TANZANIA METEOROLOGICAL AGENCY

MONTHLY WEATHER BULLETIN

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HIGHLIGHTS

- **Most crops over unimodal areas were at harvesting maturity**
- **Soil moisture increased significantly over much of western Lake Victoria basin and coastal areas leading to excessive soil moisture to crops**

SYNOPTIC SUMMARY

During the month of May 2010 climate systems (Azores and Siberian high pressure systems) over the northern hemisphere relaxed while the southern hemisphere high pressure systems (Mascarine and St. Helena) intensified thus resulting into northward migration of the rain zone (Inter-tropical Convergence Zone, ITCZ), towards the northern part of Africa. Sea Surface Temperatures (SSTs) over the southwestern Indian Ocean were generally warm. Southeasterly to easterly low level wind flow was observed over most parts of the country. Towards mid-May easterly wind flow became enhanced causing a surge of moist air mass towards the coastal areas and hinterlands.

WEATHER SUMMARY

RAINFALL

Parts of bimodal areas(the northeastern highlands and northern coast) were more active with some areas reporting monthly rainfall totals exceeding 300 mm as shown in Fig 1A. The highest amount recorded during May 2010 was 551.5 mm at Pemba followed by Lyamungu 351.8 mm, Amani 332.3 mm, Bukoba 242.7 mm, Tukuyu 226.4 mm, Zanzibar 214.8 mm and Tanga 200.9 mm. However, much of unimodal areas were generally dry indicating normal cessation of *Msimu* rains.

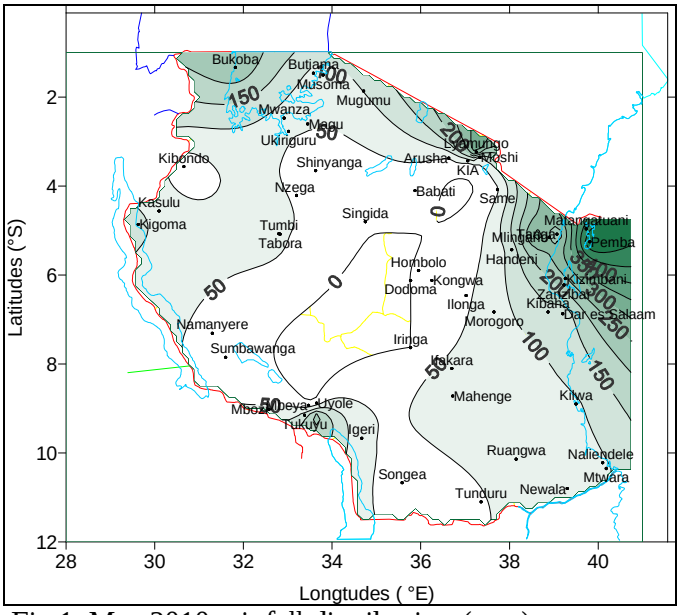

Fig 1: May 2010 rainfall distribution (mm)

MEAN AIR TEMPERATURE

During the month under review temperatures dropped slightly over much of the country with coastal region and its hinterlands, parts of Shinyanga and western regions reporting temperatures

exceeding 30 ºC as indicated in Figure 2A.

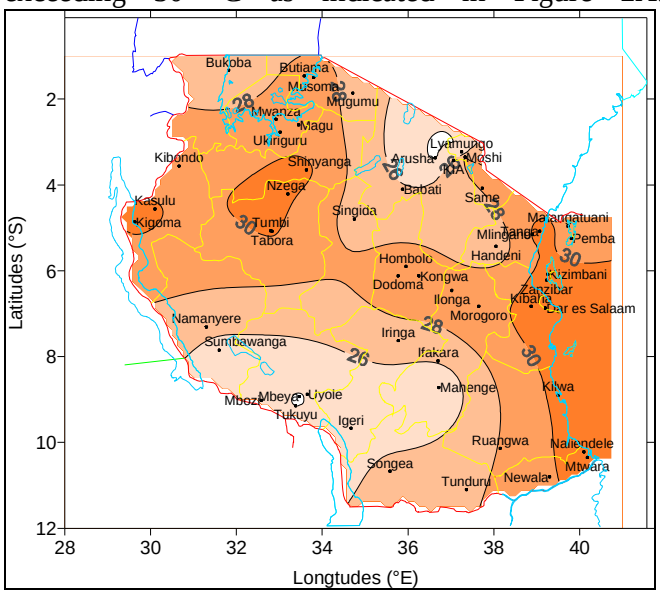

Fig2A: May 2010 Mean Maximum Temperature (°C)

Mean maximum air temperatures recorded ranged between 24ºC and 30ºC. The highest absolute maximum temperature of 31.7°C was recorded at Dar es Salaam during the second dekad of the month. The lowest mean maximum temperature was 23.4°C at Mbeya in the southwestern highlands.

