TANZANIA METEOROLOGICAL AGENCY

MONTHLY WEATHER BULLETIN

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HIGHLIGHTS

- Dry conditions over unimodal rainfall areas were conducive for crop harvesting.
- Soil moisture decline over bimodal areas sped up drying of mature crops.

SYNOPTIC SUMMARY

During the month of May, the southern hemisphere systems, St Helena and Mascarene high pressure cells and the East African ridge continued to intensify while the Siberian high pressure relaxed resulting to southeasterly to southerly flow toward the coastal areas. Generally the northern hemisphere systems (Azores and Siberian anticyclones) continued to relax thus allowing the Inter-Tropical Convergence Zone (ITCZ) to migrate further northwards. A weak trough over the Lake Victoria basin continued to support rainfall and thunderstorms over the region. The West Indian Ocean was under subsidence thus reducing rainfall over most areas of the country.

WEATHER SUMMARY

RAINFALL

During the month of May, rainfall activities were observed over several parts of the country where few stations still reported monthly rainfall amounts exceeding 100 mm as shown in Figure 1A. Rainfall exceeding 200 mm was received over northern coast (Tanga region and Pemba Island), Kilimanjaro (Moshi) and Kagera regions. The highest amounts were reported at Bukoba 321.3mm, Lyamungu 253.3mm and Pemba 244.2mm. Declined rainfall over most areas indicated normal cessation of seasonal rains.

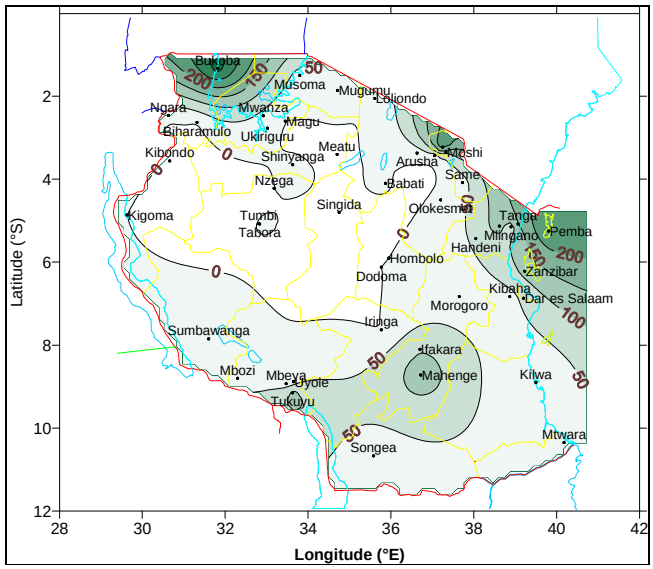

Figure 1A: May 2008 Rainfall Distribution (mm)

MEAN AIR TEMPERATURE

Temperatures decreased slightly during the month due to orientation of overhead sun due north. The mean maximum temperature ranged between just above 30 ºC and below 22 ºC as indicated in Figure 2A. The highest mean maximum temperature recorded during the month was about 30.6 °C at Dar es Salaam with an absolute highest maximum of about 31.3 °C during the first dekad of the month. The lowest mean maximum temperature was about 22.6°C over Mbeya in the southwestern highlands. The mean minimum air temperature ranged from just below 9 ºC to slightly above 24 ºC.

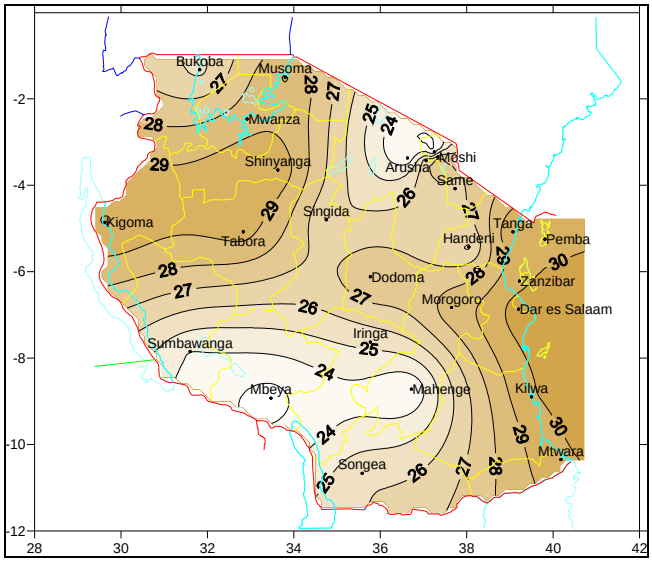

Fig 2A: May 2008 Mean Maximum Temperature (°C)

The lowest value of the mean minimum temperature was about 9.5 °C observed at Mbeya, while the highest value was about 24.1 °C recorded at Pemba as shown in Fig. 2B. Mbeya town reported the lowest 10 day minimum temperature of about 9.1 °C during the first dekad of May.

