TANZANIA METEOROLOGICAL AGENCY

MONTHLY WEATHER BULLETIN

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OCTOBER – HIGHLIGHTS

- Land preparation is picking up over central, western, southern and southwestern areas.
- Short rains (*Vuli)* performance so far depicts a below normal trend over northern coastal belt and parts of northeastern highlands.

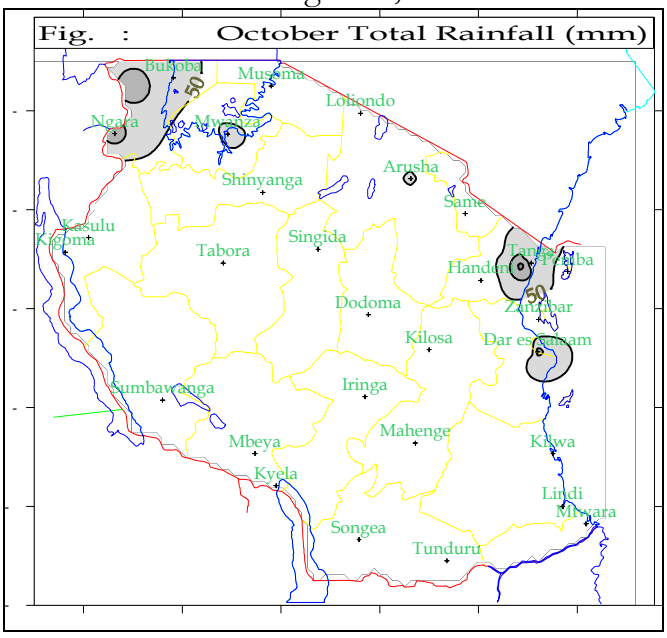
SYNOPTIC SUMMARY

The Siberian and Azores anticyclones over the northern hemisphere remained intense while the Arabian ridge started to develop gradually over the Arabian Peninsula. The southern hemisphere anticyclones (St. Helena and Mascarene) and the East African ridge were strong during the early dates of the month and started to relax towards the end of the month. The Inter-Tropical Convergence Zone (ITCZ) was active over the northern parts of the country including northern coast. The Congo trough over the equatorial central Africa was evident associated with westerly wind flow from the basin to the western parts of the country. Over southwestern Indian Ocean the southeasterly to easterly wind flow towards the country dominated. The prevailing cold Sea Surface Temperature (SST) over the Indian Ocean influenced negative rainfall anomalies over few areas of the northern coast.

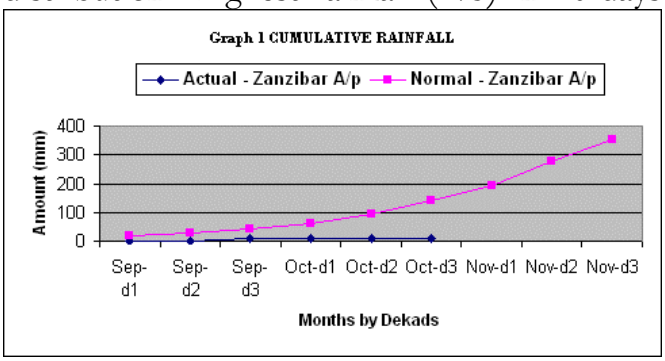
WEATHER SUMMARY

RAINFALL

During October rainfall activities were observed over some parts of the Lake Victoria Basin (LVB), northeastern highlands and over a few areas of the northern coastal belt. As shown in Figure 1, more than 35mm



total rainfall for the period was recorded over the northeastern and northern sectors of the country, but was characterized by poor distribution. Highest rainfall (175) in 10-days

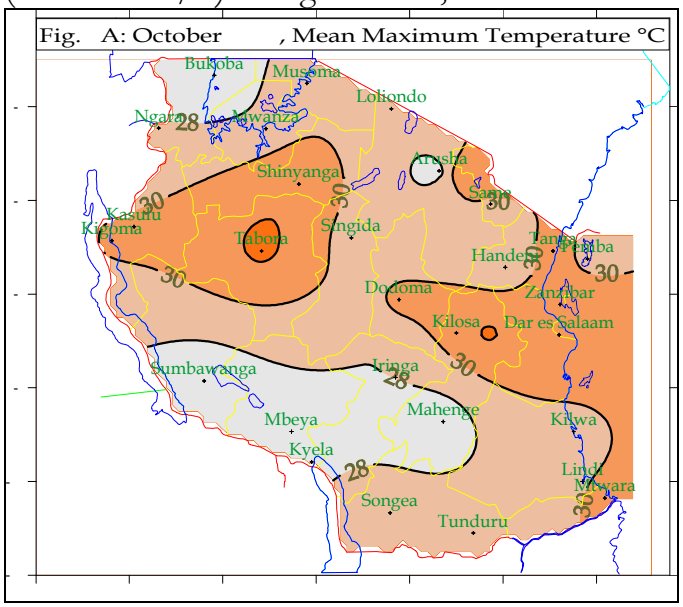


was recorded at Mlingano soil research center, Julius Kambarage Nyerere International A/P (125mm) in 4-days and Ngara Agriculture

