TANZANIA METEOROLOGICAL AGENCY

MONTHLY WEATHER BULLETIN

ISSN No: 0856-0919, Volume 7, Issue 1 January 2005

HIGHLIGHTS

- Minimal rains during the period over the northeastern sector of the country implies failure of 2004 short rains

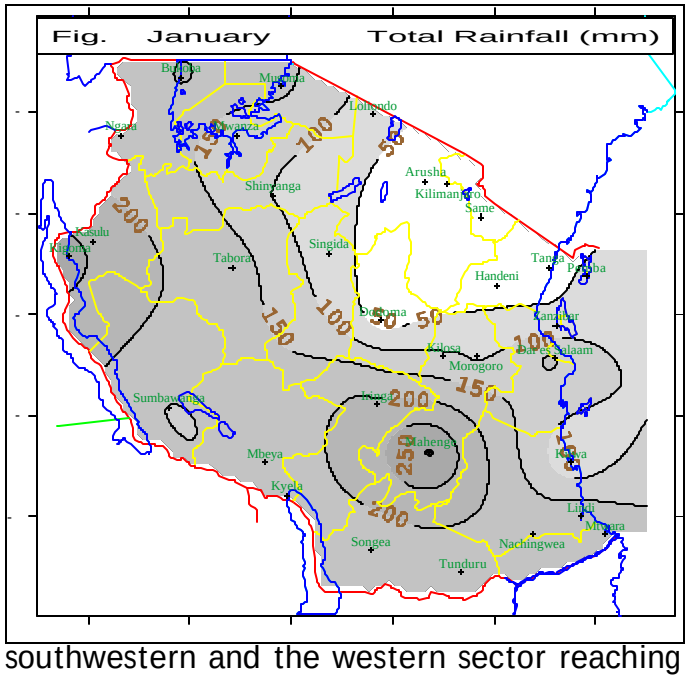
SYNOPTIC SUMMARY

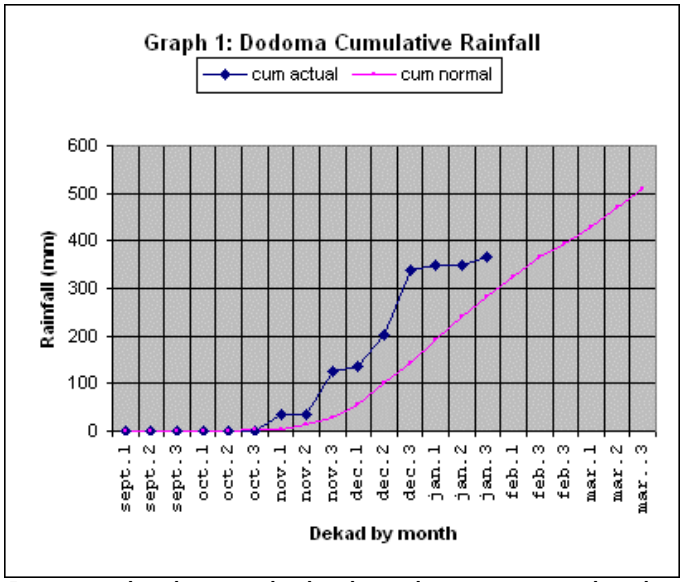
During the month of January, the Azores anticyclone and the Arabian ridge were strong. The Mascarene anticyclone and the St. Helena anticyclone were weak. The zonal component of the Inter Tropical convergence Zone (I.T.C.Z) was active over the southern parts of the country. Moderate tropical storms Daren, Ernest and Filapi developed in southwestern Indian Ocean.

WEATHER SUMMARY

RAINFALL

During the month of January rainfall above normal was recorded over southern, southwestern and the western sector reaching a maximum total for the month of about 200mm as indicated in Figure 1. Parts of central areas recorded near normal total rainfall for the period (Graph 1). On the other hand, northeastern areas observed below normal rainfall where 50mm was mainly the maximum amount recorded adding to the poor short rains since October 2004.

