



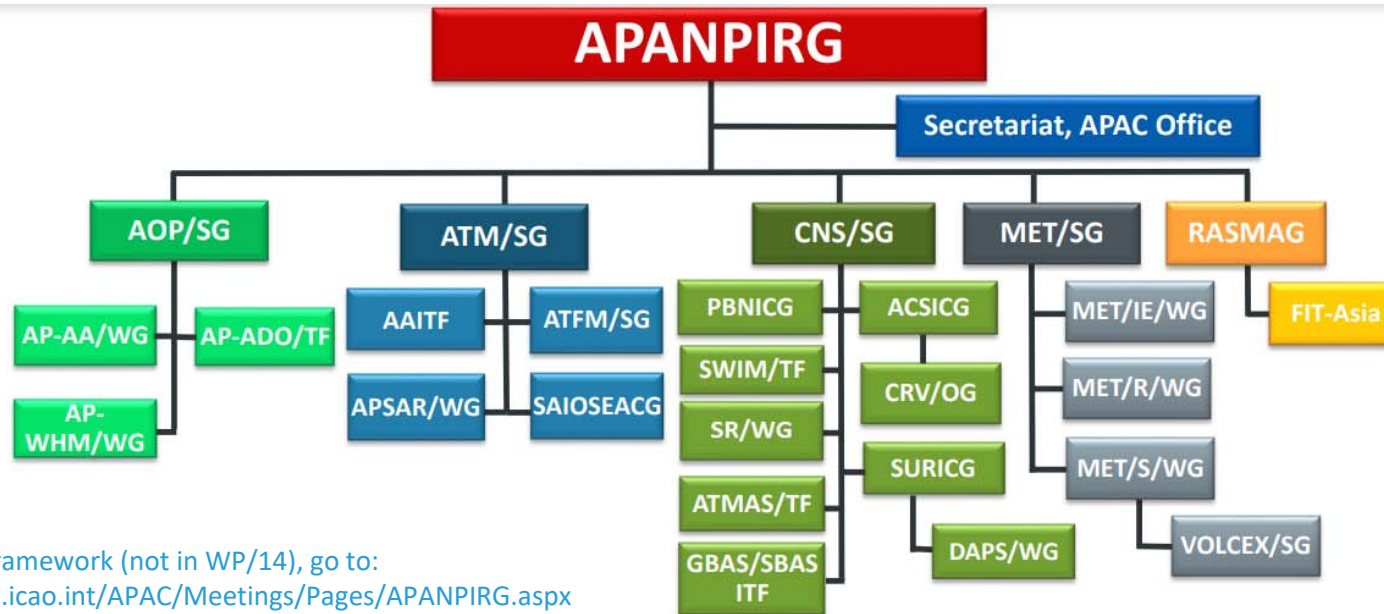
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WP/14 – OUTCOMES OF THE MET SG AND ITS CONTRIBUTORY WGs ON SWIM-RELATED MATTERS

Presented by the Secretariat

The Seventh Meeting of the System-Wide
Information Management Task Force (SWIM TF/7)
Bangkok, Thailand, 09 – 12 May 2023





APANPIRG Framework (not in WP/14), go to:
<https://www.icao.int/APAC/Meetings/Pages/APANPIRG.aspx>

AOP/SG	- Aerodrome Operations and Planning Sub Group
AP-AA/WG	- APAC Aerodrome Assistance Working Group
AP-ADO/TF	- APAC Aerodrome Design and Operations Task Force
AP-WHM/WG	- APAC Wildlife Hazard Management Working Group

ATM/SG	- ATM Sub Group
AAITF	- AIS - AIM Implementation Task Force
APSAR/WG	- APAC Search and Rescue Working Group
ATFM/SG	- ATFM Steering Group
SAIOSEACG	- South Asia Indian Ocean and South East Asia ATM Coordination Group

