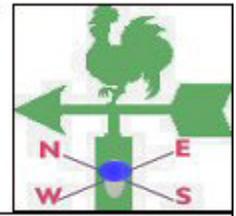




# TANZANIA METEOROLOGICAL AGENCY



## MONTHLY WEATHER BULLETIN

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### MAY – HIGHLIGHTS

- The long rains (*Masika*) in bimodal rainfall areas have ended.
- Expected dry conditions in June will accelerate crops to maturity and favour drying of matured crops, crop harvesting and storage.

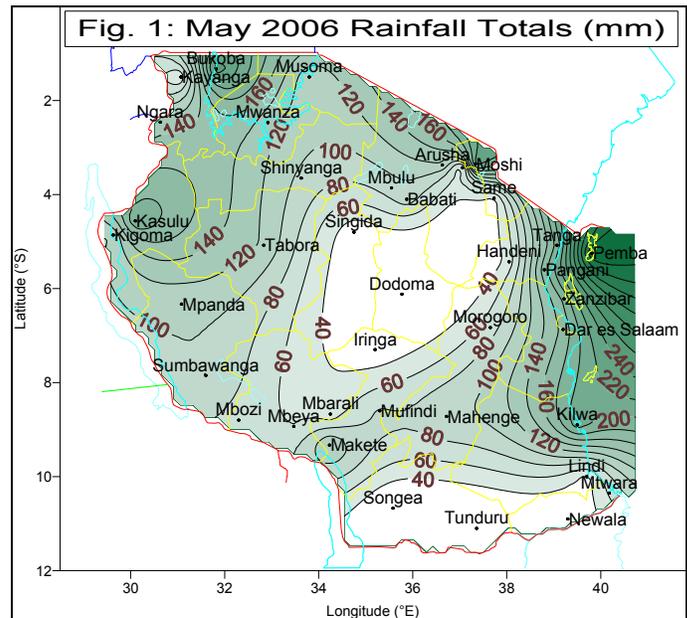
### SYNOPTIC SUMMARY

The Azores and Siberian anticyclones, and Arabian ridge over the northern hemisphere were weak, thereby allowing southern systems especially the East African ridge to extend further north. The anticyclonic systems in the southern hemisphere, St. Helena and Mascarene continued to intensify, thus enabling the East African ridge to dominate over most part of the country. The zonal component of the ITCZ was active over the northern sector of the country. The meridional component of the ITCZ was weak due to a relaxation of the Azores high pressure cell. Southeasterly winds were dominant especially at lower levels.

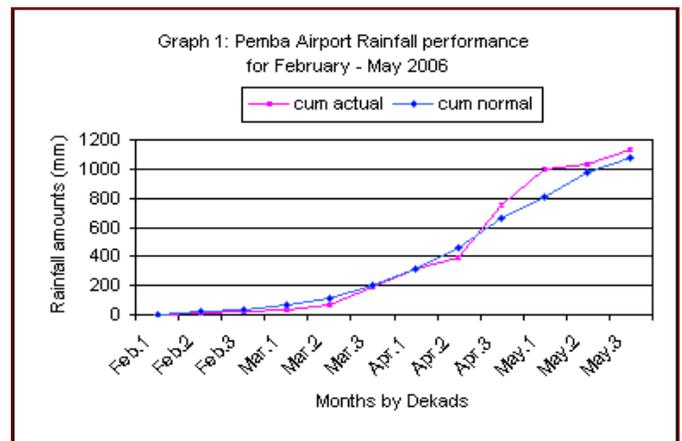
### WEATHER SUMMARY

#### RAINFALL

During the month cumulative rainfall indicates that there were more rainfall activities over most of the northern coast and parts of western Lake Victoria basin and western region (Fig. 1). Central areas (Singida and Dodoma regions) and Manyara region, and southern sector of the country experienced a large decrease in rainfall activities as enclosed by 40 mm isohyet. Cessation of seasonal rains over unimodal rainfall areas started during mid-April over central areas and spread across the entire area during May as indicated by rainfall amounts enclosed by 100 mm isohyet. On the other hand most of bimodal rainfall pattern depicted decreased rainfall activities during third dekad of the month, suggesting the end of long rains (*Masika*).



The highest rainfall amount recorded during the month was 377.7 mm over Pemba Island.