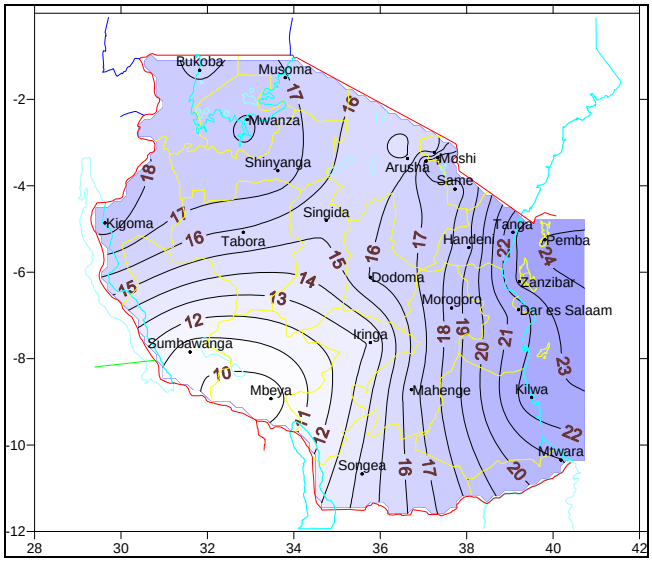

Figure 2B: May 2008 Mean Minimum Temperature (°C)

MEAN SUNSHINE HOURS

Sunshine hours across the country during May indicate that the duration of mean bright sunshine ranged from about 3 hrs/day to above 10 hrs/day as shown in Figure 3. Long bright sunshine hours (> 10 hrs/day) occurred over central areas (Tabora) while short durations (< 3 hrs/day) were experienced over some parts in northeastern highlands. Cloudy conditions over northeastern highlands shortened bright sunshine durations to less than 3 hrs/day.

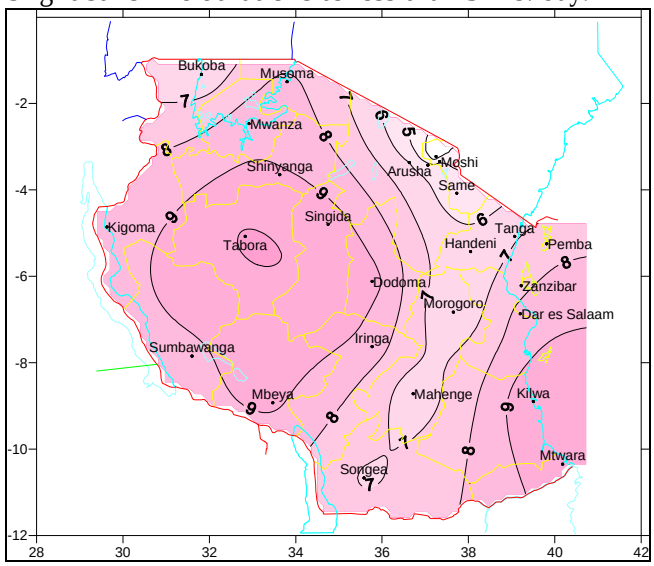

Figure 3: May 2008 Mean Sunshine Hours (hrs/day)

MEAN WIND SPEED

During the period mean wind speed across the country ranged between about 2 to 10 km/hr as indicated in Figure 4. Some parts of northeastern highlands and central regions experienced windy conditions that exceeded 10 km/hr. Wind speeds in May increased slightly compared to previous month. Calm conditions and low wind speeds of about 2 km/hr were recorded over most parts of Ruvuma and Morogoro regions. However, increased windy and dry conditions over central areas have increased

prospects for occurrences of dust devils, wind erosion, and higher evaporation rates.

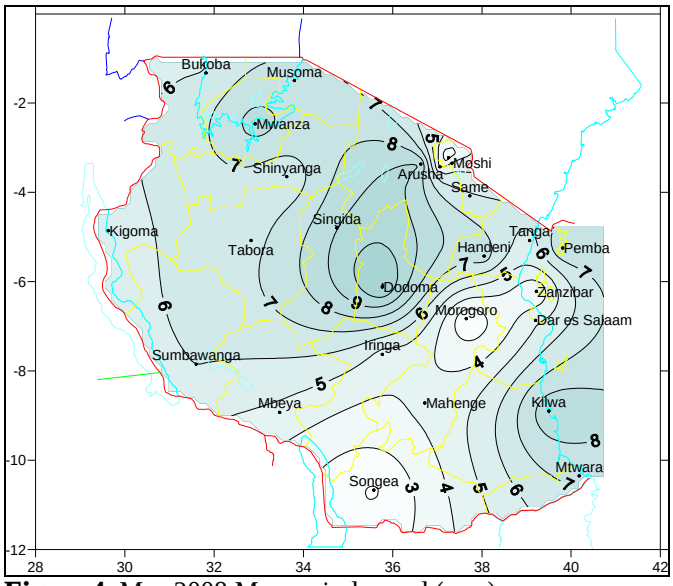

Figure 4: May 2008 Mean wind speed (mm)

