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THE TANZANIA METEOROLOGICAL AUTHORITY ACT,
(CAP. 157)

REGULATIONS

(Made under section 54)

THE TANZANIA METEOROLOGICAL AUTHORITY (METEOROLOGICAL STATIONS) REGULATIONS, 2021

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PART I
PRELIMINARY PROVISIONS

Citation

1. These Regulations may be cited as the Tanzania Meteorological Authority (Meteorological Stations) Regulations, 2021.

Application

2. These Regulations shall apply to the provision for establishment, operation, maintenance and coordination of meteorological stations.

Interpretation

3. In these Regulations, unless the context requires otherwise-

"aeronautical meteorological station" means a station designated to make observations and meteorological reports for use in air navigation;

"aircraft" means an airplane, helicopter or airship used to make environmental observations;

"aircraft meteorological station" means meteorological station situated on an aircraft;

"Aircraft Meteorological Data Relay" means the collective name for the automated aviation meteorological data collection systems from aircraft fitted with appropriate software packages;

"aircraft observation" means the evaluation of one or more meteorological elements made from an aircraft in flight;

"air-report" means a report from an aircraft in flight

prepared in conformity with requirements for position, and operational or meteorological reporting;

"agricultural meteorological station" means a place where agro-meteorological observations are made;

"climatological station" means a station whose observations are used for climatological purposes;

"fixed sea station" means an ocean weather ship or a station situated on a lightship, a fixed or anchored platform, a small island or in certain coastal areas;

"forecast" means a statement of expected meteorological conditions for a specified time or period, and for a specified area or portion of airspace;

"hydrological observation" means the direct measurement or evaluation of one or more hydrological elements, such as stage, discharge, water temperature, etc.;

"hydrological meteorological or observing station" means a place where hydrological observations or climatological observations for hydrological purposes are made.

"land station" means an observing station or field site situated on land, either fixed or mobile;

"meteorological information" means a meteorological report, analysis, forecast, and any other statement relating to existing or expected meteorological conditions;

"meteorological observations" means evaluation of one or more meteorological elements;

"meteorological report" means a statement of observed meteorological conditions related to a specified time and location;

"meteorological stations" means facilities, either fixed or mobile on land, sea or space with instruments to measure atmospheric conditions;

"meteorological watch office" means 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;

"mobile sea station" means a station aboard a mobile ship or an ice floe;

"ocean weather station" means a station aboard a suitably equipped and staffed ship that shall remain at a fixed sea position and that makes and reports surface and upper air observations, and may also make and report subsurface observations;

"ordinary climatological station" means a climatological station at which observations are made at least once daily, including daily readings of extreme temperature and of amount of precipitation;

"principal climatological station" means a climatological station at which hourly readings are taken, or at which observations are made at least three times daily in addition to hourly tabulation from autographic records;

"rainfall station" means a station at which observations of rainfall are made;

"sea station" means an observing station situated at sea and shall include ships, ocean weather stations and stations on fixed or drifting platforms rigs, platforms, lightships, buoys and ice floes;

"surface observation" means a meteorological observation, other than an upper-air observation, made from the Earth's surface;

"surface station" means a surface location from which surface observations are made;

"synoptic observation" means a surface or upper-air observation made at a standard time;

"synoptic station" means a station at which synoptic observations are made; and

"tide-gauge station" a station at which tidal measurements are made.

PART II
ESTABLISHMENT OF METEOROLOGICAL STATIONS

Obligation to comply with requirements

4.-(1) A person who intends to establish a meteorological station shall ensure that the type of station complies with the requirements under these Regulations.

(2) Subject to subregulation (1), the types of meteorological stations which may be established include-

(a) synoptic stations;
(b) aircraft meteorological stations;
(c) automatic weather stations;
(d) radar wind profiler stations;
(e) weather radar stations;
(f) aeronautical meteorological stations;
(g) research or training-purpose stations;
(h) climatological stations;
(i) agricultural meteorological stations;
(j) rainfall meteorological stations;
(k) hydrological meteorological stations;
(l) Global Climate Observing System (GCOS);
(m) special meteorological stations; and
(n) any other type as the Authority may approve.

Registration of meteorological station

5.-(1) A person who intends to register a meteorological station shall be required to make application for registration to the Authority.

(2) An application under subregulation (1), shall be made in form No. 1 set out in the First Schedule to these Regulations accompanied with fee of such amount as prescribed in the Second Schedule to these Regulations.

(3) The Authority shall, upon receipt of an application, scrutinize and consider the application.

(4) The Authority shall, upon being satisfied with the application, register the station.

(5) Where the application is rejected, the Authority shall notify the applicant in writing and give the reasons of such rejection.

General requirements

6.-(1) The meteorological station operator shall ensure that, before establishing a meteorological station at a proposed location, a technical survey is conducted.

(2) Subject to the provisions of these Regulations, an applicant for registration of a meteorological station shall be required to comply with the following general requirements-

(a) the siting and exposure;

(b) personnel competence required;
(c) properly calibrated instruments;
(d) necessary instruments and technology used for observation of weather parameters; and
(e) preventive and corrective maintenance.

(3) Subject to subregulation (2), the Director General may suspend or cancel registration of a meteorological station where the requirements are not met and shall notify the owner in writing and give the reasons of such cancellation or suspension.

Supervision of meteorological operators

7. The meteorological station operator shall, for the purpose of facilitating monitoring and supervision by the Authority, be ready for-
(a) inspection visits; and
(b) submission of reports.

Requirement for application of permit

8.-(1) A person who intends to engage in operation of meteorological stations shall apply to the Authority for a permit in form No. 2 set out in the First Schedule to these Regulations.

(2) The permit granted under the Act shall be subject to payment of a fee prescribed in the Second Schedule to these Regulations.

Terms and conditions of permits

9. The Authority may issue a permit to a person who fulfils the following conditions-
(a) registered, in case of a company;
(b) pay all charges, costs and fees as may be determined;
(c) has capacity to carry out activities;
(d) has no criminal records; and
(e) has complied with guidelines, directives and orders issued by the Authority.

Loss, damage or alter of permit

10.-(1) Where the permit holder satisfies the Authority that the permit has been lost, destroyed or defaced, the Authority may, on payment of a fee of thirty percent of the value of the permit, issue a duplicate permit.

(2) A person shall not be allowed to alter a permit

in any circumstances.

(3) A person who contravenes the provisions of subregulation (2) commits an offence.

Suspension and cancellation of permit

11. The Director General may suspend or cancel a permit for any of the following reasons-

(a) the holder has provided false, misleading or incomplete information in the application;
(b) the holder has contravened the terms and conditions specified in the permit;
(c) there has been a change in material or circumstances affecting the eligibility criteria required for issuance of permit;
(d) failure to submit required reports; or
(e) such other reasons as may be prescribed by the Director General subject to the laws.

