



ICAO

*International Civil Aviation Organization*

**WORKING PAPER**

**ICAO 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 7: Future work program**

**REVIEW THE TERMS OF REFERENCE**

(Presented by the Secretariat)

**SUMMARY**

This paper presents the terms of reference of the ICAO Asia/Pacific (APAC) Meteorology Sub Group (MET SG) for the Meeting to review and propose updates as necessary to ensure the MET SG continues to focus on assisting the APAC Air Navigation Planning and Implementation Regional Group (APANPIRG) with matters related to planning and implementing meteorological services for international air navigation.

**1. INTRODUCTION**

1.1 The objectives of APANPIRG are to: a) ensure continuous and coherent development of the APAC Regional Air Navigation Plan (ANP) and other relevant regional documentation; b) facilitate the implementation of air navigation systems and services as identified in the ANP, with due observance to the importance of air safety, regularity and efficiency; and c) identify and address specific deficiencies in the air navigation field.

1.2 APANPIRG created the MET SG as a specialized contributory body to assist in its planning and implementation work, specifically concerning meteorological service for international air navigation.

1.3 This paper invites the Meeting to review the current terms of reference of the MET SG and propose updates as necessary for further review and possible adoption by APANPIRG.

**2. DISCUSSION**

2.1 The terms of reference of the MET SG describe the objectives, functions, establishment, membership, Chairing and Secretary, meetings, reporting, and delegated authority of the MET SG.

2.2 To optimize the support provided by MET SG to APANPIRG and ensure the deliverables of MET SG remain focused on the current and future needs of the APAC Region, MET SG keeps the terms of reference under regular review.

2.3 The MET SG terms of reference, last updated by APANPIRG/31 in December 2020, are published in the APANPIRG Procedural Handbook – Attachment B. A copy of the MET SG terms of reference is provided in **Appendix A**.

2.4 In addition, the MET SG work plan, last reviewed by MET SG/26, is provided in **Appendix B**. The Meeting is reminded that the Secretariat and Chairs of the MET SG, MET/IE WG, MET/S WG and MET/R WG are coordinating the preparation of a standard, integrated template for reporting progress on the MET work plan.

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

3.1 This paper invites the Meeting to:

- a) Note the information in this paper;
- b) Review the terms of reference of the MET SG in **Appendix A** and propose updates as necessary to ensure a continued focus on the APAC Region's requirements for support related to planning and implementing meteorological services for international air navigation; and
- c) Discuss any relevant matters as appropriate.

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## **APPENDIX A**

[Extracted from the *APANPIRG Procedural Handbook*, Sixth Edition — 1 June 2020, A/L No 01]

### **Terms of Reference for APANPIRG Meteorology Sub-Group (MET SG)**

(Updated 16 December 2020, Decision APANPIRG/31/16 refers)

#### **1. Objectives of the MET SG**

- a) Ensure the continuous and coherent development of the MET parts of the Asia/Pacific Regional Air Navigation Plan (APAC ANP) and other relevant regional documentation in a manner that is harmonized with adjacent regions, consistent with ICAO standards and recommended practices (SARPs), the Global Air Navigation Plan and the Global Aviation Safety Plan and reflects global requirements;
- b) Facilitate the implementation of aeronautical meteorological systems and services, as identified in the APAC ANP, Aviation System Block Upgrade (ASBU) priority modules and Asia/Pacific Seamless ANS Plan elements, with due observance to the primacy of air safety, regularity and efficiency; and
- c) Identify and address specific air navigation deficiencies in the field of aeronautical meteorological (MET) services.

#### **2. Functions of the MET SG:**

- a) Review MET parts of the APAC ANP, prepare amendment proposals as necessary to reflect updates and changes in the operational and global requirements;
- b) Monitor the level of and, as necessary, facilitate the implementation of aeronautical meteorological services to support the effective implementation of ASBU priority modules and the Asia/Pacific Seamless ANS Plan elements;
- c) Identify air navigation deficiencies in the field of aeronautical meteorology, e.g., through systems performance monitoring) and, where necessary, propose appropriate corrective action and facilitate the development and implementation of action plans by States to resolve identified deficiencies;
- d) Review and update the APANPIRG list of air navigation deficiencies in the field of aeronautical meteorology, as necessary, to reflect the current situation;
- e) Monitor research and development and trials and demonstrations in the field of aeronautical meteorology and other relevant areas and facilitate the transfer of this information and expertise, as necessary, between States;
- f) Make specific recommendations and develop guidance materials aimed at improving aeronautical meteorological services through the use of existing and/or new procedures, facilities and technologies;
- g) Review and identify inter-regional and intra-regional coordination issues in the field of aeronautical meteorology and, as necessary, recommend actions to address those issues; and
- h) Identify and progress environmental initiatives related to aeronautical meteorology.