CNS/SG	- CNS Sub Group
PBNICG	- PBN Implementation Coordination Group
SWIM/TF	- System-Wide Information Management Task Force
SR/WG	- Spectrum Review Working Group
ATMAS/TF	- ATM Automation System Task Force
GBAS/SBAS ITF	- GBAS/SBAS Implementation Task Force
ACSICG	- Aeronautical Communication Services Implementation Coordination Group
• CRV/OG	- Common Regional Virtual Private Network (VPN) Operations Group
SURICG	- Surveillance Implementation Coordination Group
• DAPS/WG	- Mode S Downlinked Aircraft Parameters Working Group

MET/SG	- Meteorology Sub Group
MET/IE/WG	- Meteorological Information Exchange Working Group
MET/R/WG	- Meteorological Requirements Working Group
MET/S/WG	- Meteorological Services Working Group
• VOLCEX/SG	- (APAC) Volcanic Ash Exercises Steering Group

RASMAG	- Regional Airspace Safety Monitoring Advisory Group
• FIT-ASIA	- FANS Implementation Team – Asia



ICAO APAC Meteorology Sub-Group (MET SG)

- Work Plan
 - Develop user requirements for SWIM-based MET Information Services Supporting ATFM
 - identify MET experts to contribute to the SWIM/TF to ensure MET aspects are fully considered

WP/14, para. 1.1



MET SG/26 (1-5 Aug 2022)

- Use of the Internet for MET SWIM architecture
 - Supported Draft Decision SWIM TF/06/01
 - CNS SG/26 – WP/34
 - MET SG/26 considered it essential to adopt the proposal concerning the use of the Internet for MET Information Services in Regional SWIM architecture

WP/14, para. 2.1-2.2



MET SG/26 (1-5 Aug 2022)

- SWIM workshop
 - Noted States' need for MET- and SWIM-related support
 - Revised the MET SG work plan to consider organizing and conducting a MET-focused workshop on SWIM

WP/14, para. 2.3



MET/IE WG/21 (27-29 March 2023)

- Agenda item on SWIM
 - Noted States' need for MET- and SWIM-related support
 - Added a new agenda item on SWIM for the next Meeting (MET/IE WG/22; tentatively in March or April 2024)

WP/14, para. 2.4



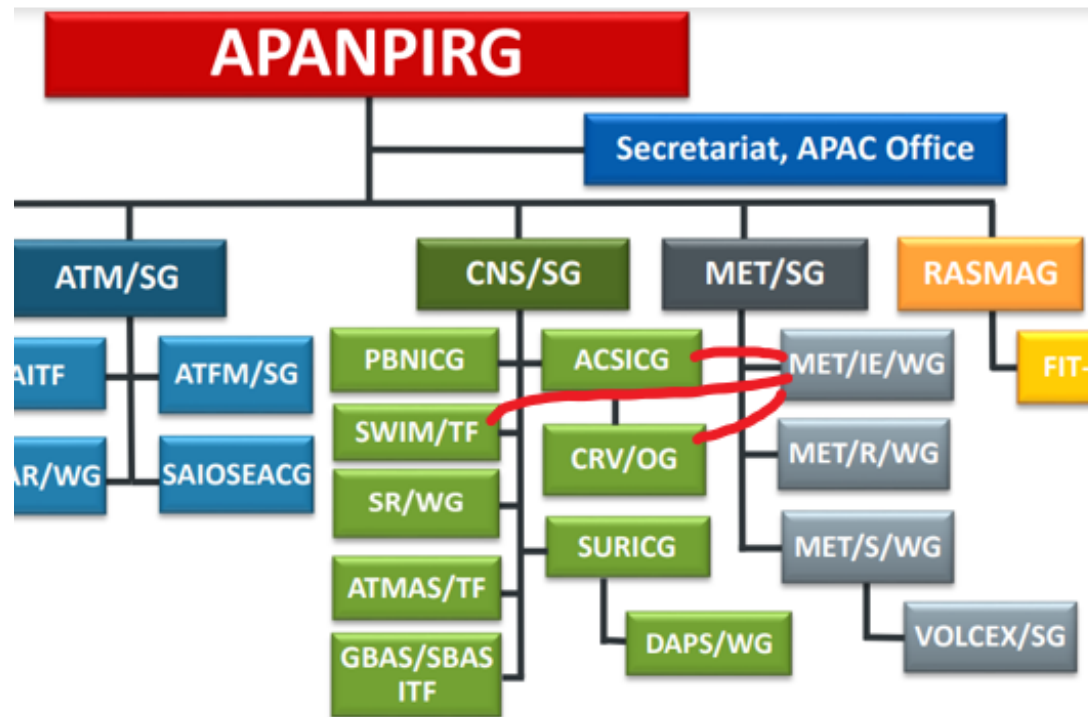
MET/IE WG/21 (27-29 March 2023)

