

## MONTHLY WEATHER BULLETIN

ISSN No: 0856-0919, Volume 11 Issue 6

June, 2010

### HIGHLIGHTS

- Over unimodal and bimodal rainfall sectors, crop harvesting was the major activity during the month. Good harvest is anticipated
- Much of the country is expected to experience low Temperatures

### SYNOPTIC SUMMARY

During the month of June 2010 climate systems (Azores and Siberian high pressure systems) over the northern hemisphere relaxed while the southern hemisphere systems (Mascarene and St. Helena high pressure systems) together with the associated East African ridge intensified thus keeping the rain-making mechanism zone i.e. Inter-tropical Convergence Zone (ITCZ), over the northern Africa. Sea Surface Temperatures (SSTs) over the south-western Indian Ocean were generally warm. Southerly to southeasterly low level wind flow was observed over most parts of the country. Towards the end of June occasional easterly wind flow associated with a low level trough resulted into enhanced moisture supply towards the coastal areas and hinterlands.

### WEATHER SUMMARY

### RAINFALL

Parts of northern coast (Islands of Unguja and Pemba) and Lake Victoria basin (Kagera region) reported monthly rainfall totals exceeding 100 mm as shown in Fig 1. The highest amount recorded during the month was 142.4 mm at Pemba followed by Bukoba 111.7 mm and Lyamungo 87.4 mm. Other few stations which received rainfall recorded less than 80 mm, as much of the country was seasonably dry as indicated in Fig 1.

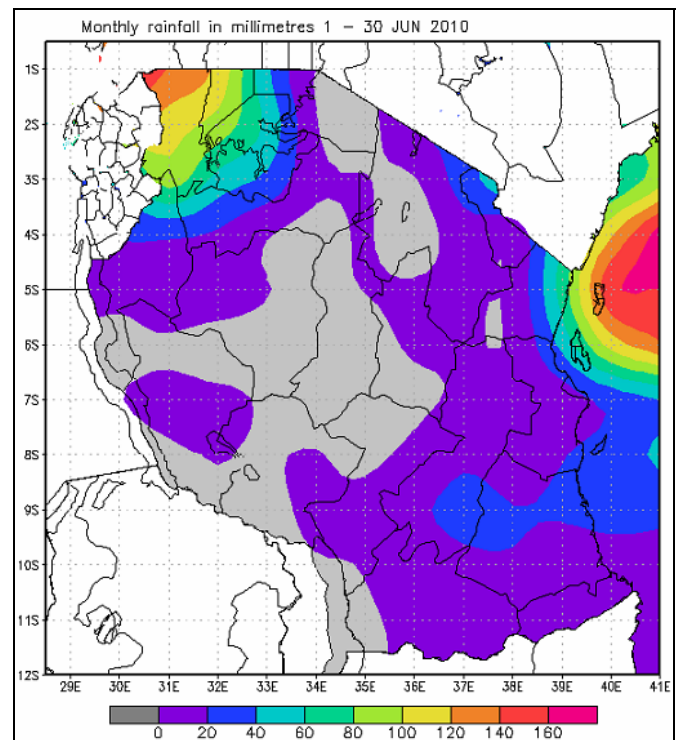
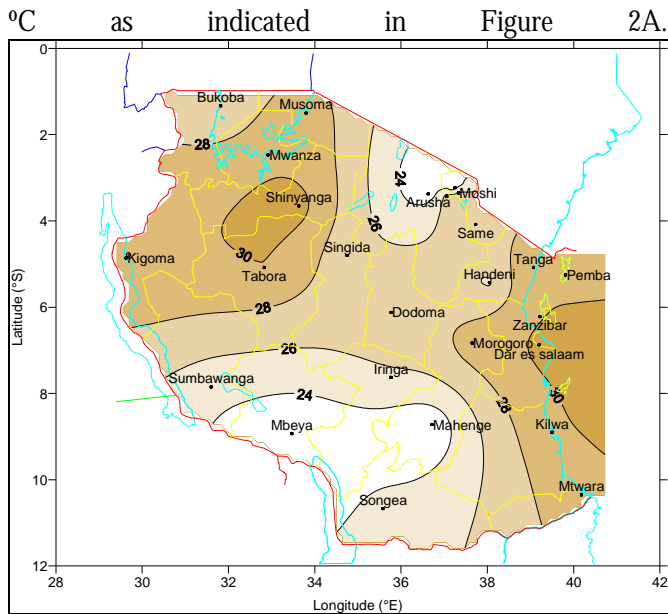