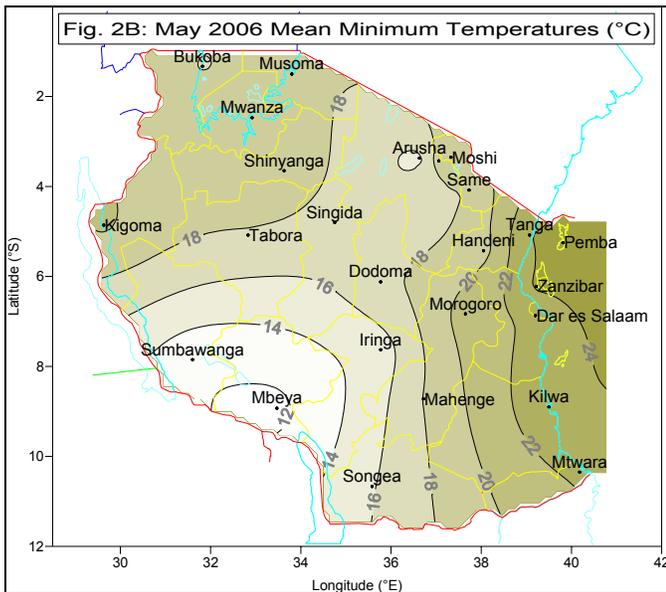


Graph 1 depicts performance of long rains (*Masika*) at Pemba airport when current cumulative dekadal rainfall amounts (actual) were compared with long-term dekadal cumulative normal values for the period from February to May. *Masika* rains over this area

and parts of the northern coast were generally above normal although belated over some areas.

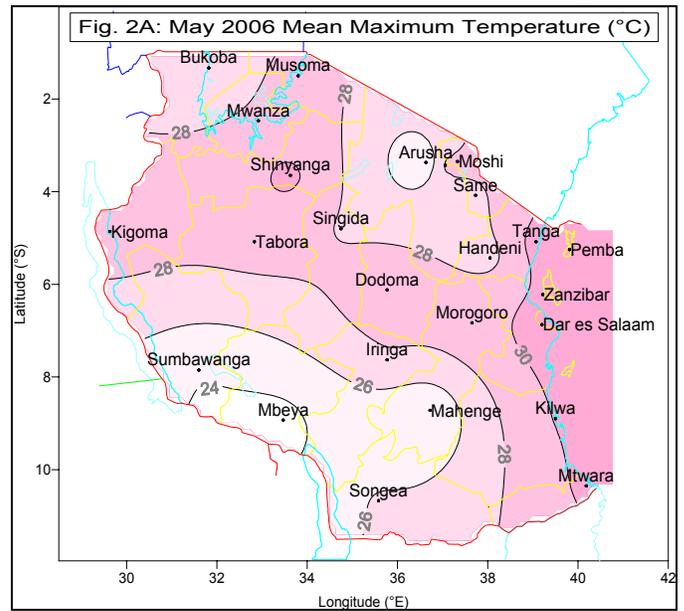
**MEAN AIR TEMPERATURE**

Temperature conditions for the month of May were expressed as mean air maximum and minimum temperatures as shown in Figs. 2A and 2B respectively. Observed mean maximum temperature ranged between about 24 °C over southwestern highlands and just above 30 °C along the coastal belt areas (Fig. 2A).



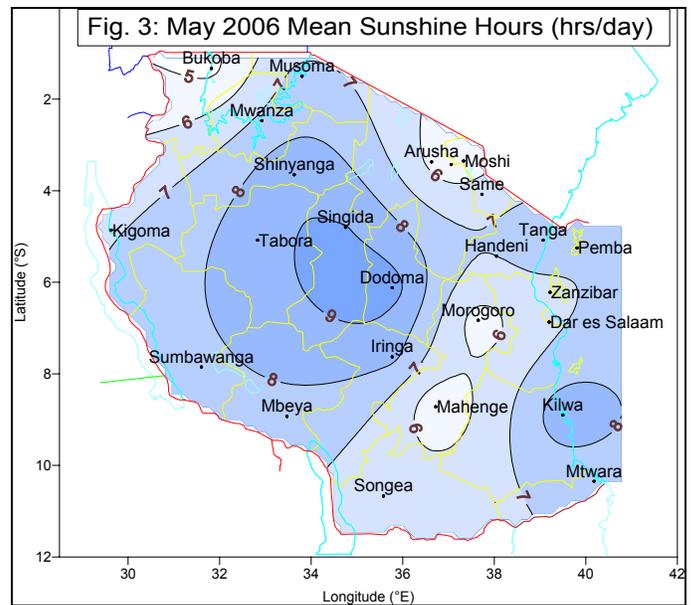
Over most of the coastal belt areas and parts of Shinyanga region, the third dekad of May depicted higher maximum temperatures than that of previous two dekads. The highest maximum temperature recorded during the period was 33.3 °C at Mtwara town in the southern coast.