Reports keeping

12.-(1) The Director General shall keep the reports and other information relating to the permits issue under the Act.

(2) The records under subregulation (1) may be inspected by any person upon payment of a fee prescribed in the Second Schedule to these Regulations.

Inspection of meteorological stations

13.-(1) The meteorological operator shall cause to be carried out the inspection and maintenance to ensure a high standard of observations and correct functioning of instruments.

(2) The inspections and maintenance under subregulation (1) shall be carried out by technical personnel, who shall ensure that-

(a) the sitting and exposure of instruments are known, recorded and acceptable;
(b) instruments have approved characteristics, are in good order and regularly verified against relevant standards;
(c) there is uniformity in the methods of observation and in the procedure for reduction of observations;

(d) the observers are competent to carry out their duties.

(3) The inspection frequency shall depend on the type station, and shall be carried out according to inspection timeframe.

Networks for observing stations

14.-(1) Where a meteorological station operator establishes a station, the station shall be recognised as part of the national networks of observing stations.

(2) A meteorological station operator shall ensure that a station meets the requirements of the horizontal spacing of observing stations in a network.

(3) For the purpose of this regulation, "horizontal spacing" means an optimal distance between one station to another depending on the geographical features of the specific area.

Report of meteorological activities

15. The meteorological station operator shall be required to prepare an annual report of meteorological activities carried out in the station containing the following information-

(a) general condition of the station;
(b) maintenance;
(c) calibration status;
(d) training of staff;
(e) challenges;
(f) recommendation; and
(g) any other information.

PART III
TYPES OF METEOROLOGICAL STATIONS
(a) Synoptic Stations

Surface synoptic stations

16.-(1) The surface synoptic stations established shall-

(a) be either manned, partly or fully automated; and
(b) include land stations and fixed and mobile sea stations that conduct synoptic observations.

(2) The synoptic station shall be located to give

meteorological data representative of the area in which it is situated.

(3) The standard times of observations for surface synoptic stations shall be-

(a) main standard times of observations - 0000, 0600, 1200 and 1800 UTC; and

(b) intermediate standard times observations - 0300, 0900, 1500 and 2100 UTC.

(4) The atmospheric pressure observations at the synoptic station shall be made at exactly the standard time as prescribed under subregulation (3) while the observation of other meteorological elements shall be made within ten minutes preceding the standard time.

(5) In the cause of observation, the surface synoptic observations shall be made-

(a) four times daily at the main standard times, with priority being given to the 0000 and 1200 UTC observations, which are required for global exchanges; and

(b) twenty four times daily at main standard times, intermediate standard times and at regular hourly intervals for national use and exchange.

(i) Surface Land Synoptic Station

General requirements

17.-(1) Each synoptic station on land established shall be uniquely identified by a station index number which shall be issued by the Authority.

(2) Where it is necessary to change the index number of a synoptic land station, the change shall be made effective on 1st January or 1st July of a calendar year.

Siting and exposure requirements

18.-(1) The meteorological station operator shall ensure that a station is sited at a location with the following characteristic-

(a) ground covered with short grass or a surface representative of the locality, and surrounded by open fencing or palings to exclude unauthorized persons; and

(b) the site shall be away from trees, buildings,

walls or other obstructions.

(2) The instrument enclosure for a surface land synoptic station shall be of the size of 18m by 12m equal to 60ft x 40ft.

(3) The enclosure under subregulation (2) shall be sited in the middle of a buffer zone and aligned in the true North – South direction.

(4) The buffer area around the instrument enclosure shall be-

(a) at least 30m x 30m equal to 98.5ft x 98.5ft; and

(b) covered by the natural vegetation or ground cover of the region which shall be maintained below approximately 0.05m equal to 1.5 ft.

(5) The surface land synoptic stations shall be placed at intervals not exceeding the minimum horizontal resolution required as described by the Authority.

Composition requirements

19.-(1) The surface synoptic observations recorded at a manned synoptic land station shall consist of observations of the meteorological elements including-

(a) present weather;
(b) past weather;
(c) wind direction and speed;
(d) cloud amount;
(e) type of cloud;
(f) height of cloud base;
(g) visibility;
(h) air temperature;
(i) humidity;
(j) atmospheric pressure;
(k) pressure tendency;
(l) extreme temperature;
(m) amount of precipitation; and
(n) sunshine duration.

(2) The surface synoptic observations at an automatic land station shall consist of measurements of the meteorological elements including-

(a) atmospheric pressure;
(b) wind direction and speed;
(c) air temperature;

(d) humidity;
(e) precipitation;
(f) amount of precipitation; and
(g) intensity of precipitation.

Frequency and timing of observations

20. A meteorological station operator of the surface synoptic station shall be required to make observations and report-

(a) twenty four times daily at main standard times, intermediate standard times and at regular hourly intervals for national use and exchange; and
(b) less than twenty four times daily for selected stations with specific requirements.

(ii) Surface Sea Synoptic Stations

General requirements

21.-(1) The meteorological station operator of a mobile ship station shall be required to make observation on any event in a sea area and report to the Authority.

(2) The meteorological station operator shall, in case of mobile ship stations traverse data sparse areas and regularly follow routes through areas of particular interest to the ship owner, conduct observations and report to the Authority.

(3) The meteorological station operator of a fixed sea weather station shall obliged to make observation according to synoptic station requirement and report to the Authority.

Location characteristics for surface sea synoptic station

22. The meteorological station operator shall ensure that surface sea synoptic station is sited at a location with the following characteristics-

(a) a surface representative of the locality, and surrounded by open sea area; and
(b) be away from obstructions.

Composition for surface sea synoptic station

23.-(1) The meteorological station operator of surface sea synoptic station shall be required to make observation on the following elements-

(a) present weather;
(b) past weather;
(c) wind direction and speed;
(d) cloud amount;
(e) type of cloud;
(f) height of cloud base;
(g) visibility;
(h) air temperature;
(i) humidity;
(j) atmospheric pressure;
(k) pressure tendency;
(l) characteristic of pressure tendency;
(m) ship's course and speed;
(n) sea-surface temperature;
(o) direction of movement of waves;
(p) wave period;
(q) wave height; and
(r) special phenomena.

(2) Subject to subregulation (1), mobile ship stations shall make observation depending on the type of station as may be determined by the Authority based on national and international standards.

Frequency and timing of observations

24.-(1) The meteorological station operator of a surface sea synoptic station shall ensure that observations are made and reported at least four times per day at the main standard time.

(2) The meteorological station operator of a surface sea synoptic station shall ensure that observations at lightship stations, fixed and anchored platform stations and automatic sea stations are made and reported at least four times per day at the main standard times.

(3) Subject to subregulation (1), where there are operational difficulties on board ship to make observation impracticable at a main standard time, the actual time of observation shall be as near as possible to the main standard time.

(4) Subject to subregulation (1), where storm conditions prevail, surface synoptic observations shall be made and reported from mobile sea stations frequently

than at the main standard times.

