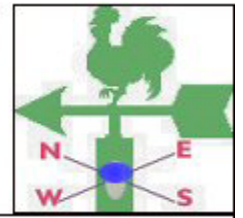




# TANZANIA METEOROLOGICAL AGENCY



## MONTHLY WEATHER BULLETIN

ISSN No: 0856-0919, Volume 8, Issue 8

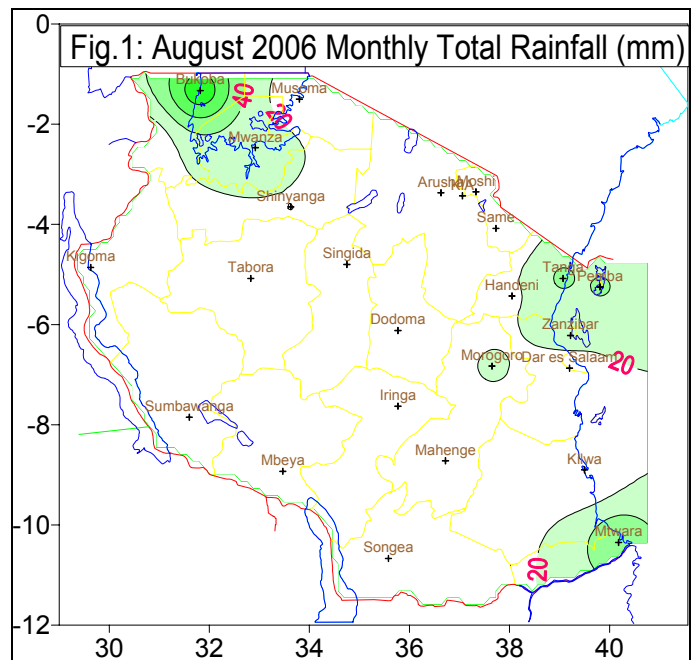
August 2006

### HIGHLIGHT

- Drier conditions continued over much of the country, except for a few areas over Lake Victoria basin and Coastal belt.
- Relatively, harvests for the 2005/06 growing season were much better than the previous season.
- Minimum temperatures improved (warming) slightly over much of the country.

### SYNOPTIC SUMMARY

The Arabian ridge, and Azores and Siberian anticyclones over the northern hemisphere remained weak while the southern hemisphere anticyclones (St.Helena and Mascarene) and the East African ridge were strong and intense. The near equatorial trough over the northeastern sector of the country was active and deep. The meridional component of the Inter-Tropical Convergence Zone (ITCZ) over the western part of the country was generally weak during the month of August. The southeasterly monsoon (SE) flow south of 5°S becoming southwesterly (SW) flow north of 5°S over the east African coast remained a dominant feature throughout the month of August.



### WEATHER SUMMARY

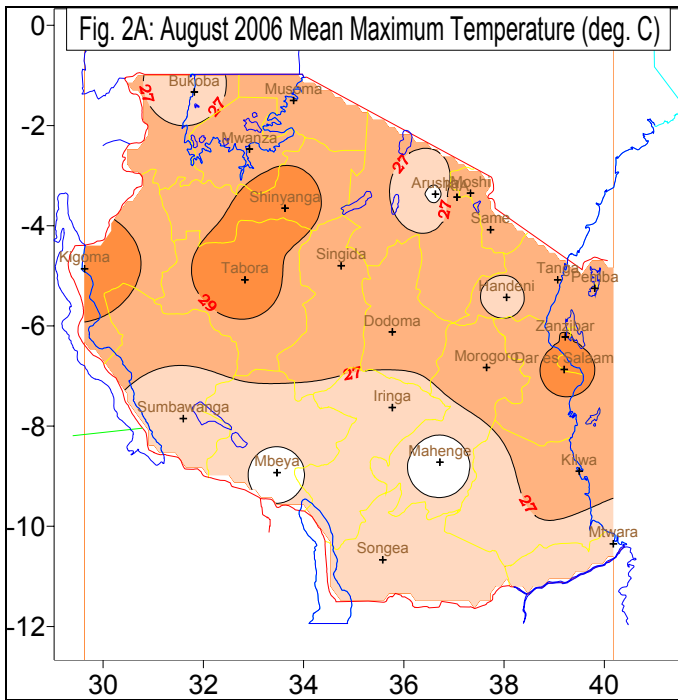
#### RAINFALL

During the month of August dry conditions dominated over much of the country except for a few areas over the Lake Victoria basin and coastal belt that reported occasions of rainshowers.