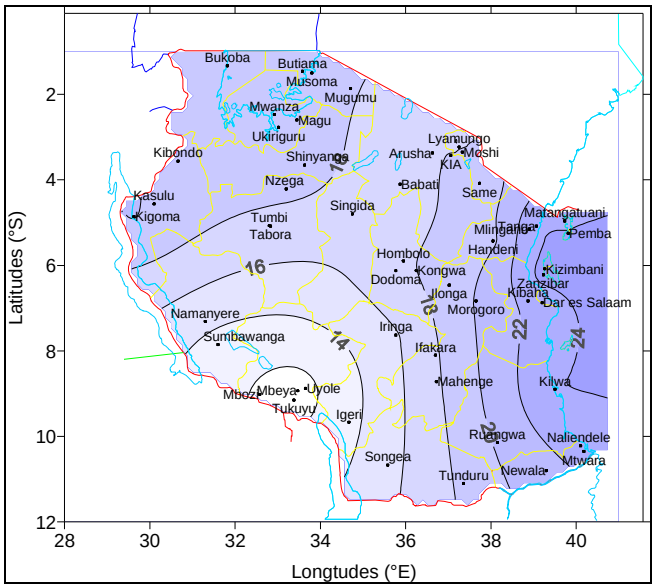

Fig 2B: May 2010 Mean Minimum Temperature (°C)

The mean minimum air temperatures recorded ranged from 12ºC to 24ºC as shown in Fig 2B. The lowest value of mean minimum temperatures recorded was 10.2 °C at Mbeya in the southwestern highlands while the highest value of 25.1 °C was reported at Zanzibar in the northern coast.

MEAN SUNSHINE HOURS

Sunshine duration records across the country during May show that the mean bright sunshine hours ranged from 5hrs/day over northeastern highlands and southern Morogoro (Mahenge areas) to about 9 hrs/day over southwestern highlands, Central (Dodoma region) and Western (Tabora region) as shown in Figure 3.

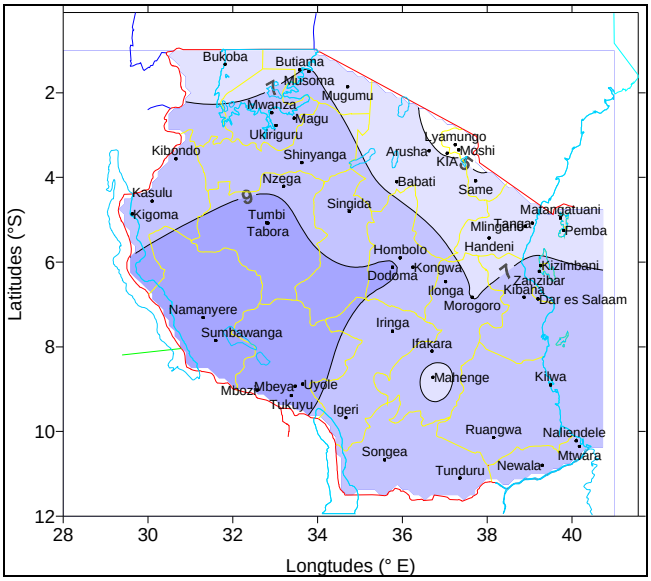

Fig 3: May 2010 Mean Sunshine Hours (hrs/day)

MEAN WIND SPEED

Mean wind speeds across the country ranged from 3 to more than 9 km/hr during the month as shown in Figure 4. Some parts of central and southwestern highlands experienced wind speeds exceeding 9 km/hr. Low wind speeds of below 3km/hr were recorded over some parts of Morogoro, Songea and Lyamungo. Windy conditions enhanced evaporation rates particularly over central region.