(5) The meteorological operator of a surface sea synoptic station shall, when sudden and dangerous weather developments is encountered, make surface observations and report without regard to the standard observation times.

(iii) Upper-Air Synoptic Stations

General requirements

25.-(1) The meteorological station operator shall ensure that the upper-air synoptic stations are uniquely identified by a station identifier issued by the Authority.

(2) The meteorological station operator shall ensure that each upper-air station shall have an appropriate manual of instructions.

(3) The meteorological station operator may, in the cause of operation, when upper-air data from the ocean areas are sparse, give consideration to equipping suitable ships to make soundings and, if possible, to measure upper winds.

(4) The meteorological station operator shall ensure that upper-air station intended to observe pressure, temperature, humidity or wind is spaced at intervals not exceeding the minimum horizontal resolution.

Siting and exposure

26.-(1) The meteorological station operator shall ensure that the upper-air synoptic station is sited-

(a) on high ground, with the horizon being free from obstructions; and

(b) at an area with no obstructions subtending an angle exceeding 6° at the observation point.

(2) The stations sited under this regulation shall be spaced at intervals not exceeding the minimum horizontal resolution required as described by the Authority.

Meteorological elements

27. The upper-air synoptic observation shall consist of measurement of one or more of the following meteorological elements-

(a) atmospheric pressure;

(b) air temperature;

(c) humidity; or
(d) wind direction and speed.

Frequency and timing

28.-(1) The meteorological station operator shall, when making upper air synoptic observations, comply with the standard times.

(2) Subject to subregulation (1), the standard times of observation shall be at 0000, 0600, 1200 and 1800 UTC.

(3) Where the meteorological station operator encountered any difficult and fails to comply with standard times reffered under subregulation (2), he shall make observation and report at least at 0000 or 1200 UTC.

(4) The meteorological station operator at the upper-air synoptic shall ensure that observations at ocean weather stations, comprises of raw insonde observations at 0000 and 1200 UTC or radiowind observations at 0600 and 1800 UTC.

(5) The meteorological station operator shall, when making observation, ensure that the actual time of regular upper-air synoptic observations is as close as possible to H-30 and shall not fall outside the time range from H-45 to H.

(b) Climatological Stations

General requirements

29.-(1) A climatological station operator shall ensure that a climatological station give a satisfactory representation of the climate characteristics of all types of terrain in the territory.

(2) The climatological station operator shall establish and maintain a directory of a climatological station which includes the following information for each station-

(a) name and geographical coordinates;
(b) elevation;
(c) a brief description of the local topography;
(d) category of station and details of observing programmes;
(e) exposure of instruments, including height

above ground of thermometers, rain gauges and anemometers;

(f) a station history including date of beginning of records, changes of site, closure or interruption of records, changes in the name of the station and important changes in the observing programme;

(g) the name of the supervising organization or institution; and

(h) the datum level to which atmospheric pressure data of the station refer.

Siting and exposure

30.-(1) The climatological station operator shall ensure that a station is established and instruments are enclosed in an area of measurements of-

(a) 25m by 25m equal to 82ft x 82ft for a station with many installations; and

(b) 4 m x 4 m equal to 13ft x 13ft for a rainfall station with relatively few installations.

(2) The climatological station operator shall ensure that the climatological station is spaced at an interval not exceeding the minimum horizontal resolution required as described by the Authority.

Composition requirements

31.-(1) A climatological station operator shall ensure that a station is located and set up in a manner to be able to operate continuously for at least ten years, and that the exposure remains unchanged over a long period.

(2) In the cause of observation, the climatological observation may be operated at a different category stations as follows-

(a) in an ordinary climatological station, where the observation is made on of the following elements-

(i) extreme temperatures;

(ii) amount of precipitation, if possible; and

(iii) any other related meteorological elements.

(b) in a principal climatological station, where the

observation is made out of the following elements-

(i) weather;
(ii) wind direction and speed;
(iii) cloud amount;
(iv) type of cloud;
(v) height of cloud base;
(vi) visibility;
(vii) air temperature including extreme temperatures;
(viii) humidity;
(ix) atmospheric pressure;
(x) precipitation amount;
(xi) snow cover or snow depth;
(xii) sunshine duration or solar radiation; and
(xiii) soil temperature.

(c) in a special purpose climatological station established for special observing program and is-

(i) limited in number of its parameters; and
(ii) has its own frequency, spacing and timeliness for observation.

(3) The climatological station operator shall, when observing temperature in the soil at a principal climatological station, ensure that the soil is measured at some or all of the following depths 5, 10, 20, 50, 100, 150 and 300 cm.

Frequency and timing of observations

32.-(1) The climatological station operator shall, when making observation, ensure that all climatological stations are made at fixed times according to UTC.

(2) The climatological station operator shall ensure that the climatological observations made at a climatological station are made at times that reflect the significant diurnal variations of the climatic meteorological elements.

(3) The climatological station operator shall ensure that, when changes are made to the times of climatological observations in a network, simultaneous observations are carried out at a skeleton network of representative stations

at the old times of observation and at the new ones, for a period covering the major climatic seasons of the area.

(c) Agricultural Meteorological Stations

General requirements

33.-(1) The agricultural meteorological station operator shall ensure that the density of the network of each category of agricultural meteorological station permit the delineation of weather parameters on the scale required for agrometeorological planning and operation, taking into account the agricultural features of the country.

(2) The agricultural meteorological station operator shall ensure that an up-to-date directory of the agricultural meteorological stations is maintained, giving the standard metadata including the following information for each station-

(a) name and geographical coordinates;
(b) elevation;
(c) brief description of the local topography;
(d) natural biomass, main agro-systems and crops of the area;
(e) types of soil, physical constants and profile of soil;
(f) category of station, details of observing programme and reporting schedule;
(g) exposure of instruments, including height above ground of thermometers, rain gauges and anemometers;
(h) station history including date of beginning of records, changes of site, closure or interruption of records, changes in the name of the station and important changes in the observing programme; and
(i) name of the supervising organization or institution.

(3) The agricultural meteorological station operator shall ensure that agricultural meteorological station is inspected at regular intervals to make sure that high standard of observation is maintained, in respect of-

(a) quality of meteorological instruments used;

(b) correct exposure of the station and the sensors;
(c) acceptable knowledge and competence of personnel; and
(d) adherence to standards of measurements, observations and reports issued for air navigation users.

Siting and exposure

34.-(1) The agricultural meteorological station operator shall, when installing or establishing an agricultural meteorological station, observe that the station is sited at a location with the following characteristics-

(a) ground covered with short grass or a surface representative of the locality, and surrounded by open fencing or palings to exclude unauthorised persons; and
(b) at a site away from trees, buildings, walls or other obstructions.