Fig 1: June 2010 rainfall distribution (mm)

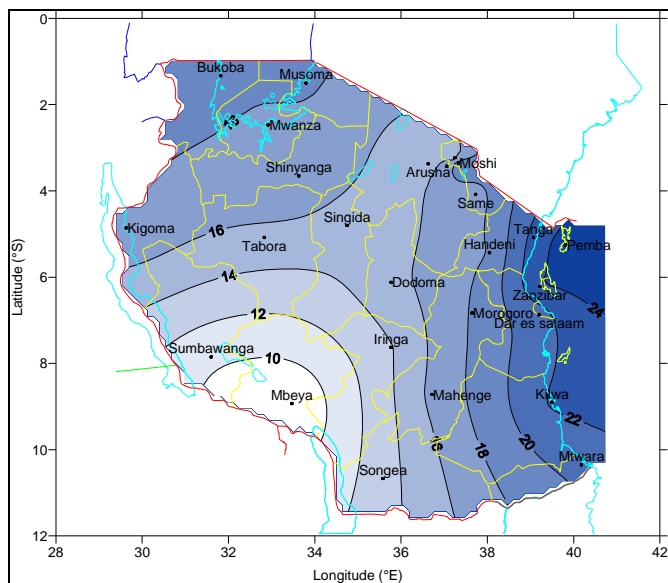
### MEAN AIR TEMPERATURE

During the month under review temperatures dropped slightly over much of the country with few areas of the coastal region and its hinterlands, parts of Shinyanga and western regions reported temperatures exceeding 28



**Fig2A:** June 2010 Mean Maximum Temperature (°C)

Mean maximum air temperatures records ranged between 24°C and 30°C. The highest absolute maximum temperature of 31°C was recorded at Dar es Salaam during the first dekad of the month and at Kigoma during the third dekad. The lowest mean maximum temperature value of 22°C was recorded at Lyamungo and Arusha station over the northeastern highlands.



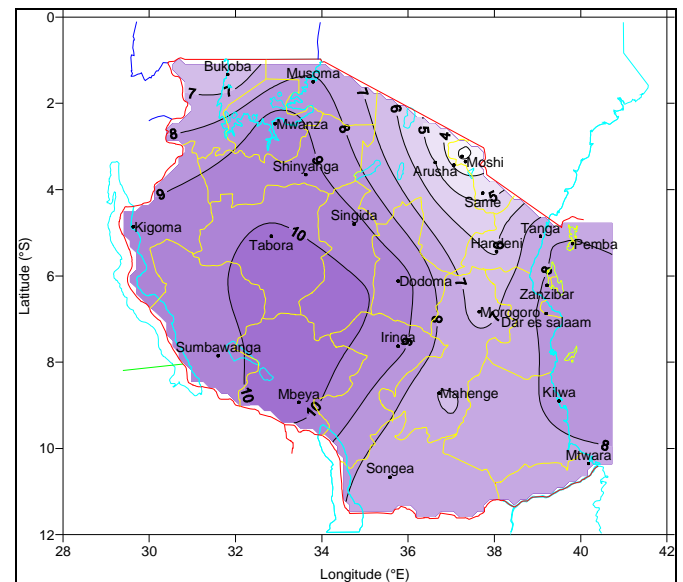
**Fig 2B:** June 2010 Mean Minimum Temperature (°C)

Mean minimum air temperatures recorded ranged from 10°C to 24°C as shown in Fig 2B. The lowest value of mean minimum temperatures

recorded was 8 °C at Mbeya over the southwestern highlands while the highest value of 25°C was reported at Pemba in the northern coast.