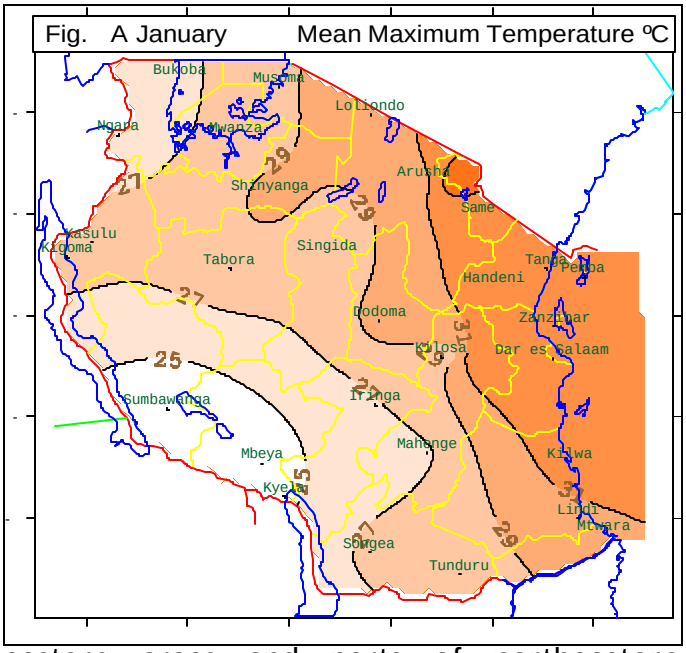




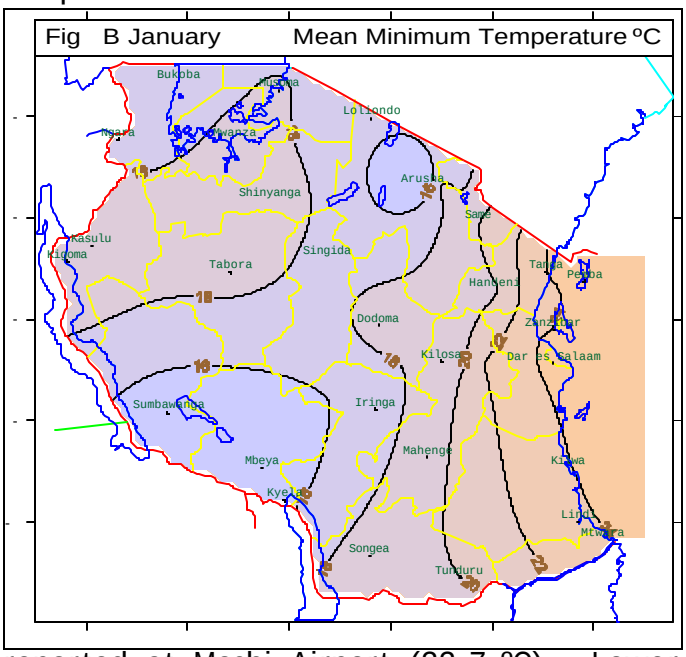
January is the period when importance in the performance of seasonal rains shift from following short rains to seasonal rains that span from October/November to April/May observed over western, central, southern and south-western highlands.

MEAN AIR TEMPERATURE

Mean maximum temperature across the country during January is shown in Figure 2A. Hot conditions ranged from 24 to 34ºC. Hotter conditions were observed over



eastern areas and parts of northeastern highlands. Highest mean maximum temperature from records received was

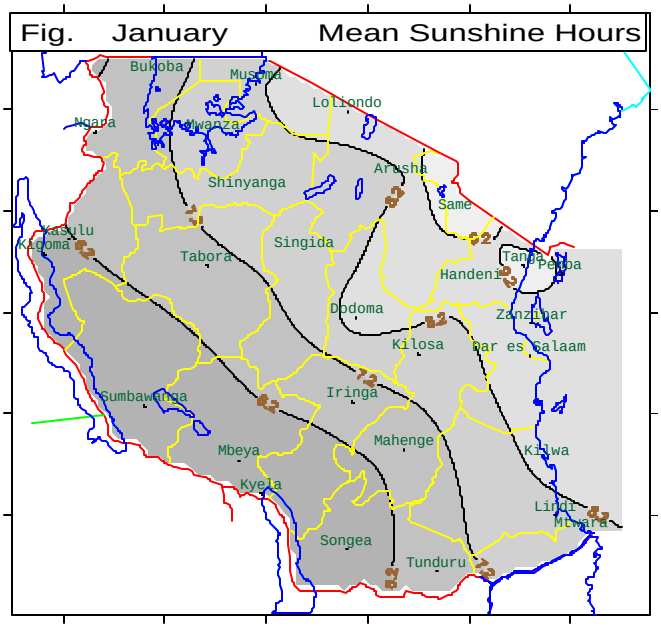


reported at Moshi Airport (33.7 ºC). Lower mean maximum temperatures were recorded over the southwestern highlands with Sumbawanga meteorological station reporting 23.2 ºC

On the other hand, mean minimum temperature profile for January is shown as Figure 2B. Mean minimum temperature range was between 16 ºC to 25 ºC as the situation of December 2004. The eastern sector exhibited higher values compared to the inland situation.

