



International Civil Aviation Organization

**MIDANPIRG Meteorology Sub-Group
Eleventh Meeting (MET SG/11)**

(Cairo, Egypt, 14 - 15 November 2023)

Agenda Item 3: Global and Regional Developments

PROPOSALS FOR THE AMENDMENT OF ANNEX 3 AND THE NEW PANS-MET

(Presented by the Secretariat)

SUMMARY

A summary of the proposals for the amendment of Annex 3 and the new PANS-MET is provided in this information paper (State letter AN 10/1-23/1 dated 26 January 2023 refers).

Action by the meeting is at paragraph 3.

1. INTRODUCTION

1.1 The meeting may recall that in response to Recommendation (5/2) by the Meteorology Divisional Meeting (2014) (MET-DIV/14), the METP developed the restructured Annex 3 and the new PANS-MET to facilitate the migration of the provision of aeronautical meteorological information from a "product-centric" to an "information-based" environment under the System Wide Information Management (SWIM), and the evolution of the provision of aeronautical meteorological service in line with the Global Air Navigation Plan (GANP). The restructuring also provides clearer separation of performance and functional requirements in Annex 3 from the technical specifications to be transferred to the PANS-MET.

1.2 The meeting may also recall that the Air Navigation Commission (ANC), at the fifth meeting of its 221st Session held on 24 November 2022, considered proposals developed by the fifth meeting of the Meteorology Panel (METP/5) to amend the Standards and Recommended Practices (SARPs) in Annex 3 - *Meteorological Service for International Air Navigation*, the new *Procedures for Air Navigation Services - Meteorology* (PANS-MET, Doc 10157) and consequential amendments to Annex 6 - *Operation of Aircraft, Part I - International Commercial Air Transport - Aeroplanes, Part II - International General Aviation - Aeroplanes* and Part III - *International Operations - Helicopters*, Annex 10 - *Aeronautical Telecommunications, Volume II - Communication Procedures including those with PANS status*, Annex 11 - *Air Traffic Services*, Annex 15 - *Aeronautical Information Services, Procedures for Air Navigation Services - ICAO Abbreviations and Codes* (PANS-ABC, Doc 8400), *Procedures for Air Navigation Services - Aeronautical Information Management* (PANS-AIM, Doc 10066) and *Procedures for Air Navigation Services - Air Traffic Management* (PANS-ATM, Doc 4444).

1.3 The proposals address developments of the restructured Annex 3 and the new PANS-MET, and amendments relating to: a) space weather information services; b) quantitative volcanic ash information; c) the International Airways Volcano Watch (IAVW); d) the ICAO Meteorological

Information Exchange Model (IWXXM); e) the World Area Forecast System (WAFS); and f) improved definition of meteorological authority and introduction of a new definition of meteorological service provider. The Commission authorized the transmission of these proposals to Contracting States and appropriate international organizations for comments.

1.4 Comments related to the amendment proposals were due by 26 July 2023. The proposed amendments to Annexes 3, 6 Parts I, II and III, 10, Volume II, 11 and 15 are envisaged for applicability on 28 November 2024, except for proposed amendments to Annex 3 related to quantitative volcanic ash information, which should be indicated as 27 November 2025. The proposed amendments to PANS-ABC (Doc 8400), PANS-AIM (Doc 10066), PANS-ATM (DOC 4444) and PANS-MET (Doc 10157) are envisaged for applicability on 28 November 2024, except for proposed amendments to PANS-MET related to quantitative volcanic ash information which should be indicated as 27 November 2025.

2. DISCUSSION

Restructured Annex 3 and the new PANS-MET

2.1 In response to Recommendation (5/2) by the Meteorology Divisional Meeting (2014) (MET-DIV/14), the METP developed the restructured Annex 3 and the new PANS-MET to facilitate the migration of the provision of aeronautical meteorological information from a "product-centric" to an "information-based" environment under SWIM, and the evolution of the provision of aeronautical meteorological service in line with the GANP. The restructuring also provides clearer separation of performance and functional requirements in Annex 3 from the technical specifications to be transferred to the PANS-MET.

Further development of space weather information services

2.2 Proposed amendments also include updates to existing provisions regarding space weather information services, which became operational in November 2019, including the upgrade of the provisions from Recommended Practices to Standards and a clarification of the roles of both global and regional space weather centres. The update of the template for the space weather advisory (PANS-MET, Table A7-4 refers) is also proposed, which allows the use of an intensity identifier in both observations and forecasts and the implementation of an operational status identifier. Furthermore, based on coordination between the METP and the Information Management Panel (IMP), it is proposed to delete the requirements for the issuance of NOTAM related to space weather in both Annex 3 and Annex 15.

Quantitative volcanic ash information and IAVW updates

2.3 Furthermore, proposed amendments introduce quantitative volcanic ash information, based on enhanced capabilities of quantitative monitoring and dispersion modelling of volcanic ash, as a new Recommended Practice. Initially it is recommended that only those Volcanic Ash Advisory Centres (VAACs) in a position to do so issue quantitative volcanic ash information. As of 27 November 2025, it is recommended that all the VAACs issue such information.

2.4 In addition, the proposed amendments also introduce the issuance of Volcano Observatory Notice for Aviation (VONA) as a Recommended Practice. It also provides better clarification to whom the notice needs to be disseminated. In response to the introduction of VONA, it is proposed to delete the aviation colour code from the volcanic ash advisory. Minor corrections are proposed to the template for the volcanic ash advisory and the relevant tables in the PANS-MET.

Further development of IWXXM

2.5 Proposed amendments also include the requirements to disseminate WAFS forecasts (i.e. upper air gridded and significant weather (SIGWX) forecast) and VONA in IWXXM format, and remove the limitation of the number of runway visual range (RVR) values contained in a single METAR/SPECI in IWXXM format.

Further development of WAFS

2.6 Moreover, the proposed amendments incorporate updates to WAFS forecasts to better serve as an enabler to the GANP, allowing World Area Forecast Centres (WAFCs) to issue upper air gridded information with increased spatial and temporal resolution for extended forecast periods. It is also proposed to start the issuance of SIGWX forecast in IWXXM format.

Improved definition of meteorological authority

2.7 In addition, the proposed amendments clarify the existing definition for "meteorological authority" and, in consequence, to introduce a new definition for "meteorological service provider", to better distinguish the roles and responsibilities of both entities. This proposal reflects the arrangements that are being implemented by an increasing number of States.

2.8 For more details, please reference Appendices B – J to State letter AN 10/1-23/1 dated 26 January 2023.

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 in order to adapt National implementation plans to future ICAO provisions.