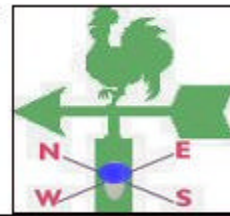




TANZANIA METEOROLOGICAL AGENCY



MONTHLY WEATHER BULLETIN

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NOVEMBER- HIGHLIGHTS

- Low rainfall over northeastern areas creates some concern on the performance of the short rains.

SYNOPTIC SUMMARY

During the month of November, the St. Helena anticyclone and the Arabian ridge were weak. The Mascarene anticyclone and the Azores anticyclone were strong. The meridional component of the Inter Tropical convergence Zone (I.T.C.Z) was active over the Lake Victoria basin and western areas. Tropical cyclones Arola and Bento developed in southwestern Indian Ocean.

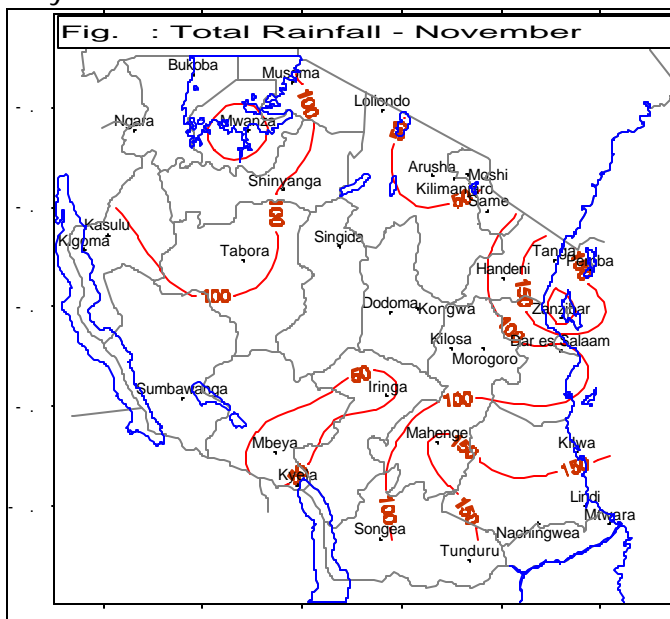
WEATHER SUMMARY

RAINFALL

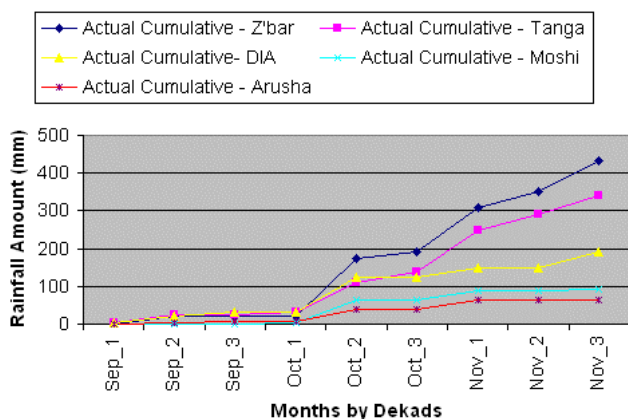
By the end of November rainfall activities covered most parts of the country except for parts of northeastern areas where dry

while southern areas and Lake Victoria Basin observed up to 150mm. Southwestern and northeastern areas recorded amounts up to only about 50mm. The low rainfall amounts

Fig. : Total Rainfall - November



2004 Short Rains Performance - Graph 1.



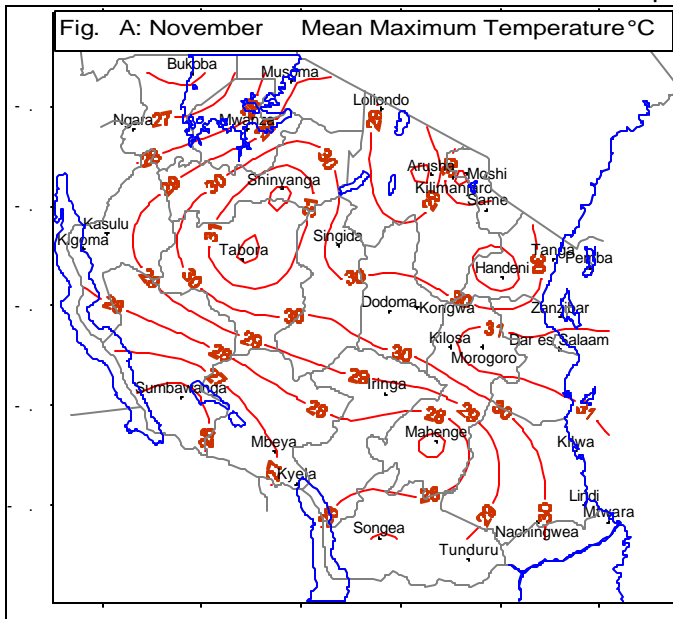
conditions dominated. As shown in Figure 1, maximum total rainfall up to 200mm were only recorded over the northern coastal belt