The mean minimum air temperatures ranged from just below 12 °C to slightly above 24 °C (Fig. 2B). The highlands in the southwestern part of the country (Rukwa and Mbeya and Iringa regions) has continued experiencing cooler conditions, with Mbeya town recording the lowest mean minimum temperature of about 11.5 °C, and the observed lowest minimum temperature was 10.4 °C during the third dekad of the month. Generally, temperature conditions indicated that May was warmer than April over coastal belt areas during daytime hours, while over the southwestern highlands and parts of Arusha region cooler conditions during nights and early morning hours prevailed.



**SUNSHINE HOURS**

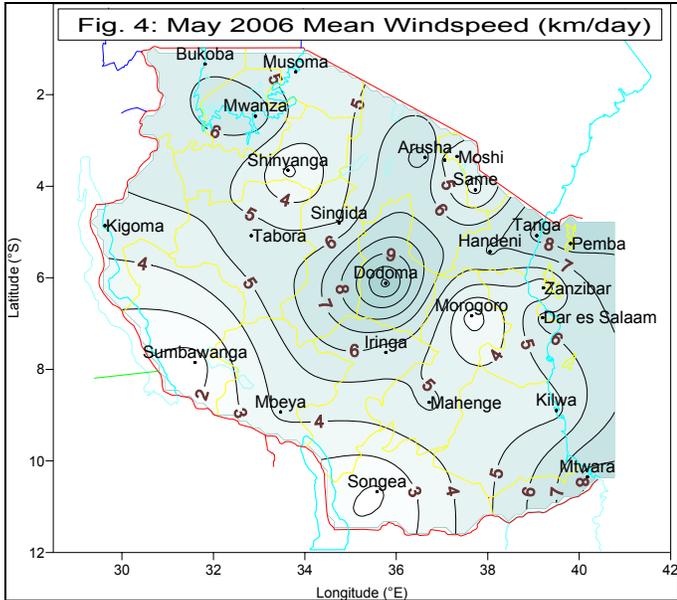
Figure 3, indicates spatial distribution of mean sunshine hours across the country during May. Durations of mean bright sunshine hours ranged between about 5 and 9 hrs/day.



A few pocket areas, west of Lake Victoria basin, northeastern highlands and parts of Morogoro region experienced shorter durations of about half daylight hours due to predominant cloudy activities in the areas. The longest durations of about 9 hrs/day dominated mainly over central (Dodoma and Singida regions).

**MEAN DAILY WIND SPEED**

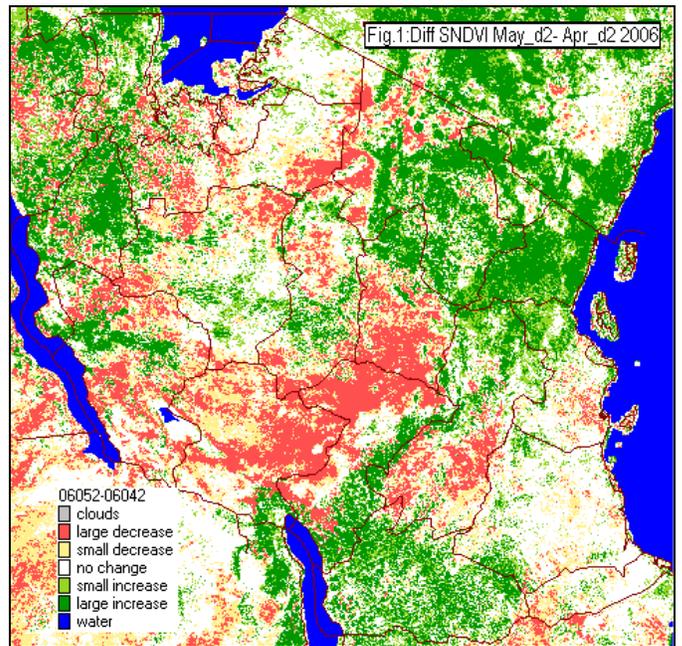
Mean wind speed across the country ranged from just below 2 km/hr to just above 10 km/hr as depicted in Figure 4. The core of maximum speed of about 10 km/hr was located over central areas (Dodoma region), while areas surrounding Shinyanga, Morogoro, Sumbawanga and Songea towns had calm conditions and winds of about 2 km/day strength.



