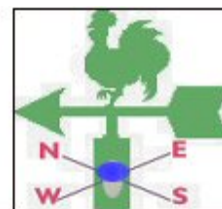




TANZANIA METEOROLOGICAL AGENCY



MONTHLY WEATHER BULLETIN

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HIGHLIGHTS

- Performance of rainfall during October - November 2007 was generally below normal over many areas in the country except over Bukoba, Morogoro, Zanzibar, and Kigoma.
- Most areas in the bimodal sector experienced such a poor soil moisture supply that was not conducive for growth and development of the early planted crops and land preparations never commenced at all in some areas.

SYNOPTIC SUMMARY

The southern hemisphere systems, the St. Helena and Mascarene highs and East African ridge were intense, such that the East African ridge extended up to northern Kenya whereas the northern hemisphere systems, the Azores and Siberian anticyclones together with Arabian ridge were relaxed, thus allowing the Inter-Tropical Convergence Zone (ITCZ) to oscillate. The Near Equatorial Trough (NET) was weak. A weak trough over the Lake Victoria basin was a dominant feature, influencing rain showers and thunderstorms in the basin.

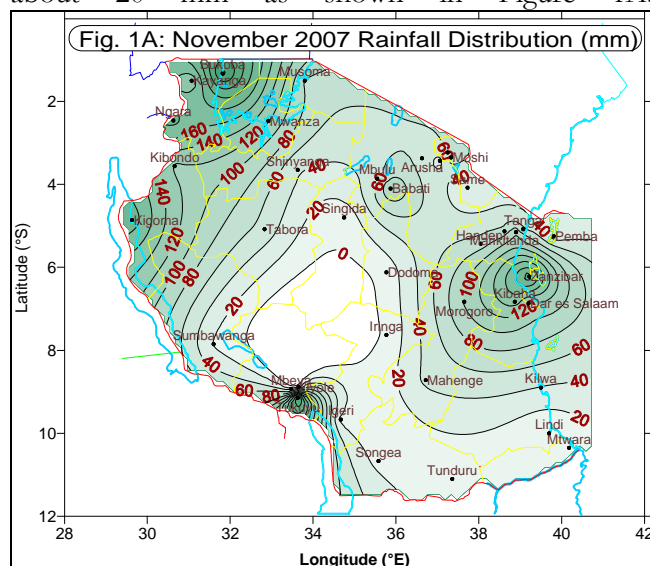
WEATHER SUMMARY

RAINFALL

During November, there were few localized areas in Lake Victoria basin, northern coastal belt and western (Kigoma region), and over high grounds of Mbeya region where the monthly rainfall amounts reported exceeded 100 mm as indicated in Fig. 1A. Most of the rainfall activities were reported during the first and second dekads of the month, while the third dekad experienced rainfall decline mainly over bimodal areas where the short rains (*vuli*) have indicated poor performance so far.

Central areas, southwestern highlands and southern sector including southern coast remained seasonably dry with a few areas reporting some light rains of

about 20 mm as shown in Figure 1A.



On the other hand, the performance of rainfall during October - November 2007 was generally below normal over many areas in the country except over Bukoba, Morogoro, Zanzibar, and Kigoma, as indicated in Figure 1B.