### **3. Establishment of the MET SG**

3.1. The Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) established the MET SG to assist in its planning and implementation work, charging MET SG with preparatory work on specifically defined problems in the field of aeronautical meteorology requiring expert advice for their resolution. APANPIRG also appointed MET SG as the 'parent' group for other contributory bodies working in the field of aeronautical meteorology for APANPIRG.

### **4. Membership of the MET SG**

4.1. Membership of the MET SG comprises experts provided by States, whether Members or not of the APANPIRG, International Organizations and bodies having experience in the provision of aeronautical meteorological information and services.

### **5. Chairing and Secretary of the MET SG**

5.1. The MET SG shall elect a Chairperson, and Vice-Chairperson if needed, from the experts provided by States. The maximum term of the Chairperson and Vice Chairperson is four years. The Secretary of APANPIRG will appoint the Secretary of the MET SG.

### **6. Meetings of the MET SG**

6.1. The Chairperson of the MET SG, in consultation with Members and the Secretary, shall decide the date and duration of Meetings. As a rule, the MET SG should agree, at each Meeting, on the date and duration of the next Meeting and on a tentative schedule of future Meetings.

### **7. Documentation and Record of Meetings of the MET SG**

7.1. The MET SG shall record the proceedings of its Meetings in the form of a Report or a Summary and submit the Report or Summary for review and consideration by APANPIRG. A Meeting Report should cover completed action on any part of the MET SG work plan and outline the needs of MET SG for further directives or guidance from the APANPIRG to proceed in its work. Reports on Meetings shall be of a simple layout and as concise as practicable and should normally cover:

- a) Short introduction;
- b) Summary of findings (presented in the order of discussion of the agenda items, including any proposals for action); and
- c) Work plan and schedule for future Meetings.

7.2. The Secretary should publish the Report as early as practicable (21-days) after the Meeting.

7.3. The Secretary should disseminate the meeting invitation as early as practicable, i.e., not less than 3-months before the Meeting, and reminders for submission of papers approx. 6-weeks and 1-week before the due date for submission of papers.

7.4. Contributors should submit papers to the ICAO Secretariat as early as practicable, i.e., 28-days before the Meeting at which they are intended to be considered. The Secretary should publish

papers, and send a notification of their availability, as early as practicable, i.e., 14-days before the Meeting at which they are intended to be considered.

7.5. The Secretary, in consultation with the Chairperson, may decide to accept papers submitted less than 28-days before the Meeting at which they are intended to be considered when there is a clear benefit to the Meeting in doing so.

## **8. Delegated authority of the MET SG**

8.1. The MET SG may propose actions for further consideration by APANPIRG and record these in the MET SG Report as either draft Conclusions or draft Decisions of APANPIRG.

8.2. Additionally, APANPIRG has empowered MET SG to adopt proposals for action on technical matters (especially those concerning guidance to States in the implementation of ICAO SARPs and global and regional plans) that do not have additional economic, environmental, inter-regional or political effects, which should be considered by APANPIRG. The MET SG shall record these in its Meeting Report as Conclusions or Decisions of MET SG.

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**APPENDIX B**

**METEOROLOGY SUB-GROUP (MET SG)  
WORK PLAN**

<b>ToR Ref*</b>	<b>Detailed description of deliverable</b>	<b>Responsibility</b>	<b>Target date</b>	<b>Status of progress</b>
a) to h)	<b>Coordination meeting</b> for the Chairs of MET SG, MET/R WG, MET/IE WG, MET/S WG, VOLCEX/SG  Online meetings conducted: 03/10/2022, 15/12/2022, 14/03/2023, 13/06/2023	Chair MET SG and Secretariat	Dec 2021 Mar 2022 Jun 2022 Sep 2022	<del>Completed</del> <del>In progress</del>
a)	<b>Draft amendment proposal</b> for APAC ANP to fulfil missing data in Tables MET	MET/S WG and Secretariat	Mar 2022	In progress
a)	<b>Draft amendment proposal</b> for APAC ANP to clarify the MET-related implementation planning guidance in the ANRF and other parts of Volume III	MET/R WG MET/IE WG MET/S WG with guidance from ICAO	May 2022	In progress
b) c) g)	<b>Organization and Analysis</b> of APAC Regional SIGMET test  Ref: Report of Conjoint Session of MET/IE WG/21 and MET/S WG/13 Ref: MET SG/27, WP/04 – Review outcomes from MET/IE WG/21	MET/S WG (Activity 1 and 3) MET/IE WG (Activity 3)	Mar 2022	<del>Completed</del> <del>In progress</del>
b) c) g)	<b>Analysis</b> of APAC Regional OPMET-availability monitoring exercise  Ref: Report of MET/IE WG/21 Ref: MET SG/27, WP/04 – Review outcomes from MET/IE WG/21	MET/IE WG (Activity 1)	Mar 2022	<del>Completed</del> <del>In progress</del>
b) c)	<b>Analysis</b> of APAC Regional OPMET-timeliness, -compliance and -regularity monitoring exercises  Ref: Report of MET/IE WG/21 Ref: MET SG/27, WP/04 – Review outcomes from MET/IE WG/21	MET/IE WG (Activity 2)	Mar 2022	<del>Completed</del> <del>In progress</del>

