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THE TANZANIA METEOROLOGICAL AUTHORITY ACT,
(CAP. 157)

REGULATIONS

(Made under section 54)

THE TANZANIA METEOROLOGICAL AUTHORITY (METEOROLOGICAL SERVICES FOR MARINE ACTIVITIES) REGULATIONS, 2021

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THE TANZANIA METEOROLOGICAL AUTHORITY (METEOROLOGICAL SERVICES FOR MARINE ACTIVITIES) REGULATIONS, 2021

PART I
PRELIMINARY PROVISIONS

- Citation 1. These Regulations may be cited as the Tanzania Meteorological Authority (Meteorological Services for Marine Activities) Regulations, 2021.
- Application 2. These Regulations, shall apply to the provision of meteorological services for marine activities in the territorial waters.
- Interpretation 3. In these Regulations unless the context requires otherwise-
"maritime" means issues connected with the sea, especially in relation to seaborne trade or naval matters;
"national, regional or Global Observing System "means a system responsible for ensuring that the observations are made at national, regional and international levels according to the prescribed standards, are encoded correctly and are presented for transmission at the times laid down;
"Navtex (Navigational Telex)" means an international automated medium frequency direct-printing service for delivery of navigational and meteorological warnings and forecasts, as well as urgent maritime safety information to ships;

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- "observation environment" means the minimum environmental space required for accurately acquiring atmospheric information by means of meteorological instruments free from external interference;
 - "severe weather warning" means the emergent announcement issued in the form of weather forecast to the public in the areas affected when severe weather of possible serious impacts on national economy and people's livelihood is imminent, such as tropical cyclone, tsunami, strong winds, heavy rain, hail, etc.;
 - "surface synoptic station" means a weather station located on the surface of the Earth, either on land or sea, with instruments and equipment for measuring atmospheric conditions to provide information for weather forecasts and to study the weather and climate;
 - "the marine environment" includes the open and coastal ocean, estuaries, large lakes, rivers and their interfaces with the land and the atmosphere;
 - "Tanzanian ship" means a ship registered or licensed under the provisions of the Merchant Shipping Act at a port in the United Republic;
 - "territorial waters" means any territorial or inland waters of the United Republic;
 - "tsunami warning" means a warning issued to draw the attention to the potential occurrence of tsunami wave caused by an earthquake under the Oceans or lake;
 - "tsunami report" means a report on the result of tsunami observation.
 - "Voluntary Observing Scheme" means scheme of Meteorological services of most maritime countries made arrangements with ships regularly visiting their shores to take marine meteorological observations and transmit them to shore at no cost to the ship;
 - "warnings" means the forecasts issued to warn or advise of

severe weather events such as tropical cyclone, tsunami, strong winds, heavy rain, hail and large waves; and

"weather forecast" means the general terminology for weather forecast, climate prediction and various specialized meteorological forecasts.

**PART II
MONITORING AND COORDINATION OF THE MARINE
WEATHER SITUATION**

Monitoring
of marine
weather
situation

4. Any person who intends to engage in operating meteorological station or forecasting activities over the territorial waters shall be required to-

- (a) continuously monitor current observations, advisories, forecasts and warnings of weather and marine parameters including significant weather phenomena;
- (b) determine the need for issuance, cancellation or amendment or update of advisories, forecasts and warnings; and
- (c) use performance criteria and background knowledge and skills in analysing and monitoring of weather situation, forecasting marine weather phenomena, ensuring quality of services and their dissemination.

Coordination
of
observational
networks and
data
management

5. A Meteorological station operator shall be coordinated by the Authority the through following frameworks-

- (a) the national, regional and Global Observing System;
- (b) the Voluntary Observing Scheme; and
- (c) the Ship of Opportunity Programme.