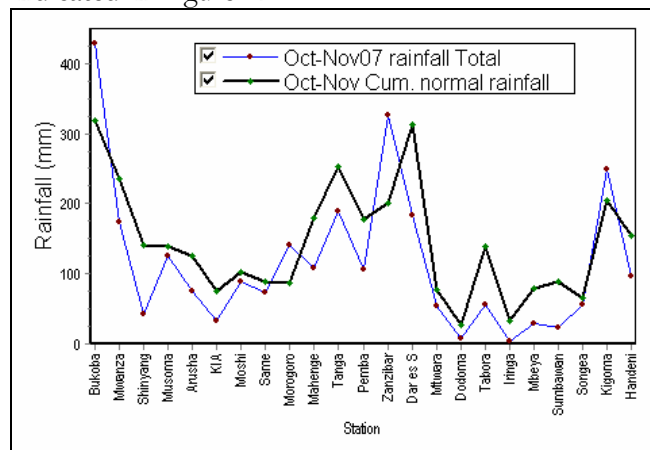
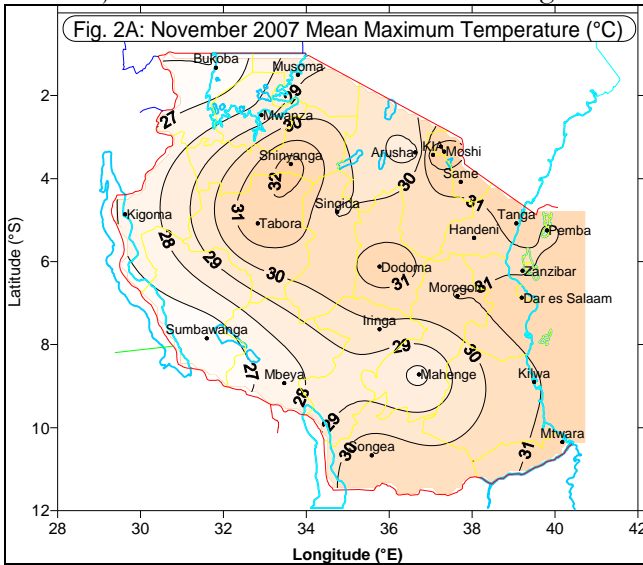


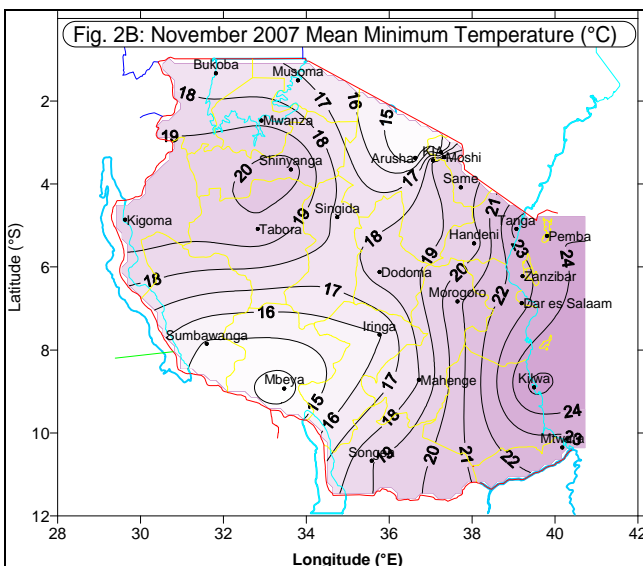
Fig. 1B: October - November 2007 rainfall performance over few selected stations

MEAN AIR TEMPERATURE

Temperatures continued to rise during the month, indicating a normal trend for the period. The spatial mean maximum and minimum values are shown in Figs. 2A and 2B respectively. The mean maximum temperature ranged between just above 32 °C and just below 27 °C as indicated in Figure 2A.



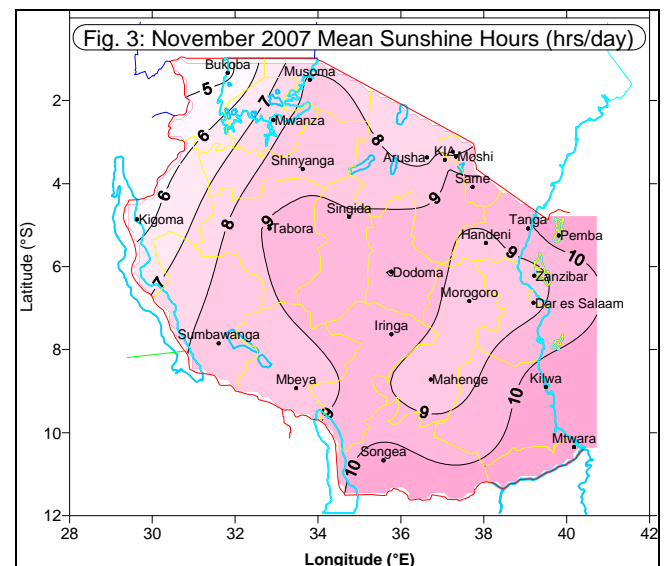
The highest mean maximum temperature recorded during the month was about 33.1 °C at Kilimanjaro International Airport (KIA) with the absolute maximum of 33.6 °C recorded during the first dekad of November. The lowest mean maximum temperature was about 27 °C over the southwestern highlands and west of Lake Victoria basin.



