



ICAO

International Civil Aviation Organization

**Thirty-Second Meeting of the Asia/Pacific Air Navigation
Planning and Implementation Regional Group
(APANPIRG/32)**

Video Teleconference, 1 – 3 December 2021

Schedule: 10:00 – 13:15 Bangkok Time [UTC+7]

- Agenda Item 3: Performance Framework for Regional Air Navigation Planning and Implementation**
- 3.5 MET**

METEOROLOGY SUB-GROUP (MET SG) REPORT

(Presented by Chair of MET SG)

SUMMARY

This paper presents a progress report from the Twenty-fifth meeting of the Meteorology Sub-group (MET SG/25) and invites the Meeting to adopt three Draft Conclusions concerning (i) updating online register of IWXXM exchange status; (ii) SWIM architecture to enable the cost-effective and efficient provision and consumption of MET information services; and (iii) update on the provision of Space Weather Advisory, and one Draft Decision on Meteorological expert contribution to SWIM/TF.

Strategic Objectives:

- A: **Safety** – Enhance global civil aviation safety
- B: **Air Navigation Capacity and Efficiency** — Increase the capacity and improve the efficiency of the global aviation system
- E: **Environmental Protection** — Minimize the adverse environment effects of civil aviation activities.

1. INTRODUCTION

1.1. The Meteorology Sub-Group convened online for its Twenty-fifth meeting (MET SG/25) from 18 to 22 October 2021. MET SG/25 reviewed the status of progress on its work plan, including its contributory bodies: Meteorological Requirements Working Group (MET/R WG); Meteorological Information Exchange Working Group (MET/IE WG); and Meteorological Services Working Group (MET/S WG).

1.2. This paper presents a progress report on the main activities of MET SG and its contributory working groups. All documentation and reports from MET SG/25 and the meetings of MET/R WG, MET/IE WG and MET/S WG are available at the ICAO APAC Office website at: www.icao.int/apac > Meetings > Meeting List – 2021. The full report from MET SG/25 is at the following link:

<https://www.icao.int/APAC/Meetings/Pages/2021-MET-SG-25.aspx>.

1.3. This paper invites the Meeting to adopt three Draft Conclusions on the following: updating online register of IWXXM exchange status; SWIM architecture to enable the cost-effective and efficient provision and consumption of MET information services; and update on the provision of Space Weather Advisory, and one Draft Decision on Meteorological expert contribution to SWIM/TF.

2. DISCUSSION

Online Register of APAC IWXXM exchange status

2.1. MET SG/25 reviewed progress (since MET SG/24) in developing an online register of current IWXXM exchange status and the need for States to provide updates on their implementation status of IWXXM exchange in the online register.

2.2. MET SG/25 considered that the provision of timely updates by States to the register, which would facilitate the Region-wide implementation of the IWXXM exchange, required the attention of States/Administrations, including both MET and CNS communities. Therefore, MET SG/25 formulated the following Draft Conclusion:

Draft Conclusion MET SG/25-03: Updating Online Register of IWXXM Exchange Status	
That, States/Administrations provide timely updates to the Online Register of IWXXM Exchange Status on the latest status of AMHS capability for IWXXM exchange among ROCs and NOCs, and the availability of IWXXM MET reports.	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 inform users and Regional OPMET Bulletin Exchange Scheme participants of each States’ ability to generate and receive IWXXM over the required communication links and facilitate the Region-wide implementation of IWXXM exchange.	
When: Now	Status: Draft to be adopted by PIRG
Who: <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: ROs	

Cost-efficient support of Meteorological SWIM Services

2.3. MET SG/25 discussed issues concerning many APAC Meteorological Service Providers’ plans to offer SWIM services, which were highlighted when the recent SWIM TF/5 meeting modified its Terms of Reference to specify the SWIM architecture and implementation approach will occur principally over the Common aeRonautical Virtual private network (CRV).

2.4. Noting that, currently, Meteorological Service Providers and airlines do not have access to CRV, MET SG/25 discussed the need for Meteorological Service Providers to provide SWIM services directly to users for volume intensive and non-sensitive MET information and how this could be supported through the work of the SWIM TF.

