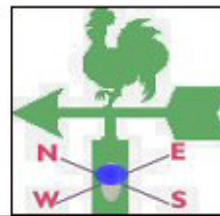




TANZANIA METEOROLOGICAL AGENCY



MONTHLY WEATHER BULLETIN

ISSN No: 0856-0919, Volume 11 Issue 10

October, 2010

HIGHLIGHTS

Soil moisture improved slightly during the third dekad of the month over areas surrounding the Lake Victoria, though early planted beans and maize over those areas particularly Kagera region had already been affected by inadequate supply of soil moisture.

SYNOPTIC SUMMARY

During October 2010 southern hemisphere systems (Mascarine and St. Helena anticyclones) remained relatively intense while the northern hemisphere high pressure systems (Azores and Siberian anticyclones) intensified gradually and shifted southwards. A moderate East African Ridge persisted over the country during the same period. The rain-making mechanism, the Inter-tropical Convergence Zone (ITCZ) slightly moved southwards although it remained diffused over the country. *La Niña* conditions (below normal sea surface temperatures) persisted over much of equatorial Pacific Ocean. Enhanced low level westerly anomalies were observed over the Eastern and Central Indian Ocean whereas weak westerly anomalies were observed over the western Indian Ocean. A weak southeasterly low level wind flow was observed over most parts of the country sustaining injection of relatively less moist air mass towards the country.

WEATHER SUMMARY

RAINFALL

During October, the start of short rainfall season (*Vuli*) was reported over some regions that experience bimodal rainfall pattern in the Lake Victoria basin, northern Kigoma, and northern coastal belt. However, over northeastern highlands *Vuli* rains had not started. Rainfall exceeding 50 mm was recorded at Mwanza 156.9 mm, Zanzibar 86.6 mm, Ukiriguru 80.1 mm, Kibondo 79.2 mm, Musoma 76.0 mm, Bukoba 73.5 mm, Pemba

64.7 mm, and Kigoma 60.2 mm. Very few stations reported rainfall between 10 and 50 mm. Much of the unimodal regions (central, western, and southwestern highlands) were seasonally dry as shown in Figure 1.

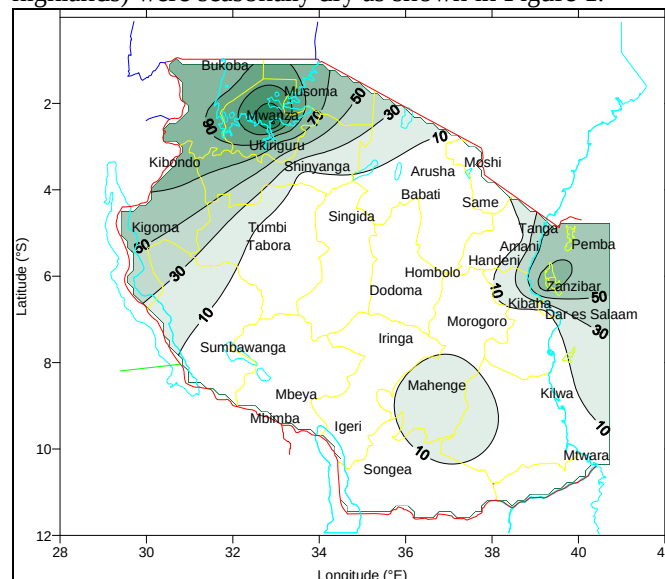


Fig. 1: October 2010 Rainfall distribution in millimeters

MEAN AIR TEMPERATURE

Temperatures were generally warm during the month indicating onset of warm season in the country. Areas over northeastern highlands, coastal region and its hinterlands, central, and Shinyanga and Tabora regions, recorded monthly mean maximum temperatures exceeding 31 °C as indicated in Figure 2A.