(2) The instrument enclosure for an agricultural meteorological station shall be of the following size-

(a) where there are many instalations, the size of a synoptic station shall be 18m by 12m equal to 60ft x 40ft;
(b) for few installations, the minimum size shall be 10m by 7m equal to 33ft x 23ft;
(c) 10m by 10m equal to 33ft x 33ft when AWS is used as agricultural meteorological station.

(3) The enclosure shall be sited in the middle of a buffer zone and aligned in the true North – South direction.

(4) The buffer area around the instrument enclosure shall be-

(a) at least 30m x 30m equal to 98.5ft x 98.5ft; and
(b) covered by the natural vegetation or ground cover of the region which shall be maintained below approximately 0.05m equal to 1.5 ft.

(5) The agricultural meteorological station operator shall ensure that each agricultural meteorological station is located at a place that is representative of agricultural and natural conditions in the area concerned-

(a) at experimental stations or research institutes for agriculture, horticulture, animal husbandry,

forestry, hydrobiology and soil sciences;

(b) at agricultural and allied colleges;

(c) in areas of present or future importance for agricultural and animal husbandry;

(d) in forest areas; and

(e) in national parks and reserves.

Composition requirements

35.-(1) The agricultural meteorological station operator shall, when observing programme at an agricultural meteorological station, in addition to the standard climatological observations, include some or all of the following:

(a) observations of physical environment-

(i) temperature and humidity of the air at different levels in the layer adjacent to the ground, from ground level up to about 10 metres above the upper limit of prevailing vegetation, including extreme values of these meteorological elements;

(ii) soil temperature at depths of 5, 10, 20, 50 and 100 cm and at additional depths for special purposes and in forest areas;

(iii) soil water or volumetric content at various depths, with at least three replications when the gravimetric method is used;

(iv) turbulence and mixing of air in the lower layer including wind measurements at different levels;

(v) hydrometeors and water-balance components including hail, dew, fog, evaporation from soil and from open water, transpiration from crops or plants, rainfall interception, runoff and water table;

(vi) sunshine, global and net radiation as well as the radiation balance over natural vegetation, crops and soils over twenty four hours;

(vii) observations of weather conditions causing direct damage to crops, such as frost, hail, drought, floods, gales and extremely hot, dry winds;

(viii) observations of damage caused by sandstorms and duststorms, atmospheric pollution and acid deposition as well as forest, bush and grassland fires; and

(b) observations of a biological nature-

(i) phenological observations;

(ii) observations on growth as required for the establishment of bioclimatic relationships;

(iii) observations on qualitative and quantitative yield of plant and animal products;

(iv) observations of direct weather damage on crops and animals;

(v) observations of damage caused by diseases and pests; and

(vi) observations of damage caused by sandstorms and duststorms and atmospheric pollution, as well as forest, bush and grassland fires.

Frequency and timing

36. The agricultural meteorological station operator shall ensure that-

(a) the observation of a physical nature is made at the main synoptic times; and

(b) the observation of a biological nature is made regularly or as frequently as significant changes occur, and shall be accompanied by meteorological observations;

(c) soil moisture observations shall be made on 7th, 17th and 27th of the month;

(d) crop phenological phase observations shall be made on Monday, Wednesday and Friday; and

(e) where the days in subregulation (4) are unofficial day, the observation shall be performed a day earlier or later.

(d) Aeronautical Meteorological Stations

General requirements

37.-(1) The aeronautical meteorological station operator shall ensure that data relating to the elevation of an aeronautical meteorological station on land are specified in whole metres.

(2) The aeronautical meteorological station operator shall ensure that aeronautical meteorological stations on land are uniquely identified by index number known as station identifier.

(3) Where the aeronautical meteorological station operator changes the index number of an aeronautical meteorological station on land, he shall include the change in the reports.

(4) The change of index number under subregulation (3) shall be made effective on 1st January or 1st July.

(5) The aeronautical meteorological station operator shall ensure that the stations are inspected at sufficiently frequent intervals to ensure that high standard of observation is maintained, in respect of-

(a) quality of meteorological instruments used;
(b) correct exposure of the station and the sensors;
(c) acceptable knowledge and competence of personnel; and
(d) adherence to standards of measurements, observations and reports issued for air navigation users.

Siting and exposure

38.-(1) The aeronautical meteorological station operator shall ensure that the aeronautical meteorological stations are established at aerodromes and other points of significance for air navigation.

(2) The enclosures, fencing, for instruments at airports shall be installed in such a way that the minimum distance between the enclosure and the-

(a) turning areas and aprons shall be 80m;
(b) runways shall be 60m; and
(c) taxi ways shall be 30m.

(3) The station shall be sited at a location with the following characteristics-

(a) ground covered with short grass or a surface representative of the locality, and surrounded by open fencing or palings to exclude unauthorized persons; and

(b) the site shall be away from trees, buildings, walls or other obstructions.

(4) The instrument enclosure for a surface land synoptic station shall be of the size of 18m by 12m equal to 60ft x 40ft.

(5) The enclosure under subregulation (4) shall be sited in the middle of a buffer zone and aligned in the true North – South direction.

(6) The buffer area around the instrument enclosure shall be-

(a) at least 30m x 30m equal to 98.5ft x 98.5ft; and

(b) covered by the natural vegetation or ground cover of the region which shall be maintained below approximately 0.05m equal to 1.5 ft.

Composition requirements

39. The aeronautical observations shall consist of the following meteorological elements-

(a) surface wind direction and speed;

(b) visibility;

(c) runway visual range, when applicable;

(d) present weather;

(e) cloud amount, type and height of base;

(f) air temperature;

(g) dew point temperature;

(h) atmospheric pressure (QNH and QFE);

(i) supplementary information; and

(j) supplementary information shall contain significant meteorological conditions, particularly those in the approach and climb out areas.

Frequency and timing of observations

40.-(1) The aeronautical meteorological station operator shall ensure that the routine observations is made at intervals of-

(a) one hour; or
(b) at intervals of one half-hour,

as the Authority considers necessary.

(2) Notwithstanding subregulation (1), special observations shall be made in accordance with criteria established by the Authority.

(e) Aircraft Meteorological Stations

Siting and exposure

41.-(1) The aircraft meteorological station shall be a meteorological station situated on an aircraft.

(2) The station shall be sited and exposed on aircraft in accordance to international requirements for weather observations on aircraft.

Composition requirements

42. The aircraft based observations shall consist of at least the following variables, with desirable and optional variables as indicated:

(a) static air temperature;
(b) wind speed;
(c) wind direction;
(d) pressure altitude;
(e) latitude;
(f) longitude;
(g) time of observation;
(h) turbulence;
(i) geometric altitude-desirable;
(j) humidity desirable; and
(k) icing desirable.

Frequency and timing of observations

43. The aircraft meteorological station operator shall make the following aircraft observations:

(a) routine aircraft observations during aircraft takeoff, approach and landing phases, en-route and climb-out phases; and
(b) special and other non-routine aircraft observations during any phase of the flight.