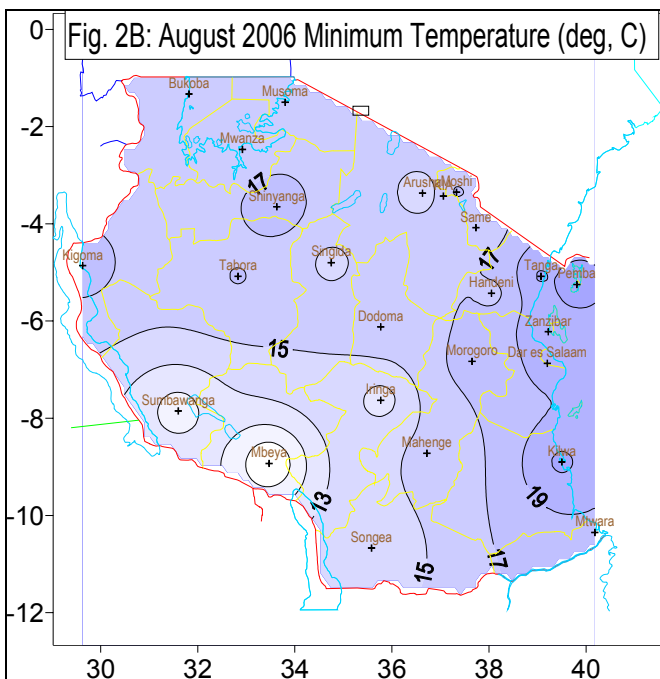
Rainfall was recorded at Bukoba Airport 90.9 mm, Mtwara Airport 55.0 mm, Tanga 43.7 mm and Pemba 42.1 mm, as indicated by a 40 mm isohyet (Fig.1). Other areas, mostly those with unimodal rainfall pattern were seasonally dry, except Mtwara region in the southern coast.

### MEAN AIR TEMPERATURE

Temperature conditions for the month of August were expressed as mean maximum and minimum values as shown in Figs. 2A and 2B respectively. Graph 1, also indicates the dekadal minimum temperatures as observed for the period of May to August 2006. Observed mean maximum temperature ranged between about 25.0 °C over southwestern highlands and just above 29.0 °C along the northern coast and over Shinyanga, Tabora and Kigoma areas as shown in Fig. 2A. A slight increase of about 2.0 °C was observed over southwestern highlands as compared to conditions during the month of July. Mean minimum air temperatures ranged from just below 9.0 °C to slightly above 21.0 °C (Fig. 2B).



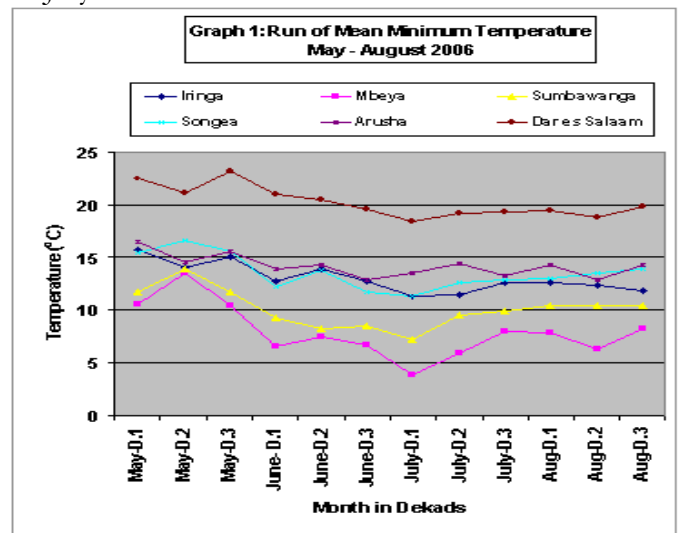
Generally, the country in August experienced a slight warming of about 1.0 °C over much of the country, although over the coastal belt cooler conditions (a decrease of about 1.0 °C) were experienced compared to the past month.



Most areas over the highlands in the southwestern (Rukwa, Mbeya and Iringa regions) continued experiencing chilly weather conditions.

