



ICAO

International Civil Aviation Organization

**THE ELEVENTH MEETING OF SYSTEM WIDE
INFORMATION MANGEMENT TASK FORCE
(SWIM TF/11)**

Bangkok, Thailand, 25 – 29 May 2026

Agenda Item 6: State, regional and global SWIM updates

LATEST STATUS OF IWXXM

(Presented by Hong Kong, China)

SUMMARY

This paper highlights the latest status of the ICAO Meteorological Information Exchange Model (IWXXM) and related outcomes of the 13th and 14th meeting of the ICAO Meteorological Panel (METP) Working Group of Meteorological Information Exchange (WG-MIE) being held in Sep 2025 and May 2026 respectively.

1. INTRODUCTION

1.1 The WMO Task Team on Aviation Data (TT-AvData) had published a new version of IWXXM in November 2025 – IWXXM 2025-2 – to meet the changes involved in Amendment 82 to ICAO Annex 3 and PANS-MET (Doc. 10157). A decision was made at the 13th meeting of ICAO Meteorological Panel Working Group on Meteorological Information Exchange (METP WG-MIE/13) regarding deprecation of older IWXXM versions and ceasing their use in operational exchange of meteorological information.

1.2 Subsequent to METP WG-MIE/13, ways to make IWXXM better fit the publish-subscribe and request-reply exchange patterns in SWIM were further discussed at WG-MIE/14.

2. DISCUSSION

IWXXM 2025-2

2.1 The following is a recap of the major changes involved in IWXXM 2025-2 with respect to IWXXM 2023-1:

- First introduction of the Quantitative Volcanic Ash Concentration Information (QVACI) package
- First introduction of the Volcano Observatory Notice for Aviation (VONA) package
- Changes to the METAR/SPECI, Volcanic Ash Advisory, and Space Weather Advisory packages in accordance with the changes of their respective TAC templates
- Changes to the METAR/SPECI package to allow the provision of unlimited RVR, and temperature reports in tenths of a degree, in contrast to TAC

- Changes to the Meteorological Feature Package, and the WAFS Significant Weather Forecast package which has been based on it, to prepare for use by packages to be developed in future
- Updates to documentation in IWXXM and all its packages to reflect the introduction of PANS-MET and the discontinuation of the WMO Technical Regulations (WMO-No. 49), Volume II, Meteorological Service for International Air Navigation

2.2 Details regarding IWXXM 2025-2, including the schemas, examples, UML model, and release notes, are available at <https://schemas.wmo.int/iwxxm/2025-2/>.

Versions of IWXXM for operational exchange

2.3 While it is a known fact that upgrading systems to use the latest version of IWXXM needs resources and hence requires thorough planning and preparation, delayed implementation of IWXXM may not only make the produced IWXXM messages non-compliant with current ICAO Annex 3 and PANS-MET, downstream consumers will also need to be able to consume multiple versions of IWXXM reports, thus increasing their operational complexity and cost.

2.4 ICAO METP WG-MIE in its 13th meeting had discussed the issue and arrived at the following decision:

Decision MIE/13-03: Managing IWXXM Version

That,

- following the official release of version 2025-2 in November 2025, only versions 2023-1 and later should be exchanged operationally, and
- future IWXXM versions should be managed as independent packages.

2.5 Table 1 shows the latest IWXXM compatibility table taking into account the decision made by WG-MIE.

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	VONA	QVACI	Requirements
1.1	1.1.0	1.1.0	1.1.0	N/A	N/A	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	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	N/A	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	N/A	N/A	Am79+ Am80
2023-1	3.1.0	3.0.1	4.0.1	3.1.1	3.1.0	3.1.0	3.0.1	1.1.0	N/A	N/A	Am79 + Am80
2025-2	3.2.0	3.0.2	4.0.2	3.1.2	3.1.1	3.2.0	3.1.0	1.2.0	1.0.0	1.0.0	Am82 / PANS-MET

2.6 WG-MIE is developing a plan for communicating operational deprecation of older IWXXM versions, and approaches to globally coordinating the implementation of new IWXXM schema versions, with emphasis on lifecycle planning (including retirement of versions), stakeholder readiness, and alignment of regional deployment timelines.

2.7 To address the above issues concerning IWXXM version recommendations and compatibility, the MET/IE WG/24 meeting held in April 2026 formulated the following Draft Conclusion for further consideration by MET SG:

Draft Conclusion MET/IE WG/24-01 – IWXXM Version Compatibility	
<p>What: That, States are requested to ensure that MET service providers, air navigation service providers (ANSPs), airlines and other end users do the following:</p> <p>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*; and</p> <p>b) prepare for future system upgrades to support future IWXXM versions driven by further amendments to Annex 3.</p> <p>(*Link to the IWXXM capability table: https://wmo.int/iwxxm)</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input checked="" type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: Many States are exchanging IWXXM OPMET data in older versions of IWXXM which are no longer compliant with Amendments 82 to ICAO Annex 3. To avoid the potential impact on operations due to IWXXM version compatibility issues, States must upgrade the systems for generating, exchanging and consuming IWXXM reports to support the IWXXM version that complies with the latest amendment to Annex 3.</p>	<p>Follow-up:</p> <p><input checked="" type="checkbox"/> Required from States</p>
<p>When: As soon as practicable</p>	<p>Status: Draft to be adopted by MET SG</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> RASG-APAC <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

New initiatives discussed in WG-MIE/14

2.8 In response to Decision MIE/13-03 b) mentioned in Para. 2.4 above, TT-AvData has started to work on a solution that allows packages to be separately managed and used. Under the new organisation, IWXXM version is no longer being referenced when the schema of an IWXXM report (e.g. METAR/SPECI) is being used; instead schemas of individual packages are referenced by their own name and version number. Since such arrangement effectively decouples the physical link of an IWXXM version from its packages, the term "IWXXM version" will be renamed as "IWXXM release" and is merely an identifier of all valid packages – no matter being updated or not – being published in the same release. This new organisation will be implemented in the next release of IWXXM.

2.9 A discussion of the current state of standardisation of AMQP headers and message structure as defined by the European MET SWIM Services Sub-Group (MET3SG) community of interest with regard to the implementation of SWIM information services according to the European CP1 regulation was made. While most of the elements in the AMQP headers could be extracted from IWXXM reports, the need of such operational metadata to support the operation of SWIM information services was noted. In fact, some elements in existing IWXXM reports, like "operational and non-operational indicators" and "TAC-to-IWXXM translation outcome", should also be useful to support features like filtering in publish-subscribe and request-reply SWIM information service exchange patterns. Further investigation would be taken by WG-MIE and TT-AvData to identify further operational metadata needs, consider cross exchange pattern interoperability and introduce necessary operational metadata into IWXXM schemas. Learning from other information domain on their requirements and application of such metadata in information service features would also be carried out.

3. ACTION BY THE MEETING

3.1 The meeting is invited participants to:

- a) note the information in this paper;
- b) consider reminding States to ensure systems being developed or procured will work with current and upcoming versions of IWXXM in the future; and
- c) discuss any relevant matter as appropriate.