(f) Weather Radar Stations

General requirements

44.-(1) The Authority shall establish and operate a network of weather radar stations for better provision of meteorological services for social-economic development activities.

(2) Each weather radar station shall be uniquely identified by index number known as station identifier.

(3) The Authority shall ensure that while operating weather radars national regulations for the use of radio frequencies are complied with.

(4) The Authority shall ensure that the operated weather radar stations-

(a) are capable of transmitting and receiving horizontally polarized signals;

(b) are capable of transmitting and receiving both horizontally and vertically polarized signals; and

(c) provide observations of the radar reflectivity factor.

Siting and exposure

45.-(1) A person who intends to establish weather radar station shall ensure that the establishment is carried on in an appropriate site.

(2) The appropriate site shall be-

(a) on high ground, with the horizon being as free from obstructions as possible;

(b) one with no extensive obstructions subtending an angle exceeding 6° at the observation point; and

(c) at symmetrical hill with a downward slope of about 6° for a distance of 400 m, in a hollow surrounded by hills rising to a 1° or 2° elevation.

(3) The weather radar station operator shall, when tracking system of a weather radar, provide a firm foundation on which the equipment can be mounted.

(4) The weather radar station operator shall ensure that there are restrictions on the height of buildings or obstacles surrounding a weather radar antenna as follows-

(a) with the centre of the pedestal bottom of a weather radar antenna as the measuring centre,

the highest part of a building or obstacle within a radius of 182m shall be under the horizon of the pedestal bottom;

(b) with the centre of the pedestal bottom of a weather radar antenna as the measuring centre, the highest part of a building or obstacle within the circular belt of an inner radius of 182m and an outer radius of 520m, shall be under an elevation angle of 0.5 degrees.

(5) The restricted height of buildings surrounding a polar orbital satellite tracking antenna shall be measured from the centre of the pedestal bottom of that tracking antenna, the highest part of a building or obstacle shall be under an elevation of three degrees.

Composition requirements

46.-(1) The weather radar station operator shall ensure that single-polarization weather radars provide the following observations-

(a) radial velocity; and

(b) spectral width.

(2) The weather radar station operator shall ensure that weather radars with dual-polarization capability provide the following observations-

(a) differential reflectivity;

(b) cross-polar correlation;

(c) differential phase; and

(d) specific differential phase.

Frequency and timing of observations

47.-(1) The weather radars operated shall make observations available at least every 15 minutes.

(2) The weather radar observational data shall be made available to the Authority.

(g) Rainfall Meteorological Station

General requirements

48.-(1) The measuring of precipitation shall aim to obtain a sample that is representative of the true amount falling over the area which the measurement is intended to represent, whether on the synoptic scale, mesoscale or microscale.

(2) The ordinary rainfall station shall consist of-

(a) standard rain-gauge; and

(b) measuring cylinder.

(3) The observing rainfall station shall be registered by the Authority and the registration information shall comprise of the following-

(a) name of location, village or street, ward, district and region;

(b) date of registration;

(c) location points, latitude, longitude, elevation; and

(d) person managing the station.

(4) A registered rainfall station shall have a unique identification number or index number.

(5) A rainfall meteorological station shall be inspected at sufficiently frequent intervals to ensure high standard of observation is maintained, in respect of-

(a) quality of instruments used;

(b) correct exposure of the station; and

(c) acceptable knowledge and competence of personnel.

(6) The registration of a rainfall station shall cease and its data counted unacceptable, when-

(a) a station stop reporting its observational data for a period of three month without notifying the Authority;

(b) no competent personnel is present to manage the station and to perform meteorological observations;

(c) general conditions for operation of such station no longer give assurance for quality observation of data; and

(d) the Authority decides to close such a station.

Siting and exposure

49.-(1) The rainfall meteorological station shall be at an open space to ensure free collection of rain water.

(2) The raingauge shall be installed at a location where the distance of any obstacle, including fencing, from the raingauge is not less than twice the height of the object above the rim of the gauge, and preferably four times the

height.

(3) Subject to the requirement under subregulation (2), and where an enclosure is required for the station for optimal observations, the enclosure shall be a fencing of-

(a) at least 4m x 4m equal to 13ft x 13ft long; and
(b) not more than 4ft high above the surface.

Composition requirements

50. The rainfall station shall perform observation of the following parameters-

(a) rainfall amount; or
(b) rainfall intensity.

Frequency and timing of observations

51.-(1) The observations from a meteorological rainfall station shall be performed once in twenty four hours.

(2) The observations in subregulation (1), shall be conducted everyday at 0600 UTC.

(h) Hydrometeorological Station

General requirements

52.-(1) Hydrometeorological observing stations shall be classified as-

(a) climatological stations and precipitation stations for hydrological purposes; and
(b) hydrological stations for specific purposes.

(2) The Authority shall-

(a) register all hydrometeorological stations and assign each with a unique code numbers;
(b) carry out station inspection in collaboration with hydrological service provider to ensure proper working of the instruments and accuracy of data; and
(c) provide technical support for installation and regular servicing of the instruments and equipment.

Siting and exposure

53.-(1) A station shall be located at a site which permits correct exposure and functioning of the instruments and satisfactory instrumental and non-instrumental observations.

(2) Each hydrometric and groundwater station shall be located at a place and under an arrangement which will provide for the continued operation of the station for at least ten years, unless it serves a specific purpose which justifies its functioning for a shorter period.

Composition requirements

54. The hydrometeorological stations shall carry out observations, including-

(a) wet and dry bulb temperature;
(b) rainfall;
(c) wind speed and direction;
(d) air humidity;
(e) cloud amount and type; and
(f) evaporation.

Frequency and timing of observations

55.-(1) Where automatic registration is not available, observations of elements for hydrological purposes shall be made at regular intervals which are appropriate for the elements and purposes.

(2) Uniformity in time of observations shall, generally, be observed within a catchment area.

(h) Research or Training Purpose Land Stations

General requirements

56.-(1) The research or training purpose land station shall be established for the aim of collecting data for research or training purpose for the intended period.

(2) A research or training purpose land station shall be registered by the Authority.

(3) The registration under subregulation (2) shall comprise of the following information-

(a) names of location, village or street, ward, district and region;
(b) date of registration;
(c) period intended to operate the station;
(d) location points, latitude, longitude, elevation, and
(e) person managing the station.

(4) A registered station shall have a unique identification number or index number.

(5) A research or training purpose land station shall be inspected at sufficiently frequent intervals to ensure high standard of observation is maintained, in respect of-

(a) quality of instruments used;

(b) correct exposure of the station; and

(c) acceptable knowledge and competence of personnel.

Siting and exposure

57.-(1) The research or training purpose land station shall be sited at a location with the following characteristics-

(a) ground covered with short grass or a surface representative of the locality, and surrounded by open fencing or palings to exclude unauthorised persons; and

(b) at a site away from trees, buildings, walls or other obstructions.