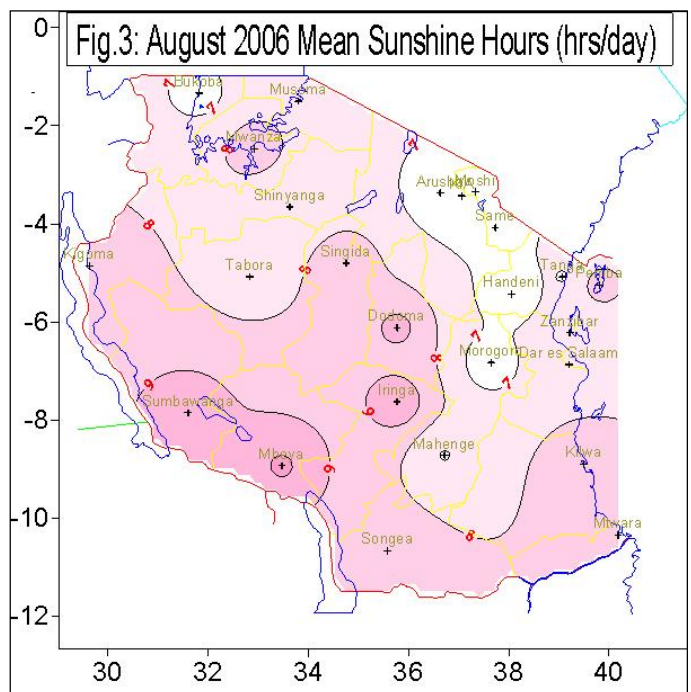
Run of mean minimum temperatures for the few selected stations (Graph 1) during May to August 2006 indicates the maximum cooling during July

dekad 1, where Mbeya in the southwestern highlands recorded the lowest mean dekadal temperature of about 4.0 °C. For most of the areas the minimum temperatures have improved slightly from third dekad of July and have remained between 10.0 and 20.0 °C.



### MEAN SUNSHINE HOURS

Figure 3, indicates the spatial distribution of mean sunshine hours across the country during August. Durations of mean bright sunshine hours

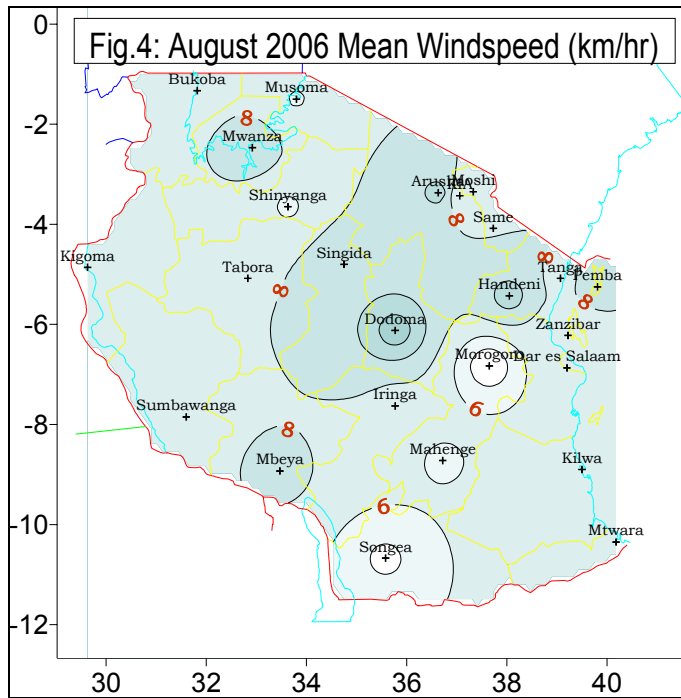


ranged between about 7 and 10hrs/day. Over a large part of western sector (Kigoma, Rukwa, Mbeya, and Tabora regions), central areas (Singida and Dodoma regions), and parts of southern sector experienced

longer durations of between 8 and 10 daylight hours mainly due to a large decrease in cloudy activities over the areas. Shorter durations of less than 7 hrs/day covered Arusha, Manyara, and Kilimanjaro regions over northeastern areas and similar conditions were also observed in Kagera region.

**MEAN DAILY WIND SPEED**

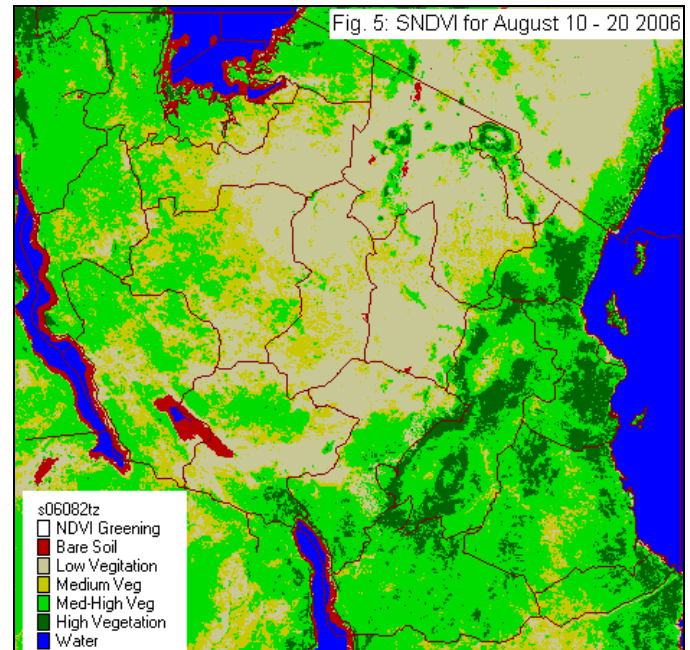
Mean wind speed across the country ranged from just below 4 km/hr to 12 km/hr as indicated in Figure 4. The core of maximum speed of about 12 km/hr was located over central areas (Dodoma region), while areas surrounding Songea and Morogoro towns experienced light winds of about 4 km/hr. The increased wind strength mainly over central regions was beneficial to harnessing of wind power for water pumping by use of windmills and raised prospects of dust devils occurrences, wind erosions and higher evaporation rates.



