



ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY

*Workshop on the Implementation
of Amendment 82 to Annex 3 to
Chicago Convention and the PANS-
MET*

(Praia, Cabo Verde, 30 March – 3 April 2026)



Session 1: ICAO Regulatory Framework related to MET

PPT1.4. - Procedures for Air Navigation Services – Meteorology (PANS-MET) and Role in Implementation

ICAO, WACAF Office

Overview

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| 01 | Origin of PANS-MET | 02 | Creation and validation of PANS-MET |
| 03 | Advantages of PANS-MET | 04 | Purpose and Scope of the PANS-MET |
| 05 | Status of the PANS-MET | 06 | Implementation |
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Origin of the PANS-MET

- **Divisional Meteorological Meeting (2014) – Recommendation 5/2.**
- **Restructuring of the Annex3 :**
 - **Retain the requirements in Annex 3**
 - **Move compliance provisions into PANS-MET.**
- **Objective :** alignment with the One Sky concept (GANP – Doc 9750)
- **Approval** by the Air Navigation Commission (ANC) – **197th Session (October 2014)**.

Creation and validation of PANS-MET

- **Establishment of the Group of Experts on Meteorology (METP) (ANC, 197th-5))**
- **Mandate** : Developing the new PANS-MET.
- **Completion of the work in 2021.**
- **Adoption and endorsement at METP/5 (Recommendation 4/1).**



Key benefits of PANS-MET

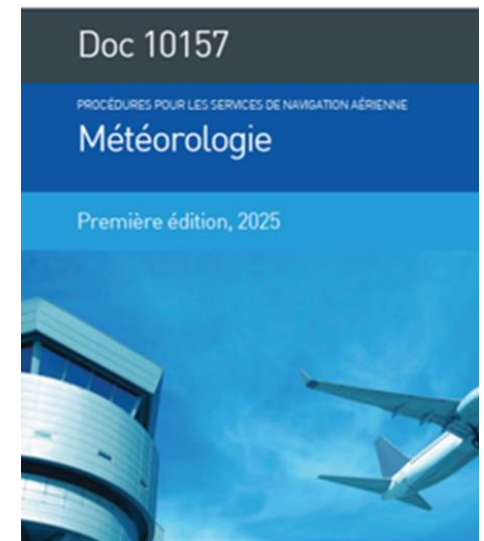
1. Transitioning to a data-driven environment

1. Moving from a "product" to a "data" approach»

2. Integration into the SWIM environment.

3. Harmonization with the reform of Annex 15 and the PANS-AIM (Doc 10066).

4. Alignment with the GANP (Doc 9750).



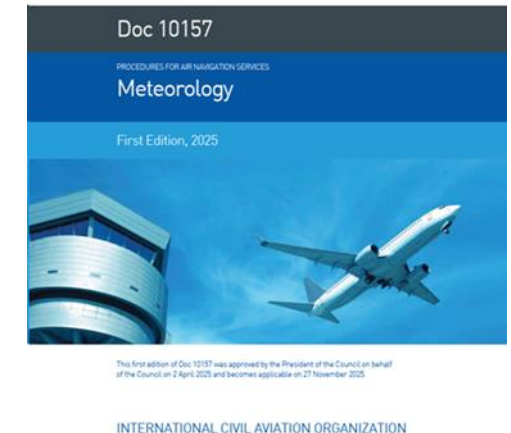
La première édition du Doc 10157 a été approuvée par le Président du Conseil au nom du Conseil le 2 avril 2025 et sera applicable à partir du 27 novembre 2025.

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Key benefits of PANS-MET

2. Flexibility and scalability

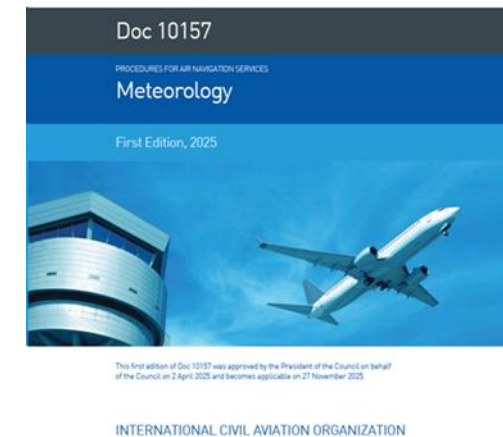
- The "means of compliance" are **rapidly evolving**.
- The PANS-MET allow for **more flexible amendments** than the Annexes.
- Ensures that provisions are **always up-to-date**.