(2) The instrument enclosure for a research or training purpose land station shall be of the size-

(a) where there are many installations, the size of a synoptic station shall be 18m by 12m equal to 60ft x 40ft;

(b) for few installations, the minimum size shall be of the rainfall station of 4m by 4m equal to 13ft x 13ft; and

(c) 10m by 10m equal to 33ft x 33ft for an AWS research or training purpose land station.

(3) The enclosure shall be sited in the middle of a buffer zone and aligned in the true North – South direction.

(4) The buffer zone around the instrument enclosure shall be-

(a) at least 30m x 30m equal to 98.5ft x 98.5ft; and

(b) covered by the natural vegetation or ground cover of the region which shall be maintained below approximately 0.05m equal to 1.5 ft.

Composition requirements

58.-(1) The research or training purpose land station operator shall make observations of weather parameters depending on the area of his interest of research purpose or training.

(2) The research or training purpose land station operator shall ensure that weather observing practice is consistent with respect to a number of parameters observed.

Frequency and timing

59.-(1) The research or training purpose land station operator shall ensure that observations at a research or training purpose land station is conducted at a specified interval of time for the whole period of the existence of the station.

(2) The weather observing practice shall be consistent with respect to time frequency within a day.

(3) The data for a research or training purpose land station shall be transmitted to the Authority.

(i) Tide-Gauge Station

General requirements

60. The Authority shall ensure establishment of adequate network of tide-gauge stations.

Location and Composition

61.-(1) The tide-gauge stations shall be established along coasts subject to storm surge.

(2) The gauges shall be placed in a manner that allows determination of the full range of water heights.

Frequency and timing of observations

62.-(1) The observations of tide height shall be made at the main synoptic times of 0000, 0600, 1200 and 1800 UTC.

(2) In coastal storm situations, hourly observations shall be made.

(j) Automatic Weather Station

General requirements

63.-(1) A meteorological station operator may establish Automatic Weather Station in its acronym AWS to supplement manned weather stations.

(2) Weather parameters measured or recorded shall be stored in a built-in data logger or may be transmitted to

a remote location via a communication link.

(3) The Automatic Weather Station may be used for many purposes including-

(a) increasing the density of an existing network by providing data from sites that are difficult to access or are inhospitable;

(b) providing observations at manned stations outside the normal working hours of the observing staff, for instance during the night or on weekends;

(c) satisfying new observational needs and requirements;

(d) increasing the reliability of the data and standardizing observing methods and timing for all network stations;

(e) cutting costs by reducing the number of manned stations;

(f) placing sensors in meteorologically favourable sites apart from the places of residence and work of the observer.

(g) reducing human errors; or

(h) measuring and reporting with high frequency or continuously.

(4) The Automatic Weather Station may be designed as an integrated concept of various measuring devices in combination with the data-acquisition and processing units. Such a combined system of instruments, interfaces and processing and transmission units is usually called an Automated Weather Observing System in its acronym AWOS or Automated Surface Observing System in its acronym ASOS.

(5) Management of the Automatic Weather Station shall, in principle, follow the same general rules and practices as for the management of manned stations since automatic meteorological stations are generally used to supplement or expand a basic manned station.

Classification of Automatic stations

64. The Automatic Weather Station may be classified into two stations namely-

(a) real-time Automatic Weather Station, which is

a station providing data to users of meteorological observations in real time, typically at programmed times;

(b) off-line Automatic Weather Station, which is a station recording data on site on internal or external data storage devices possibly combined with a display of actual data.

Location and exposure

65.-(1) The guidance regarding siting, exposure and changes in instrumentation shall apply equally to automatic weather stations and to manned weather stations.

(2) There shall not be any difference between the performance and quality of the observational data from manned and automatic stations.

Composition requirements

66. The operator of the Automatic Weather Station shall ensure that the station is able to monitor the following meteorological parameters continuously and on regularly selected time steps:

(a) air temperature (°C);
(b) relative humidity (%) ;
(c) wind speed (m/s);
(d) wind direction (deg clockwise from N);
(e) rainfall (mm);
(f) barometric pressure (mbar);
(g) solar radiation (W/m^2);
(h) soil temperature (°C);
(i) soil moisture (%);
(j) IR (earth) radiation (W/m^2); or
(k) sunshine duration (min).

Conditions for Replacing Manual stations

67.-(1) Where the operator of an Automatic Weather Station replaces a manual observing instrument that has been in operation for a long time, he shall ensure that there is a sufficient overlap in observation systems to facilitate maintaining the homogeneity of the historical record.

(2) The operator of an Automatic Weather Station shall take into account the following general for sufficient

operational overlap between existing and new automated systems:

(a) wind speed and direction for twelve months;
(b) temperature, humidity, sunshine, evaporation twenty four months; and
(c) precipitation for twenty four months.

Frequency and timing

68. The frequency for measurement of meteorological variables shall be set depending on the type of station the Automatic Weather Station serves.

(k) Radar Wind Profiler Station

General requirements

69. A person who operates a radar wind profiler station shall be required to comply with national regulations for the use of radio frequencies.

Quality Control

70.-(1) The Radar Wind Profiler Station shall, like other instruments, adhere to the calibration policy requirements regarding calibration procedures of the system.

(2) The Radar Wind Profiler Station operator shall be required to ensure that inspection checks are made according to the intervals specified by the Authority.

Composition requirements

71. A person who operates radar wind profiler station shall be required to make horizontal wind vector observations and vertical wind component observations.

Frequency and timing

72. The Radar Wind Profiler Station shall be operated continuously so as to acquire and provide horizontal winds at time intervals not exceeding sixty minutes.

PART IV
OBSERVATION OF METEOROLOGICAL PARAMETERS

Observation of atmospheric

73.-(1) The hectopascal (hPa), equal to 100 pascals (Pa), shall be the unit in which pressures are reported for meteorological purposes.

pressure

(2) The atmospheric pressure shall be reduced to mean sea level and observed at every hour.

(3) At aeronautical meteorological stations, the atmospheric pressure shall be measured, and QNH and QFE values shall be computed and reported in hectopascals.

(4) For synoptic report, the reading of the barometer shall be the last observation.

Observation of air temperature and dew point temperature

74.-(1) The temperature and dew point temperature shall be observed every hour and reported in degrees Celsius.

(2) For observation of air temperature the thermometer shall be installed in a thermometer screen.

(3) Thermometers shall be read to at least 0.1 °C.

(4) The daily minimum temperature shall be observed and reported at 0600Z and the daily maximum temperature shall be observed at 1800Z and reported at 0600Z.

Observation of surface wind

75.-(1) The exposure of wind instruments over level, open terrain shall be ten metres above the ground.

(2) Wind speed shall be measured to the nearest unit in metres per second, kilometres per hour or knots, and shall represent, for synoptic reports, an average over ten minutes or, if the wind changes significantly in the ten minute period, an average over the period after the change.

