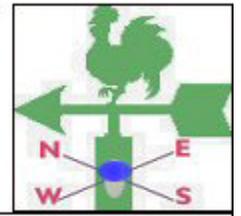




# TANZANIA METEOROLOGICAL AGENCY



## MONTHLY WEATHER BULLETIN

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### HIGHLIGHTS

- Onset of short-rains (*vuli*) over much of northeastern sector.
- Poor performance of early planted *vuli* crops over some parts of Kagera region.
- Improved pasture and water availability over bimodal areas.

### SYNOPTIC SUMMARY

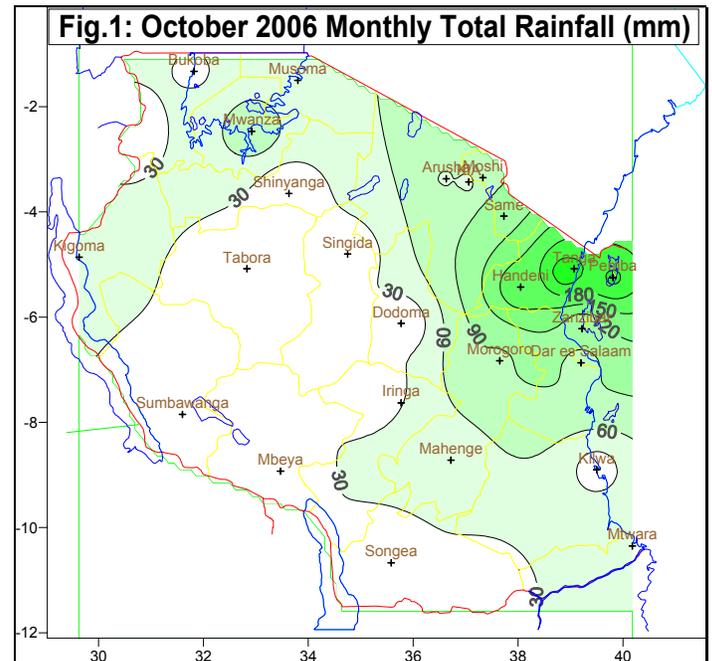
The southern hemisphere anticyclones of St. Helena and Mascarene and the East African ridge continued to relax hence reducing the possibility of high pressure system feeding in moisture over the coast instead the northern system coupled with the Inter Tropical Convergence Zone (ITCZ) dominated. The Arabian, Azores and Siberian anticyclones over the northern hemisphere continued to intensify thus pushing the ITCZ further south. However, the southeasterly monsoon (SE) flow south of 5° - 10°S becoming southwesterly (SW) flow north of 0° - 5°S over the east African coasts were active and dominant towards the end of the month.

### WEATHER SUMMARY

#### RAINFALL

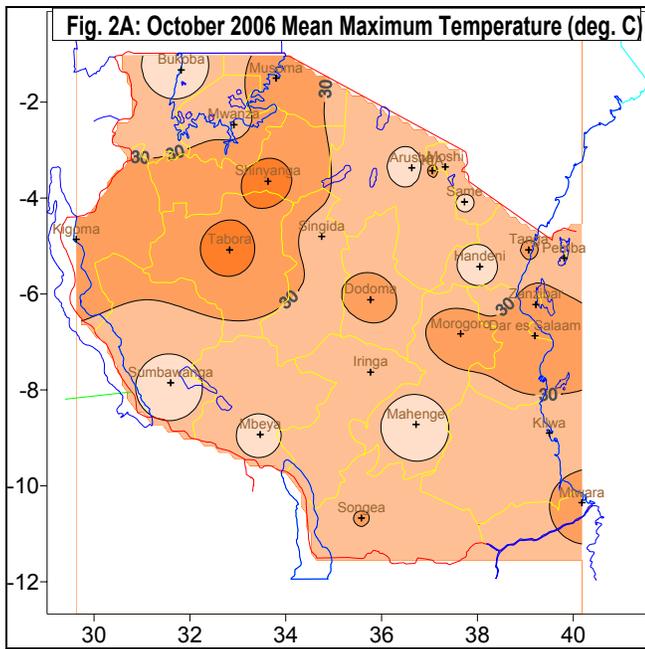
Onset of the short rains (*vuli*) over the northern coast and northeast was clearly discernible, something that has not happened for a couple of years now. There are spatial and temporal variations in its intensity and amounts but all of the areas supposed to have the *vuli* have had it early this time around. Figure 1 shows the amounts obtained for the month with the highest recorded at Pemba 215.8mm, followed by Tanga 214.0mm, Same 118.8mm, Handeni 176.7mm, Zanzibar 96.2mm, Moshi 88.4mm, Morogoro 87.9 and Mwanza 80.7mm. A few other stations recorded between 10mm and 50mm. In the unimodal sector, a

few stations also received rainfall with Mtwara 51.5mm, Mbeya 18.3mm, Kigoma 31.5mm, and Kilwa 17.4mm. This in general gives hopes for an early onset of seasonal rains over the areas.