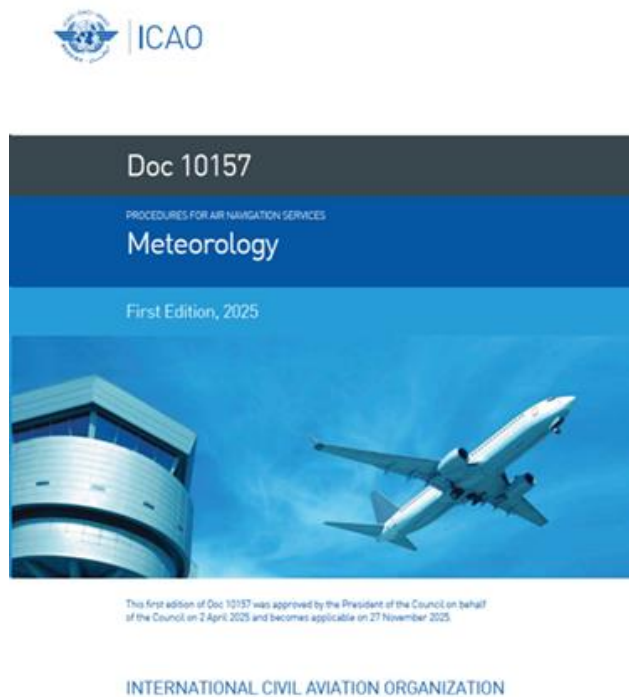
Key benefits of PANS-MET

3. Clarification of responsibilities

- Annex 3 → Meteorological Administration (Regulation and Oversight).
- PANS-MET → Meteorological Service Provider (Operational Implementation).
- Better understanding **of roles**.
- **Improved level** of compliance and implementation.

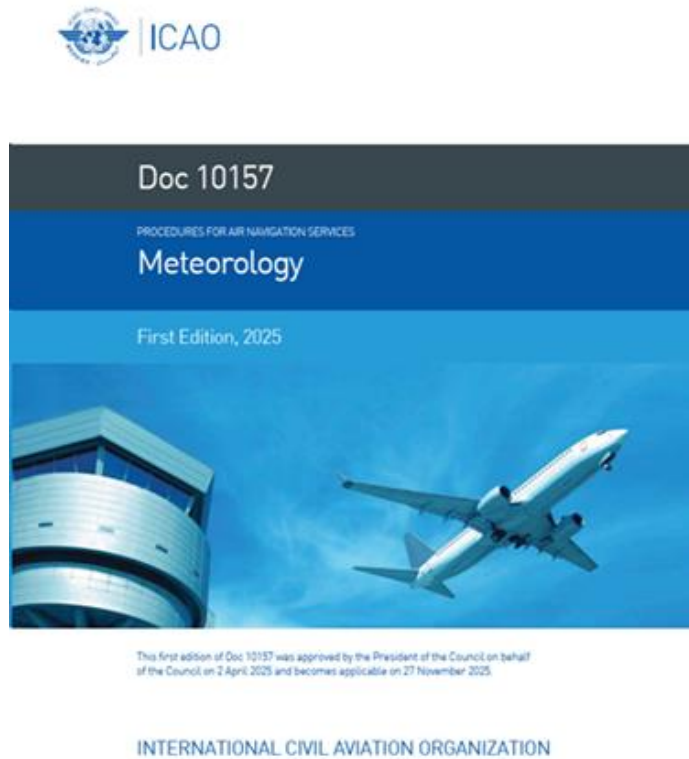


Scope and purpose



- The PANS-MET **complement** the SARPs in Annex 3.
- May be supplemented by **Regional Supplementary Procedures** (Doc 7030).
- **Describe in detail the operational procedures** to be followed by MET Service Providers.
- Translate the requirements of Annex 3 into **practical implementation modalities**.

Status of the PANS-MET



- **PANS do not have the same legal status** as SARP.s
- **SARPs:** adopted by the Council under the provisions of **Article 37 of the CC – Adoption of International Standards and Procedures**, and subject to the provisions of **Article 90 CC – Adoption and Amendment of the Annexes**.
- **PANS-MET:** approved by the Council, recommended for use by States.
- Some elements of the PANS-MET can be adopted as SARPs after **they have reached the necessary degree of maturity and stability**.