**SATELLITE INFORMATION**

During the period it is the peak of the dry season across the country. Vast areas over central, northeastern, southwestern and western depict low vegetation cover as shown in Figure 5.

The low vegetation cover coloured light brown in Figure 5 recorded a vegetation index less than 20%. Higher vegetation covered mostly the eastern sector and southern areas where the index reached up to 80%. Medium cover bearing indices between 30 and 50% covered parts of western areas. Shallow water fronts and dams appear in red colour.



**AGROMETEOROLOGY**

Most areas had cleared off the field activities for the season during this month except for a few pocket areas mainly over high altitudes that include Makete district in Iringa region, Rombo district in Kilimanjaro region, Loliondo and Simanjiro in Manyara region and Mbulu in Arusha region where some harvesting activities were being finalized. Farmers over northwestern areas were engaged in planning for the coming season, preparing land and getting seeds.

The month of August 2006 marked the end of monitoring of the 2005/06 annual crop growing season. Relatively, harvests for the 2005/06 growing season were much better than the previous season.

Pasture and water for livestock/wildlife across the country are generally declining as the dry season progresses.

## HYDROMETEOROLOGY

Low humidity, windy conditions and higher evaporation rates led to further reduction in water levels in rivers, lakes and dams. Water for domestic and industrial purposes should be used sparingly.

## ENVIRONMENTAL

Nights and mornings are chilly due to prevailing low temperatures and windy conditions. In high altitude areas where temperatures are still low, charcoal stoves should not be used to heat up homes to avoid asphyxiation from carbon monoxide.

## EXPECTED SYNOPTIC SITUATION DURING SEPTEMBER 2006

The northern hemisphere systems (Arabian and Azores anticyclones) are expected to build-up gradually towards the mid of the month while over the southern hemisphere, the Mascarene and St. Helena anticyclones and East African ridge are expected to start relaxing towards the mid dates of the month of September. The near equatorial trough over the northeastern parts of the country is expected to be active and continue to cause occasional light rains over the coast of Tanga and the Island of Pemba. The I.T.C.Z will continue to remain further to the north near the horn of Africa although towards the end of the month it is expected to shift slowly to the south.

Over the west, the meridional arm of I.T.C.Z is expected to oscillate gradually to the east and likely to influence some rainfall activities over the western and Lake Victoria basin areas. The wind patterns over the coast will be more of southeasterly to southerly becoming southwesterly on reaching the East African coast to feed the southwesterly (SW) monsoons over Indian continent.

## EXPECTED WEATHER SITUATION DURING SEPTEMBER 2006

Lake Victoria basin (Kagera, Mwanza and Mara regions) and western (Kigoma region) areas will feature cloudy to partly cloudy conditions with likelihood of having thundershowers over few areas and sunny periods. Southwestern highlands (Iringa, Mbeya and Rukwa regions), southern (Ruvuma region) and southern coast are expected to feature partly cloudy conditions and sunny periods. Northeastern highlands (Arusha, Kilimanjaro and Manyara regions) will experience partly cloudy conditions and sunny periods. The northern coast (Coast region, Dar es Salaam, Tanga, Zanzibar and Pemba) and some parts of Morogoro will experience partly cloudy conditions with occasions of morning light rains over few areas and sunny periods. Central areas (Dodoma and Singida regions) and parts of western areas of the country (Tabora region) will feature partly cloudy conditions and long sunny periods.

Prepared by

**TANZANIA METEOROLOGICAL AGENCY**

3<sup>rd</sup>, 4<sup>th</sup> & 10<sup>th</sup> Floors - Ubungo Plaza - Morogoro Road.

P.O. Box 3056 Tel. 255 -(0) 22 - 2460706-8 ; Fax: 255 - (0) 22 - 2460718 E-mail: (1) [met@meteo.go.tz](mailto:met@meteo.go.tz) (2) [agromet\\_tz@meteo.go.tz](mailto:agromet_tz@meteo.go.tz)

Dar-es-Salaam UNITED REPUBLIC OF TANZANIA