## MONTHLY WEATHER BULLETIN

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#### HIGHLIGHTS

- May broke lowest rainfall records in many stations. Morogoro for instance, recorded 0.6 mm lowest value since 1986 while Same recorded 1.1 mm and Kilimanjaro International Airport recorded 9.3 mm lowest since 1974. Zanzibar A/P recorded 42.3 mm of rainfall, which was the lowest since 1944.
- · Poor food crop yields over the northern coast belt and northeastern areas prevailing scenario.

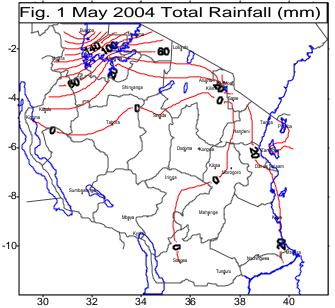
## SYNOPTIC SUMMARY

During the month of May, the East African ridge was strong and maintained low level diffluent flow over the country. The St. Helena and Mascarene anticyclone were intense. The Arabian ridge and the Azores anticyclone were weak.

## WEATHER SUMMARY

#### RAINFALL

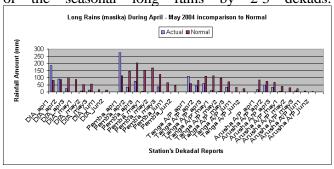
During May normal dry conditions persisted over unimodal rainfall areas of central, southern,



southwestern and western areas. Over bimodal rainfall areas (Lake Victoria Basin, northeastern and northern coastal belt) currently under long-rains season (masika) recorded generally below normal rainfall during the period. Of much concern were areas over northern coastal belt where abnormally

dry conditions persisted during most of the period. In comparison to long-term records, the observed May total rainfall at Morogoro Met. of 0.6 mm is the lowest value since 1986, while the recorded rainfall at Same of 1.1 mm and that at Kilimanjaro International Airport of 9.3 mm are the lowest since 1974. Zanzibar A/P recorded 42.3 mm of rainfall, which was the lowest since 1944.

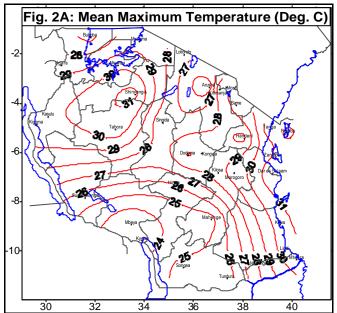
The drier than normal conditions over northern coastal belt and northeastern areas as shown in the graph below, depict an earlier than normal cessation of the seasonal long rains by 2-3 dekads.



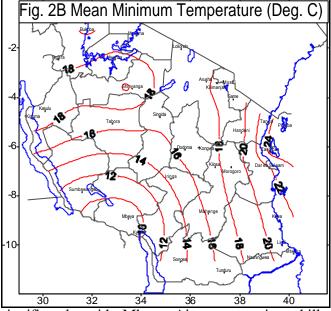
#### MEAN AIR TEMPERATURE

During May the mean air temperatures in terms of daily maximum and minimum observations appear in Figures 2A and 2B respectively. The Mean maximum temperatures ranged between 31 °C and 24 °C while the mean minimum temperatures were between 25 °C and 8°C. Both Figures 2A and 2B continue to depict a similar pattern during April where high values concentrated over the eastern sector of the country and parts of mid-lands while records of lower values appear over southwestern areas indicating an altitude and latitude effect.

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Compared to the situation during April, overall cooler conditions dropped

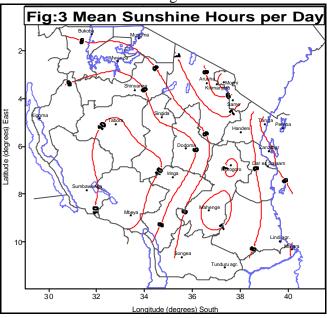


significantly with Mbeya Airport reporting chilly conditions at 8.5°C during May.