ToR Ref*	Detailed description of deliverable	Responsibility	Target date	Status of progress
b) g)	<b>Analysis</b> of APAC Regional VAAC backup tests Ref: MET/S WG/13, IP/09 – Combined APAC VAAC Management Report	MET/IE WG (Activity 4)	Mar 2022	Completed In progress
b) g)	<b>Analysis</b> of APAC Regional IROG backup tests Ref: Report of MET/IE WG/21 Ref: MET SG/27, WP/04 – Review outcomes from MET/IE WG/21	MET/IE WG (Activity 5)	Mar 2022	Completed In progress
b)	<b>Revised draft regional guidance material</b> on MET information needed to support the elements of the APAC Seamless ANS Plan	MET/R WG (Deliverable 3)	May 2022	In progress
b) c) g)	<b>Final report</b> on ICAO volcanic ash exercises (Papua New Guinea, North-east Asia, Philippines, etc.)	APAC VOLCEX/SG	TBD	Not started
c) d)	<b>Update</b> the reporting form on APANPIRG AN deficiencies to reflect progress to add/remove deficiencies in the MET field	MET SG Chair, Secretariat	Jun 2022	In progress
c) d)	<b>Reporting form updates</b> showing the status of implementation of corrective action for the resolution of AN deficiencies in the MET field	MET/S WG (Activity 2 and 6)	Mar 2022	In progress
f)	<b>Progress report</b> on implementation and testing of IWXXM exchange	MET/IE WG (Activity 7)	Jun 2022	In progress
g)	<b>Information</b> on ICAO provisions related to meteorological authority and quality assurance, cost recovery, competency, training and qualifications for meteorological service provision shared with States	MET SG Chair, Secretariat	Jun 2022	In progress
g)	<b>Analysis</b> of MET information used in the Region specifically to support ATM operations	MET/R WG (Deliverable 2)	May 2022	In progress
g)	<b>Plan</b> and organize a seminar on regional implementation of MET information to support ATM operations Ref: Report of MET/R WG/12 Ref: MET SG/27, WP/06 – Review outcomes from MET/R WG/12	MET/R WG (Deliverable 5)	May 2022	Completed In progress
h)	<b>Environmental Issues</b> Identify issues in the field of aeronautical meteorology related to environmental issues	MET SG Chair, Secretariat	Jun 2022	In progress

ToR Ref*	Detailed description of deliverable	Responsibility	Target date	Status of progress
b) e) g)	<b>Consideration of a MET-focused SWIM workshop</b>	Secretariat, MET/IE WG Chair	TBD	Not started
e) f) g)	<b>SIGMET coordination activities in APAC Region</b> Coordinate on the next steps to promote integration and expansion of SIGMET coordination activities among States/Administrations.	MET/R WG (Deliverable 7) MET/S WG (Activity 8)	Jun 2022	In progress
	<b>Update</b> Regional Guidance for Tailored Met Information and Services to Support ATM Operations  Ref: 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>	MET/R WG	May 2022	<del>In progress</del> Completed
	<b>Develop</b> User Requirements for SWIM-based MET Information Services Supporting ATFM	MET/R WG	May 2022	In progress
	<b>MET expert contribution to SWIM/TF</b> – Identify meteorological expert/s to contribute to the APAC SWIM/TF to ensure meteorological aspects are fully considered	MET SG	Nov 2021	In progress

\* Corresponding functions of the MET SG, as listed in the *Terms of Reference of the MET SG* (Ref: APANPIRG Procedural Handbook, Sixth Edition — 1 June 2020, A/L No 01)

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