**MEAN SUNSHINE HOURS**

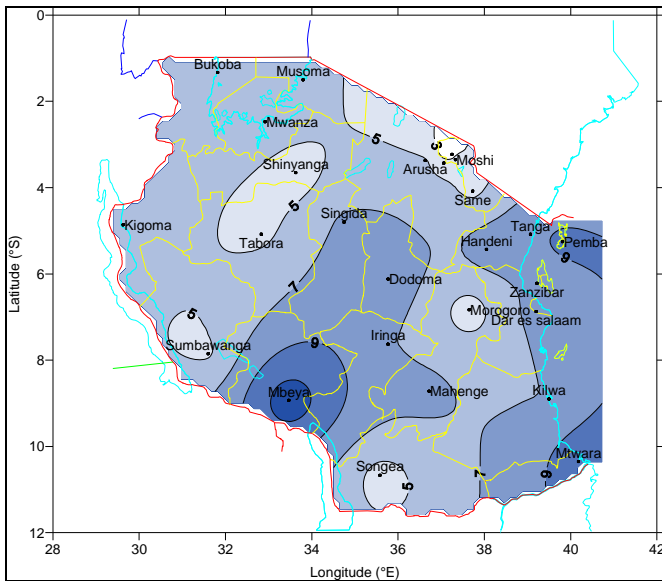
Sunshine duration records across the country during June show that the mean bright sunshine hours ranged from 3 hrs/day over northeastern highlands to about 10 hrs/day over southwestern highlands and western (Tabora region) as shown in Figure 3.



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

**MEAN WIND SPEED**

Mean wind speeds across the country ranged from 3 to 11 km/hr during the month as shown in Figure 4. Some parts of southwestern highlands experienced wind speeds exceeding 11 km/hr. Low wind speeds of below 5 km/hr were recorded over some parts of Morogoro, Songea, Shinyanga, Tabora, Rukwa and Lyamungo. Higher wind speed coupled with drier conditions enhanced prospects for occurrences of dust devils, wind erosion, and higher evaporation rates particularly over central region.



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

**AGROMETEOROLOGICAL SUMMARY**

During the month of June 2010 most farmers were engaged in harvesting of crops mainly maize, paddy and beans over most areas of bimodal rainfall regime. Most crops were generally in good state as reported over the Lake Victoria basin and northeastern highlands. Crop harvest is anticipated to be good over most of the areas though poor harvest of maize have been reported over Magu, Kwimba and Kilosa district due to inadequate soil moisture supply enhanced by earlier cessation of the seasonal rains.

Over unimodal areas, farmers were continuing with maize, beans, paddy, sunflower, sorghum and millet harvest, and yield prospects is generally good, though some areas like Ismani in Iringa (north) and Nzega in Tabora 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**

Water levels in lakes, dams and river flows were maintained during the month, thus water availability for human and industrial use, and hydro power generation is good.

**ENVIRONMENTAL SUMMARY**

Cool temperatures over most areas in the country have led to comfortable conditions although over high ground areas cold temperatures were uncomfortable as reported from Mbulu and Meru districts (northeastern highlands and southwestern highlands).

**EXPECTED SYNOPTIC SITUATION DURING JULY 2010**

Sea Surface Temperatures (SSTs) are projected to remain warm over south-western tropical Indian Ocean including the Mozambique Channel. Southeasterly to easterly wind anomaly is projected over the Indian Ocean coupled with atmospheric convection and warm Sea surface Temperatures. This condition indicates enhanced phase of convection for the month of July 2010 mainly for the Coastal areas and southwestern highlands.

**EXPECTED WEATHER DURING JULY 2010**

Lake Victoria basin (Kagera, Mwanza, Mara regions and Kibondo areas): is expected to feature normal dry season. Shinyanga is expected to feature dry and warm conditions.

Western region (Kigoma and Tabora regions): is expected to feature normal dry condition with a likelihood of light 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 and Tanga regions, the isles of Unguja and Pemba): are expected to feature enhanced rainfall during the month as a result of enhanced convection associated with warming over the western Indian Ocean occasionally including southern Morogoro.

Central areas (Dodoma and Singida regions): are expected to feature mainly dry, windy and dust devils 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 relatively low temperatures, dry conditions and occasional light rains over high grounds.

Southern coast (Mtwara and Lindi regions) is expected to experience: occasional showers

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