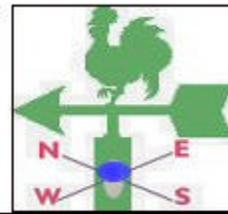




TANZANIA METEOROLOGICAL AGENCY



MONTHLY WEATHER BULLETIN

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OCTOBER - HIGHLIGHTS

- The impact of the cyclone that hit the southern coast belt, brought in rain that increased soil moisture
- Kilwa Masoko recorded the highest rainfall intensity of 141mm over an interval of 4 hours only, but this was not yet the onset of the rainy season in South coast.

SYNOPTIC SUMMARY

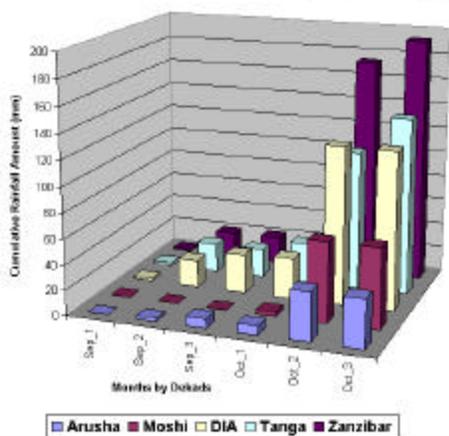
During the month of October, the St. Helena anticyclone and the Azores anticyclone were weak. The Mascarene anticyclone and the Arabian ridge were strong. The meridional component of the Inter Tropical Convergence Zone (ITCZ) was active over the Lake Victoria basin.

WEATHER SUMMARY

RAINFALL

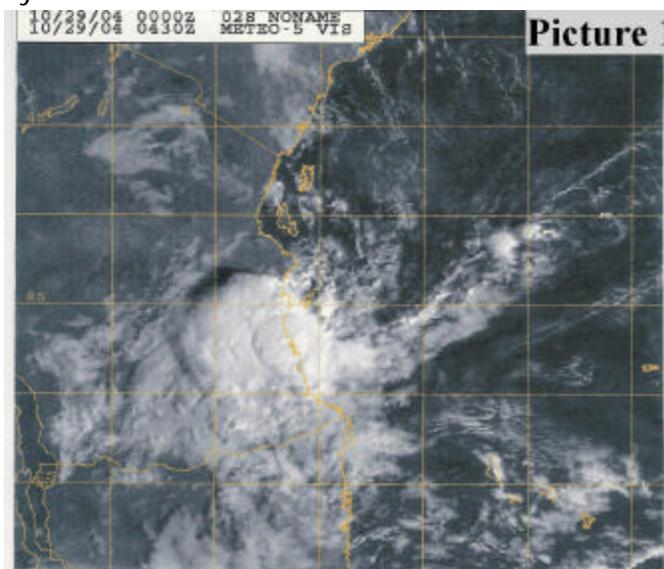
rainfall activities that signaled the 2004 short rains (*vuli*) season over western Lake Victoria Basin during September in October

Northeastern & Northern Coastal Belt 2004 Short Rains (Vuli) Performance [Graph 1]

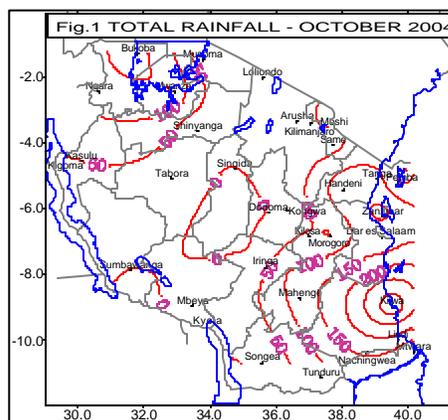


spread eastwards and reached parts of north-eastern areas and northern coastal belt. As shown in Graph 1, such rainfall activities registered between 50 to 150mm. Towards the end of October, from 28th to 29th a weak

cyclone from the western Indian Ocean hit the



southern coastline. The storm center passed through Kilwa Masoko (Picture 1) The storm was characterized by flash thunder showers, high rainfall intensity and high surface winds that locally blew down houses and overall



