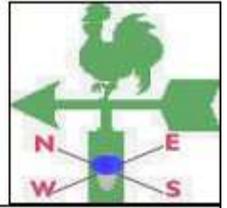




TANZANIA METEOROLOGICAL AGENCY



MONTHLY WEATHER BULLETIN

ISSN No: 0856-0919, Volume 10 Issue 10

October 2008

HIGHLIGHTS

- 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
- During November poor vegetation conditions is likely to persist over central regions and parts of northeastern highlands.

SYNOPTIC SUMMARY

During October 2008, the southern hemisphere systems, St Helena and Mascarene high pressure cells relaxed while the Siberian high pressure continued to intensify resulting into southward migration of the Inter-tropical Convergence Zone (ITCZ). An easterly to southeasterly flow resulted in low level wind convergence which enhanced a few showers and thunderstorms over coastal areas and hinterlands. However, the development of the tropical cyclone 'Asma' over north eastern Madagascar resulted into a dry spell over the coastal areas during the second and third weeks of October 2008 disrupting the onset of short rains over the northern coast and northeastern highlands. Active meridional component of ITCZ resulted into increased rainfall activities over the western areas and Lake Victoria Basin.

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 100 mm was recorded at Mwanza 176.2 mm, Bukoba 163.4 mm, Mtwara 149.2 mm, Ngara 145.8 mm,

Musoma 118.7 mm, Kibondo 116.2 mm, Ukiriguru 112.5 mm, Kibaha 105 mm, and Biharamulo 102.3 mm. Very few stations reported rainfall between 40 and 100 mm. Much of the unimodal regions (central, western, and southwestern highlands) were seasonably dry except the southern coast where Mtwara recorded off season rainfall as shown in Figure 1.

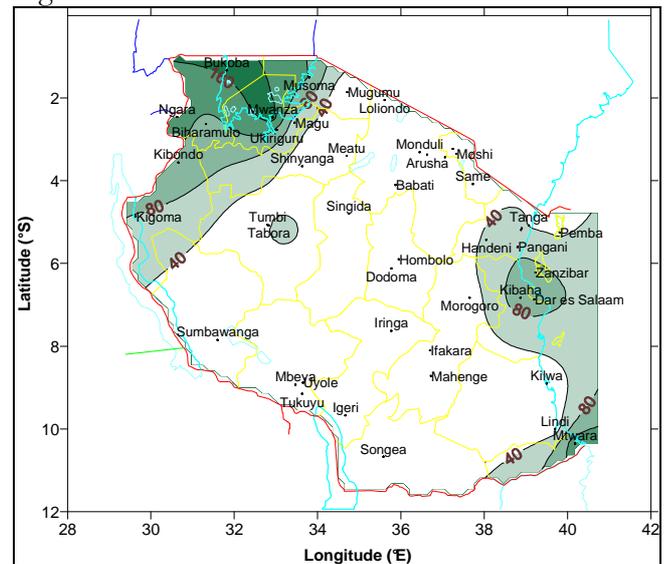


Figure 1: October 2008 Rainfall Distribution (mm)

MEAN AIR TEMPERATURE

Warm temperatures were experienced over much of the country during October indicating onset of the warm season. The mean maximum temperature ranged between just above 32°C and below 27 °C as indicated in Figure 2A. The highest mean maximum temperature recorded during the

month was about 32.6 °C at Shinyanga with an absolute highest maximum of about 33.6 °C during the second dekad of the month. The lowest mean maximum temperature was about 25.9 °C over Bukoba in the Lake Victoria basin. The mean minimum air temperature ranged from just below 13.0 °C to slightly above 24 °C.

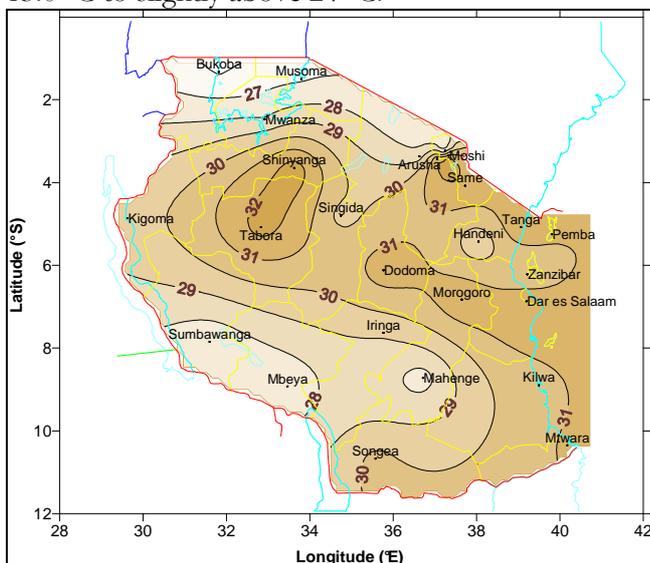


Fig 2A: October 2008 Mean Maximum Temperature (°C)

The lowest value of the mean minimum temperature of about 12.7 °C was recorded at Mbeya, while the highest value of about 24.4 °C was observed at Kilwa Masoko in the southern coast as shown in Fig. 2B.