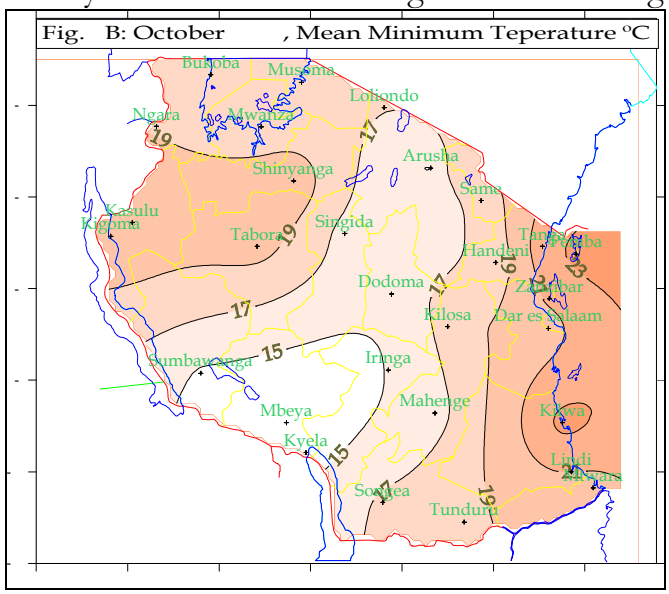
office 111.9mm in 13-days. Cumulatively, the short rains *(vuli)* for the 2005/06 rainfall season started in September. Its performance so far depicts a below normal trend over northern coastal belt (Graph 1 for Zanzibar A/P) and parts of northeastern areas including Bukoba A/P over the LVB. The remaining parts of the country remained seasonally dry.

MEAN AIR TEMPERATURE

Temperatures conditions during the month of October are expressed as mean air maximum and minimum temperatures as shown in Figures 2A and 2B respectively. Observed mean maximum temperature ranged between 26.6°C (Bukoba A/P) and 32.5°C (Tabora A/P). Figure 2A, shows that



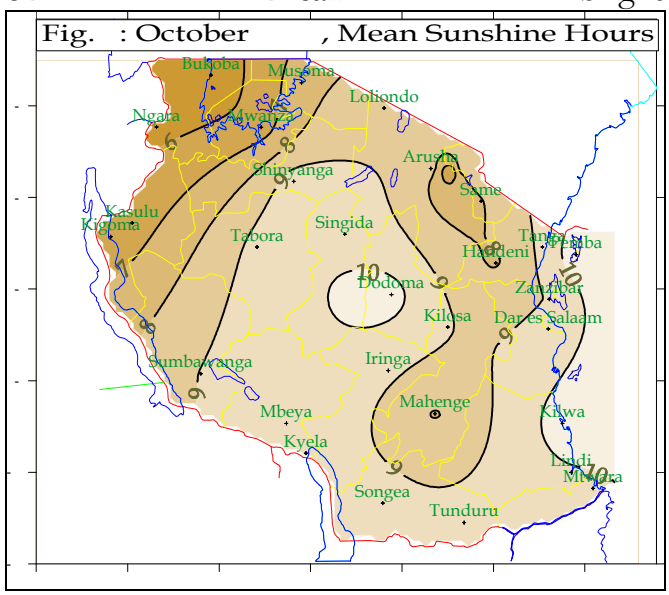
the highest mean maximum temperatures across the country were observed over parts of Tabora, Shinyanga and Kigoma regions, with the highest record of 32.5 °C observed over Tabora A/P. The lowest mean maximum temperature of about 26.6°C was reported at Bukoba A/P. On the other hand, Fig.2B shows that the mean minimum air temperatures ranged from just below 15 °C to just above 23 °C, whereas the extreme minimum temperature of 12.4 °C was observed at Mbeya A/P during the first 10-days of October and a significant warming



of about 3.1 °C compared to the situation during the past month.

SUNSHINE HOURS

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



sunshine ranged from 6 to 10 hours/day. The longer durations mainly up to 10 hours/day

dominated over central, southwestern, southern and along the coastal belt. The lowest durations of below half daylight hours were experienced over some parts of Kagera region due to increased influx of cloud cover from Congo forest on the northwestern side of the country.

MEAN DAILY WIND SPEED

Mean wind run across the country during the month of October ranged from about 7 km/hr to a core maximum wind speed of just above 13km/hr as shown in