SUNSHINE HOURS

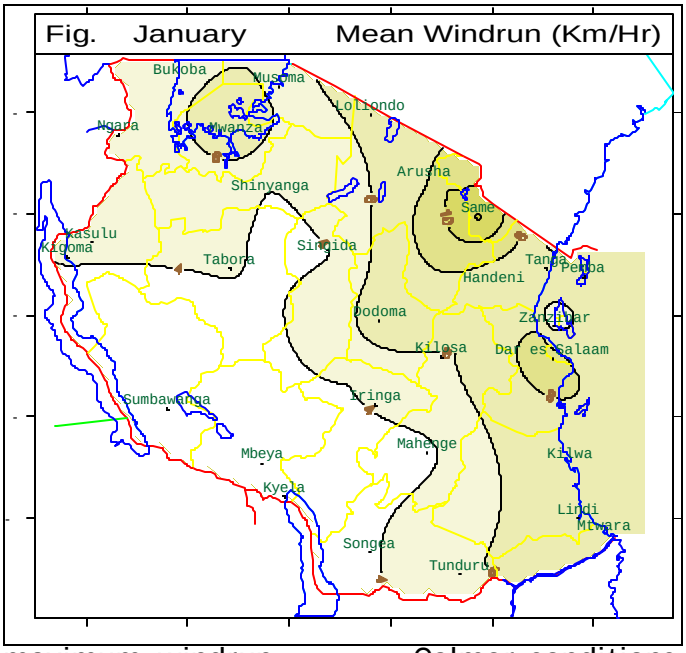
Mean bright sunshine hours during January recorded across the country is shown in Figure 3. Durations of mean bright



sunshine ranged from around 6 hours to about 9 hours per day, a general increase by 1 hour on lower value observed during December 2004. Longer bright sunshine hours mainly greater than 9 hours per day, continued to be observed over the extreme northeastern corner. Almost half of the western sector of the country recorded the lowest durations, about half daylight, mostly because of the cloud activity persistence as an influx of moist air from the Congo air mass.

MEAN DAILY WINDSPEED

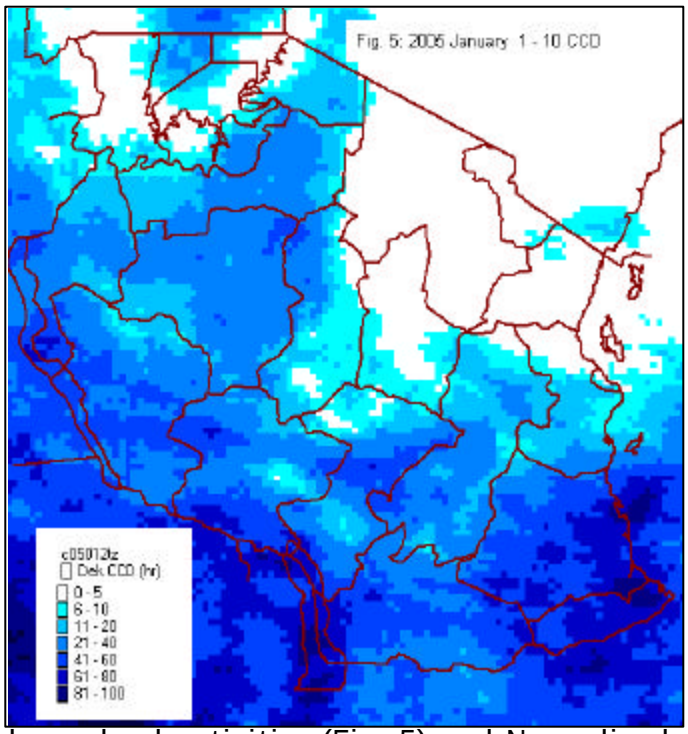
Mean wind run across the country during the month of January ranged from 4 km/hr to 10 km/hr as shown by Figure 4, an increase by 1 km/hr on the lower side. Maximum surface wind run during January were observed over northeastern at a speed of around 10 km/hr that covered parts of Moshi and Same districts. Maximum speeds depict an increase in the spread of locations that reported such



maximum windrun. Calmer conditions with speeds less than 4km/hr prevailed mostly over southwestern areas.