(3) Wind direction shall be measured in degrees and reported to the nearest ten degrees and represent a scalar average over ten minutes or, if the wind changes significantly in the ten minute period, an average over the period after the change.

(4) The “Calm” shall be reported when the average wind speed is less than 1 knot and the direction in this case is coded as 00.

(5) In the absence of an anemometer, the wind speed may be estimated using the Beaufort scale.

(6) At sea stations, in the absence of an appropriate instrument, the wind speed may be estimated by reference to the Beaufort scale and the wind direction by observing

the motion of sea waves.

(7) The output averaging time for wind shall be 2 minutes or 10 minutes.

(8) For the purpose of agro-climatological, wind shall be measured at 2 metres and be reported with flag S to indicate special purpose.

Observation of precipitation for meteorological use

76.-(1) The amount of precipitation shall be the sum of the amounts of liquid precipitation and the liquid equivalent of solid precipitation.

(2) The precipitation shall be observed after every three hours starting from 0600Z.

(3) The daily amount of precipitation shall be reported at 0600Z.

Soil temperature

77.-(1) The measurements shall be made to detect diurnal variations of soil temperature at depths of 5, 10, 20, 50, 100 and in some cases, 200 cm.

(2) The soil surface temperature measurements shall be made for special purposes.

Soil moisture

78.-(1) The gravimetric estimation of soil moisture shall be taken as the average of at least three samples from each depth.

(2) The gravimetric water content shall be expressed as the grams of soil moisture contained in a gram of dry soil.

Evaporation

79.-(1) The observation for evaporation shall be made daily at 0600Z.

(2) At each observation, water temperature and wind run records shall be taken.

(3) The amount of evaporation shall be read in millimetres.

Sunshine duration

80.-(1) The observation for sunshine duration shall be made daily at 0600Z.

(2) The threshold value for bright sunshine shall be 120 W m–2 of direct solar irradiance.

Upper-air observations

81.-(1) Atmospheric pressure, temperature and humidity observations at upper-air synoptic stations shall be made by means of a radiosonde attached to a fast-ascending free balloon.

(2) The upper wind observation at an upper-air synoptic station shall be made by tracking of the fast-ascending free balloon through electronic means.

Visibility

82. The visibility shall be measured or observed hourly and reported in metres or kilometres.

Clouds

83. The cloud amount, cloud type and height of cloud base shall be observed hourly.

PART V
DATA COMMUNICATION AND DISSEMINATION

Communication of information

84.-(1) A meteorological station owner shall be required to register to the Authority.

(2) Meteorological station owners registered under subregulation (1) shall use various communication options of information exchange with the Authority, which may include-

(a) Digital Meteorological Observatory;
(b) Meteorological Aviation Information System;
(c) Marine Meteorological Information System; and
(d) any other information exchange system as the Authority may determine.

Collection and dissemination services

85. Without prejudice to regulation 84, the Authority may provide to meteorological station owners, other means of collection and dissemination of services, such as-

(a) routine collection and dissemination service for time- and operation-critical data and products based on real-time "push" mechanisms, implemented through dedicated telecommunication means providing a guaranteed quality of service;

(b) discovery, access and retrieval service based on a request or reply "pull" mechanism with relevant data-management functions implemented through the internet; and

(c) timely delivery service for data and products based on a delayed-mode "push" mechanism implemented through a combination of dedicated telecommunication means and public data telecommunication networks, especially the internet.

PART VI
GENERAL PROVISIONS

Fees or charges

86.-(1) A person who intends to operate miscellaneous meteorological services shall be obliged to pay fees or charges prescribed under the Second Schedule to these Regulations.

(2) For the purpose of this regulation, "miscellaneous meteorological service" means services which may be conducted or provided other than regulated services specified in the Act.

General penalty

87. A person who contravenes a provision of these Regulations where no penalty has been specifically provided for commits an offence and shall, upon conviction, 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.

SCHEDULES

FIRST SCHEDULE

FORMS

FORM NO. 1

Made under regulation 5(2))

APPLICATION FORM FOR REGISTRATION OF METEOROLOGICAL STATION

(1) Particulars of the Applicant

Name of the Applicant (Individual/Company/Institution)		....
Type of business/Work		....
Business identity /Tin number/ registration No.		....
Fill this section if it is a Company/Institution		Company originality *(Tick the appropriate)* Local ☐ Foreign ☐
Physical Address of the applicant		
	Postal Address	....
	Telephone No:	....
	Mobile No:	....
	Email address	....

GN. NO. 595 (Contd.)

	Passport No./National ID No (*For individual)*	.....		
Village/Street	…… ….		Ward	…… …
District	…… ….		Region	…… …

(2) Particulars of the station to be registered

Station information
Name of Station: ……..
Station type (Manned/AWS): .....
Address.....
Coordinates (Lat.:……., Lon.:……, Elevation:……..)
.....
Purpose.....
Type of meteorological instrument/equipment
i. …… vi…….....
ii. …… vii……...
iii. ……. viii……...
iv. ……. ix…….....
v. …… x…….....
(Provide the list of instrument/equipment hereunder if the space provided above is limited)……
……
……
Telephone..... Mobile.....
Fax..... e-mail.....
Village/Street.....Ward…….……
District.....Region.....

(3) Registration application terms and conditions:

The station purported to be registered shall be required to meet the following conditions:

GN. NO. 595 (Contd.)

i. Dully-filled application form is accompanied by an introduction letter from the applicant's hamlet, street or village leaders, institution.

ii. Any intention to change the station particulars shall be done upon approval of the Authority.

iii. A person shall not relocate registered meteorological station without the approval of the Authority.

iv. Where it is necessary to relocate any national referenced meteorological station, the matter shall be subject to approval by the Authority and relocation cost shall be borne by such person.

v. A person operating meteorological station that is not registered by the Authority commits an offence.

vi. Use of calibrated instruments.

vii. Station being located properly.

viii. Necessary instruments and technology used for observation of weather parameters.

ix. Station shall be established for respective purpose as stipulated in this application form.

x. Station owner shall adhere to terms and conditions of maintaining and operating the station.

xi. Station owner shall share the observed data and transmitting them to National Meteorological databank.

xii. The Authority shall, if satisfied with the application send the qualified technical personnel to verify the standard of meteorological station on the cost of the applicant.

Declaration

I_____, the applicant for registration of meteorological station hereby declare that I have carefully read and understood

the details of this form and therefore agree to abide with the terms and conditions for this application.

Applicant's signature:_____

Date:_____

(4) FOR OFFICIAL USE ONLY.