2.5. Because of the concerns raised in the discussion above, MET SG/25 formulated the following Draft Conclusion:

Draft Conclusion MET SG/25-07: SWIM architecture to enable the cost-effective and efficient provision and consumption of MET information services	
That, APAC SWIM TF ensures it defines a SWIM architecture, corresponding technical infrastructure requirements, and implementation approach that continues to enable the cost-effective and efficient provision and consumption of MET information services to all users to support aviation safety and air navigation capacity and efficiency, in consideration of use cases of highly data-intensive MET information services.	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: SWIM architecture, principally over CRV, might not provide a cost-effective and efficient solution for all use cases envisaged in ICAO’s global plans, in particular after commencement of the provision of highly data-intensive quantitative and probabilistic MET information services and enable access from anywhere in the globe.	
When: Now	Status: Draft to be adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: ROs	

Update on the provision of Space Weather Advisories

2.6. MET SG/25 reviewed an update on the provision of space weather (SWX) advisories, including recent changes to the WMO headers for these products, and considered the pending introduction of a fourth global Space Weather Advisory Centre (SWXC) operated by the China-Russian Federation consortium, due to commence operations on 16 November 2021.

2.7. MET SG/25 was reminded that States need to ensure systems and processes are in place to distribute SWX advisory information to aviation users within their airspace. Given this requirement, MET SG/25 formulated the following Draft Conclusion:

Draft Conclusion MET SG/25-09: Update on the provision of Space Weather Advisory	
That, States/Administrations urgently implement or adjust their systems to enable the forwarding of space weather advisories (in TAC and IWXXM form) as appropriate to users.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: CRC will commence operation with effect from 16 November 2021, and the WMO message headers for TAC and IWXXM format SWX advisory messages were updated to have separate headers for each space weather impact type.	
When: Now	Status: Draft to be adopted by PIRG
Who: <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: ROs	

Support of Meteorological SWIM Services

2.8. MET SG/25 noted that most SWIM TF members have a background in communications, navigation or surveillance, while meteorological service is not well represented. Therefore, MET SG/25 strongly recommended that the meteorological community increase its participation in the SWIM TF by formulating the following Draft Decision:

Draft Decision MET SG/25-08: Meteorological expert contribution to SWIM/TF

<p>That, States consider identifying meteorological experts to contribute to the APAC SWIM/TF to ensure meteorological aspects are fully considered.</p>	<p>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</p>
<p>Why: Currently, few members of the SWIM/TF come from a meteorological background. The SWIM/TF would benefit from a greater understanding of the requirements and plans for meteorological information services.</p>	
<p>When: Now</p>	<p>Status: Draft to be adopted by PIRG</p>
<p>Who: <input checked="" 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: ROs</p>	

Publishing of IWXXM Frequently Asked Questions

2.9. MET SG/25 noted that the draft FAQs document was made available via the MET SG/25 website to facilitate feedback from users. The authors made some refinements based on feedback provided by IATA. MET SG/25 noted that the document is sufficiently mature to publish for use by States (**Conclusion MET SG/25-01: Publishing of IWXXM Frequently Asked Questions**).

Progress of the ad hoc group on Deficiencies

2.10. MET SG/25 reviewed the progress of the ad hoc group tasked with assisting the Secretariat in identifying and facilitating the resolution of air navigation deficiencies in the meteorology field. MET SG/25 was pleased to note the significant achievements of the ad hoc group. These included the development of the *MET Deficiency Report Guide*; a template to facilitate States’ reporting (to MET SG) of progress on resolving deficiencies, a review of the APANPIRG Procedural Handbook, and the development of the *MET Deficiency Identification Guide*; a documented process for utilising the results of annual ICAO APAC SIGMET tests and OPMET monitoring in the identification of deficiencies.

2.11. Concerning the ad hoc group’s proposal to monitor VONA¹ information from late 2023, MET SG/25 noted that MET/S WG should carefully consider the readiness of SVOs² when proposing regular regional VONA tests.

2.12. Based on the experience of the ad hoc group, MET SG/25 decided to revise the description of the ad hoc group’s work to focus on more achievable activities (**Decision MET SG/25-04: MET Deficiencies ad hoc group TOR**). In addition, MET SG/25 endorsed the use of the ad hoc group’s *MET Deficiency Report Guide* and *MET Deficiency Identification Guide* (**Decision MET SG/25-05: MET Deficiencies template and guidance**).

Air Navigation Deficiency AP-MET-23 Implementation by Solomon Islands

2.13. MET SG/25 congratulated Solomon Islands on progress towards resolution of the Air Navigation Deficiency AP-MET-23 concerning the provision of MWO and SIGMET service and its evidence-based Report to satisfy the APANPIRG requirements for the removal of an air navigation deficiency from the open list.

