TANZANIA METEOROLOGICAL AGENCY

MONTHLY WEATHER BULLETIN

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HIGHLIGHTS

Few farmers have started land preparation over unimodal (Southwestern highlands, Western, Southern, Southern coast, and Central) and bimodal (Lake Victoria basin) rainfall regime for the coming farming season.

SYNOPTIC SUMMARY

During the month of September 2009, the climate systems over the northern hemisphere have remained weak, thus, holding the rain making mechanism, Intertropical Convergence Zone (ITCZ) to the north of East Africa. Meanwhile, the southern hemisphere high pressure systems (St. Helena and Mascarene) were relatively strong contributing to extension of a ridge crossing the eastern sector of Tanzania towards Kenya.

WEATHER SUMMARY

RAINFALL

Most areas of the country remained dry during September, except for a few areas over Lake Victoria basin, northern parts of Kigoma region (Kibondo), North eastern highlands and Coastal areas which recorded rainfall amount as shown in Figure 1. Bukoba was leading by 77.7mm followed by Tanga 57.8mm and Mwanza 57.8mm. Other stations received less than 30mm of rainfall for the period, as for Shinyanga 27.1mm, Musoma 20.3, Tanga 10.0mm, Ukiriguru 8.2mm, Amani 4.7mm, Handeni 4.4mm and Dar es Salaam 2.1mm.

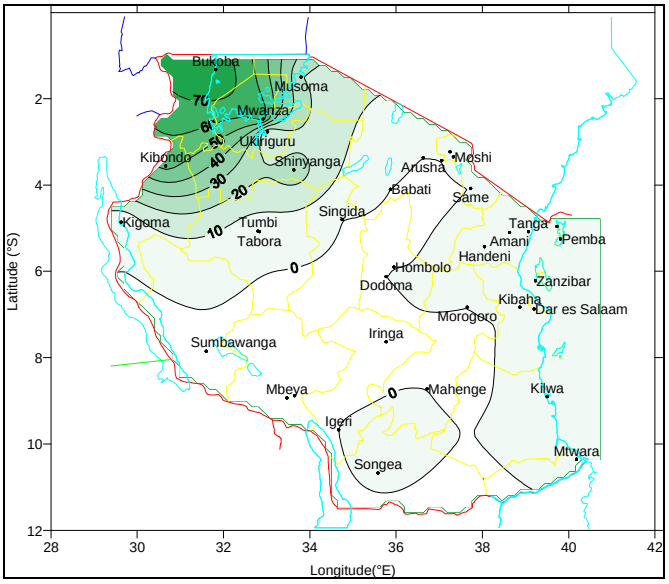

Fig 1: Sept 2009 Rainfall distribution (mm)

MEAN AIR TEMPERATURE

During the month under review the country experienced cool to warm temperatures where cool temperatures were experienced over Southwestern and Northeastern highlands of the

country as indicated in Figure 2B.

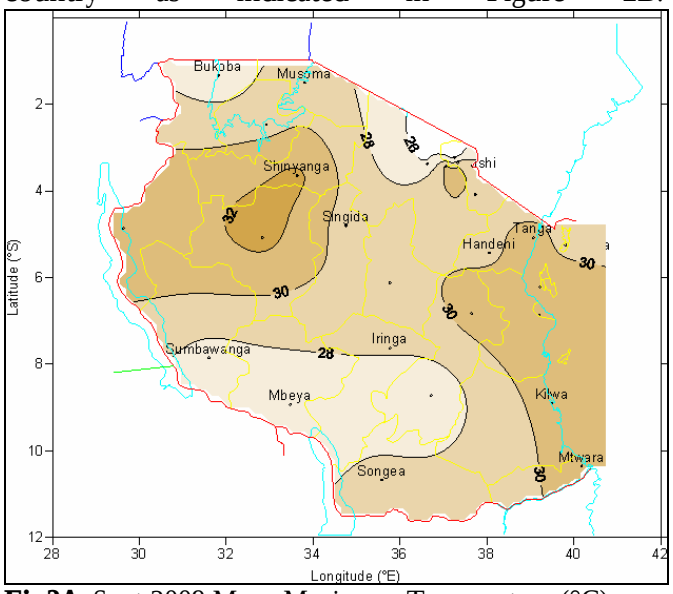

Fig2A: Sept 2009 Mean Maximum Temperature (°C)