Ship
selection and
observation;
transmission
and archiving

6.-(1) Meteorological station operator may be arranged by the Authority for a selection of Voluntary Observation Ships to be equipped with tested marine meteorological instruments using the following selection

criteria-

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- (a) vessel registration under Merchant Shipping Act;
 - (b) willingness of ship-owner;
 - (c) ship space for installation of all necessary instruments;
 - (d) ship staff capacity to record and transmit the meteorological observations during synoptic hours;
 - (e) weather reception mechanism;
 - (f) parameters to be observed;
 - (g) ship route (regarding the area of interest); and
 - (h) identify fixed and anchored platform stations regarded as ships.
- (2) The meteorological station operator shall take records and transmit marine meteorological observations according to World Meteorological Organisation standards times for surface synoptic observations.
- (3) The companies involved in shipping business may-
- (a) involve as many of their ships as practicable in making and recording of weather observations;
 - (b) be encouraged in collection of meteorological data by ships at sea;
 - (c) arrange for data examination, dissemination and exchange and encourage the use of meteorological instruments of a high degree of accuracy; and
 - (d) arrange for the reception and transmission of weather messages from and to ships, using the appropriate shore-based facilities for terrestrial and space radio-communications services.
- (4) The ship master may be encouraged by the Authority to inform other ships in the vicinity and also shore stations whenever they experience a wind speed of fifty knots or more as prescribed in the First Schedule to these Regulations.
- (5) When in the vicinity of a tropical cyclone, or of a suspected tropical cyclone, ships may take and transmit

their observations at more frequent intervals whenever practicable, bearing in mind navigational preoccupations of ships' officers during storm conditions.

(6) The ship company's owners shall transmit meteorological observations using the ship's terrestrial or space radio-communications facilities for the benefit of various national meteorological services.

**PART III
ISSUANCE OF MARINE WEATHER FORECASTS AND
WARNINGS**

Provision of
marine
weather
services

7.-(1) Any person who engages in meteorological activities over the sea may provide to other maritime users with marine meteorological services and related oceanographic information including tsunami safe navigation and high efficiency of operations, using adequate modes of dissemination.

(2) The services to be provided shall comprise of the following:

(a) in territorial waters, coastal, offshore, ports and harbours shall include-

- (i) warnings on tropical cyclones;
- (ii) daily weather forecasts, state of sea or lake and forecasts of winds, waves and tides;
- (iii) weather instruments for marine observations;
- (iv) severe weather warnings;
- (v) tsunami warning and advisories;
- (vi) distribution of sea surface temperature for identification of fishing grounds;
- (vii) up-welling and sea currents;
- (viii) weather reports for seaweed farmers;
- (ix) phases of the moon for determining fish concentrations;
- (x) cloudiness or sunshine hours;
- (xi) length of dry or wet season;
- (xii) specific meteorological data including

- relative humidity and temperature; and
- (xiii) support services for search and rescue;
- (b) support services for the International Maritime Organisation or International Hydrographic Organisation Worldwide Navigational Warning Service;
- (c) support services for marine environmental emergency response;
- (d) marine climatology; and
- (e) training in marine meteorology.

Principles of marine meteorological services

8. Any person engaged in provision of marine meteorological services shall be required to observe the following principles:

- (a) satisfaction of the requirements for information on marine environmental conditions and phenomena;
- (b) designed for the safety of marine operations and to promote the efficiency and economy of marine activities;
- (c) guided on the use and interpretation of meteorological and related oceanographic information; and
- (d) International Standards for the dissemination of internationally coordinated marine meteorological information, forecast and warning services.

Provision of marine weather forecasts and warnings

9.-(1) Any person who intends to engage in forecasting activities over the sea shall be obliged to provide forecasts and warnings of marine weather phenomena and climate services to users about the spatial extent, onset and cessation, duration, intensity and temporal variation.

(2) The services provided under subregulation (1) shall-

- (a) ensure that forecasts of weather parameters and phenomena are consistent across boundaries of the area of responsibility as far as practicable;

- (b) maintain meteorological integrity which includes monitoring forecasts or warnings issued for other regions, and liaison with adjacent regions as required;
- (c) facilitate the formulation of Standard Operating Procedures governing the issuance of marine weather forecasts and severe weather warnings;
- (d) issue a tsunami report immediately after the earthquake event has occurred when the occurrence of earthquake under the ocean and tsunami event could not be predicted in advance;
- (e) issue a tsunami warning immediately with respect when the Authority judges a tsunami would arrive and influence the coastal area;
- (f) issue a report on the cancellation of tsunami warning accordingly when the Authority determines that the severe weather threat has no more significant impact;
- (g) issue information of tropical cyclones in a timely way, when it moved into the area of latitude 5–25 degrees South, and longitude 45–60 degrees East;
- (h) strive to obtain a uniform procedure in regard to the international meteorological services already specified, and as far as practicable, to conform to the technical regulations and recommendations made by the World Meteorological Organisation; and
- (i) supply information in suitable format for transmission in coordination with relevant institutions.