Implementation

- Implementation is the **responsibility of the Contracting States.**
- Effective application **after national adoption.**
- Written to allow **direct use** by MET personnel.



This first edition of Doc 10157 was approved by the President of the Council on behalf of the Council on 2 April 2025 and becomes applicable on 27 November 2025.

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Publication of differences

- **No notification obligation** under Article 38 of the CC.
- However: recommended publication of **the important differences** between the procedures of the States and the corresponding ICAO procedures.
- **See Reference to the provisions of Annex 15 (AIP)).**

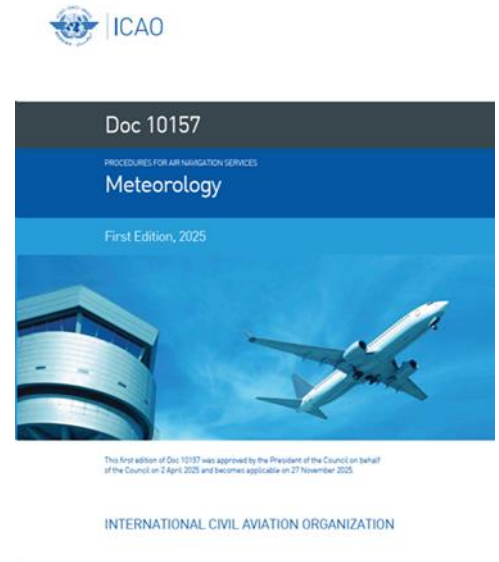


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Publication of information

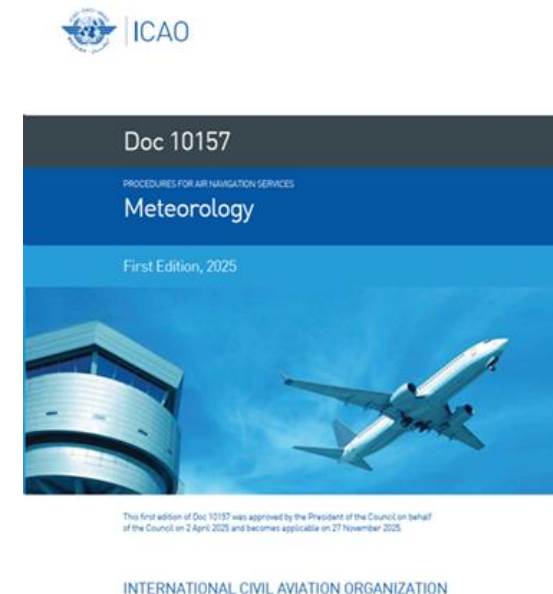
- Any establishment, modification or withdrawal of MET services/systems.
 - Shall be notified in accordance with the provisions of Annex 15.
- Need to ensure transparency and information for aeronautical users.



First edition of the PANS-MET, Doc 10157

Publication and implementation

- Stems from the recommendations of the 5th meeting of the Expert Panel on Meteorology (**METP/5**).
- **Adoption by the ICAO Council.**
 - **Date: April 2, 2025.**
 - **Session: 234th Session, 14th Meeting.**
- **Applicability** : as of November 27, 2025
- **Reference** : *Procedures for Air Navigation Services – Meteorology (PANS-MET, Doc 10157)*



Main content of the PANS-MET

The PANS-MET cover, among other things:

- Procedures related **operational meteorological information**.
- Procedures relating to **the World Area Forecast System (WAFS)**.
- **Space Weather (SWX)** procedures.
- The modalities for the exchange of meteorological information in digital format (**IWXXM**).
- Operational processes related to **volcanological monitoring along international airways** (International Airways Volcano Watch, IAVW).

The PANS-MET translate the requirements of Annex 3 into detailed operational instructions.

First edition of the PANS-MET (Doc 10157) ^{1/4}

Content of the PANS – MET: Table of Contents

Chap. 1

Contains **definitions and terms used in a restrictive sense.**

Chap. 2

Contains **provisions and procedures for the provision of aerodrome meteorological information**, in the form of local routine observation messages, local special reports, METARs and SPECIs, volcanic activity report.

Chap. 3

Contains provisions and procedures for **the reporting of aircraft meteorological observation** information.

First edition of the PANS-MET (Doc 10157) ^{2/4}

Content of the PANS – MET: Table of Contents

Chap. 4

Contains provisions and procedures for **the preparation of aerodrome meteorological forecast information**, in the form of TAFs, trend forecasts and take-off forecasts.