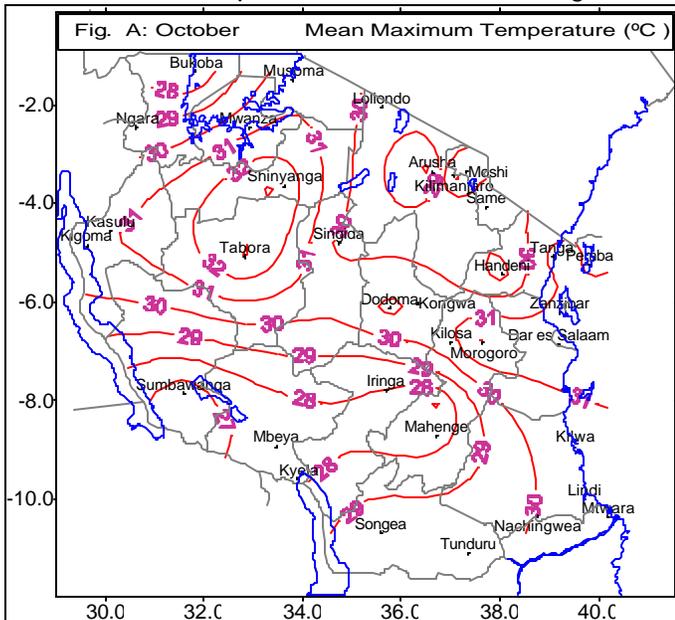
Total rainfall for the month of October was thus highest at Kilwa Masoko 344.2mm followed by Mafia 211mm. On the other hand,

caused some infrastructure damage along its path. Kilwa Masoko recorded the highest rainfall intensity of 141mm over an interval of 4hours only.

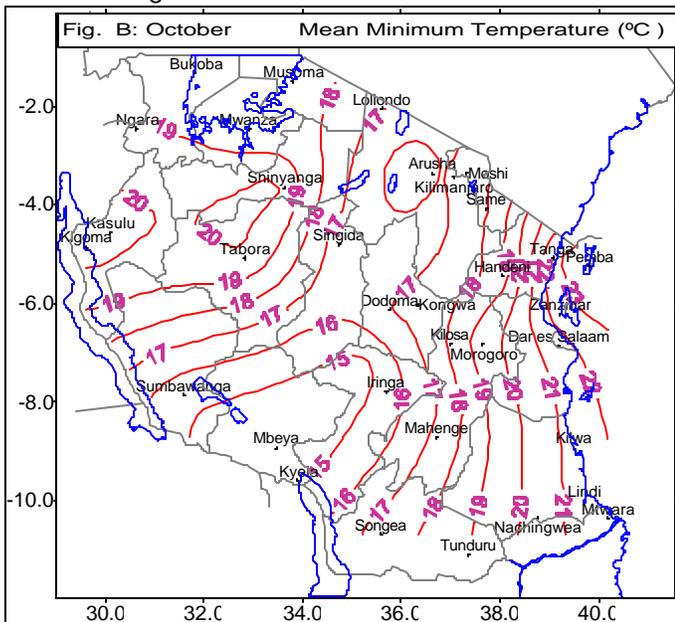
central and southwestern areas remained dry during the period (Figure 1) a normal feature at this time of the year.

MEAN AIR TEMPERATURE

Mean surface air temperature increased during October compared to the general



situation during September. Mean maximum values (Figure 2A), depict hot spots that covered inland areas over Tabora and Shinyanga with temperatures over 32°C while a second high of 31°C was recorded over the