- Updated terms of reference
 - Functions of the group to include the following:
“... coordinate and seek support from other enabling ICAO groups (e.g. SWIM TF, ACSICG, CRV OG, etc.) to support MET information exchange initiatives”

WP/14, para. 2.5



MET/IE WG/21 (27-29 March 2023)



WP/14, para. 2.5



MET/IE WG/21 (27-29 March 2023)

EXPECTATION FROM SWIM TF

ICAO APAC SWIM Seminar – 8 May 2023, SP/04 – AEROTHAI SWIM JOURNEY

- Provide regional SWIM implementation guidance materials, including detailed technical specifications
- Approach to ensure interoperability and harmonization, e.g.
 - identify information exchange model version to be used across the APAC region
 - identify mediation method for SWIM users using different information exchange model versions
- Provide transition plan
- List of common Information Services
- Suggest framework to onboard other aviation stakeholders (not only ANSP)



Not in WP/14



MET/IE WG/21 (27-29 March 2023)

Table 1: Compatibility table showing IWXXM versions, associated report packages, and relevant ICAO Annex 3 requirements

IWXXM Version	METAR/SPECI	TAF	SIGMET	AIRMET	TCA	VAA	SWA	WAFS SIGWX F/C	Requirements
1.1	1.1.0	1.1.0	1.1.0	N/A	N/A	N/A	N/A	N/A	Am76
2.1	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1	N/A	N/A	Am77
3.0	3.0.0	3.0.0	3.0.0	3.0.0	3.0.0	3.0.0	3.0.0	N/A	Am78
2021-2	3.1.0	3.0.1	4.0.0	3.1.0	3.1.0	3.1.0	3.0.1	1.0.0	Am79 + Am80
2023-1 (undergoing WMO FT approval)	3.1.0	3.0.1	4.0.1	3.1.1	3.1.0	3.1.0	3.0.1	1.1.0	Am79 + Am80

Not in WP/14



MET/IE WG/21 (27-29 March 2023)

4.4. The Meeting noted that, according to the compatibility table, IWXXM formatted METAR/SPECI, SIGMET, AIRMET, TCA, VAA, and SWA messages issued in IWXXM Version 3.0 will not comply with the latest amendment (Amendment 80) to ICAO Annex 3, noting even the minor changes to the IWXXM schema for TAF can result in non-compliance with ICAO Annex 3.

4.5. Considering the need for States to ensure compliance with ICAO Annex 3, the Meeting noted that the producers of IWXXM reports should implement or upgrade their systems to support at least IWXXM Version 2021-2. Therefore, the Meeting formulated the following Draft Conclusion

Not in WP/14



MET/IE WG/21 (27-29 March 2023)

- Draft Conclusion/Decision MET/IE WG/21-01:
IWXXM version compatibility

What? That, States are requested to ensure that MET service providers, air navigation service providers (ANSPs), airlines and other end users do the following:

Not in WP/14



MET/IE WG/21 (27-29 March 2023)

- Draft Conclusion/Decision MET/IE WG/21-01: IWXXM version compatibility
 - a) make the necessary system upgrades to support the IWXXM version which complies with the latest amendment to Annex 3 as stated in the IWXXM compatibility table*
- *<https://github.com/wmo-im/iwxxm/wiki/Package-Compatibility>

Not in WP/14



MET/IE WG/21 (27-29 March 2023)

- Draft Conclusion/Decision MET/IE WG/21-01:
IWXXM version compatibility
 - b) prepare for future system upgrades to support future IWXXM versions driven by further amendments to Annex 3.