over northeastern areas point to a failing short rains season. Graph 1, depicts Arusha and Moshi areas which have accumulated only 100mm since short rains (*vuli*) started in October while the coastal belt had larger accumulations amounting up to 400mm.

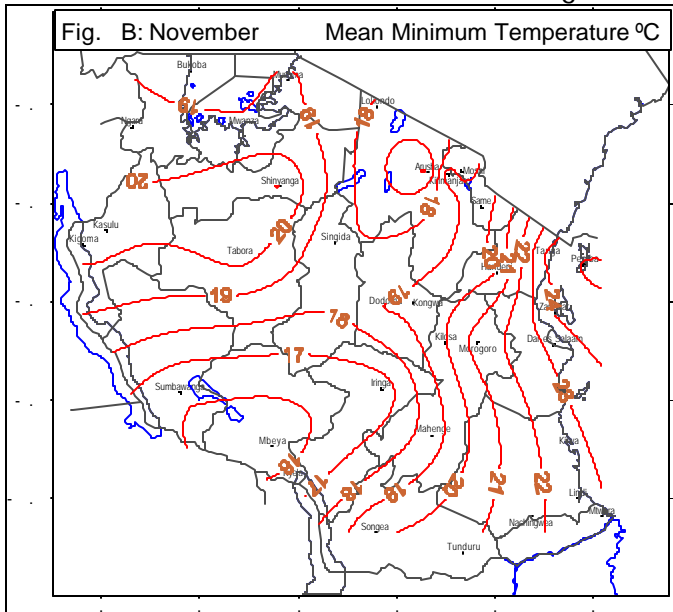
MEAN AIR TEMPERATURE

Mean maximum temperature across the country during November is shown in Figure 2A. Hot conditions ranged from 26 to 32°C. Hotter conditions were observed over inland areas of Tabora and Shinyanga and parts of

mid coastal belt as indicated in the map.



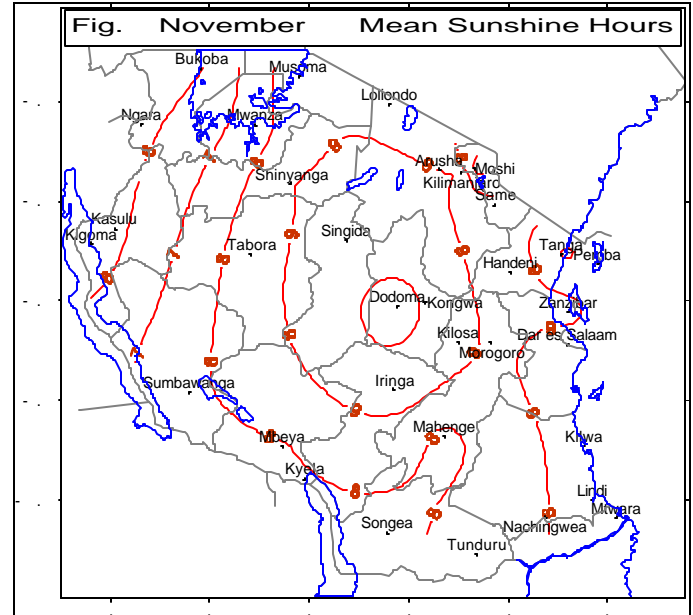
Elevation lowered hot conditions observed over southwestern and northeastern highlands.