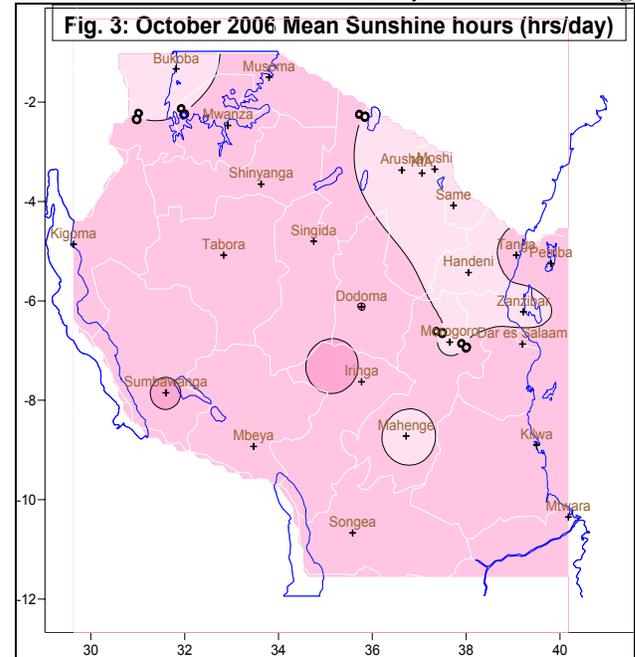


#### MEAN AIR TEMPERATURE

Temperature conditions for the month of October were expressed as mean maximum and minimum values as shown in Figs. 2A and 2B respectively. Observed mean maximum temperature ranged between about 33.4 °C and about 26.2 °C as recorded over western, central and eastern parts that include Shinyanga, Kigoma, Tabora, Dodoma, Morogoro and Coast regions as shown in Fig. 2A. Mean minimum air temperatures ranged from just below 13.4 °C to slightly above 22.0 °C as in Fig. 2B.

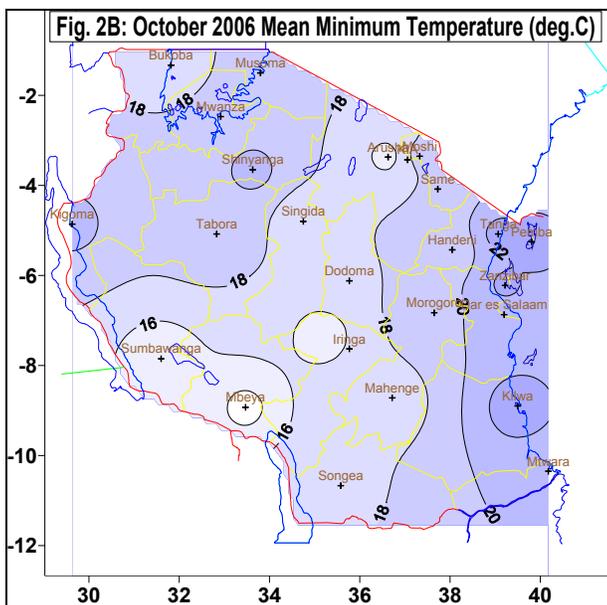


of mean bright sunshine hours that ranged between about 6.1 and about 10.8 hrs/day as shown in Fig. 3.

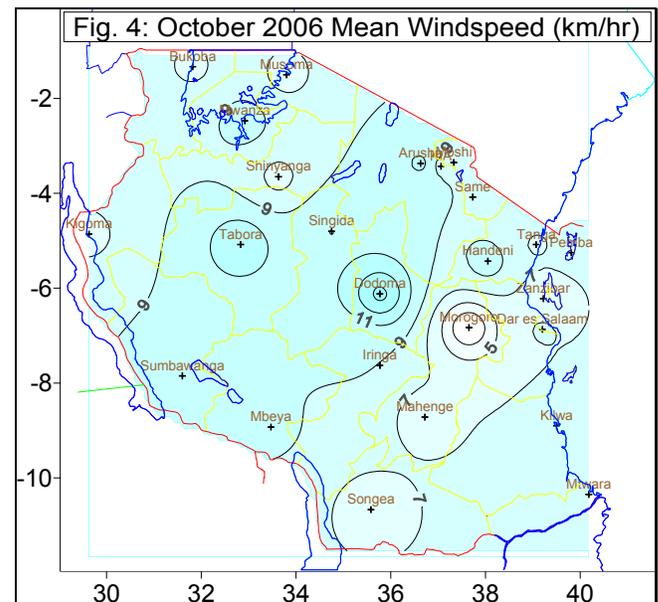


Rising trend of temperature improved the chilly conditions that prevailed in the past months over most areas of southwestern highlands (Rukwa, Mbeya and Iringa regions). This situation signifies the onset of warm season in the country being a normal feature during this time of year.

Just a small portion of the country (northeastern highlands and the northern tip) experienced shorter duration of bright sunlight as a result of increased cloudy conditions following the setting in of short rains over these areas. The rest of the country observed longer periods mainly due to a large decrease in cloudy activities during the month.