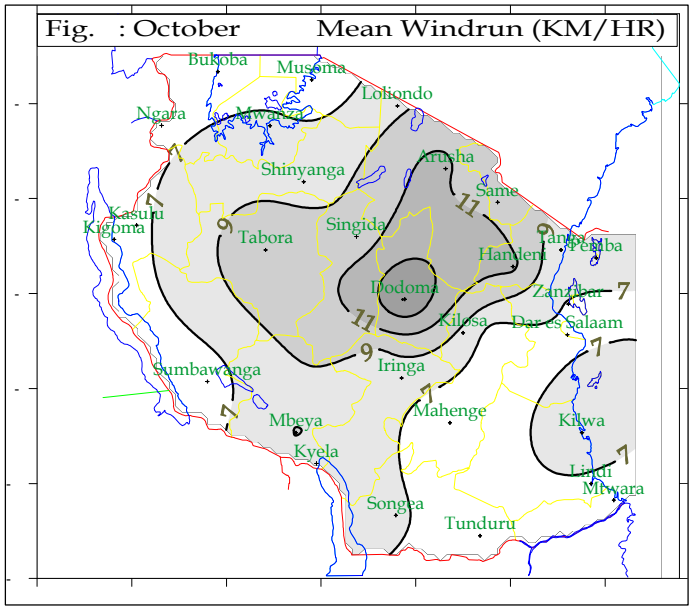
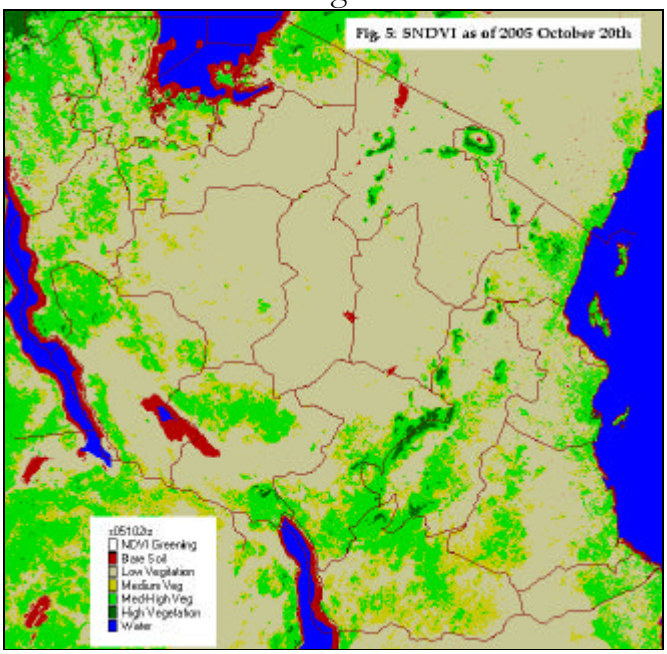


Figure 4. The core of higher wind speeds (greater than 10 km/hr) is oriented along the northeast axis and occurred over central region and parts of northeastern areas. The highest speed recorded was from Dodoma A/P at 15km/hr. The impact of such speeds at the surface ground was high evaporation rates, increased presence of dust devils and enhanced wind erosion on bare ground surfaces.

Lower wind speeds of less than 7 km/hr dominated over southern, western and the LVB.

SATELLITE INFORMATION

Figure 5 depicts vegetation greenness as indicated by the Spot Normalized Difference Vegetation Index



(SNDVI) from METEOSAT satellite sensor for the second 10-days of October 2005. During October, the peak of the dry season, indicated by low vegetation cover dominated most of the country as shown by the gray colouring. Such areas recorded an index lower than 30%. Very few areas recorded an index higher than 50% mainly from perennial vegetation along higher grounds such as over Udzungwa mountains.

AGROMETEOROLOGY

Variable soil moisture levels were experienced during the period over the bimodal rainfall areas of Lake Victoria Basin (LVB), northeastern highlands and northern coast. Soil moisture deficits have been wide spread over northeastern areas and the coastal region. Over LVB, where the growing season

started early, reports from districts of Bukoba (Misenye and Rubale wards), Muleba (Kamachumu and Izigo wards) indicated occurrence of wilting of beans. Prolonged soil moisture deficit shortened the length of the 2005 *vuli* growing season over the coastal belt and northeastern areas.

Over the unimodal rainfall regime (central southern, southwestern and southern) land preparation continues to be the major activity occupying the farmers. Over parts of central areas that recorded some off season soil moisture replenishment favored pasture development.

HYDROMETEOROLOGY

Low water levels in rivers and lakes were experienced during the period. Water for industrial and domestic purposes should be used sparingly.

ENVIRONMENTAL

Windy, dusty 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 Arabian and Azores anticyclones over the northern hemisphere are expected to continue to intensify while over the southern hemisphere the Mascarene anticyclone and the East African ridge are expected to weaken. The St. Helena anticyclone is expected to remain intense. The position of the ITCZ is expected to be over the region during this month while over the west intrusions of westerlies from the Congo basin are expected to strengthen. Northeasterly wind flows from the Arabian peninsula are expected to develop while over the western Indian Ocean easterly wind flow is expected to dominate.

EXPECTED WEATHER SITUATION DURING NOVEMBER

The Lake Victoria basin and western parts of the country are expected to experience cloudy conditions with showers and thunderstorms over some areas and sunny periods. The northeastern highlands, northern coast and the hinterlands, Zanzibar and Pemba islands and central parts (Dodoma and Singida) are expected to feature partly cloudy to cloudy conditions with showers and thunderstorms over few areas. The remaining parts of the country will continue to experience partly cloudy conditions with passage of light showers at times mainly over south western highlands.

Prepared by
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