The mean minimum air temperature ranged from just below 14 °C to slightly above 22 °C. The lowest value of the mean minimum temperature was about 12.9 °C observed at Mbeya station, while the highest value was about 25 °C recorded at Kilwa in the southern coast as shown in Fig. 2B. During the first and second dekads of November Mbeya reported a 10-day mean minimum temperature of about 14 °C, as compared to 12 °C experienced during the month of October 2007, thus maintaining a rising trend of temperatures across the country.

MEAN SUNSHINE HOURS

Sunshine hours across the country during November indicates that the duration of mean bright sunshine hours ranged from about 5 hrs/day to above 10 hrs/day as shown in Figure 3.



Longer bright sunshine hours occurred over central areas (Dodoma and Singida regions), northeastern highlands, eastern Tabora, Iringa, and Ruvuma regions, and coastal belt. Shorter durations of about 5 hrs/day bright sunshine were recorded over western parts of Kagera region.

MEAN WIND SPEED

During the period mean wind speed across the country ranged between about 4 to 14 km/hr as indicated in Fig. 4. Central areas and northeastern

highlands experienced windy conditions where wind speeds exceeded 8 km/hr. The core of maximum wind speed of about 14 km/hr was recorded at Dodoma Met station. Low wind speeds at about 5 km/hr were recorded over Mara, Kagera, Zanzibar areas and northern Arusha.

Compared to October, the wind strength and pattern did not change much during November. Dry conditions over central areas, southwestern and northeastern highlands areas increased prospects for occurrences of dust devils, wind erosion, and higher evaporation rates.

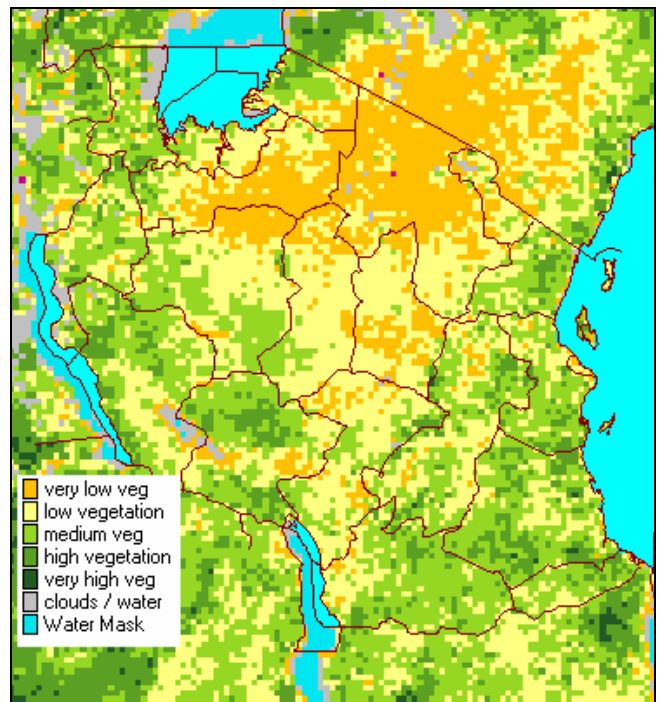
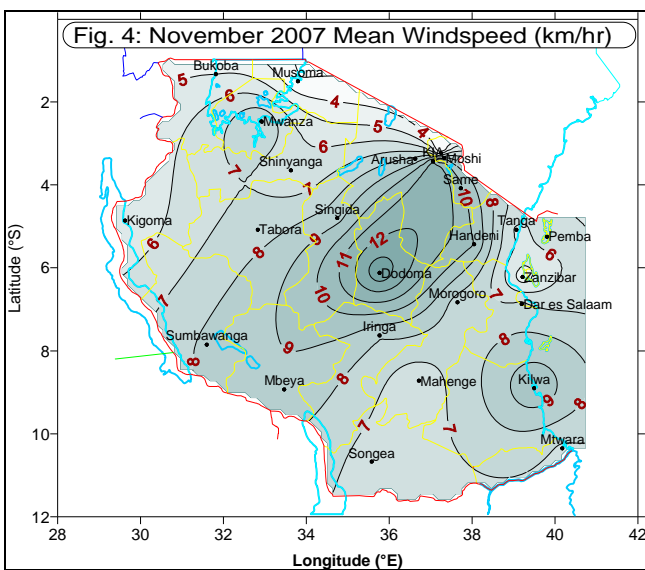