SATELLITE INFORMATION

Mean vegetation condition during the third dekad of May is indicated in Figure 5 in a NOAA satellite imagery, depicting the Normalized Difference Vegetation Index (NDVI). Generally

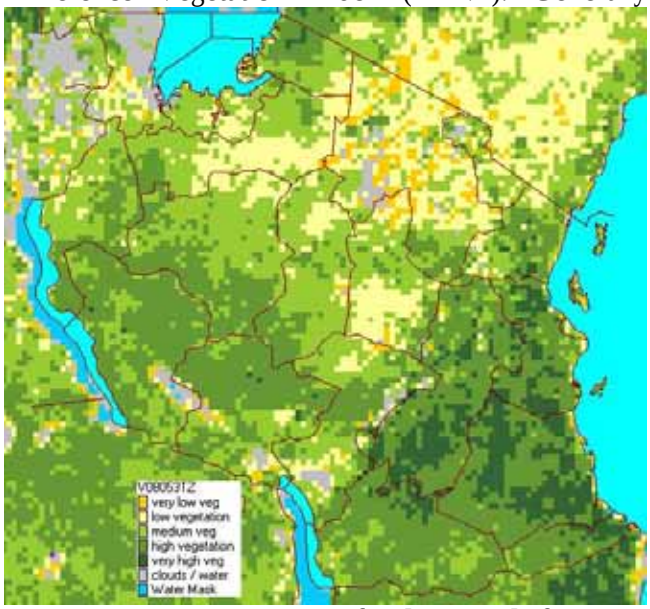

Figure 5: Vegetation for the period of May 21-31, 2008

good vegetation condition was recorded over the southern sector as indicated on the picture being a result of the presence of a high percentage of perennial vegetation that covers the area.

Northeastern areas and some parts over central areas including eastern areas of Shinyanga region were dominated by low vegetation levels. On average, very low vegetation condition is likely to cover most parts of central areas during the month of June.

AGROMETEOROLOGICAL SUMMARY

During the month soil moisture levels continued declining over most parts of the country rendering a conducive environment for harvesting activities and further drying up of the crops (maize, paddy, and millet/sorghum) mainly over unimodal rainfall areas (southwestern highlands, southern, western, and central regions). Crop yield, for 2007/2008 cropping season in these areas is anticipated to be good. Over bimodal rainfall regime areas, early planted crops are being harvested while the late planted maize, rice and beans were between wax ripeness and full ripeness stages and in good state as observed over some parts of northeastern highlands. However, crops over Same (Mkumbara and Mkomazi), Mbulu, Loliondo, and Rombo in the northeastern highlands, and Ngara, Karagwe, Magu, Kwimba, and Tarime in the Lake Victoria basin were adversely affected by persistent low soil moisture conditions. In these areas crops condition was between moderate to poor, as some rain was still desired for proper maturity.

Market supply for cassava over several areas of the country continued fairly well, while pasture conditions and water availability for livestock and wildlife were generally good across the country.

HYDROMETEOROLOGICAL SUMMARY

Water levels in lakes and dams were high as well as river discharges over parts of northeastern areas and Lake Victoria Basin. As for areas over central, southern, southwestern and western regions water levels have started to decline as the dry season continues.

ENVIRONMENTAL SUMMARY

Night temperatures are falling over most parts of the country as we enter the cool/cold season.

EXPECTED SYNOPTIC SITUATION DURING JUNE 2008

During the month of June, the southern hemisphere systems (St. Helena and the Mascarene anticyclones) are expected to continue intensifying, where as the Azores and Siberian anticyclones in the northern hemisphere are expected to continue relaxing, thus, allowing both the zonal and meridional components of the ITCZ to move further northwards. Slightly warm sea surface temperatures over the west tropical Indian Ocean are likely to continue in the month of June and allow a little supply of moisture to northeastern sector of the country. However, the East African ridge is expected to be intense over the country resulting to southerly wind flow from the southern hemisphere. Relatively cold air is expected to set in the southern region and southwestern highlands.

EXPECTED WEATHER SITUATION DURING JUNE 2008

The northern coast and hinterlands (Dar es Salaam, Tanga and northern Morogoro regions and Islands of Zanzibar and Pemba) and northeastern highlands (Arusha, Kilimanjaro and Manyara regions) are expected to feature partly cloudy conditions with light showers over few areas. Lake Victoria basin (Kagera, Mwanza, Shinyanga, and Mara regions) is expected to feature partly cloudy conditions with isolated showers and thunderstorms. Western areas are expected to feature partly cloudy conditions and sunny periods. Central areas (Dodoma and Singida regions), southwestern highlands (Iringa, Rukwa and Mbeya regions), southern areas (Ruvuma region and Mahenge) are expected to feature partly cloudy and cool weather conditions with drizzle mostly over high grounds. Southern coast (Lindi and Mtwara regions) is expected to feature partly cloudy conditions.

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