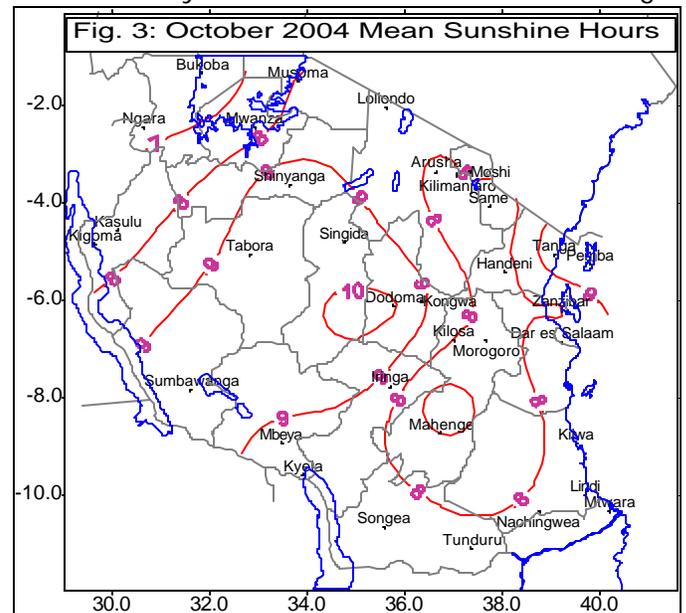


northern coastal belt. The lowest mean

maximum temperature at around 27°C was recorded in the southwestern highlands. Mean minimum temperature profile for October appears as Figure 2B. The range was between 15°C to 23°C. Relatively higher minimum temperature values were recorded over the northern coastal belt, (22°C - 23°C) over the Isles of Zanzibar and Pemba a signal that the hot season is setting in. A low at around 15°C was recorded over southwestern highlands. Compared to the situations during September, October mean minimum temperature profile showed a warming-up by 2.8°C.

SUNSHINE HOURS

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



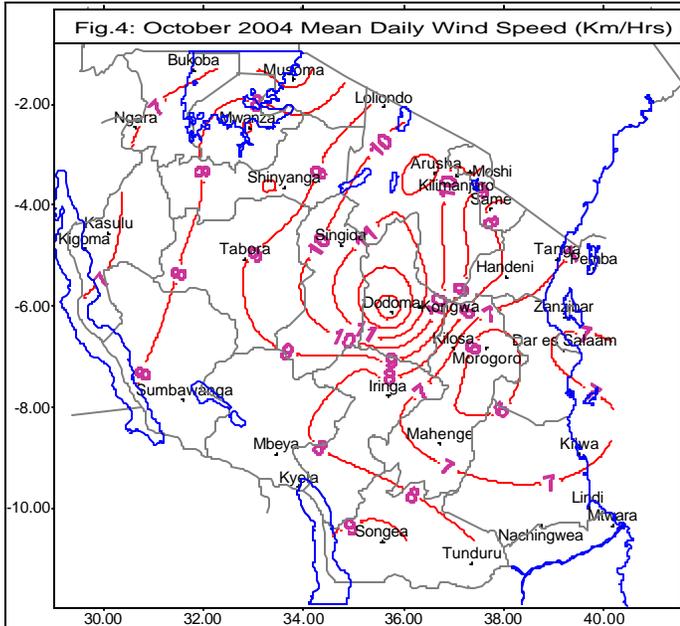
sunshine ranged from around 7 hours to just past 10 hours per day, showing an overall increase by 1 hour during October compared to the September profile.

Highest durations mainly greater than 9 hours per day dominated parts of mid-western and southern highlands while 10 hours per day continued to be recorded over central areas. Lowest durations around half daylight hours covered areas where cloud activity was on an increase such as western parts of Lake Victoria Basin, parts of northeastern areas, Morogoro

and Lindi regions and parts of Udzungwa mountain ranges.

MEAN DAILY WINDSPEED

Mean wind run across the country during the month of September ranged from 6.5 km/hr to

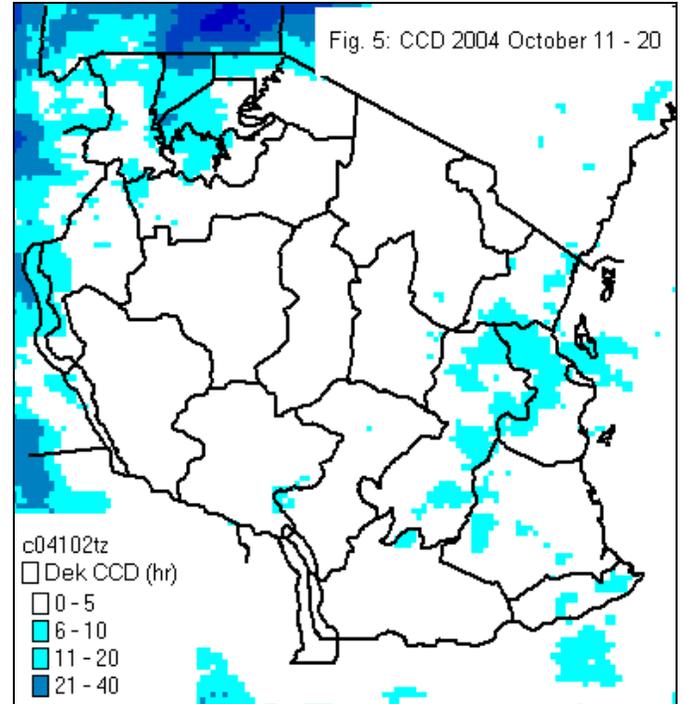


a maximum of just above 13 km/hr as shown in Figure 4. The core of maximum wind speed was oriented along the north - south axis and occurred over central and parts of northeastern areas. Lower wind speeds, around 7 km/hr, dominated over southern, southwestern, western and northwestern areas, mid-southern areas and the eastern sector of the country. The overall pattern continued to be like that observed during September.