Figure 5: Satellite NDVI indicating the vegetation condition for the period of November 11-20, 2007.

AGROMETEOROLOGICAL SUMMARY

During the month, most areas in the bimodal sector experienced relatively poor soil moisture supply that was not conducive for growth and development of the early planted crops. Sample reports from these areas indicate that over several parts of Lake Victoria basin particularly in Kagera and Mara regions field crops at vegetative stage were negatively affected by soil moisture stress.

The situation is so bad that even land preparations did not commence at all in some areas of Monduli, Handeni, Loliondo and Simanjiro districts in northeastern highlands and northern coast. However, over a few pocket areas of the districts western parts mainly; Kibondo and Kasulu in Kigoma region, Muleba, Biharamulo, and Ngara districts in Kagera region some favorable soil moisture conditions enhanced crop status in the areas.

Over much of the unimodal rainfall regime areas; central, south, southern coast and southwestern highlands, farmers were still in land preparations for the coming cropping season.

SATELLITE INFORMATION

Mean vegetation condition during the second dekad of November is indicated in Figure 5 in a NOAA satellite imagery depicting the normalized difference vegetation index (NDVI). Higher values of the vegetation index appear over Lake Victoria basin, western areas, southern and coastal belt. Very low values concentrated over much of southern Lake Victoria basin (Shinyanga) northern Tabora, central (Singida and Dodoma), northeastern highlands (Manyara, Arusha and Kilimanjaro regions), and eastern Mara region, the areas which are potential for livestock farming. The observed deterioration of vegetation is likely to influence pasture availability for livestock in these areas.

Growth of cassava and sweet potatoes over several areas across the country continued well at various stages, while market supply for both crops was generally good.

Pasture conditions and water availability for livestock and wildlife are dwindling especially over central and southwestern areas hoping the seasonal rains start early to arrest the situation.

HYDROMETEOROLOGICAL SUMMARY

Water levels in lakes and dams, and water flows in rivers continued to decrease following below normal rains that has been observed so far and the ongoing dry season. Water for domestic and industrial purposes should be used sparingly.

ENVIRONMENTAL SUMMARY

Temperatures are high over most parts while humidity is particularly high over the coastal belt.

EXPECTED SYNOPTIC SITUATION DURING DECEMBER 2007

The northern hemisphere systems, the Arabian ridge, Siberian and Azores anticyclones are expected to intensify while the southern hemisphere systems, the St. Helena, Mascarene anticyclones and the East African ridge are expected to relax, allowing the ITCZ to shift further south.

The Lake Victoria trough is expected to deepen and the meridional arm of the ITCZ is expected to be active, thus influencing showers and thunderstorms over the basin.

EXPECTED WEATHER SITUATION DURING DECEMBER 2007

Northern coast (Dar es Salaam, Tanga and Morogoro regions together with Zanzibar and Pemba Islands) and northeastern highlands (Arusha, Kilimanjaro and Manyara regions) are expected to feature partly cloudy conditions with rainshowers and isolated thunderstorms over some areas. Southern coast (Lindi, Mtwara and southern Morogoro regions) together with southern areas (Ruvuma region) and southwestern highlands (Iringa, Rukwa and Mbeya regions) are expected to feature partly cloudy conditions with rainshowers over same areas. Lake Victoria basin (Kagera, Mwanza, Shinyanga and Mara regions) together with Western areas (northern Kigoma region) are expected to feature cloudy conditions with showers and thunderstorms over same areas. Western areas (Tabora region and southern Kigoma), and central areas (Dodoma and Singida regions) are expected to feature partly cloudy conditions with showers over some areas.

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