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The following circular is promulgated for information, guidance and necessary action

*Salim R. Msangi*  
**Director General**

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**ADOPTION AND IMPLEMENTATION OF ICAO ANNEX 3 (METEOROLOGICAL SERVICE FOR INTERNATIONAL AIR NAVIGATION) – AMENDMENT 82**

**1. PURPOSE**

The purpose of this Aeronautical Information Circular (AIC) is to inform service providers obliged to provide aeronautical meteorological service that, the United Republic of Tanzania (URT) has adopted Amendment 82 to ICAO Annex 3 – (Meteorological Service for International Air Navigation), Standards and Recommended Practice (SARPs) which is now effective and applicable at State level.

This AIC further provides guidance on the key changes introduced by Amendment 82, and the affected national regulations.

**2. APPLICABILITY**

This AIC applies to meteorological service providers required to provide aeronautical meteorology for air navigation:

**3. BACKGROUND**

ICAO Annex 3 was amended through Amendment 82 from recommendations developed by fifth meeting of the Meteorology Panel (METP/5) concerning the restructured Annex 3, Space Weather Information Services, Quantitative volcanic ash information and the International Airways Volcano Watch (IAVW), the ICAO Meteorological Information Exchange Model (IWXXM), the World Area Forecast System (WAFS), and improved definition of Meteorological Authority and introduction of a new definition of Meteorological service provider.

The United Republic of Tanzania has formally adopted Amendment 82 to Annex 3 and will continue to implement provisions contained in Annex 3 through oversight activities. The Authority is concurrently undertaking the process of transposing the Amendment 82 provisions into the Civil Aviation (Meteorological Service for International Air Navigation) Regulations including consequential amendments to associated Advisory Circulars, Orders, and other technical guidance material.

#### 4. THE PROVISIONS CONTAINED IN THE AMENDMENT 82 TO THE ANNEX 3 INCLUDES AMENDMENT CONCERNING:

##### 4.1 Amended and introduced new definitions

- a) **International airways volcano watch (IAVW)**. International arrangements for monitoring volcanic activity and providing notices, forecasts and warnings to aircraft of volcanic ash in the atmosphere.
- b) **Meteorological authority**. The entity arranging for the provision of meteorological service for international air navigation on behalf of a Contracting State, and providing regulation and oversight of the meteorological service.
- c) **Meteorological satellite**. An artificial Earth satellite making meteorological observations and transmitting these observations to Earth.
- d) **Meteorological service provider**. The relevant entity designated to provide meteorological service for international air navigation on behalf of a Contracting State.
- e) **Meteorological watch office (MWO)**. An office designated to provide information concerning the occurrence or expected occurrence of specified en-route weather and other phenomena in the atmosphere that may affect the safety of aircraft operations within its specified area of responsibility
- f) **Minimum sector altitude (MSA)**. The lowest altitude which may be used which will provide a minimum clearance of 300 m (1 000 ft) above all objects located in an area contained within a sector of a circle of 46 km (25 NM) radius centred on a significant point, the aerodrome reference point (ARP) or the heliport reference point (HRP).
- g) **Operator**. The person, organization or enterprise engaged in or offering to engage in an aircraft operation. Space weather information service
- h) **Space weather centre (SWXC)**. A global or regional centre designated by ICAO to monitor and provide advisory information regarding space weather phenomena expected to affect high-frequency radio communications, communications via satellite, GNSS-based navigation and surveillance systems and/or pose a radiation risk to aircraft occupants, under the framework of space weather information service.
- i) **State volcano observatory**. A volcano observatory, designated by regional air navigation agreement, to monitor active or potentially active volcanoes within a State and to provide information on volcanic activity and/or volcanic ash in the atmosphere.

##### 4.2 Deleted definitions

- a) **Aerodrome elevation**. The elevation of the highest point of the landing area.
- b) **Area navigation (RNAV)**. A method of navigation which permits aircraft operations on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.
- c) **Elevation**. The vertical distance of a point or a level, on or affixed to the surface of the earth, measured from mean sea level.
- d) **Extended range operation**. Any flight by an aeroplane with two turbine engines where the flight time at the one engine inoperative cruise speed (in ISA and still air conditions), from a point on the route to an adequate alternate aerodrome, is greater than the threshold time approved by the State of the Operator.
- e) **Navigation specification**. A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:
  - Required navigation performance (RNP) specification. A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.