On the other hand, mean minimum temperature profile for November appears as Figure 2B. Mean minimum temperature range was between 16°C to 25°C. Relatively higher minimum temperature values (22 to 23°C) as observed during October, during November continued to be recorded over the coastal belt and the Isles of Zanzibar and Pemba with an increase of 2°C.

SUNSHINE HOURS

Figure 3 indicates the spread of mean bright sunshine hours observed across the country during November. Durations of mean bright



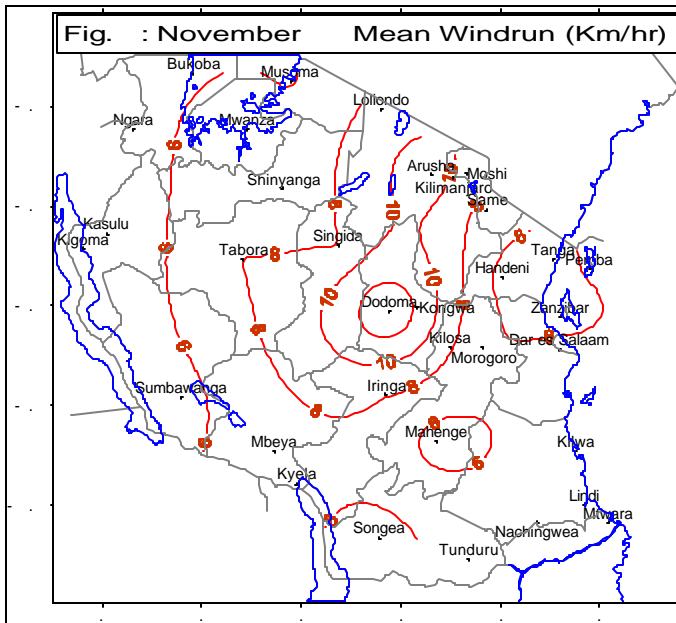
sunshine ranged from around half day to just over 10 hours per day.

Longer durations of more than 9 hours per day dominated parts of central and northeastern areas while 10 hours per day continued to be recorded mostly in Dodoma region. Shorter durations of around half daylight hours were recorded over northwestern areas where cloud activity persisted due to an influx of moisture from the Congo air mass.

MEAN DAILY WINDSPEED

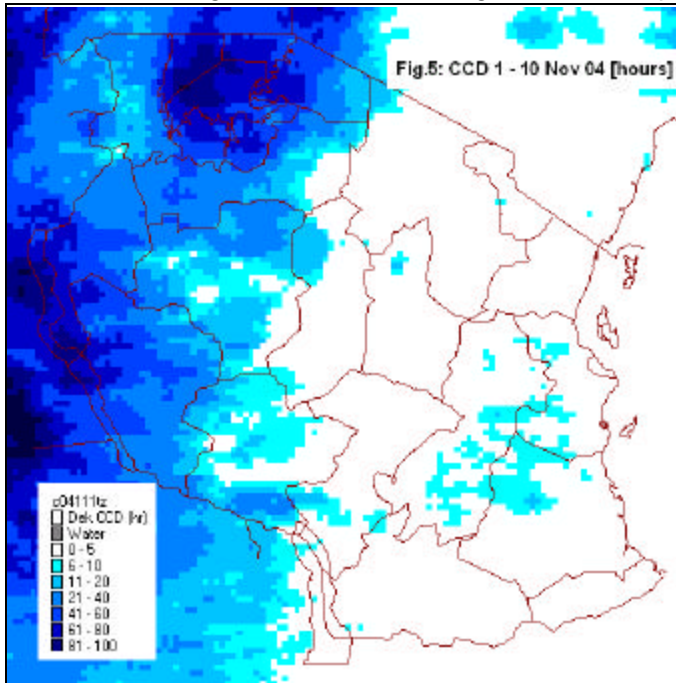
Mean wind run across the country during the month of November ranged from 6 km/hr to 12 km/hr as shown by Figure 4. Maximum surface windrun during November continued to be observed over central areas and parts of northeastern at a speed of around 10 to 12 km/hr a pattern also depicted during

October.