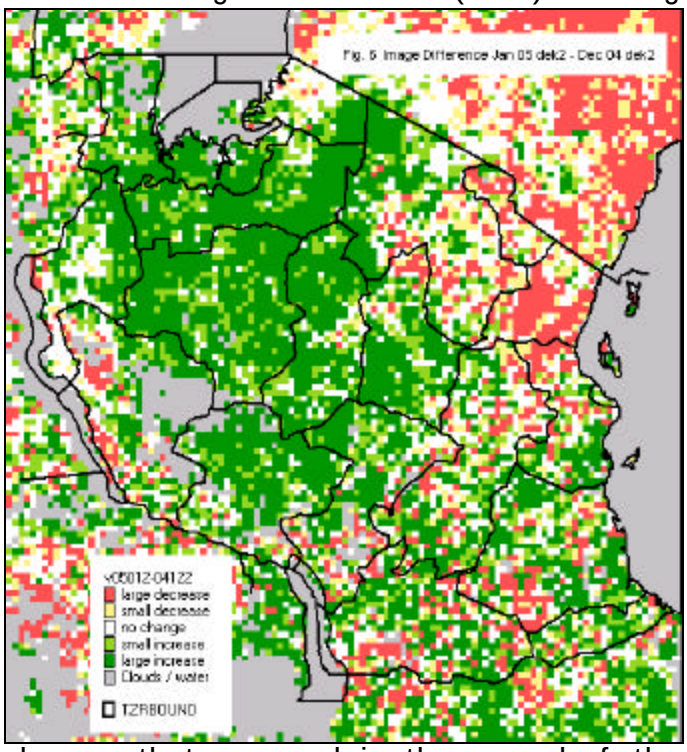
SATELLITE INFORMATION

Satellite information is shown as duration of



deep cloud activities (Fig. 5) and Normalized Difference Vegetation Index (Fig. 6). Deep cold cloud activities declined slightly during January, nevertheless, 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. METEOSAT picture which is shown in Figure 5, depicts mean duration between 1 to 10th January. On average, durations ranged from just over 5 hours to only a maximum of 80 hours. In contrast clear skies without deep cloud activities continued to dominate northeastern areas as was the case during December 2004.

Figure 6 depicts the NOAA satellite Normalized Difference Vegetation Index (NDVI) showing



changes that occurred in the spread of the greening index from second 10-days of December 2004 through second 10-days of January 2005. As of the end of January the difference image show occurrence of large greening increases in the index over midlands and the Lake Victoria Basin. On the other hand, large decreases (red colour) concentrated mostly over the northeastern sector (Tanga and Kilimanjaro regions). A mixed situation covered parts of northern coast region, Manyara, Morogoro and southern regions.

AGROMETEOROLOGY

Soil moisture supply during the month of January over most parts of the country ranged from poor to moderate levels. Over the northern western sector of the country moderate soil moisture prevailed enabling drying of ripened crops. Over the Lake Victoria Basin maize and beans generally in moderate state reached ripeness stage and in some parts beans were harvested including northern parts of Kigoma region (Kasulu and Kibondo districts). On the other hand, generally poor levels due to below normal performance of short rains resulted into realizing generally poor yields of maize over the lowlands of northeastern and northern coastal belt. Most farmers over these areas have started field preparations for the long rains crop.

Over unimodal rainfall areas of central, western, southern and southwestern areas maize in the fields generally was in the vegetative stage in good state. Paddy was being transplanted in Shinyanga and in a few areas over the coastal belt the crop was in early vegetative stage in good state. Cassava at various stages across the country continued well during the period but in Ngara district remains of *batobato* was being cleared off by uprooting old plants.

HYDROMETEOROLOGY

During the period water levels in rivers and water reservoirs increased thus boosting hydropower generation. Nevertheless, water for industrial and domestic purposes should be used sparingly.

ENVIRONMENT

The slightly increased windy condition across the country that prevailed during the month maintained prospects for diseases such as colds, coughs, pneumonia and asthma.

EXPECTED SYNOPTIC SITUATION DURING JANUARY

The Arabian ridge and the Azores anticyclone are expected to remain intense. The St. Helena anticyclone and the Mascarene anticyclone will weaken. The zonal component of the Inter Tropical Convergence Zone (I.T.C.Z) will be active over the southern, southwestern highlands and southern coast.

EXPECTED RAINFALL SITUATION DURING JANUARY

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

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