PART IV

COMMUNICATION OF MARINE WEATHER INFORMATION

Communicati
on of marine
meteorolo-
gical

10. Subject to regulation 9, any person who engages in provision of forecasting services over the sea shall be required to-

information

- (a) communicate marine weather forecasts and warnings in a timely manner to meet maritime user community needs;
- (b) disseminate marine meteorological information on approved satellite service provider platforms and NAVTEX in accordance with the Global Maritime Distress Safety System (GMDSS) Master Plan;
- (c) ensure that all forecasts and warnings are disseminated via the authorized communication options to the ships and other user groups in collaboration with maritime administrations in the United Republic;
- (d) issue and disseminate weather forecasts, warnings, synoptic and other meteorological data intended for ships in the best position to serve various coastal and high seas areas, in accordance with mutual arrangements;
- (e) arrange and make available daily marine weather forecasts for ports and harbours, coastal zone and high sea for the information of departing ships;
- (f) provide route documentation to departing ships at meteorological port offices;
- (g) provide briefing and consultation, on request, to ship crew members; and
- (h) issue tsunami warning.

Port and
harbour,
coastal zone
and high sea
users

11. The operator of a ship and other relevant users of the sea shall take-

- (a) the responsibility of ensure that they have compatible information communication facilities to and from the Authority for appropriate use and take the necessary responses; and
- (b) action on severe weather warnings issued and disseminated by the Authority.

PART V
OFFENCES AND PENALTIES

Offences for
unlawful
issuing of
weather
forecast and
warnings

12. Any person who unlawfully issues marine severe weather warnings to public commits an offence, and upon conviction shall be liable to a fine of not less than fifty million shillings but no exceeding one hundred million shillings or to imprisonment for a term not less than five years but not exceeding ten years or to both.

General
penalty

13. A person who contravenes a provision of these Regulations where no penalty has been specifically provided for commits an offence and upon conviction shall be liable to a fine of not less than one million shillings but not exceeding three million shillings or to imprisonment for a term of not less than six months but not exceeding twelve months or to both.

Tanzania Meteorological Authority (Meteorological Services for Marine Activities)

GN.No. 596 (Contd.)

SCHEDULE

MONITORING OF THE MARINE WEATHER SITUATION

(Made under regulation 6 (4))

Standard Operating Procedure for Forecasting Winds and Waves

Beaufort Scale of Wind Force

Effect of Wind	Descriptive Term	Mean Wind Speed (Kt)	Speed Range (Kt)	Beaufort Number
Calm, smoke rise vertically	calm	00	Less than 1	0
Wind direction shown by smoke, but not by wind vane	Light air	02	1-3	1
Wind left on face; Leaves move slightly; ordinary vanes moved by wind	Light breeze	05	4-6	2
Leaves and small twigs in constant motion wind extends light flag	Gentle breeze	09	7-10	3
Raises dust and loose paper; small branches are moved	Moderate breeze	13	11-16	4
Small trees in leaf begin to sway; crested wavelets form on inland lakes	Fresh breeze	19	17-21	5
Large branches in motion; overhead wires make a wrestling sound	Strong breeze	24	22-27	6
Whole trees in motion, some difficulty in walking against the wind	Near gale	30	28-33	7
Breaks twigs off trees, much difficulty experienced when walking against the wind	Gale	37	34-40	8

Tanzania Meteorological Authority (Meteorological Services for Marine Activities)

GN. No. 596 (Contd.)

Slight damage to building and other structures	Strong gale	44	41-47	9
Seldom experienced inland; trees uprooted; considerable structural damage occurs	Storm	52	48-55	10
Very rarely experienced inland; wide spread damage	Violent storm	60	56-63	11
Hurricane really experienced over land	Hurricane		64 and over	12

Dodoma,
23th June, 2021

LEONARD M. HAMURIHO
Minister for Works and Transport