



International Civil Aviation Organization

**MIDANPIRG Meteorology Sub-Group
Tenth Meeting (MET SG/10)**

(Virtual Meeting, 17 - 19 May 2022)

Agenda Item 3: Global and Regional Developments

OUTCOMES OF MET PANEL WITH SUPPORT FROM THE ASSOCIATED WORKING
GROUPS' MEETINGS

(Presented by the Secretariat)

SUMMARY

A summary of the MET Panel with support from the associated Working Groups' Meetings is provided in this paper.

Action by the meeting is at paragraph 3.

1. INTRODUCTION

1.1 The meeting may recall that the Fifth Meeting of the ICAO Meteorology Panel (METP/5) was held by virtual meetings on 7, 8, 9, 11, 14 and 16 June 2021 and supported by the following working groups under the METP:

- METP Working Group on Meteorological Requirements and Integration (METP WG-MIR);
- METP Working Group on Meteorological Information and Service Development (METP WG-MISD);
- METP Working Group on Meteorological Information Exchange (METP WG-MIE);
- METP Working Group on Meteorological Operations Group (METP WG-MOG); and
- METP Working Group on Cost Recovery Guidance and Governance (WG-MCRGG).

1.2 The focus of this paper is the outcome of the METP/5 meeting noting that each working group progresses with its work between METP meetings.

2. DISCUSSION

2.1 Significant outcomes from METP/5 included:

WG-MRI related

- Recommending the restructure Annex 3 and new PANS-MET be presented to the ANC, together with its recommendation that these documents be adopted in replacement of the

twentieth edition of Annex 3, including Amendment 81, with intended applicability in 2023 and with the understanding that further changes to these documents may first need to be incorporated, based on other agreed recommendations stemming from METP/5;

- Decided that the Secretariat be requested to expeditiously identify, in coordination with WG-MRI as necessary, all required amendments to other ICAO Annexes, PANS and guidance material, consequential to the introduction of the new PANS-MET;
- Decided that the METP: a) use the PANS-MET Strategic Briefing Paper as the basis for further activities to promote the new PANS-MET beyond the MET community; b) encourage its members to brief their respective State representatives and decision makers on this complex issue, prior to any ANC debate, or State consultation process and c) encourage further communications and outreach activities to promote the new PANS-MET at a regional level (through PIRGs);
- Recommended the METP formulate a proposal via the ICAO Secretariat, to the ANC, requesting them to instigate an active collaboration between identified stakeholders (particularly international standards organisations and dependent ICAO Panels), with the aim of developing a community designed solution for non-mandatory guidance for visualisation of some digital meteorological information;
- Decided that the METP endorse the following principles in order to support and encourage the introduction of new digital MET information services: a) MET Service Providers move swiftly from the current state of translating existing TAC into IWXXM, and publish the rich information from the original source; b) users use this data rich IWXXM and take advantage of the benefits it presents instead of converting the IWXXM data back into the legacy TAC formats; and c) new MET SWIM services avoid the language of the legacy MET products (i.e. not using such terminology as ‘METAR service’ or ‘TAF service’) in order to avoid any ambiguity or confusion with current products;

WG-MISD related

- Recommended the METP endorse the draft amendments to the provisions related to space weather advisory service as part of draft Amendment 81 to the restructured Annex 3 and new PANS-MET with intended applicability in 2023: clarified that ICAO designates the centres as regional or global; added definition of ‘space weather information service’; clarified the role of the global centre; clarified the supply of advisory information; added meteorological watch offices (MWO) since in some States the MWO also serves the function of an aerodrome meteorological office; removed international NOTAM offices; clarified the role of the regional centre;
- Recommended the METP endorse the removal of the requirement to disseminate space weather information via NOTAM, from Annex3; and the Secretariat coordinate the proposed amendment to Annex 3 and the consequential amendments to Annex 15 with the IMP and its Secretary;
- Decided that the WG-MISD SWX Work Stream, based upon the advice of the SWXCCG, be tasked to determine the dates on which the China-Russian Federation Consortium (CRC) integration activities are considered complete to enable the CRC to join the operational rotation of global space weather information centres;
- Decided that the METP, through the appropriate working groups, and by the next review of the space weather information system, develop the functional requirements for regional space

weather centre, ensuring representation from the ICAO-designated regional space weather centres in that process;

- Recommended the METP endorse the draft provisions for quantitative volcanic ash information as part of draft Amendment 81 to the restructured Annex 3 and new PANS-MET;
- Decided that the METP endorse the work accomplished and planned to develop the hazardous weather information service (HWIS): 1) finalize the HWIS Service Architecture Design document; 2) finalize the HWIS Roadmap; 3) commence drafting provisions for Annex 3 and PANS-MET in time for the Amendment 82 (expected applicability in November 2026); 4) collaborate with the WMO and its Aviation Research and Development Project (AVRDP/2) to demonstrate the HWIS concept on a regional or sub-regional scale for severe convection (expected to begin in late 2021 and continue until 2025); 5) invite WAFCS to support HWIS demonstration with WAFS grids and polygons of cumulonimbus clouds; and 6) develop a plan for communication and socialization of HWIS;
- Recommended to close the Job Card related to the development of provisions for the Information on the Release of Radioactive Material (subject to ANC consideration);