¹ The State volcano observatories may use the Volcano Observatory Notice for Aviation (VONA) format to send information to their associated ACCs/FICs, MWO and VAAC [ICAO Annex 3, Appendix 2, 4.1, Note 2., refers]

² State volcano observatory (SVO)

2.14. Notwithstanding the significant progress demonstrated by the Solomon Islands, MET SG/25 noted that it was also reported unresolved issues concerning the content, format and timeliness of SIGMET.

2.15. Given the above, MET SG/25 requested the Solomon Islands, with assistance from its partner States, to conduct additional corrective action to enable the MET SG to confirm that Solomon Islands had fully resolved the deficiency AP-MET-23. Subject to Solomon Islands demonstrating resolution of the issues concerning content, format and timeliness of SIGMET information, and sustainable provision of ICAO-compliant SIGMET service, MET SG would support the removal of deficiency AP-MET-23 from the APANPIRG open list. Therefore, to facilitate the removal of the deficiency from the open list, MET SG/25 requested the Secretariat coordinate with the Solomon Islands to report the resolution of the deficiency to APANPIRG.

SIGMET Coordination cum User Requirements Workshop

2.16. MET SG/25 noted the outcome of a SIGMET Coordination cum User Requirements Workshop organised by Hong Kong Observatory in late June 2021. MET SG/25 also noted that the Workshop had successfully brought the participating MWOs and some users together to share their respective experiences in SIGMET services for better mutual understanding. MET SG/25 agreed that continual dialogue among the users and neighbouring MWOs are crucial to improving the SIGMET service in the APAC Region.

2.17. MET SG/25 noted similar activities had been organised as reported and formulated the Decision of common concern for the ad hoc group on SIGMET Coordination, under MET/S WG (**Decision MET SG/25-06: Further update on SIGMET Coordination guidance for enhancement of SIGMET coordination activities in the Region**).

Updates of APAC Regional Guidance for Tailored MET Information and Services to support ATM Operations

2.18. MET SG/25 reviewed proposed updates to the APAC Regional Guidance for Tailored Meteorological Information and Services to Support Air Traffic Management (ATM) Operations developed by the MET/R WG and supported the proposed updates to the guidance material (**Conclusion MET SG/25-10: Update to Regional Guidance for Tailored Meteorological Information and Services to Support ATM Operations**).

Update to Regional SIGMET Guide

2.19. MET SG/25 reviewed draft updates harmonising the APAC Regional SIGMET Guide with SIGMET Guide in the ICAO EUR Region, including guidance on IWXXM format relevant to SIGMET information. MET SG/25 noted that to facilitate the exchange of SIGMET in IWXXM, the current draft version of the APAC Regional SIGMET Guide would be released (**Conclusion MET SG/25-11: Updates to Regional SIGMET Guide**).

Review Plan of Work

2.20. MET SG/25 reviewed the work plan of the MET SG, which APANPIRG last updated in 2020, to ensure alignment of the work of the MET SG and its contributory bodies. MET SG/25 proposed revisions or updates as necessary to ensure the deliverables of the MET SG and its support of APANPIRG remain focused on the current and future needs of the APAC Region. The updated work plan is provided in the **Appendix** to this paper.

Progress of Secretariat actions

2.21. MET SG/25 noted the negative impact of the lack of progress of many Secretariat actions, including late finalisation of the Working Groups' reports and late availability of the MET SG/25 papers. As a result, progress on critical items had been delayed, and the execution of the MET SG/25 meeting was not at the desired standard. MET SG/25 requested its concerns about the capacity of MET Secretariat resourcing be raised at APANPIRG.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

- a) Note the progress of the MET SG and its contributory working groups;
- b) Adopt the Draft Conclusions at paragraphs 2.2, 2.5 and 2.7, above; and
- c) Adopt the Draft Decision at paragraph 2.8, above.

**METEOROLOGY SUB-GROUP (MET SG)
TERMS OF REFERENCE AND PLAN OF WORK**

Editorial Note: Updates proposed by MET SG/25 shows deleted text using ~~text to be deleted~~, and added text with grey shading (text to be inserted).

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.