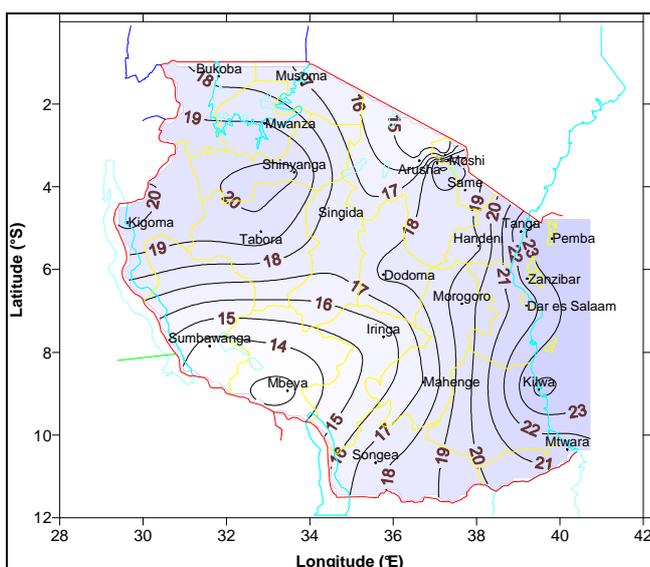


Fig 2B: October 2008 Mean Minimum Temperature (°C)

Mbeya also recorded an absolute minimum temperature of about 11.3 °C during first dekad of the month.

MEAN SUNSHINE HOURS

Sunshine hours across the country during October indicate that the mean duration of bright sunshine hours ranged from about 5 hrs/day to 10 hrs/day as shown in Figure 3. Long bright sunshine hours (> 9 hrs/day) occurred over parts of central, southwestern highlands, and coastal belt including islands of Zanzibar and Pemba. Cloudy conditions shortened bright sunshine durations (< 6 hrs/day) over western Lake Victoria basin as depicted from rainfall map or Figure 1.

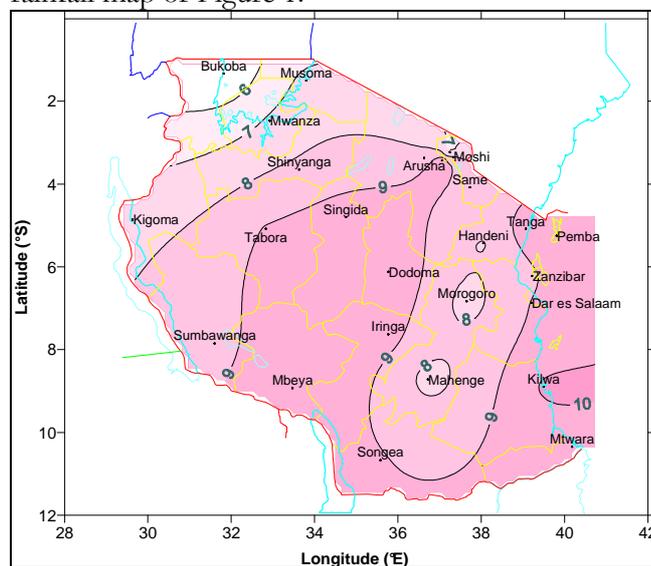


Figure 3: October 2008 Mean Sunshine Hours (hrs/day)

MEAN WIND SPEED

During the period mean wind speeds across the country ranged between about 2 to 13 km/hr as indicated in Figure 4. Some parts of central and northeastern highlands regions experienced windy conditions that exceeded 10 km/hr. Slight wind conditions and low wind speeds of about 6 km/hr were recorded over most parts of Morogoro and Ruvuma regions. Increased windy and dry conditions have increased prospects for occurrences of dust devils, wind erosion, and higher evaporation rates.

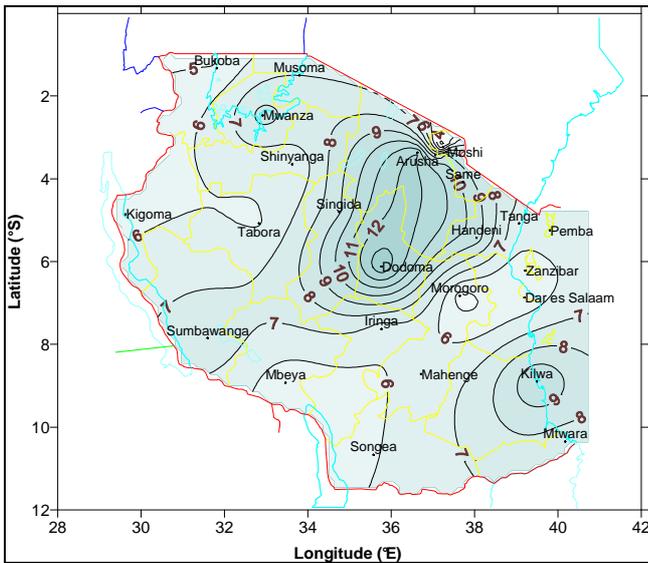


Fig 4: October 2008 Mean wind speed (mm)