SATELLITE INFORMATION

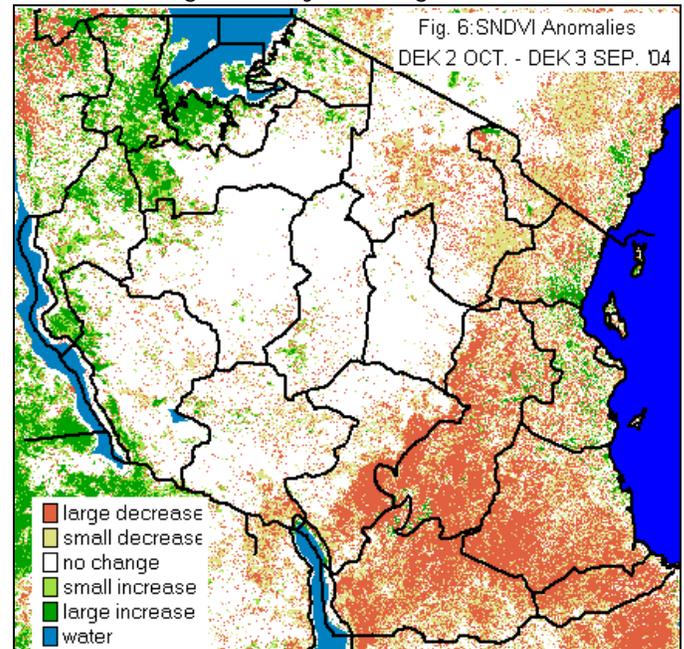
Duration of deep cloud activities increased during October compared to the situation in September across the country. Influx of cold cloud activities fed into the country from Congo air mass to the west and occasions of easterly waves on the eastern sector from the Indian Ocean. Looking at Figure 5, the meteosat picture depicts mean duration between 11 to 20th October. On average

durations ranged from just over 5 hours to only a maximum of 40 hours highlighting



the setting in of a new season. 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 anomalies given by changes between the



greening index during the second 10-day of October to the situation during the third 10-day period of the month of September 2004.

An increasing trend of the index covers Lake Victoria Basin, parts of western areas and patches over the eastern sector. Over the southern areas major decrease in the index dominated. There was no change in the index over central areas. Deficits in soil moisture supply were generally over areas with a decreasing trend in the index. As such areas of concern that need close follow up are northeastern where the season for new growth in plant canopies should be on an increasing trend in response to increased soil moisture replenishment due to the seasonal rains

AGROMETEOROLOGY

Soil moisture replenishment experienced during October over the bimodal rainfall areas (Lake Victoria Basin, northeastern and northern coast belt) continued to create conducive environment for the timely establishment of seasonal farming activities. The impact of the cyclone that hit the southern coast belt, brought in a fresh supply of soil moisture thus improved the existing normal dry environment during this time of the year for the area. Though damage to local infrastructure occurred, soil moisture improvement created ideal conditions for early initiation of the growing season. Farmers in such areas should embark in land preparation activities to benefit from the improved soil moisture situation. Growing crops (maize and beans) generally in early vegetative stages and in good conditions were reported from Lake Victoria Basin. Land preparation and planting is now ongoing over northeastern areas and northern coastal belt. In remaining areas land preparation including accessing farm inputs is the major concern of farmers now that the new growing season is setting in.

HYDROMETEOROLOGY

Decline in the water levels in rivers and water reservoirs have been recorded as the dry period continues. Nevertheless, electricity generation has been boosted by the use of natural gas reducing dependence on hydropower. Water for industrial and domestic purposes should be used sparingly.

ENVIRONMENT

The windy and dry conditions across the country that prevailed during the month abetted prospects for diseases such as colds, coughs, pneumonia and asthma.

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

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