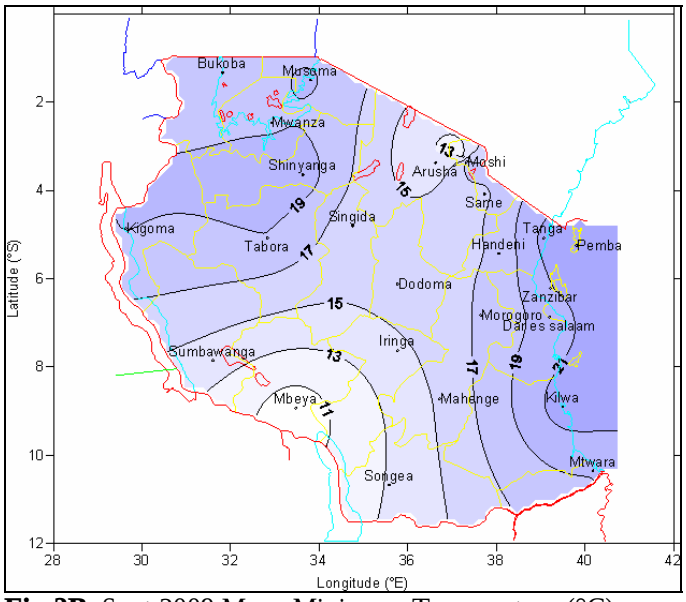

Fig 2B: Sept 2009 Mean Minimum Temperature (°C)

Mean maximum air temperatures ranged between 26 ºC and 32ºC as indicated in Figure 2A. The highest absolute maximum temperature of 33.7°C was recorded at Shinyanga in the second dekad of the month. The lowest mean maximum temperature was 23.1 °C at Lyamungo in the north eastern highlands. Mean minimum air temperatures ranged from 11 ºC to 21 ºC as shown in Figure 2B. The lowest value of mean minimum temperatures was 8.7 °C at Mbeya in the south western highlands while the highest value of 23.3°C was at Pemba over the coastal belt. During the first dekad of the month Mbeya recorded the lowest absolute temperature of about 9 °C in the first dekad of the month.

MEAN SUNSHINE HOURS

Sunshine duration records across the country during September shows that the mean bright sunshine hours ranged from about 6 hrs/day west of lake Victoria basin to more than 10 hrs/day over Central, Southwestern highlands and coastal areas as shown in Figure 3.

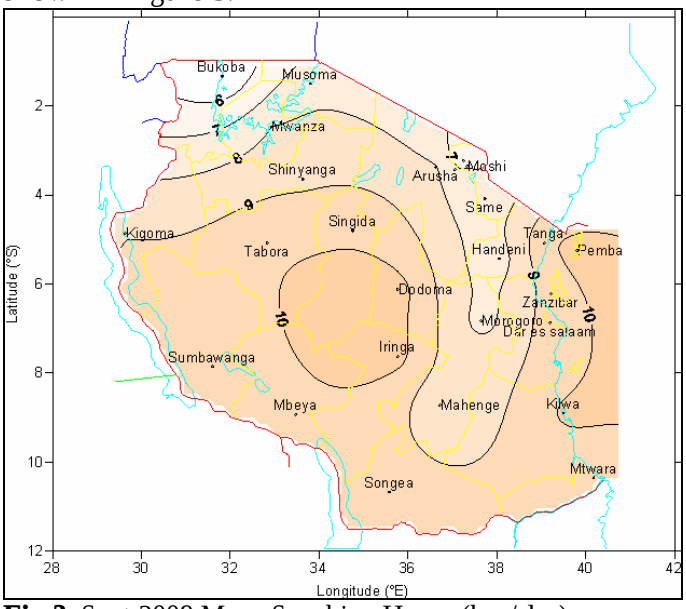

Fig 3: Sept 2009 Mean Sunshine Hours (hrs/day)

MEAN WIND SPEED

Mean wind speeds across the country ranged between 5 to 13 km/hr during the month of September as shown in Figure 4. Some parts of Northeastern highlands and Southwestern highlands experienced windy speeds exceeding 13 km/hr. Low wind speed of below 5 km/hr were recorded over North eastern highlands (Lyamungo) as shown in Figure 4. Windy conditions experienced over some parts of Northeastern highlands (Arusha) and Southwestern highlands (Mbeya) increased evaporation rates and therefore water deficit.

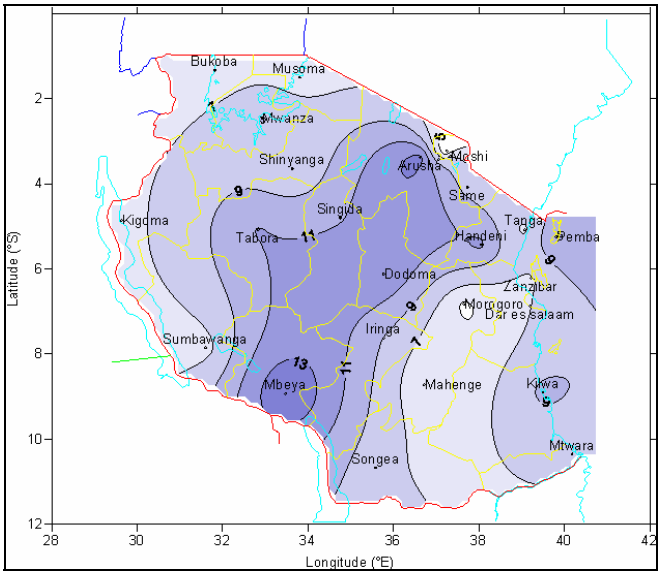

Fig 4: Sept 2009 Mean wind speed (km/hr)

