TANZANIA METEOROLOGICAL AGENCY

MONTHLY WEATHER BULLETIN

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HIGHLIGHTS

- **Weeding was the major activity occupying farmers in bimodal areas**
- **Over unimodal areas most crops were at vegetative to full ripeness stages**
- **Soil moisture increased significantly over much of western Lake Victoria basin and coastal leading to short term excessive soil moisture to crops**

SYNOPTIC SUMMARY

During April 2010 the climate systems (Azores and Siberian anticyclones) over the northern hemisphere relaxed while the southern systems (Mascarene and St. Helena anticyclones) intensified significantly thus resulting into a northward migration of the Inter-Tropical Convergence Zone (ITCZ), the rain-making mechanism, towards the northern part of the country. Sea Surface Temperatures (SSTs) over the southwestern Indian Ocean were persistently warm. Southeasterly to easterly low level wind flow was observed over most parts of the country. Towards the end of the month of April there was a heavy cloud extending from Southwestern Indian Ocean spreading over the whole coastal belt of the country. The cloud which was associated with easterly waves enhanced rainfall activities over the areas.

WEATHER SUMMARY

RAINFALL

Parts of Lake Victoria Basin, northeastern highlands and northern coast were more active with some areas reporting monthly rainfall totals exceeding 400 mm as shown in Fig 1A. The highest amount recorded during April 2010 was 529.4 mm at Lyamungu mm followed by Moshi 479.2 mm, Pemba 441.8 mm, Bukoba 425.1 mm, and Amani (Tanga) 408.8 mm. Comparing April 2010 and 2009 with long term mean rainfall, Fig 1B depicts wetter April in 2010 than 2009 over much of the country. However, some stations over unimodal areas, central (Dodoma and Singida), western (Kigoma and Tabora) and parts of southwestern highlands (Sumbawanga) experienced below normal rainfall during the month under review as indicated in Fig 1B.

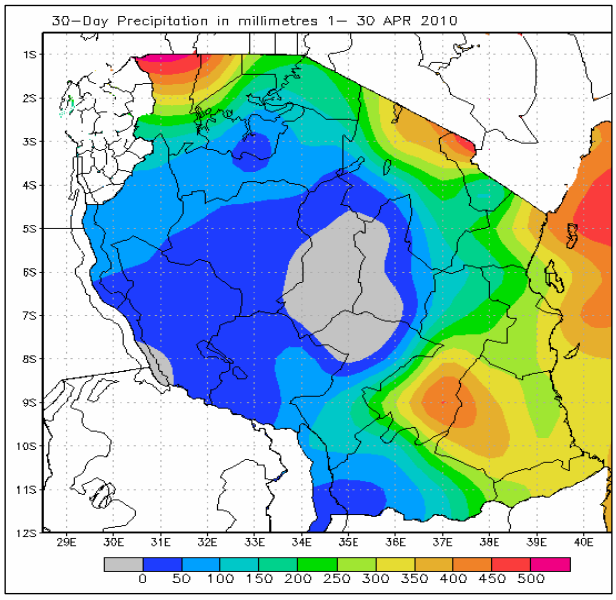

Fig 1A: April 2010 rainfall distribution (mm)

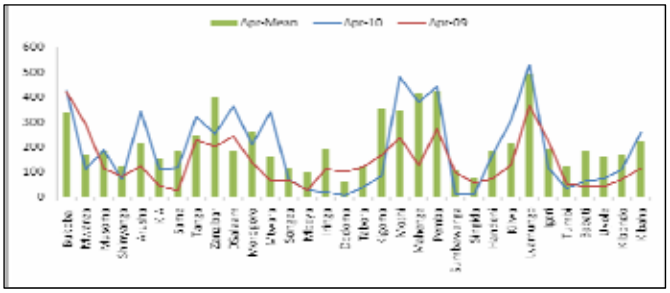

Fig 1B: Comparing rainfall distribution during April 2010 and 2009 and normal.

MEAN AIR TEMPERATURE

During the month under review the temperatures dropped slightly over much of the country with coastal region and its hinterlands and western regions reporting temperatures exceeding 30 ºC as indicated in Figure 2A.

