



ICAO

UNITING AVIATION

AANDD: Minimum Reporting Areas (MET)

Third Meeting of the APIRG IIM/SG, 12-14 October 2020



Agenda Item 5- Air Navigation Planning, Deficiencies and Reporting in the MET Area

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Outline

Minimum Reporting Areas- MET

- 01 QUALITY MANAGEMENT SYSTEM (QMS)
- 02 METEOROLOGICAL WATCH OFFICE
- 03 MET OBSERVATIONS & REPORTS (METAR/SPECI)
- 04 FORECASTS
- 05 OPMET INFORMATION EXCHANGE
- 06 FLIGHT BRIEFING SERVICE
- 07 TELECOMMUNICATION FACILITIES
- 08 WARNING INFORMATION
- 09 ASBU AMET-B0 IMPLEMENTATION
- 10 QUALIFICATIONS- MET PERSONNEL



01 QUALITY MANAGEMENT SYSTEM (QMS)

- **Deficiencies result when:**
 - The State has NOT established and implemented a properly organized quality system that is compliant to the ISO 9001 series of standards.
 - comprising of procedures, processes and resources necessary to provide for the quality management of the meteorological information to be supplied to the users
- **Affects the quality of the meteorological information supplied to the users.**
 - MET information supports enhanced operational efficiency and safety; and
 - Users are more likely to pay for services and products that are quality assured.



02

METEOROLOGICAL WATCH OFFICE (MWO)

- **Deficiencies result when:**
 - The State has NOT designated a Meteorological Watch Office/s (MWO) as indicated in AFI eANP Vol II, Table MET II-1
 - To maintain continuous watch on hazardous MET conditions which may affect the safety of flight operations within the Flight Information Region (FIR) of their area of responsibility
- **Supports enhanced operational efficiency and safety**





03

MET OBSERVATIONS & REPORTS (METAR/SPECI)

- **Deficiencies result when:**
 - Routine MET observations, issued as Meteorological Aerodrome Reports (METAR),
 - are NOT made throughout the 24 hours of each day at intervals of one half-hour (AFI eANP Vol II)
 - Special observations or local special reports are NOT issued as required
 - NOT included as supplementary information in METAR and aerodrome Special Meteorological Reports (SPECI) as indicated in Table MET-II-AFI.
 - information on the state of the runway
 - Is NOT included as supplementary information/appended to the METAR and SPECI as indicated in Table MET II-2.
 - Wind sensors
 - the wind sensors for routine reports are NOT appropriately sited for proper indication of Runway Touch Down Zone (RWY TDZ) conditions in accordance to A3 4.6.1.2
 - If the position of the wind sensors is NOT indicated in the AIP GEN section.



04

FORECASTS

- **Deficiencies result when:**

- Meteorological forecasts are not issued in accordance with the AFI eANP Vol II, Part V, Table MET II-2:

- A Terminal Aerodrome Forecasts (TAF) is one member of a family of aerodrome forecasts.
- E.g. Deficiency when a TAF is NOT issued in accordance with the format in Annex 3;

- **Landing forecast (prepared in the form of a trend forecast)**

- Are NOT provided for the aerodromes indicated in the AFI eANP Vol II, Part V, Table MET II-2





05

OPMET INFORMATION EXCHANGE

- **Deficiencies result when:**

Operational meteorological (OPMET) information-

- prepared as METAR, SPECI and TAF for aerodromes indicated in Table MET II-2, and
- SIGMET and AIRMET (if applicable) messages prepared for flight information regions or control areas indicated in Table MET II-1 (AMBEX) scheme:
 - Is NOT disseminated to the regional OPMET databanks (RODBs) designated for the AFI Region (*namely Dakar and Pretoria RODBs*) as per the AMBEX scheme and;
 - *also NOT disseminated to the center designated for the operation of the Internet-based service (Secure SADIS FTP) in the AFI Region.*
- special air-reports that do not warrant the issuance of a SIGMET are NOT disseminated to other MET offices in the AFI Region
 - in accordance with the AFI MET Bulletin Exchange (AMBEX) Scheme



05

OPMET EXCHANGE CONT.**– The State in the AFI Region**

- does NOT issue VOLMET broadcasts for use by aircraft in flight.

– In the AFI aerodromes for which METAR and SPECI are to be included in VOLMET broadcasts, when broadcasts are NOT transmitted in:

- the sequence and broadcast time as indicated in Table MET II-3.





06

FLIGHT BRIEFING SERVICE

- Deficiencies result when, in the AFI Region:
 - scheduled VOLMET broadcasts do NOT contain TAF and SIGMET
 - D-VOLMET (digital VOLMET) messages uplinked to the aircraft in aircraft do NOT contain
 - METAR, SPECI and TAF