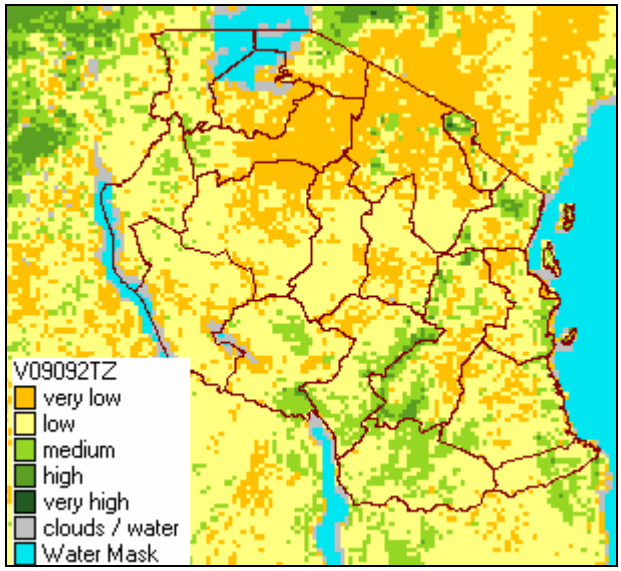

Fig 5: Vegetation condition during Sept 11-20, 2009.

SATELLITE INFORMATION

Figure 5 depicts the status of vegetation coverage during the second dekad of September 2009 as Normalized Difference Vegetation Index (NDVI) from METEOSAT satellite sensor. In the second dekad of September 2009, the satellite depicted NDVI between very low to low indices over most parts of the Northeastern highlands (Arusha, Manyara, and Kilimanjaro regions), eastern Shinyanga region, western (northern part of Tabora region), and Central (Dodoma and Singida regions), northern Iringa and west parts of Mbeya region. However, the vegetation has performed better (high to very high indices) mainly over some few parts of Southwestern highlands, southern regions and coastal belt. The observed low NDVI index over the livestock potential areas (Northeastern highlands, Lake Victoria basin, Central and Tabora region) is a preliminary indicator that pasture supply is still low.

AGROMETEOROLOGICAL SUMMARY

Dry condition that prevailed during the month was conducive for extensive land preparation mainly over bimodal areas of Tanzania. The dry conditions led to increased scarcity of pasture and water creating a threat to livestock and wildlife over much of Northeastern highlands (Arusha, Manyara, and Kilimanjaro regions) and central areas which observed poor rainfall performance during the previous season.

Few farmers have started land preparation over unimodal (Southwestern highlands, Western, Southern, Southern coast, and Central) and bimodal (Lake Victoria basin) rainfall regime for the coming farming season.

HYDROMETEOROLOGICAL SUMMARY

Water levels in rivers, lakes and dams and their respective catchments declined over most areas of the country as the dry season persisted. Water for industrial and domestic purposes should therefore be used sparingly.

ENVIRONMENTAL SUMMARY

During September the country experienced generally cool to warm temperatures, giving comfortable conditions for the coastal belt which is normally warmer.. Dry windy conditions that still prevailed over Northeastern highlands, coast, central and western areas increased prospects for diseases such as coughs, colds, pneumonia, and asthma.

EXPECTED SYNOPTIC SITUATION DURING OCTOBER 2009

During the month of October 2009, the southern hemisphere high pressure systems (St.Helena and the Mascarene) are expected to relax significantly contributing and allow the East African ridge to retreat southwards. The Siberian and Azores high pressure systems in the northern hemisphere are expected to intensify and allow the zonal component of the Inter-tropical Convergence Zone (ITCZ) to migrate southwards over the African continent.

EXPECTED WEATHER SITUATION DURING OCTOBER 2009

Lake Victoria basin (Kagera, Mwanza and Mara regions) is expected to feature partly cloudy to cloudy condition with showers and thunderstorms. The short rains (Vuli) season in the northern (bimodal rainfall) sector of Tanzania is due to commence from second to third week of October over northern coast and third to fourth week over northeastern highlands.
The Northern coast and hinterlands (Dar-es-Salaam, Tanga and Northern Morogoro regions and islands of Unguja and Pemba) are expected to feature mainly partly cloudy conditions with showers. Northeastern highlands (Arusha, Kilimanjaro and Manyara regions**)** are expected to feature partly cloudy condition and rain mainly towards the end of the month.
Western areas (Tabora and Kigoma regions**)** are expected to feature partly cloudy conditions with occasional showers over Kigoma and western parts of Tabora regions.
Over the Central areas (Dodoma and Singida regions, Southwestern (Mbeya, Rukwa and Iringa regions) and Southern parts of the country (Ruvuma region and Mahenge) are expected to feature mainly partly cloudy conditions and sunny periods. Southern coast (Lindi and Mtwara regions) areas are expected to feature mainly partly cloudy condition with a few light rains.

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