## SUNSHINE HOURS

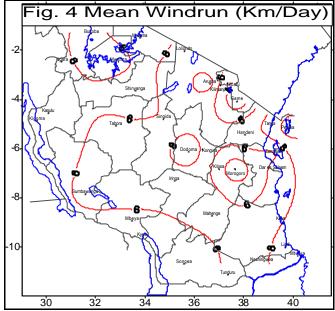
During May mean sunshine hours across the country ranged from about 4 to just above 10 hours/day as shown in Figure 3. Shorter durations of bright sunshine, around 4 hrs/day, were experienced over parts of northeastern areas where cloudy conditions dominated. Maximum bright

sunshine hours, just above 10 hours, were mainly experienced over western, southwestern and central areas where cloud activities have drastically been reduced due to ending of seasonal rains.



#### **MEAN DAILY WINDSPEED**

Mean wind run across the country ranged from about 6km/day to a maximum of 9km/day during May as shown in Figure 4.



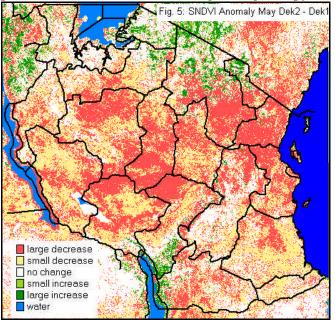
Over the costal belt there has been a picking up of wind speed to signify continued organization of the seasonal low-level flow of south-easterlies. Minimum speeds appear as pockets on the leeward sides of the Uluguru mountains in Morogoro, Same

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and Singida areas sandwiched in between the higher winds highlighted earlier.

## SATELLITE INFORMATION

Available satellite information during the month appears as in Figure 5 showing Normalized Difference Vegetation Index (NDVI) anomaly from the Spot satellite depicting NDVI difference between 1<sup>st</sup> 10day during May and the 2<sup>nd</sup> 10-day period mean index. The overall greening canopy in



the vegetation till May 20<sup>th</sup>, largely across the country depicts a decreasing trend in the NDVI anomalies as shown in Figure 5. Northern coastal belt, north-eastern areas and parts of Lake Victoria Basin depicting large decreases in NDVI are areas of concern during this period of the year. Over such areas green vegetation should be peaking from status of maturing crops in the fields. The low NDVI indices locate spread of areas generally featuring extent of drought impact. On the other hand, decreases indicated over central, western and southern areas depict a normal drying nature from generally ripened crops in the fields.

## AGROMETEOROLOGY

Parming activities during May have generally consisted of harvesting mature crops over central, western and southern areas. Over bimodal

areas of Lake Victoria Basin, northeastern and northern coastal belt – field crops have started to mature and beans in Kagera in good state are being harvested. Drought condition that persisted during the month has withered field crops especially beans mostly at flowering and maize at late vegetative stage in parts of Arusha, Manyara and Kilimanjaro regions. On the other hand, the low soil moisture profile over southern, southwestern, central and western areas signified the setting in of the dry season.

Moderate to high yields of maize crop is expected from harvests over central, southern, southwestern and western areas. Masika season crops over northern coastal belt, northeastern areas and parts of Lake Victoria Basin, are expected to have only moderate yields as crop growth has been impacted by insufficient soil moisture supply during May. Likewise prospects for paddy yields are gauged at moderate level especially over the coastal belt.

Cassava, at various stages from planting to maturity has continued to supply town markets.

#### **HYDROMETEOROLOGY**

Rainfall that fell during the month contributed significantly to water levels in rivers and other water reservoirs in some parts of the country. Water levels in rivers and dams for general water supply and electricity generation have improved slightly over the areas receiving rains.

### **ENVIRONMENTAL**

The moderately low wind speeds and the spreading dry conditions (central areas), which prevailed during the month reduced prospects for diseases such as colds, coughs, pneumonia and asthma.

## EXPECTED SYNOPTIC SYSTEMS FOR JUNE

The East African ridge will remain intense and maintain low level diffluent flow pattern over the country. The St Helena Anticyclone and The Mascarene anticyclone are expected to remain

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intense. The Arabian ridge will weaken while the Azores anticyclone will strengthen.

# WEATHER OUTLOOK FOR JUNE

Northeastern highlands and northern coast will have partly cloudy conditions with light rains over few areas and sunny periods. Lake Victoria basin will experience partly cloudy conditions with showers and thunderstorms over few areas and sunny periods. Southwestern highlands, southern coast, central, western and southern areas will have partly cloudy conditions with sunny periods.

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