9. Work Plan of the MET SG

	Detailed description of deliverable	Responsibility	Target date	Status of progress
a) to h)	Coordination meeting for the Chairs of MET SG, MET/R WG, MET/IE WG, MET/S WG, VOLCEX/SG	Chair MET SG and Secretariat	Dec 2021 Mar 2022 Jun 2022 Sep 2022	In progress
a)	Draft amendment proposal for APAC ANP to fulfil missing data in Tables MET	MET/S WG and Secretariat	Mar 2022	In progress
a)	Draft amendment proposal 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)	Organisation and Analysis of APAC Regional SIGMET test	MET/S WG (Activity 1 and 3) MET/IE WG (Activity 3)	Mar 2022	In progress Completed
b) c) g)	Analysis of APAC Regional OPMET-availability monitoring exercise	MET/IE WG (Activity 1)	Mar 2022	In progress Completed
b) c)	Analysis of APAC Regional OPMET-timeliness, -compliance and -regularity monitoring exercises	MET/IE WG (Activity 2)	Mar 2022	In progress Completed
b) g)	Analysis of APAC Regional VAAC backup tests	MET/IE WG (Activity 4)	Mar 2022	In progress Completed
b) g)	Analysis of APAC Regional IROG backup tests	MET/IE WG (Activity 5)	Mar 2022	In progress Completed
b)	Revised draft regional guidance material on MET information needed to support the elements of the APAC Seamless ANS Plan	MET/R WG (Deliverable 3)	May 2022	In progress
e)	Organisation and Analysis of APAC Regional SIGMET monitoring exercises	MET/S WG (Task 4)	Mar 2022	In progress Completed
b) c) g)	Final report on ICAO volcanic ash exercise APAC VOLCEX 18/01 TBD (Papua New Guinea)	APAC VOLCEX/SG (Milestone 5)	TBD	Not started
b) e) g)	Final report on ICAO volcanic ash exercise APAC VOLCEX 18/02 (Indonesia/Sumatra)	APAC VOLCEX/SG (Task 6)	Completed	Completed

	Detailed description of deliverable	Responsibility	Target date	Status of progress
b) e) g)	Final report on ICAO volcanic ash exercise APAC VOLCEX 19/01 (Raoul Island, affecting Fiji's area of responsibility)	APAC VOLCEX/SG (Task 7)	Completed	Completed
b) c) g)	Final report on ICAO volcanic ash exercise APAC VOLCEX 20/01 TBD (North-east Asia)	APAC VOLCEX/SG (Milestone 9)	TBD Jun 2020	Not started
b) c) g)	Final report on ICAO volcanic ash exercise APAC VOLCEX 19/02 TBD (Philippines)	APAC VOLCEX/SG (Milestone 8)	TBD Jun 2020	Not Started
c) d)	Update the APANPIRG AN deficiencies database to add/remove deficiencies in the MET field	MET SG Chair, Secretariat	Jun 2022	In progress Completed
c) d)	Reporting form updates 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
e) f) g)	First draft of input to the Regional SIGMET Guide to assist States in aligning cross FIR boundary SIGMET information	MET/R WG (Task 4) MET/S WG (Task 4)	Completed	Completed
f)	First draft of input to the Regional SIGMET Guide on the use of objective criteria supporting the issuance of SIGMET information for thunderstorm	MET/S WG (Task 4)	Completed	Completed
f)	Progress report on implementation and testing of IWXXM exchange	MET/IE WG (Activity 5)	Jun 2022	In progress Completed
f) g)	ROBEX Handbook updates to support improved efficiency and effectiveness of the ROBEX scheme; develop new table indicating COMM links and status	MET/IE WG (Task 6)	Mar 2020	Completed
g)	Information 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)	Analysis of MET information used in the Region specifically to support ATM operations	MET/R WG (Deliverable 2)	May 2022	In progress
g)	Plan and organize a for seminar on regional implementation of MET information to support ATM operations	MET/R WG (Deliverable 5)	May 2022	In progress
h)	Environmental Issues Identify issues in the field of aeronautical meteorology related to environmental issues	MET SG Chair, Secretariat	Jun 2022	In progress
b) e) g)	IWXXM workshop Plan and conduct the IWWXM workshop based on outcomes from a survey of States' requirements for IWXXM implementation support	Secretariat, MET/IE WG Chair, MET SG Chair, Hong Kong China, Singapore	TBD April/May 2020	Not started Completed
f) g)	SIGMET Guide update Update the Regional SIGMET Guide to align with Annex 3, Amendment 79	MET/S WG (ad-hoc group)	Jun 2020	Completed
e) f) g)	SIGMET coordination activities in APAC Region 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) (MET/R WG)	Jun 2022	In progress

	Detailed description of deliverable	Responsibility	Target date	Status of progress
	Update Regional Guidance for Tailored Met Information and Services to Support ATM Operations	MET/R WG	May 2022	In progress
	Develop User Requirements for SWIM-based MET Information Services Supporting ATFM	MET/R WG	May 2022	In progress
	MET expert contribution to SWIM/TF – Identify meteorological expert/s to contribute to the APAC SWIM/TF to ensure meteorological aspects are fully considered	MET SG	Nov 2021	In progress

— END —