WG-MIE related

- Decided that the METP agree that WG-MIE, in coordination with the ICAO Secretariat, assist ICAO Planning and Implementation Regional Groups (PIRGs) in further promoting the implementation of interregional IWXXM information exchange;
- Decided that the METP agree on the need for a global repository for IWXXM Schema Extensions to provide adequate information to aeronautical users and that the WG-MIE continue investigating issues related to the designation of the global repository, in coordination with the other Panels concerned via the Secretariat's support, and defining the requirements of such a system;
- Decided that the METP endorse Versions 2.3 of the MET-SWIM Plan and MET-SWIM Roadmap as final versions to be applied for the implementation of IWXXM as a Standard in ICAO Annex 3; and invite the ICAO Secretariat to publish Versions 2.3 of the MET-SWIM Plan and MET-SWIM Roadmap on the ICAO METP website (both public and secure) and distribute them to the PIRGs;
- Recommended the METP endorse the draft provisions pertaining to IWXXM as part of draft Amendment 81 to the restructured Annex 3 and the new PANS-MET: e.g. removal of the term 'GML'; a few changes in METAR/SPECI that would remove constraints related to the number of RVR and include tenths of temperature and dew point; and clarify the limitation of the number of coordinates in IWXXM and TAC;
- Decided that the METP assign WG-MIE and WG-MRI to collaboratively develop the concept of Aerodrome Observation – Aerodrome Observation in IWXXM should incorporate the existing information requirements contained in METAR/SPECI, LOCAL ROUTINE/LOCAL SPECIAL reports and any new requirements from stakeholders to ensure that it would carry none of the TAC constraints;
- Decided that the METP endorse the proposed amendments to Doc 10003 that includes: 1) removal of METCE Observable Property Model (OPM) which was no longer being used since IWXXM 3.0; 2) introduction of new schemas to support the exchange of WAFS Significant Weather Forecast which would become a Recommended Practice in Annex 3 in November 2021; and 3) adoption of a new IWXXM versioning policy in which each package

(including METAR/SPECI, TAF, SIGMET, AIRMET, Volcanic Ash Advisory, Tropical Cyclone Advisory, Space Weather Advisory and WAFS Significant Weather Forecast) would have its own version number instead of the version number of IWXXM;

- Recommended the METP endorse the revised definition of OPMET information and the Secretariat arrange for its inclusion in Annex 3 and Doc 8896 as well as the WG-MIE consider the long term need for this definition in ASBU Block 3;
 - *Operational meteorological (OPMET) information.* All meteorological information required for international air navigation as specified in the Standards and Recommended Practices for Meteorological Service for International Air Navigation;

WG-MOG related

- Recommended the METP to endorse the draft provisions for Volcano Observatory Notice to Aviation (VONA) information and proposed changes to the Volcanic Ash Advisory and Aerodrome Warning templates as part of the draft provisions of Amendment 81 to the restructured Annex 3 and new PANS-MET and consequential amendments to update PANS-ABC (Doc 8400) to include the VONA and SVO acronyms and request the WMO to develop appropriate headers and priorities for VONA in both TAC and IWXXM format, noting the request by the WG-MOG/IAVW work stream for the highest priority to be assigned;
- Recommend the METP to task WG-MIE to develop the IWXXM schema necessary for digital dissemination of the VONA; and endorse consequential amendments to update ICAO Doc 8400 to include the acronyms volcanic ash advisory (VAA), tropical cyclone advisory (TCA) and space weather advisory (SWXA);
- Decided that the proposed edits (e.g. inclusion of information on re-suspended volcanic ash) to the Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds (ICAO Doc 9691) as endorsed by the Panel, be incorporated in the next available update;
- Decided that the METP note the operations of the WAFS under the WG-MOG including the upgrades to the WAFS data sets made in 2020 and 2021, as well as the planned upgrades in 2023 and 2026; and provide the WG-MOG with guidance in the operations of the WAFS, as needed;
- Decided that the METP recognize an aviation user requirement for the WAFCs to make available high resolution WAFS forecasts in other formats than GRIB2 in order to meet the objectives set out in the Global Air Navigation Plan; and support the efforts by the WAFCs, in conjunction with WMO, to explore other formats for the provision of gridded data to be used within SWIM;
- Recommended that the amendment proposals concerning WAFS (next generation WAFS data sets and data delivery services) be included in Amendment 81 to the restructured Annex 3 and the new PANS-MET, respectively, with intended applicability in November 2023;

WG-MCRGG related

- Recommended that the draft amendments concerning meteorological authority be included in draft Amendment 81 to the restructured Annex 3, the new PANS-MET, and in consequential amendments to Annex 11 – Air Traffic Services, PANS-ATM (Doc 4444) and PANS-AIM (Doc 10066), with intended applicability in November 2023;

- *Meteorological authority* – the entity arranging for the provision of meteorological service for international air navigation on behalf of a Contracting State;

Note. – The responsibilities of the meteorological authority include the provision of oversight and regulation of the meteorological service.

- *Meteorological service provider* – the relevant entity providing meteorological service for international air navigation on behalf of a Contracting State;
- Recommended that the ICAO Airport Economics Panel (AEP) – Air Navigation Services Economics Panel (ANSEP) be invited to consider the following: revising Appendix 2 of ICAO Doc 9161; adding a new appendix to Doc 9161 (containing information regarding the cost recovery of multi-national facilities and services that was previously included in the Regional Air Navigation Plan) and consequential revisions to Doc 9161 as a result of this new appendix;

Management of miscellaneous matters coming to the METP

- Decided that the METP Chairperson, in consultation with the Secretariat: a) be responsible for receiving, assessing, and authorizing the allocation, monitoring, and completion of work on miscellaneous matters related to the provision of aeronautical meteorological information not covered by the prevailing job cards; and b) establish an appropriate process to carry out the responsibility identified in a) and incorporate that process into the METP Supplementary Directives;

Note: When necessary, the METP Chairperson, in coordination with the Secretariat, will consult with the Air Navigation Commission regarding the authorization of specific activities through existing job cards or development of new job cards.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information in this paper; and
- b) keep abreast of the Global activities related to MET.