**MEAN DAILY WIND SPEED**

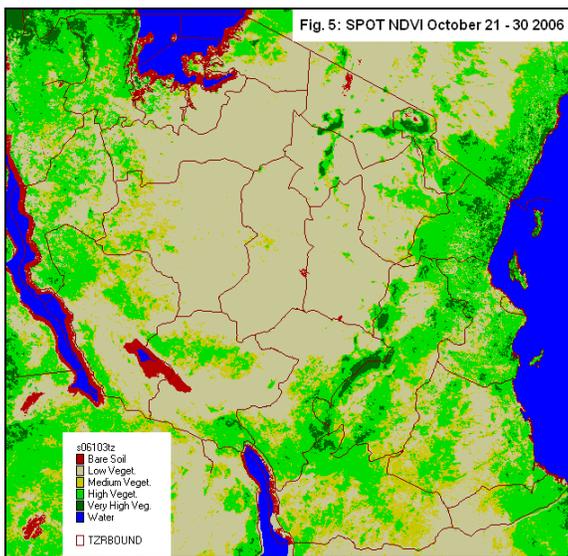


**MEAN SUNSHINE HOURS**

Spatial distribution of mean sunshine hours across the country during October indicates the durations

During October mean wind speed across the country ranged between about 1 and 15.4 km/hr as indicated in Figure 4. The core of maximum speed of about 15.4 hr was located over central areas (Dodoma region), while a larger part of Ruvuma and Morogoro regions continued to experience decreased wind speeds of less than 4 km/hr as observed over Morogoro town. The increased wind strength mainly over central regions underlies the potential to harnessing of wind power for water pumping by use of windmills and also raising prospects for occurrences of dust devils, wind erosion and higher evaporation rates.

### SATELLITE INFORMATION



Vegetation cover across the country during the period is indicated in Figure 5. Very few localized areas over Kagera region (Western Lake Victoria), a stretch along the highlands of Udzungwa ranges (eastern Iringa region), spots on the mountain slopes over the northeastern highlands and parts of northern coastal belt recorded on the high side at about 80%. Low vegetation covered most of the country as shown by the spread of gray colouring in the Satellite picture and generally below 20% vegetation was recorded over central areas, eastern Shinyanga region, northeastern areas. Improved vegetation cover is expected to increase relative to the spread of setting in of the rainfall season.

### AGROMETEOROLOGY

Soil moisture levels during the period improved well to allow farm activities be carried out particularly towards the end of the second half of the month. But some areas over the west of Lake Victoria basin (Kagera region) were at first hit by acute soil moisture stress during the first half of the month which retarded smooth growth of the early planted short rains crops (maize and beans) most of which were between emergence and weeding. Delayed planting on the other hand was experienced over surrounding areas of Kasulu, Kibondo, Magu, Musoma and Mwanza. The remaining areas over this bimodal sector, northeastern highlands and northern coast utilized the improved soil moisture status observed towards the end of the month to plant. Over unimodal areas, land preparations were being finalized with prospects for an early onset of the season.

### HYDROMETEOROLOGY

Onset of short rains in the northern sector will boost water levels in rivers, lakes and dams whereas they get even lower in the southern sector where the dry season is still continuing. Water for domestic and industrial purposes should be used sparingly.

### ENVIRONMENTAL

Temperatures are warm and comfortable, although windy conditions over the central areas increased prospects for diseases such as coughs, colds, pneumonia and asthma.

### EXPECTED SYNOPTIC SITUATION DURING NOVEMBER 2006

The northern hemisphere systems (Arabian and Azores anticyclones) are to build-up gradually towards mid month while over the southern hemisphere, the Mascarene, St. Helena anticyclone and East African ridge are expected continue relaxing. The near equatorial trough over the north-eastern parts of the country and over northern coast is

expected to continue causing showers over most areas in the coast. The I.T.C.Z is sitting right to our region and will REMAIN there for the whole of November. Over the western areas the meridional arm of I.T.C.Z is expected to continue oscillating to the east and influencing some thunder showers over most areas including Lake Victoria basin. The wind patterns over the coast will be more of southeasterly to easterly becoming southerly on the extreme northern coast

### EXPECTED WEATHER SITUATION DURING NOVEMBER 2006

Lake Victoria basin (Kagera, Mwanza and Mara) and western (Kigoma) areas will feature cloudy conditions with thundershowers over most areas and sunny intervals. The northern coastal areas (Coast region, Dar es Salaam, Tanga, Zanzibar and Pemba) and some parts of Morogoro will experience cloudy conditions with showers over most areas, isolated cases of thunderstorms and sunny intervals towards end of the month. North-eastern highlands (Arusha, Moshi, Same and Manyara) areas will experience partly cloudy to cloudy conditions with showers over most areas and few thunderstorms and sunny periods. Central areas (Dodoma and Singida) will feature partly cloudy conditions with isolated cases of light thunder showers and sunny periods. Western areas (Kigoma, Tabora) will be Cloudy and showers over most areas and few thunderstorms over few areas. Southwestern highlands (Iringa, Mbeya and Rukwa regions), southern region (Ruvuma) and southern coast are expected to feature partly cloudy conditions with some cases of light thundershowers and sunny periods

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