The application for registration of meteorological station is recommended for approval as follows:

a. Name: ....,
b. Lat:.....Lon:…….....Elevation:…..... .....,
c. Registration number:.....…....,
d. Other information.....…....., ...,

_____

_____

Name of Reviewing Officer (1) Signature

_____

_____

Name of Reviewing Officer (2) Signature

FORM NO. 2

(Made under regulation 8(1))

PERMIT APPLICATION FORM

1. Particulars of the Applicant			
Name of the Applicant	....		
Location (City/Town)	....		
Postal address	....	Postal Code	....
Physical Address	....	E-mail Address	....
Telephone No.	....	Fax	....
Nationality	....		
Business	....		
Business Tin number/Registration certificate number		....	
Does the Applicant have qualified personnel in Meteorology? YES ☐ / NO ☐		If yes, please specify (attach evidence):	

2. Information regarding the requested meteorological activity

(a) Category of Meteorological Activity to be undertaken (Check/tick the appropriate)

i. Weather observation ☐
ii. Weather Forecasting ☐

(b) For Weather observation activities, select the type of meteorological stations networks involved:

(i)	Synoptic stations	☐
(ii)	Aircraft meteorological stations	☐
(iii)	Automatic weather stations	☐
(iv)	Radar wind profiler stations	☐
(v)	Weather radar stations	☐
(vi)	Aeronautical meteorological stations	☐
(vii)	Research or Training purpose stations	☐
(viii)	Climatological stations	☐
(ix)	Agricultural meteorological stations	☐
(x)	Rainfall meteorological stations	☐
(xi)	Hydrological meteorological stations	☐
(xii)	Global Climate Observing System (GCOS)	☐
(xiii)	Special meteorological stations	☐
(xiv)	Other	☐

In case of (xiii) or (xiv) please specify

.....
.....,
.....
.....

(c) Are the stations networks already established? YES ☐ / NO ☐

If yes, please mention them:

1. .....,
2. .....,
3. .....,
4. .....,
5. .....

(d) Purpose of engagement in the meteorological activity (ies):

.....
.....
.....
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.....
.....
.....
.....

.....
(e) Place of meteorological activity i. Location name (Region) of a meteorological station:.……..……. ii. District ……..…….…… iii. Ward …….…….…… iv. Station name:..…….…….……. v. Latitude:. …… vi. Longitude: ……..……..….. vii. Altitude……

3. Declaration

I....., the applicant of the permit hereby declare that all the information contained in this form is in accordance with facts and truth to the best of my knowledge. In this regard, I have carefully read and understood the details of this form and therefore agree to abide with the terms and conditions as appropriate.

Applicant's signature.....
Date.....

4. FOR OFFICIAL USE ONLY

The application for permit is recommended for approval on the following conditions:

1. The meteorological activity to be performed under this permit is:

   ……

2. For weather observations, the type of meteorological stations networks recommended under this permit includes:

   a. .....,
   b. .....,
   c. .....,
   d. .....,
   e. .....,
   f. ……...

_____

_____

Name of Reviewing Officer (1) Signature

_____

_____

Name of Reviewing Officer (2) Signature

Notice to the Applicant**:**

1. Dully filled application form to be accompanied by an introduction letter from the applicant's hamlet, street or village leaders, or institution.
2. Payments to be done to the Authority.
3. For Weather observation activities, the applicant shall have dedicated personnel with minimum qualification of at least Certificate in Meteorology (from the recognized institution).
4. For Weather forecasting activities, the applicant shall have dedicated personnel with minimum qualification of at least B.Sc. in Meteorology (from the recognized institution).
5. Qualification evidences referred to in Nos. 3 and 4 shall be attached to this application.

SECOND SCHEDULE

(Made under regulation 5(2), 8(2), 12(2) and 86(1))

(A) Fees or Charges for Permit of Meteorological Activities

1. To conduct weather observation (To operate meteorological station)				
Type of Station/Activity	Class of Observing Station	Application Fee (TZS)	Permit Fee (TZS)	Annual Renewal License Fee (TZS)
Class A: Rainfall Station				
Rainfall station	Manned	5,000	20,000	Nil
	Automatic	10,000	300,000	200,000
Class B: Manned or Conventional Stations				
Surface synoptic station	Land Station	50,000	800,000	300,000
Aeronautical meteorological station	Manned			
Agricultural meteorological station	Manned			
Climatological station				
Hydro-meteorological station				
Research-purpose station				
Training-purpose station				
Special-purpose station				
Sea station	NIL	NIL	NIL	NIL

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Class C: AWS Stations				
Automatic Weather Station (AWS)	AWS	300,000	500,000	300,000
Automatic Weather Observing System (AWOS)	AWOS			
Surface synoptic station				
Class D: Radar and Special Stations				
Upper-air synoptic station	Radiosonde	2,000,000	5,000,000	1,000,000
Weather RADAR station	S-band			
	C-band			
	X-band			
RADAR wind profiler station				
Special meteorological stations	Radiation station			
	Lightning location station			
	Tide-gauge station			
	Other remote-sensing profiler stations			
	Meteorological reconnaissance aircraft station			
	Global Atmosphere Watch (GAW) station			
	Planetary boundary-layer station			
2. To conduct Weather and climatic forecast				
Permit for forecasting activities		2,000,000	5,000,000	3,000,000
3. To conduct weather modification activity				
Weather modification		5,000,000	10,000.000	-

(B) Fees and Charges for Registration of Meteorological Stations

Type of Station	Class of Observing Station	Application Fee (TZS)	Registration Fee (TZS)	Renewal Registration Fee (TZS)
Class A: Rainfall Station				
Rainfall station	Manned	50,000	50,000	50,000
	Automatic	50,000	300,000	300,000
Class B: Manned or Conventional Stations				
Surface synoptic station	Land station	50,000	600,000	300,000
Aeronautical meteorological station	Manned			
Agricultural meteorological station	Manned			
Climatological station				
Hydro-meteorological station				
Research-purpose station				
Training-purpose station				
Special-purpose station				
Class C: AWS Stations				
Automatic Weather Station (AWS)	AWS	50,000	500,000	300,000
Automatic Weather Observing System (AWOS)	AWOS			

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Surface synoptic station				
Class D: Radar and Special Stations				
Upper-air synoptic station	Radiosonde	1,000,000	5,000,000	3,000,000
Weather RADAR station	S-band			
	C-band			
	X-band			
RADAR wind profiler station				
Aircraft meteorological station				
Special meteorological stations	Radiation station			
	Lightning location station			
	Tide-gauge station			
	Other remote-sensing profiler stations			
	Meteorological reconnaissance aircraft station			
	Global Atmosphere Watch (GAW) station			
	Planetary boundary-layer station			

(C) Fees or Charges for Miscellaneous Meteorological Services

S/N	METEOROLOGICAL SERVICE	AGREED FEES or CHARGES
1.	Certified meteorological reports	TZS 300,000
2.	Using Intellectual property of the Authority	Costs shall be issued depending on software
3.	Inspection fee for records related to permit	TZS 300,000

Dodoma,
23th June, 2021

LEONARD M. CHAMURIHO
Minister for Works and Transport