Chap. 5

Contains provisions and procedures for the **provision of en-route meteorological forecast information**.

Chap. 6

Contains provisions and **procedures for the provisions of meteorological information containing advisories**, alerts, warnings and notices

Première édition des PANS-MET (Doc 10157) ^{3/4}

Contenu du PANS – MET : Table des matières

Chap. 7

Contains provisions and procedures for the **preparation of aeronautical climatological information.**

Chap. 8

Contains provisions and procedures for the **provision of meteorological information to operators** and flight crew members.

Première édition des PANS-MET (Doc 10157) ^{4/4}

Contenu du PANS – MET : Table des matières

Chap.9

Contains provisions and procedures applicable to weather information provided to **air traffic services, search and rescue services**, and aeronautical information services.

Chap. 10

Contains provisions and procedures for the **use of communications for the exchange of meteorological information.**

Adoption of the 1st Ed of the PANS-MET, Doc 10157

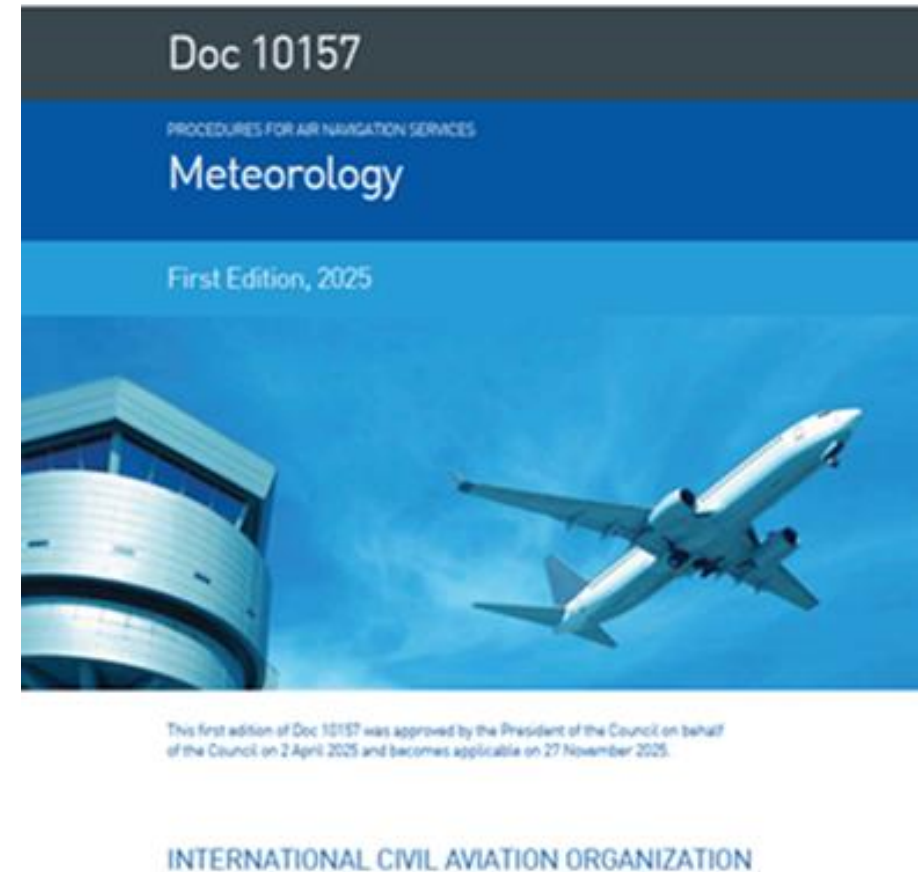
Ref.: AN 10/25.2-25/36 on 23 April 2025.

Subject: Approval of the first edition of the Procedures for Air Navigation Services — Meteorology (PANS-MET, Doc 10157).

Action: a) implement the first edition of the PANS-MET on 27 November 2025; b) publish any differences that may exist as of November 27, 2025.



Adoption of
PANS-MET



Role of the PANS-MET in Implementation

PANS-MET → MET Service Provider - Operational Implementation



Harmonization of practices

Ensure consistent application of weather services across states.



Support for safety and efficiency

- Reduction of operational discrepancies.
- Improved interoperability of systems.
- Support for Digital Environments (SWIM).
- Improved level of compliance and implementation.



Tool for national authorities

Facilitate :

- Drafting of national regulations.
- The development of internal procedures.
- Auditing and monitoring of MET service providers.



Thank You!