- Area navigation (RNAV) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.
- f) **Operational planning.** The planning of flight operations by an operator.
- g) **Performance-based navigation (PBN).** Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.
- h) **Reporting point.** A specified geographical location in relation to which the position of an aircraft can be reported.
- i) **Standard isobaric surface.** An isobaric surface used on a worldwide basis for representing and analysing the conditions in the atmosphere.
- j) **Upper-air chart.** A meteorological chart relating to a specified upper-air surface or layer of the atmosphere.

## 5.0 OPERATIONAL AND INSTITUTIONAL PROVISIONS AND COMPLIANCE ARRANGEMENTS

Amendment 82 introduces revised and enhanced requirements across Chapters 2 to 11 of ICAO Annex 3, which shall be implemented as follows:

**5.1 Under Chapter 2 (General Provisions),** the Meteorological Authority of the United Republic of Tanzania shall designate one or more Meteorological Service Providers (MSPs) and retain full responsibility for regulation and oversight to the Authority. The designated MSP(s) shall establish and maintain compliant organizational structures, qualified personnel, procedures, facilities, and quality management systems in accordance with Annex 3 SARPs.

**5.2 Under Chapter 3 (Global Systems, Supporting Centres and Meteorological Offices),** the Meteorological Authority and MSP(s) shall ensure coordination with ICAO-designated Volcanic Ash Advisory Centres (VAACs), State Volcano Observatories, Tropical Cyclone Advisory Centres (TCACs), and Space Weather Centres (SWXCs), as applicable, and ensure the receipt, processing, and dissemination of advisory information within prescribed ICAO timelines and formats.

**5.3 In accordance with Chapter 4 (Aerodrome Meteorological Observational Information) and Chapter 5 (Aircraft Meteorological Observational Information),** MSP(s) shall conduct aerodrome and aircraft meteorological observations, prepare and disseminate local routine and special reports, landing forecasts (trend forecasts), and ensure the relay of air-reports in coordination with Air Traffic Services (ATS) units, which shall ensure timely onward dissemination to relevant users.

**5.4 Pursuant to Chapter 6 (Aerodrome and En-Route Meteorological Forecast Information),** MSP(s) shall prepare and disseminate aerodrome forecasts (TAF), forecasts for take-off, en-route meteorological forecast information, and volcanic ash forecasts, and ensure interoperability with the World Area Forecast System (WAFS) and implementation of the ICAO Meteorological Information Exchange Model (IWXXM) where applicable.

**5.5 Under Chapter 7 (Meteorological Information Containing Advisories, Alerts, Warnings and Notices),** MSP(s) shall ensure the timely dissemination of SIGMET information and advisory information related to volcanic ash, tropical cyclones, and space weather to ATS units, AIS units, and aircraft operators, using prescribed ICAO formats and communication channels.

**5.6 In accordance with Chapter 8 (Aeronautical Climatological Information),** MSP(s) shall ensure the collection, maintenance, and exchange of aeronautical climatological information.

**5.7 Chapter 9 (Meteorological Service for Operators and Flight Crew Members),** MSP(s) shall provide appropriate meteorological information to operators and flight crew members for pre-flight and in-flight use.

**5.8 Pursuant to Chapter 10 (Meteorological Information for ATS, SAR and AIS),** MSP(s) shall ensure the supply of accurate and timely meteorological information to ATS, Search and Rescue (SAR), and AIS units to support safe and efficient air navigation and aeronautical information publication.

**5.9 Under Chapter 11 (Use of Communications to Exchange Meteorological Information),** MSP(s) and ATS units shall ensure that aeronautical fixed services, aeronautical mobile services, aeronautical broadcasting services (including VOLMET), and approved use of the public Internet are reliable, secure, and meet ICAO requirements for availability, integrity, and continuity.

All entities subject to this AIC shall update their internal procedures, manuals, training programmes, and operational systems to align with Annex 3 Amendment 82. Compliance shall be demonstrated through documented procedures and operational evidence.

## **5. ENQUIRIES**

For more information refer to ICAO Annex 3- Amendment 82.

Any enquiries related to this AIC or the implementation of Annex 3 - Amendment 82 should be directed to Director General through email: [tcaa@tcaa.go.tz](mailto:tcaa@tcaa.go.tz).