

*International Civil Aviation Organization*



ICAO

**WORKING PAPER**

**Asia and Pacific (APAC)  
Twenty-second Meeting of the Meteorological  
Information Exchange Working Group (MET/IE WG/22)**

Bangkok, Thailand, 18 to 21 March 2024

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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-seventh Meeting of the Meteorology Sub-Group (MET SG/27), is provided at the **Appendix A** to this paper.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) review the terms of reference and work program of the MET/IE WG in **Appendix A** to this paper and propose further updates, as necessary, for review and possible approval by MET SG.

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## APPENDIX A

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

#### TERMS OF REFERENCE AND WORK PLAN

#### TERMS OF REFERENCE

##### 1. MEMBERSHIP

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

- APAC Regional OPMET Data Banks (RODBs): Brisbane, Nadi, Tokyo, Singapore and Bangkok;
- APAC Regional OPMET Centres (ROCs);
- World Area Forecast Centres (WAFCs), London and Washington;
- Secure Aviation Data Information Service (SADIS) and WAFS Internet File System (WIFS) Provider States, United Kingdom and United States;
- APAC Volcanic Ash Advisory Centres (VAACs): Darwin, Tokyo and Wellington;
- Designated focal points for SIGMET tests and regional OPMET bulletin exchange (ROBEX);
- Pacific Islands Aviation Weather Services (PIAWS) Panel; and
- International Air Transport Association (IATA).

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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) Monitoring 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> <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> </ul>

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	<ul style="list-style-type: none"> <li>h) Provide support for the APAC MET 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;</li> <li>k) Coordinate and seek support from other enabling ICAO groups (e.g. SWIM TF, ACSICG, CRV OG, etc.) to support MET information exchange initiatives; and</li> <li>l) Provide advice and report to the MET Sub-group on the above issues for further co-ordination through the ICAO Secretariat with other appropriate bodies.</li> </ul>
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3. COMMUNICATION STRATEGIES				
Description	Target Audience	Delivery Method	Frequency / Date	Responsibility
Annual working group meeting	All APAC States	In person	Annual / March	Chair and Secretariat
Interim Work Program Progress Report	MET/IE WG Members	Web-conference E-mail	Quarterly/as determined by Chair	Chair(s) and Secretariat
MET Chairs Coordination Meeting	Chairs of MET SG and its contributory working groups	Web-conference E-mail	Quarterly/as determined by MET SG Chairs	Chair 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	20212023-20232026	MET/IE WG	
Activity 8: MET information exchange scheme	Ongoing2021-2026	MET/IE WG	
Activity 9: MET information in SWIM	Ongoing2021-2026		

5. WORK PLAN				
Activity / Milestone	Accountability	Predecessors	Date	Status
Activity 1: Availability of OPMET information				

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<b>5. WORK PLAN</b>				
<b>Activity / Milestone</b>	<b>Accountability</b>	<b>Predecessors</b>	<b>Date</b>	<b>Status</b>
Activity 1.1: Perform real time monitoring if required	IATA	-	If required	
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.	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: Performance indices 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 availability, compliance and regularity results to METSG	Chair	2.4	Annually before MET SG	
Activity 2.6: Inform States of non-compliance and corrective actions.	Secretariat	2.5	Annually Jun	
Activity 2.7: Provide support for States to support corrective actions if requested.	RODBs	2.6	As required	
<b>Milestone 2:</b> Achieve 95% (90%) or greater OPMET availability, 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

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<b>5. WORK PLAN</b>				
<b>Activity / Milestone</b>	<b>Accountability</b>	<b>Predecessors</b>	<b>Date</b>	<b>Status</b>
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 3.9: 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 corrective actions	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	
Activity 4.5: Collect test results and send to VAAC Provider State members	RODBs	4.3	Annually Oct – TBC	
<b>Milestone 4:</b> VAAC Back-up Tests conducted.	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 2023	
Activity 5.2: Review IROG Back-up Test procedures to include all IROG.	IROG Bangkok and Singapore	-	Apr 2023, 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 OPMET exchange definitions as defined in ROBEX Handbook and update as necessary.	All RODBs	-	Annually Apr	
Activity 6.2: Implement 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	Thailand and Secretariat		Nov 2023	

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5. WORK PLAN				
Activity / Milestone	Accountability	Predecessors	Date	Status
Activity 6.4: Propose quality threshold for translated data following consultation with users	IATA, Chair WG		Nov 2023	
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> ROBEX Handbook remains relevant	Secretariat	6.7	Annually Sep	
<b>Activity 7: IWXXM Implementation</b>				
Activity 7.1: Monitor migration to IWXXM.	WG	-	As required	
Activity 7.3: Report to MET SG on APAC States' IWXXM implementation status.	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 7.10: Prepare information (e.g. issues, CONOPS) for MET/P WG-MIE (possible MET/IE agenda items on issues on IWXXM and information service provision)	WG		As required	
Activity 7.12: Maintain IWXXM online register	Australia, Hong Kong, China and 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 2023	
Activity 8.4: Improve the efficiency of Request/Reply service	RODBs	8.3	Sep 2023	
<b>Milestone 8:</b> Improved efficiency and effectiveness of ROBEX Scheme	MET/IE WG	-	2023	
<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	

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5. WORK PLAN				
Activity / Milestone	Accountability	Predecessors	Date	Status
Activity 9.3: Develop guidance to support States' implementation of MET information services	WG	-	As required	
<b>Milestone 9:</b> MET-SWIM services implemented in APAC	MET/IE WG	-	2023-2027	

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