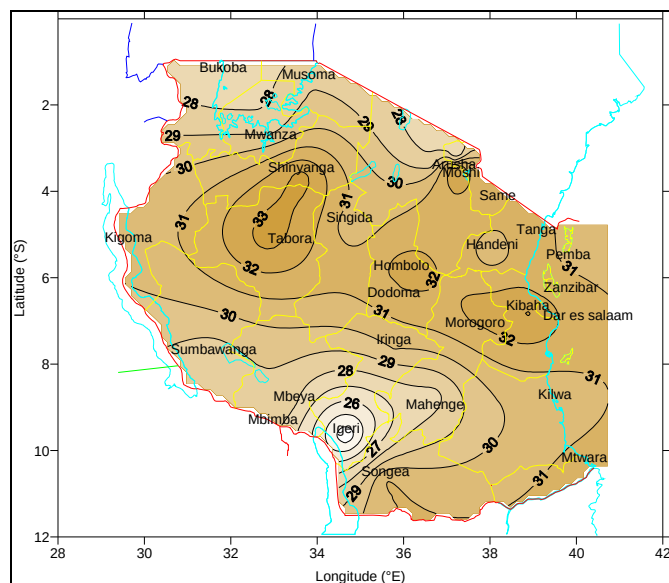


Fig 2A: October 2010 Mean Maximum Temperature (°C)

Mean maximum air temperatures records ranged between 24°C and 33°C. The highest absolute maximum temperature of 33.7°C was recorded at Morogoro during the second dekad of the month. Igeri over southwestern highlands recorded the lowest day time values in the second dekad with a maximum temperature of 22.8°C.

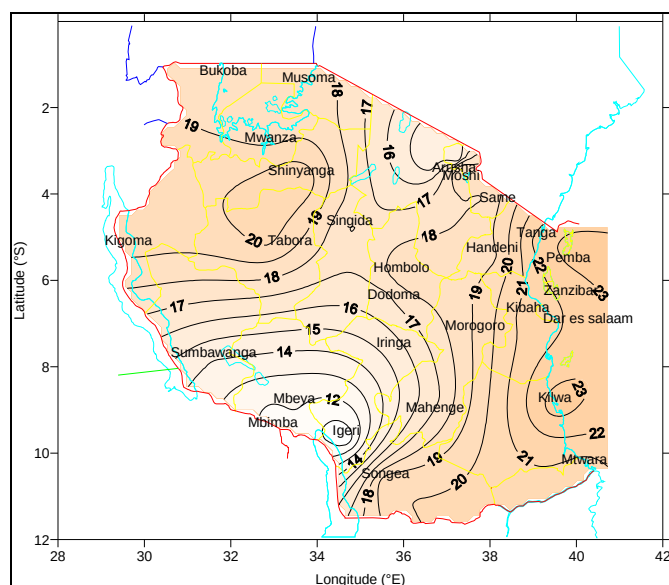


Fig 2B: October 2010 Mean Minimum Temperature (°C)

Mean minimum air temperatures recorded ranged from 10°C to 23°C as shown in Fig 2B. The lowest value of mean minimum temperature recorded was 10.2°C at Igeri over the southwestern highlands while the highest value of 23.3 °C was reported at Pemba in the northern coast.

MEAN SUNSHINE HOURS

Sunshine duration records across the country during October show that the mean bright sunshine hours ranged from 6 hrs/day over western Lake Victoria basin to about 10 hrs/day over central and southern and coastal areas as shown in Figure 3.

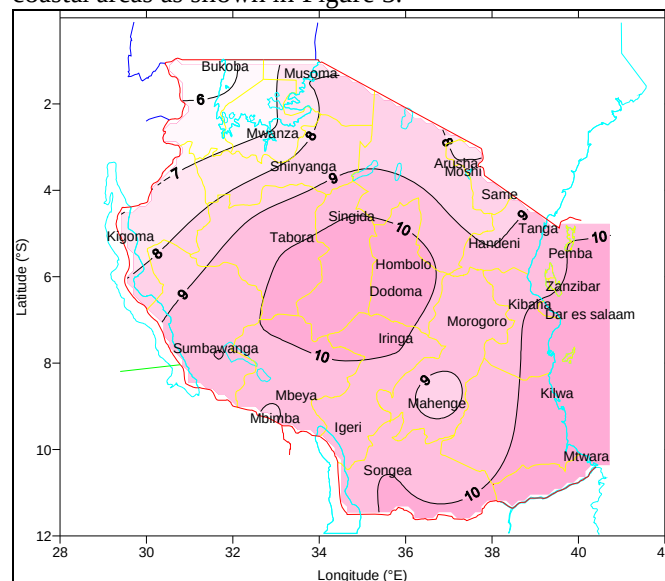


Fig 3: October 2010 Mean Sunshine Hours (hrs/day)

MEAN WIND SPEED

Mean wind speeds across the country ranged from 4 to 14 km/hr during the month as shown in Fig. 3.

