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UNITING AVIATION

Updates to ICAO provisions

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Does MET matter to ATM safety/efficiency?



...absolutely YES



SARPs for MET service

- Annex 3
- 1st Ed. 1948
- Geared towards safe, regular and efficient operations





Annex 3 – MET provision today

- Highly ‘product-centric’
- Primarily AFTN and AFS delivery to users
- ATS/Pilot oriented
- Limited ATM orientation
- Aerodrome, terminal area en-route focus



Annex 3 – MET provision today

- WAFS/WAFCs
- VAACs
- State Volcano Observatories
- TCACs
- Space Weather
- Aeronautical MET stations
- Automatic observing systems
- Aerodrome MET Offices
- Meteorological Watch Offices
- Aircraft observations
- ATIS, D-ATIS, VOLMET, D-VOLMET
- Climatological information
- Quality management
- Etc.



Annex 3 – MET provision today

- **Traditional** means of dissemination:
 - AFTN, AFS, public Internet (including SADIS and WIFS), data-link service, broadcasting
- Supplied to **traditional** users:
 - Operators, flight crew members, air traffic service providers, MET service providers
- For use in **traditional** forms:
 - Briefing, consultation and display, flight documentation



Future trends

- ICAO's Global Air Navigation Plan (GANP)
 - Fully-harmonized global air navigation system
- MET → globally interoperable systems and data
- System-wide information management (SWIM)
 - MET is a key enabler





Future trends

- Exchange of digital information
- Digital MET to support SWIM
- Amendment 79 to Annex 3 (Standard: IWXXM) METAR/SPECI, TAF, SIGMET, AIRMET, VAA, TCA, SWXA and SIGWX





- **ICAO Standard:** Dissemination of MET in IWXXM form, in addition to TAC
- IWXXM envisaged to become the only standard in 2030



PfA to Annex 3 – arising from METP/5

- Restructured Annex 3 and new PANS-MET
- Space weather information services
- Quantitative volcanic ash information
- IAVW and VONA
- IWXXM
- WAFS
- Definitions – MET authority and MET service provider



PfA to Annex 3 – arising from METP/5

- Original envisaged applicability – 28 November 2024, except for quantitative volcanic ash information – 27 November 2025
- Consultation phase => ANC agreed the proposal needed to be further refined and reviewed
- **Current** envisaged applicability – **November 2025**



PfA to Annex 3 – arising from IMP/2

- System-wide information management and information security
- Envisaged applicability – 28 November 2024
- States are encouraged to make sure MET information is made available via information services following the introduction of SWIM
- In SWIM – information services are the means to be used for MET information exchange



PfA to Annex 3 – arising from IMP/2

2.2.10 Recommendation. — *Contracting States should ensure that the meteorological information supplied to the users listed in 2.1.2 is provided through information services.*

Note 1.— In the context of system-wide information management (SWIM), the notion of information service addresses machine-to-machine interaction in a service-oriented architecture.

Note 2.— Procedures on information services are contained in the Procedures for Air Navigation Services — Information Management (PANS-IM, Doc 10199).

Note 3.— Guidance material on information services can be found in the Manual on System-wide Information Management Implementation (Doc 10203).



PfA to Annex 3 – arising from IMP/2

- ICAO Council adopted amendment 81 to Annex 3
- Effective date 22 July 2024
- Applicability date 28 November 2024
- METP developing specific guidance on MET information via SWIM-enabled information services



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