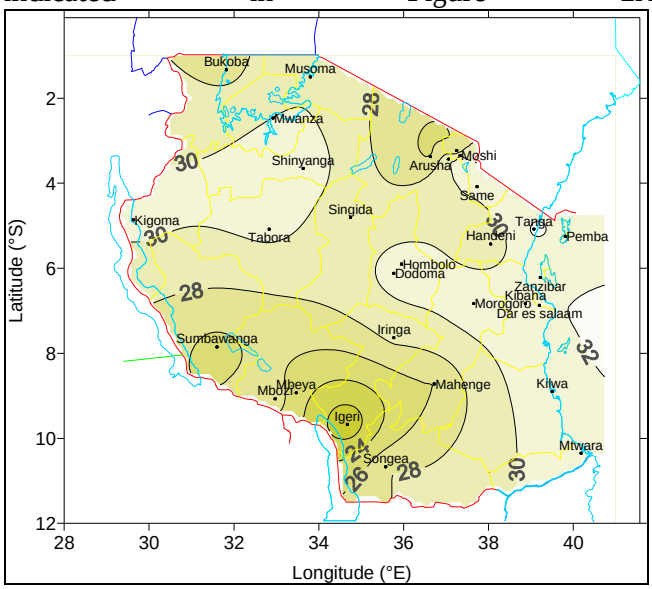

Fig2A: April 2010 Mean Maximum Temperature (°C)

Mean maximum air temperatures recorded ranged between 22ºC and 32ºC. The highest absolute maximum temperature of 32.2°C was recorded at Dar es Salaam during the second dekad of the month. The lowest mean maximum temperature was 19.7°C at Igeri in southern Iringa region.

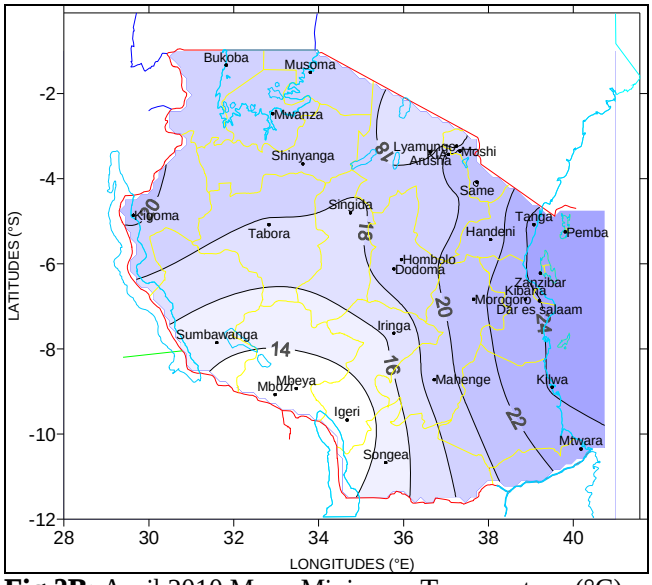

Fig 2B: April 2010 Mean Minimum Temperature (°C)

The mean minimum air temperatures recorded ranged from 14ºC to 24ºC as shown in Fig 2B. The lowest value of mean minimum temperatures recorded was 12.8 °C at Mbeya in the southwestern highlands while the highest value of 25.5 °C was reported at Pemba in the northern coast.

MEAN SUNSHINE HOURS

Sunshine duration records across the country during April show that the mean bright sunshine hours ranged from about 7 hrs/day over southwestern highlands to more than 9 hrs/day over central, western and southwestern highlands as shown in Figure 3.

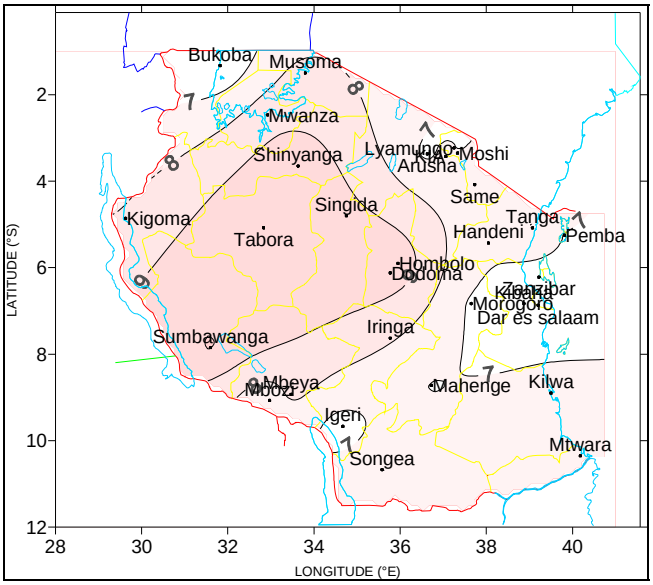

Fig 3: April 2010 Mean Sunshine Hours (hrs/day)

MEAN WIND SPEED

Mean wind speeds across the country ranged between 2 to more than 10 km/hr during the month of April as shown in Figure 4. Some parts of northeastern highlands, central, and southwestern highlands experienced wind speeds exceeding 8 km/hr. Low wind speeds of below 2km/hr were recorded over some parts of Morogoro. Windy conditions enhanced evaporation rates particularly over central regions which had a premature cessation of rainfall.