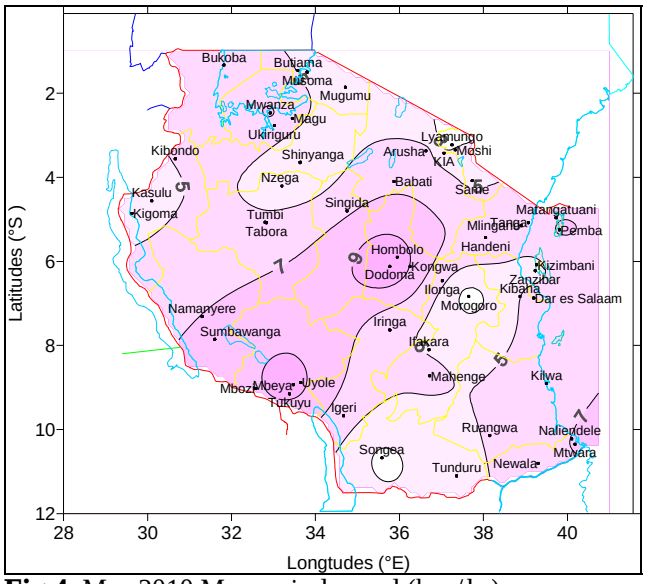

Fig 4: May 2010 Mean wind speed (km/hr)

Agrometeorological summary

During the month of May 2010 crops including maize, paddy and beans over most areas of bimodal rainfall pattern had by the end of the month reached stages ranging from advanced vegetative to full ripeness. Most crops were generally in good state over the northeastern highlands despite extensive dry spells experienced during the month, particularly over some lowland areas of Hai and Same districts. Similar observations were noted over northern coast (Tanga and Coast regions). As for unimodal areas most crops particularly maize, beans, paddy, sunflower, sorghum and millet were generally at harvesting maturity. The second phase planted beans crop was progressing well at flowering to ripeness stage and in good state. Paddy crop in moderate state was from wax to harvesting stage, while wheat crop mainly over southwestern highlands (Mbeya and Njombe areas) was at between vegetative to tasseling stage and was progressing well. A few areas like Ismani in Iringa (north) experienced poor crop performance due to inadequate soil moisture supply enhanced by earlier cessation of the seasonal rains.

Market supply for cassava over several areas continued fairly well.

Pasture and water availability are good and livestock conditions are normal.

HYDROMETEOROLOGICAL SUMMARY

The observed rains in May, have improved water levels in lakes and dams and rivers in their respective catchments and few cases of river floods observed**.** Water availability for human, industrial and energy generation has improved and should be used sparingly.

ENVIRONMENTAL SUMMARY

Cool temperatures were experienced over most areas of the country although some had localized variations of high temperatures.

EXPECTED SYNOPTIC SITUATION DURING JUNE 2010

Sea Surface Temperatures (SSTs) are projected to remain warm over southwestern tropical Indian Ocean including the Mozambique channel. Atmospheric temperatures are likely to be above normal over most areas. This condition indicates a possibility of relatively convective environment and occasional moist southerly flow during the month of June, 2010, mainly over coastal areas, southwestern highlands and southern regions.

EXPECTED WEATHER DURING JUNE 2010

Lake Victoria basin (Kagera, Mwanza and Mara regions) and Kibondo areas are expected to feature normal rainfall. Shinyanga is expected to experience dry and warm conditions. Western regions (Kigoma and Tabora regions) are expected to feature normal dry condition with a likelihood of few showers over Kigoma. Southwestern highlands (Iringa, Rukwa, Mbeya and Ruvuma region) are expected to feature off-seasonal rainfall over high grounds. Temperatures are likely to be slightly lower (chilly mornings and nights) mainly over high grounds occasionally spreading to other areas. Northern coast (Dar es Salaam, Tanga, and the isles of Unguja and Pemba) are expected to feature

occasional showers during the month as a result of warming over the western Indian Ocean while northern Morogoro is likely to be generally dry.
Central areas (Dodoma and Singida regions) are expected to feature mainly dry and windy conditions. Relatively low temperatures are likely to occur during nights and early morning hours. Northeastern highlands (Kilimanjaro, Arusha and Manyara regions) are expected to experience mainly normal rainfall conditions. Southern coast (Mtwara and Lindi regions) is expected to experience occasional rains mainly over coastal belt

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