SATELLITE INFORMATION

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

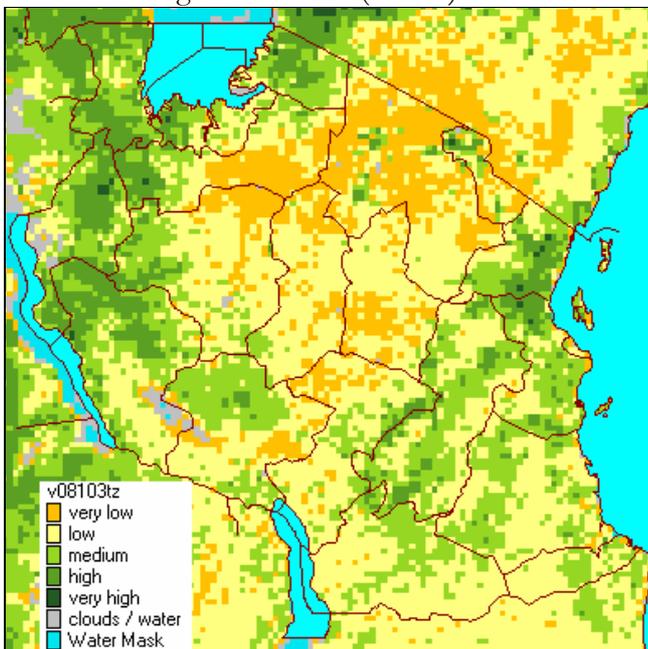


Fig 5: Vegetation for the period of October 21-31, 2008

The status of vegetation condition was generally poor over northeastern highlands (Arusha, Kilimanjaro, and Manyara regions), eastern

Shinyanga region and central areas (Tabora, Singida, and Dodoma regions) and parts of southwestern highlands (Iringa and Mbeya regions) as depicted by very low to low NDVI in Fig 5. However, areas over the coastal belt, western, and Lake Victoria Basin indicate medium to high vegetation greening as a result of some replenished soil moisture levels.

During November poor vegetation conditions are likely to persist over central regions and parts of northeastern highlands depicting delayed improvement in pasture supply for livestock and wildlife.

AGROMETEOROLOGICAL SUMMARY

Most areas particularly in the bimodal sector farmers continued with land preparations and planting of crops mainly maize and beans following soil moisture replenishment. However, the planting activity did not show well as moisture levels were not adequate enough for seed germination. Mixed crop stages were therefore registered during the period ranging from pre-germination to weeding as reported in parts of Lake Victoria basin mainly Kagera region over Karagwe, Ngara and Biharamulo districts as well as Kasulu and Kibondo districts of Kigoma region (north) and northern coast (Kibaha and Handeni districts in Pwani and Tanga regions respectively). Over unimodal sector, farmers were involved with land preparations.

Market supply for cassava over several areas of the country continued fairly well, while pasture conditions and water availability for livestock and wildlife were declining over much of unimodal rainfall regime.

HYDROMETEOROLOGICAL SUMMARY

Low humidity and windy conditions that prevailed during October over much of unimodal rainfall regime resulted into higher evaporation rates leading to a further reduction in water levels in lakes and dams, and river discharges. However, in November expected spreading of *Vuli* rains in the northern sector of the country will boost water levels in lakes

and dams, and river discharges. Consequently water for domestic and industrial purposes should be used sparingly.

ENVIRONMENTAL SUMMARY

The seasonal minimum vegetation level was recorded during October. During November warm temperatures are anticipated over most parts of the country. However, dry and windy conditions over the central areas are likely to increase prospects for diseases such as coughs, colds, pneumonia and asthma.

EXPECTED SYNOPTIC SITUATION DURING NOVEMBER 2008

During the month of November 2008, the southern hemisphere systems (the St. Helena and the Mascarene anticyclones) are expected to continue relaxing, whereas the Azores and Siberian anticyclones in the northern hemisphere will continue to intensify.

Easterly to northeasterly low level convergence associated with influx of moisture from the Indian Ocean are expected to be more organized and enhance rainfall activities over northern coast and northeastern highlands. Near normal to slightly warm Sea Surface Temperature condition over the Global Oceans is expected.

EXPECTED WEATHER SITUATION DURING NOVEMBER 2008

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

Prepared by

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