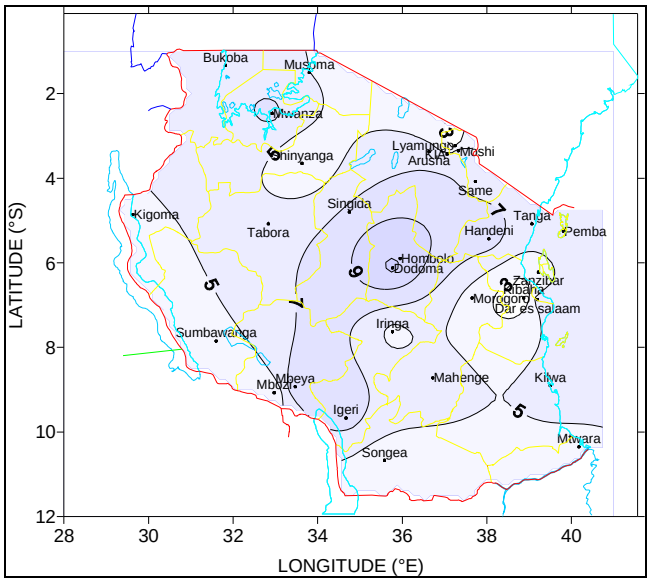

Fig 4: April 2010 Mean wind speed (km/hr)

AGROMETEOROLOGICAL SUMMARY

During the month, soil moisture increased significantly over much of western Lake Victoria basin and coastal belt leading to short term excessive soil moisture to crops. Most areas over bimodal rainfall pattern had crops mainly maize, paddy and beans ranging from early vegetative (late planting) to advanced vegetative growth stages (for the early planted crops). Crops were generally in good state as observed mainly over lowland areas of northeastern highlands (Hai and Same districts) and northern coast (Tanga and Coast regions) where soil moisture supply from *Masika* rains was adequate. Weeding was the major activity that occupied most farmers in bimodal areas. Over unimodal areas most crops particularly maize, beans, paddy, sunflower and sorghum were generally at vegetative to full ripeness stages between moderate and good state. The early planted beans mainly over higher altitude areas were harvested and the second planting phase was in progress at vegetative stage. Paddy crop in moderate state was from early vegetative to wax ripeness stages, while planting of wheat mainly over parts of Mbeya region was almost over and the crop looks good at emergence stage. Desert locusts which had broken out in mid April in Stalike and Itenka villages in Mpanda district, Rukwa region were contained within a short time.

Market supply for cassava over several areas continued fairly well.

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

HYDROMETEOROLOGICAL SUMMARY

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

ENVIRONMENTAL SUMMARY

Cool temperatures are coming over most areas in the country although some areas had local variations of high temperatures.

EXPECTED SYNOPTIC SITUATION DURING MAY 2010

Sea Surface Temperatures (SSTs) in May 2010 are projected to be generally warm over south-western tropical Indian Ocean coupled with expected enhanced easterly wind flow. The ITCZ is also expected to migrate further northwards over the northern parts of the country. Moreover, SSTs over the Mozambique Channel are expected to remain warm indicating a possibility of moist southerly flow for most of the month of May 2010.

EXPECTED WEATHER DURING MAY 2010

Lake Victoria basin (Kagera, Mwanza, Mara regions and Kibondo area) is expected to feature normal to above normal rainfall over some areas. Mainly normal rainfall is expected over Shinyanga. **Western (Kigoma and Tabora regions),** the seasonal rains are expected to be normal to above normal with a likelihood of decreasing rainfall over Tabora. **Southwestern highlands (Iringa, Rukwa and Mbeya and southern region)** are expected to feature normal

rainfall over most areas. High grounds are expected to feature outbreaks of moderate to heavy rains. Falling night temperatures associated with chilly weather are expected over some areas mainly over high grounds. **Rains over Northern coast (Dar es Salaam, Tanga, Morogoro regions, the isles of Unguja and Pemba Islands)** are expected to be normal during the month of May 2010.

Episodes of heavy rains are expected over the coastal belt and Isles of Unguja and Pemba. **Over Central areas (Dodoma and Singida regions)** the seasonal rains have come to an end over most areas. **Over Northeastern highlands (Kilimanjaro, Arusha and Manyara regions)** the Masika rains are expected to be mainly normal. **Southern coast (Mtwara and Lindi regions)** is expected to experience a few showers.

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