scheme diagram.	All RODBs, Secretariat		May Annually	
Activity 8.2: Review the structure of the ROBEX exchange in light of the introduction of SWIM.	WG		Annually Feb	
Activity 8.3: Review use of the Request/Reply service	RODBs	-	May 2021	
Activity 8.4: Improve the efficiency of Request/Reply service	RODBs	8.3	Sep 2021	
<b>Milestone 8:</b> Improved efficiency and effectiveness of ROBEX Scheme	MET/IE WG	-	2021	
<b>Activity 9: MET information in SWIM</b>				
Activity 9.1: Assist in the definition of the APAC SWIM Met service catalogue	WG	-	As required	
Activity 9.2: Assist in the definition of the APAC SWIM Met data catalogue	WG	-	As required	

<b>5. WORK PLAN</b>				
<b>Activity / Milestone</b>	<b>Accountability</b>	<b>Predecessors</b>	<b>Date</b>	<b>Status</b>
<b>Milestone 9:</b> Participated in the development of SWIM Meteorological services for APAC	MET/IE WG	-	2023	

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