Not in WP/14



MET/IE WG/21 (27-29 March 2023)

- Draft Conclusion/Decision MET/IE WG/21-01:
IWXXM version compatibility

Why? Most States are generating and exchanging IWXXM OPMET data in version 3.0. With the evolution of ICAO Annex 3, IWXXM version 3.0 which complied with Amendments 78 to Annex 3 is no longer be compliant with Amendments 80 to ICAO Annex 3. To avoid the potential impact to operations due to IWXXM version compatibility issues of the systems, States are required to upgrade the systems for generating, exchanging and consuming IWXXM reports to support the IWXXM version which complies with the latest amendment to Annex 3

Not in WP/14



MET/IE WG/21 and MET/S WG/13 (29 March 2023)

- Proposals for the amendment of ICAO Annex 3 related to SWIM
 - ICAO State letter, Ref.: AN 2/36-23/6, dated 13 February 2023
 - Proposals for the amendment of Annex 3, Annex 4, Annex 10 (Vol. II and III), Annex 15, PANS-ABC, PANS-AIM, and the first edition of PANS-IM
 - Second Meeting of the ICAO Information Management Panel (IMP/2)

WP/14, para. 2.6



MET/IE WG/21 and MET/S WG/13 (29 March 2023)

- Proposals for the amendment of ICAO Annex 3 related to SWIM
 - Applicability on 28 November 2024
 - Comments by 14 August 2023
 - Among other proposals, proposed amendment to Annex 3 concerning SWIM and a first edition of PANS-IM concerning aeronautical information management, SWIM and information security

WP/14, para. 2.7-2.9



MET/IE WG/21 and MET/S WG/13 (29 March 2023)

- Proposals for the amendment of ICAO Annex 3 related to SWIM
 - **2.2.10 Recommendation.**— *States should ensure that the meteorological information supplied to the users listed in 2.1.2 is provided through information services.*

WP/14, para. 2.10



MET/IE WG/21 and MET/S WG/13 (29 March 2023)

- Proposals for the amendment of ICAO Annex 3 related to SWIM
 - *Note 1.— In the context of system-wide information management, the notion of information service addresses machine-to-machine interaction in a service-oriented architecture.*

WP/14, para. 2.11



MET/IE WG/21 and MET/S WG/13 (29 March 2023)

- Proposals for the amendment of ICAO Annex 3 related to SWIM
 - *Note 2.— Procedures on information services are contained in the Procedures for Air Navigation Services — Information Management (PANS-IM, Doc xxxxx).*
 - *Note 3.— Guidance material on information services can be found in the Manual on System-wide Information Management Implementation (Doc xxxxx).*

WP/14, para. 2.11



MET/IE WG/21 and MET/S WG/13 (29 March 2023)

- 2.2.10 Recommendation.— States should ensure that the meteorological information supplied to the **users listed in 2.1.2** is provided through information services.
 - *operators, flight crew members, air traffic services units, search and rescue services units, airport management and others concerned with the conduct or development of international air navigation*

WP/14, para. 2.12



MET/IE WG/21 and MET/S WG/13 (29 March 2023)

- 2.2.10 Recommendation.— States should ensure that the meteorological information supplied to the **users listed in 2.1.2** is provided through information services.
 - *Therefore, by November 2024, States, operators and service providers in the aviation system may need to implement significant changes to ensure the MET information is provided to users through information services (SWIM)*

WP/14, para. 2.13



MET/IE WG/21 and MET/S WG/13 (29 March 2023)

- Transition to SWIM
 - ICAO METP was considering removing the (legacy) Annex 3 requirements for the global exchange of MET information in the traditional alpha-numeric code (TAC) form in 2029

WP/14, para. 2.14



MET/R WG/12 (1-5 May 2023)

- Development of APAC Use Case and User Requirements for SWIM-based MET Information Services Supporting ATFM
 - MET/R WG/12 – WP/12
 - SWIM TF/7 – WP/15 (A.I.6 – Ad hoc group)
 - ICAO APAC SWIM Seminar – SP/08 (Hong Kong Observatory)

WP/14, para. 2.15-2.16



ACTION BY THE MEETING

The meeting is invited to:

- a) Note the information contained in this paper;
and
- b) Discuss any relevant matters as appropriate.

WP/14, para. 3.1



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