The winds strengthened mainly over central regions, thereby increasing prospects of occurrences of dust devils, wind erosion and high evaporation rates.

**SATELLITE INFORMATION**

Figure 5 depicts vegetation greenness as indicated by the Spot Satellite Normalized Difference Vegetation Index (SNDVI) sensor being a difference image of May second dekad from that of April dekad two. The change in vegetation cover between the states during mid May from that of mid April indicates a general decrease over southwestern highlands and central sectors of the country while areas over Ruvuma region, northeastern highlands and northern coast experienced some increase. However, most areas over southern coast, and parts of Tabora, Shinyanga and Mara regions indicate no change in the mean state of vegetation coverage and greening between mid April and mid May as indicated in Fig.5.



**AGROMETEOROLOGY**

During the month, besides a decreasing trend in soil moisture levels which was observed over most areas during second and third dekads of the month, soil moisture was sufficient for crop growth and development mainly over most parts of bimodal rainfall regime where maize crop was between wax ripeness and full ripeness stages. Maize and beans crops over these areas were performing well during the period. Beans crop was reported as being in good state at full ripeness stage and harvesting was carried out over few areas of Ngara and Karagwe districts in Kagera region and Mbulu district in Manyara region during the third dekad.

Over unimodal sector including western, central, southwestern highlands and southern parts of the country, farmers have started harvesting cereals and legumes. Over southwestern highlands and southern sector (Mbeya, Iringa, Rukwa and Ruvuma regions) maize crop was in good state at full ripeness stage and harvesting of the crop has started over few areas. Over the same areas the second phase beans crop was between pod filling and full ripeness stages, in good state, while harvesting of the crop was reported over Mpanda district (Rukwa region) and parts of Ludewa district in Iringa region.

The paddy crop was performing well as observed in most areas of the country only that in some areas particularly over Coast region the late planted paddy covering the largest part of all paddy fields revealed

stunted growth at vegetative stages. Cassava was reported in good state at various growth stages nearly countrywide.

Pasture and water for livestock/wildlife generally maintained a satisfactory level across the country.

Expected dry conditions in the country during June will accelerate crops to maturity and favour drying of matured crops, crop harvesting and storage.

### HYDROMETEOROLOGY

Water levels in rivers, lakes and dams have remained at average levels. Water for domestic and industrial purposes should be used sparingly.

### ENVIRONMENTAL

Nights and mornings are getting chilly due to low temperatures and windy conditions that have set in. In south western highlands, charcoal stoves should not be used to heat up homes to avoid asphyxiation from carbon monoxide.

### EXPECTED SYNOPTIC SITUATION DURING JUNE 2006

The pressure systems on both hemispheres are unstable. The northern hemisphere systems, Arabian and Azores anticyclones are expected to relax while over the southern hemisphere, the Mascarene

and St. Helena anticyclones are expected to intensify and hence allowing the East African ridge to dominate over most parts of the country. The Inter-Tropical Converging Zone (ITCZ) will shift further northwards leading to northward shift of the Meridional and zonal components of the ITCZ. The wind patterns over the coast and most parts of the country will have a more southerly component giving rise to cold/chilly.

### EXPECTED WEATHER SITUATION DURING JUNE 2006

Lake Victoria basin (Kagera, Mwanza and Mara regions) will experience partly cloudy conditions with occasional showers accompanied with thunderstorms over few areas and sunny periods. Western parts of the country (Kigoma and Tabora regions) will feature partly cloudy conditions with occasional light showers and few thunderstorms over few areas and long sunny periods. Northeastern highlands (Arusha, Kilimanjaro and Manyara regions) will experience partly cloudy conditions with light rains mainly over high grounds and sunny periods. The northern coast (Tanga, Coast and Dar es Salaam regions, and Pemba and Zanzibar Islands) will feature partly cloudy conditions with light rains over few areas and sunny periods. Central areas (Dodoma and Singida regions) and northern parts of Morogoro region will feature partly cloudy conditions with chilly nights. Southwestern highlands (Iringa, Mbeya and Rukwa regions), southern (Ruvuma region) and southern coast are expected to experience partly cloudy conditions with chilly weather.

Prepared by

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