SATELLITE INFORMATION

Satellite information is shown as duration of deep cloud activities (Fig. 5) and Normalized Difference Vegetation Index (Fig. 6). Deep



cold cloud increased during November compared to the situation in October across the country. Influx of cold cloud activities fed into the country from Congo air mass to the west and just a few occasions of easterly

waves on the eastern sector from the Indian Ocean. Looking at Figure 5, the METEOSAT picture depicts mean duration between 1 to 10th November. On average durations ranged from just over 5 hours to only a maximum of 100 hours. Clear skies without deep cloud activities dominated central areas, parts of southern areas and northeastern areas.

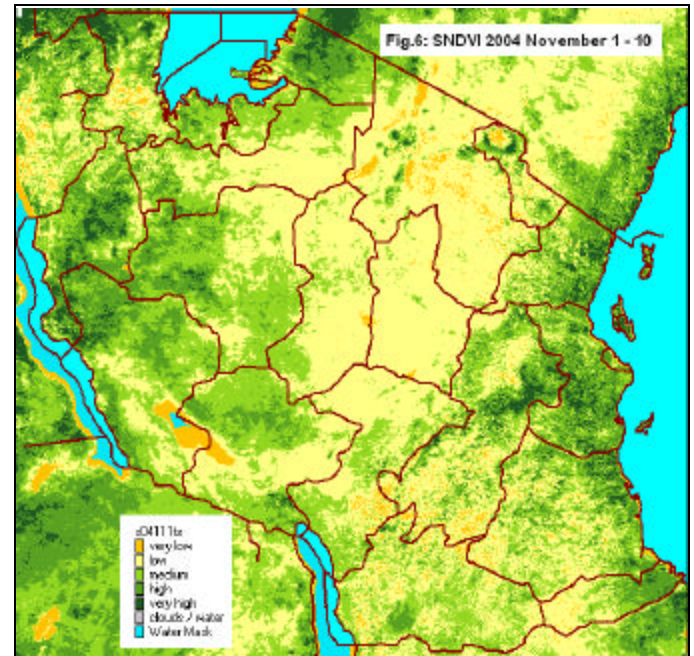


Figure 6 depicts the spot satellite Normalized Difference Vegetation Index (NDVI) showing the spread of greening index during the first 10-day of November. An index of 50 - 70% was reached by the coastal belt, parts of the southwestern highlands, western areas and the Lake Victoria Basin. Parts of central and northeastern areas recorded a low index at less than 30%. Of concern are the patch areas appearing over Manyara, Arusha and Kilimanjaro areas where a very low index of less than 10% was recorded.

AGROMETEOROLOGY

Soil moisture supply ranged from adequate to excessive levels over the Lake Victoria Basin followed by northern coastal belt but over northeastern areas localized parts experienced some deficit in soil moisture supply from dry spells encountered during the

period. Good crop development (maize at tasseling) was thus experienced over Lake Victoria Basin though in some parts where rains were excessive, maturing beans lacked necessary dry conditions needed to fully mature (Karagwe and Bukoba districts). Over the coastal belt, maize at various stages to tasseling in moderate state benefited from good soil moisture supply situation. Crops over low lands in northeastern areas experienced some level of soil moisture deficits (Simanjiro, Monduli, Loliondo, Moshi rural and Karatu districts) that hampered normal crop development. Planting and land preparation continued into full gear over central, southern and southwestern areas. Cassava growth was generally in good state across the country.

HYDROMETEOROLOGY

Decline in the water levels in rivers and water reservoirs have been recorded as the dry period continues. Water for industrial and domestic purposes should be used sparingly.

ENVIRONMENT

The wet conditions over Lake Victoria Basin have created conditions that will increase likelihood for malaria and cholera outbreaks.

EXPECTED SYNOPTIC SITUATION DURING NOVEMBER

The meridional component of the Inter Tropical Convergence Zone is expected to be active over the Lake Victoria basin and western areas. The Arabian ridge and the St. Helena anticyclone are expected to intensify. The Azores anticyclone and the Mascarene anticyclone will weaken.

EXPECTED RAINFALL SITUATION DURING NOVEMBER

The Lake Victoria basin and western areas will experience partly cloudy conditions with showers and thunderstorms over most areas and sunny periods. Northern coast and its hinterland, northeastern highlands and islands of Zanzibar and Pemba will have partly cloudy conditions with showers over few areas and sunny periods. Southwestern highlands, central, southern coast and southern will have partly cloudy conditions with showers and thunderstorms over few areas and sunny periods.