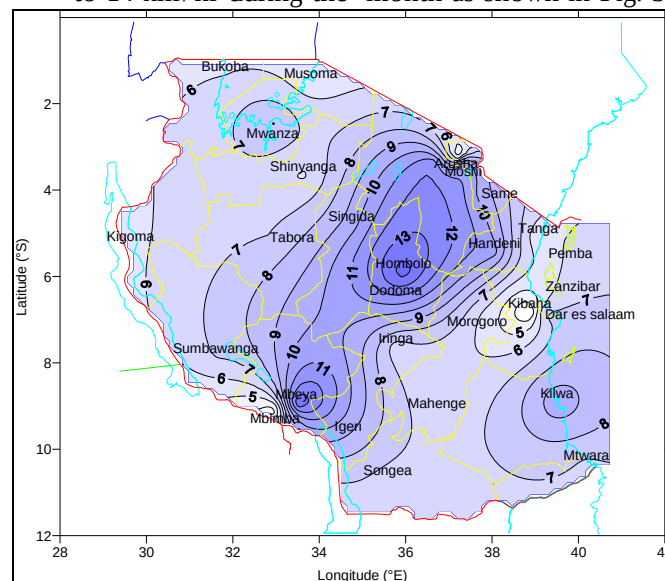


Fig 4: October 2010 Mean wind speed (km/hr)

Some parts of southwestern highlands and central areas experienced wind speeds exceeding 13 km/hr. Low wind speeds of below 5 km/hr were recorded over some parts of northern coast and northeastern highlands. Higher wind speeds coupled with drier conditions enhanced prospects for occurrences of dust devils, wind erosion, and higher evaporation rates.

AGROMETEOROLOGICAL SUMMARY

Soil moisture improved slightly during the third dekad of the month over areas surrounding the Lake Victoria, though early planted beans and maize over those areas particularly Kagera region had already been affected by inadequate supply of soil moisture. Dry conditions that persisted in the remaining areas impeded the usual activities during this time thus land preparation continued as the major activity. Over unimodal areas land preparations are expected to start in November 2010. The dry conditions on the other hand have adversely affected availability of water and pastures for livestock and wildlife largely over northeastern highlands (Arusha, Manyara, and Kilimanjaro regions), central (Dodoma and Singida regions) and parts of southern coast regions of the country.

HYDROMETEOROLOGICAL SUMMARY

Water levels in lakes, dams and river flows have declined due to the prevailing dry season, thus water for human and industrial usage and hydro power generation should be used sparingly.

ENVIRONMENTAL SUMMARY

Temperatures over most areas in the country were generally warm leading to uncomfortable conditions. The trend is towards warming during the coming dekad.

EXPECTED SYNOPTIC SITUATION DURING NOVEMBER 2010

During November 2010, the Azores High and Siberian High with the Arabian ridge are expected to intensify more and push further southwards. The St. Helena and Mascarin high together with the East African ridge are expected to slightly relax and push a little bit southwards and hence provide room for the rain belt (ITCZ) to migrate southwards towards the equatorial areas. Intensification of the Azores and Siberian Highs is likely to allow a northerly wind flow towards the country. *La Niña* event is predicted to persist across much of the Pacific Ocean and SSTs are predicted to reach -1.5°C . In this regard less moisture is expected to be pushed towards the country as a result of a weak easterly wind flow. Moreover, weak northwesterly winds are expected to bring less moist air mass from equatorial Africa and northern parts of Congo basin towards Lake Zone areas and Western region (Kigoma and western Tabora).

EXPECTED WEATHER DURING NOVEMBER 2010

Lake Victoria basin (Kagera, Mwanza, Mara, Shinyanga regions) is likely to feature normal rainfall with scattered thunderstorms. Western regions (Kigoma, Northern Rukwa and Tabora regions) are likely to feature normal rainfall with scattered thunderstorms. Southwestern highlands (Southern Rukwa, Iringa and Mbeya region) are likely to feature normal to below normal rainfall. Northern coast (Dar es Salaam and Tanga regions, the isles of Unguja and Pemba) and Central areas (Dodoma and Singida regions) are likely to feature below normal rainfall.

Northeastern highlands (Kilimanjaro, Arusha and Manyara regions) are likely to feature normal rainfall. Southern coast and Southern region (Mtwara, Lindi and Ruvuma regions) are likely to feature below normal rainfall but there are small chances of getting normal rainfall over Mtwara and Lindi regions.

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