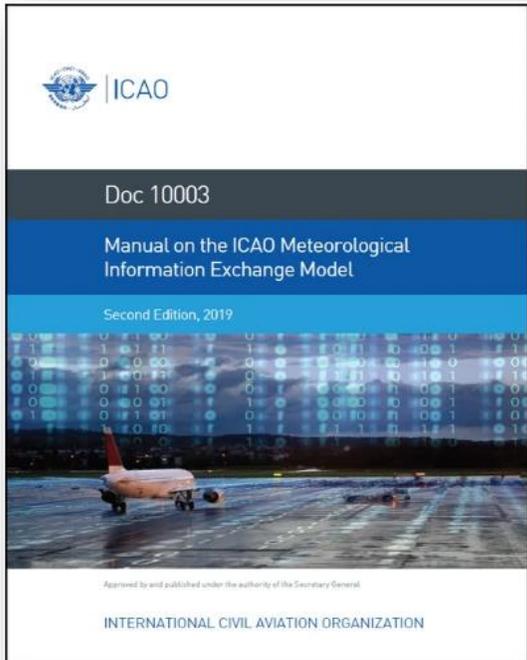




07

TELECOMMUNICATION FACILITIES

ICAO MET Information Exchange Model (IWXXM)



- **Deficiencies result when:**
 - the State has NOT developed capability of handling OPMET data in digital format (XML/GML)
 - to prepare for the future SWIM enabled environment



07

TELECOMMUNICATION FACILITIES CONT.

SECURE AVIATION DATA INFORMATION SYSTEM (SADIS) Implementation

- Deficiencies result when:
 - States have NOT established the means for accessing the World Area Forecasts System (WAFS) products i.e. SADIS FTP
 - For OPMET information prepared as METAR, SPECI and TAF for aerodromes indicated in Table MET II-2, and
 - SIGMET and AIRMET (if applicable) messages prepared for flight information regions or control areas indicated in Table MET II-1:
 - Information and messages NOT disseminated to the centre designated for the operation of the Internet-based service (Secure SADIS FTP) in the AFI Region.





08

WARNING INFORMATION

- Deficiencies

- Wind shear warning

- there are NO provisions for wind shear warning at applicable aerodromes /if warranted (aerodrome where wind shear is considered a safety factor);

- SIGMET (WS; WC and WV)

- the MET Watch Office (MWO) in a State does NOT issue SIGMET Messages in accordance to the laid down procedures in Annex 3 Sec. 7.1.1; ensuring the correct abbreviated format;

- Aerodrome warning

- aerodrome warnings are NOT issued

- AIREPS

- State does NOT ensure that provisions related to special air-reports, including those for volcanic ash, are followed with respect to their relay to the relevant MET offices? (ANS 7.463)



09

ASBU AMET-B0 IMPLEMENTATION

ASBU Element	Deficiency results when there is lack of:
AMET-B0/1: MET Observations products	<ul style="list-style-type: none"> • Provision of observations of additional meteorological parameters/elements. • More automated observations. • Higher temporal and spatial resolution for lightning, radar and satellite information
AMET-B0/2: MET forecasts and warning products	<ul style="list-style-type: none"> • Improved visualisation of meteorological forecast products. • Greater resolution (spatial and temporal) of gridded WAFS information (e.g. wind, temperature, icing, turbulence, CB clouds)
AMET-B0/3: Climatological and historical MET products	<ul style="list-style-type: none"> • the provision of climatological products including: <ul style="list-style-type: none"> – Aerodrome climatological tables; – Aerodrome climatological summaries. • the provision of historical products including meteorological observations, forecasts, advisories and warnings.
AMET-B0/4: Dissemination of MET products	<ul style="list-style-type: none"> • Commencement of the exchange of meteorological information using the ICAO Meteorological Information Exchange Model (IWXXM), <ul style="list-style-type: none"> • being the conversion of Traditional Alphanumeric Code (TAC), using an IWXXM schema, into XML/GML.



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QUALIFICATIONS –MET PERSONNEL

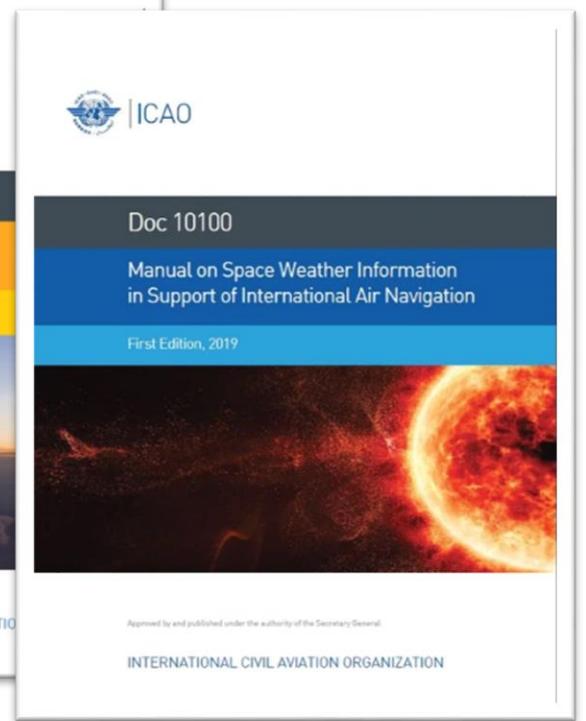
- Deficiencies

- Qualifications, competencies, education and training of MET personnel

- NONE compliance with the requirements of the World Meteorological Organization (WMO) in respect of qualifications, competencies, education and training of meteorological personnel providing service for international air navigation as indicated in Annex 3.



QUESTIONS???





ICAO

UNITING AVIATION

NO COUNTRY LEFT BEHIND



ICAO

North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU