TANZANIA METEOROLOGICAL AGENCY

MONTHLY WEATHER BULLETIN

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MAY - HIGHLIGHTS

. Exceptionally rare rainfall events reported over Pemba Island and Lake Victoria Basin.
. Poor "long rains" season despite episodic events.

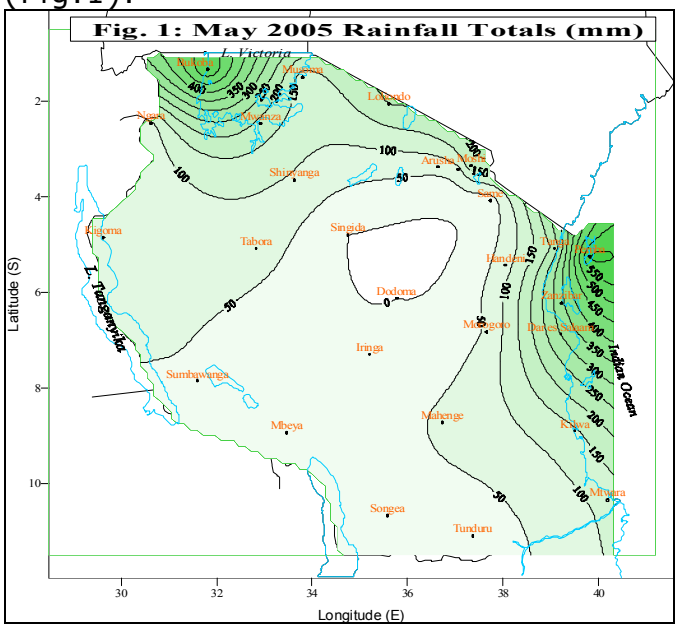
SYNOPTIC SUMMARY

During the month of May, both the Mascarene and St. Helena anticyclones were relatively strong while the Azores anticyclone and the Arabian ridge were generally weak. The Inter-tropical Convergence Zone (I.T.C.Z) was active over the northern sector of the country. The near equatorial trough was active over the northern coast with occasional easterly wave perturbations over the western Indian Ocean.

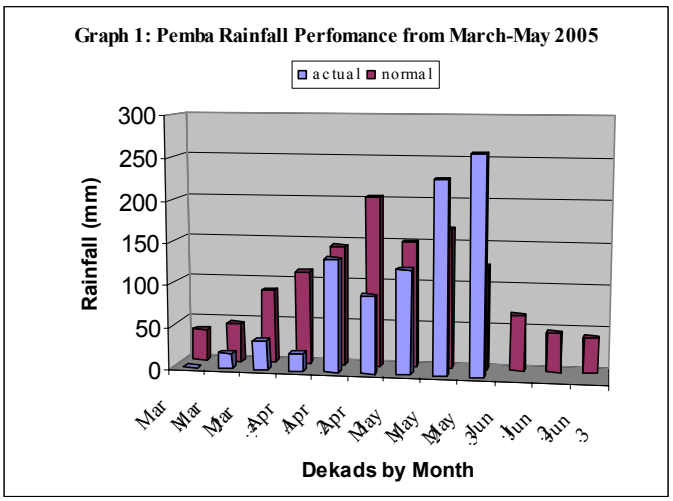
WEATHER SUMMARY

RAINFALL

Rainfall activities during the month indicated a marked decrease over most parts of the country, except for a few areas of the bimodal rainfall regime of the northern coast, northeastern highlands and Lake Victoria Basin (LVB) that received at least 200 mm of rainfall(Fig. 1). Highest total monthly rainfall recorded was at Pemba (611.5 mm) with two-day(11th and 20th May) exceptionally rare rainfall events which recorded 104.3 and 133.8 mm of rainfall per day respectively. Over the LVB, Bukoba had exceptionally rare rainfall event on 28th May which recorded 105.6 mm per day. On the other hand, minimum total rainfall for the period was recorded over unimodal rainfall areas (western, central, southwestern and southern) where seasonal rains ceased as shown by 100 , 50 and 0 mm isohyets (Fig.1).

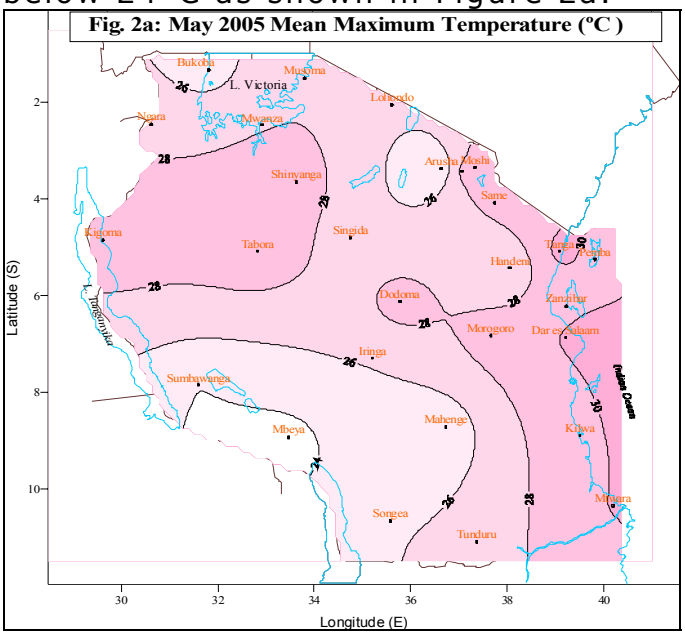


Graph 1 shows the dekadal (10-day) rainfall performance during the month at Pemba (northern coast) plotted against the long term average rainfall. It indicates a typical situation over the northern coast and northeastern highlands which was characterized by below normal rainfall since the start of the season (March), except during 2nd and 3rd dekads of May when the rainfall was above normal. This indicates therefore, poor performance of *Masika* rainfall was attributed to its poor distribution rather than the total amounts.



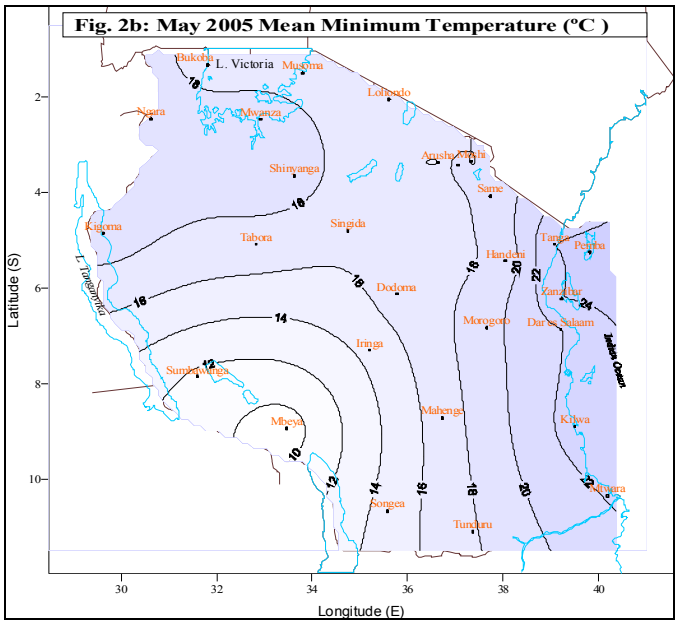
MEAN AIR TEMPERATURE

Maximum and minimum air temperatures across the country during May are indicated in Figs. 2a and 2b respectively. Observed mean maximum temperature ranged between just above 30ºC and just below 24ºC as shown in Figure 2a.



Areas over the southwestern highlands (Rukwa and Mbeya regions) continued experiencing lower maximum temperatures (slightly below 24°C), while higher values just above 30°C were observed along the coast (Tanga, Dar es Salaam and Mtwara regions). The highest value of 30.6ºC was recorded at Tanga airport, indicating a drop of 1.6ºC compared to that observed during April. Mbeya airport in southwestern highlands recorded the lowest mean maximum temperature of 23.5ºC (a drop of 0.3ºC).

On the other hand, the mean minimum air temperatures during the month ranged from just below 10ºC to just above 24ºC (Figure 2b).



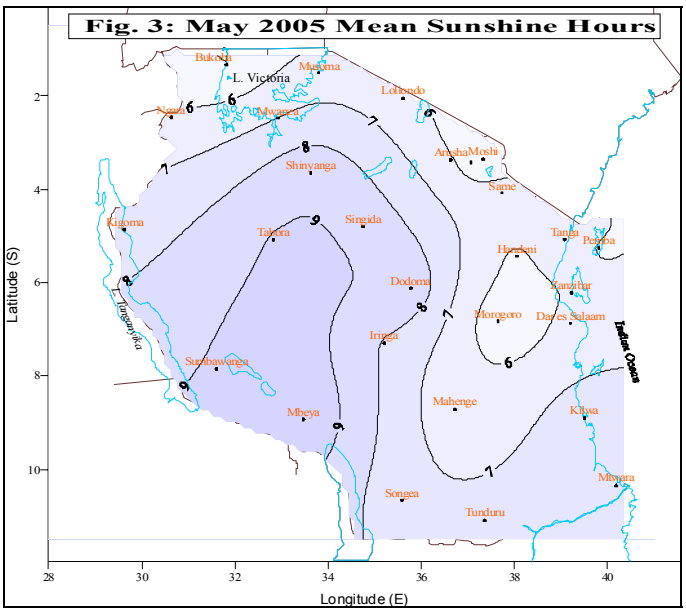
Areas over the southwestern highlands continued experiencing relatively cooler conditions (temperatures less than 14ºC) with the lowest mean minimum temperature of 9.0ºC recorded at Mbeya airport. A general drop in temperature highlights a cooling trend, an indication of the approach of the cool/cold season over the eastern Africa region.

SUNSHINE HOURS

Figure 3 indicates the spatial distribution of the bright sunshine (expressed in hours per day) observed across the country during May. The country experienced bright sunshine for durations averaged between about 6 to just above 9

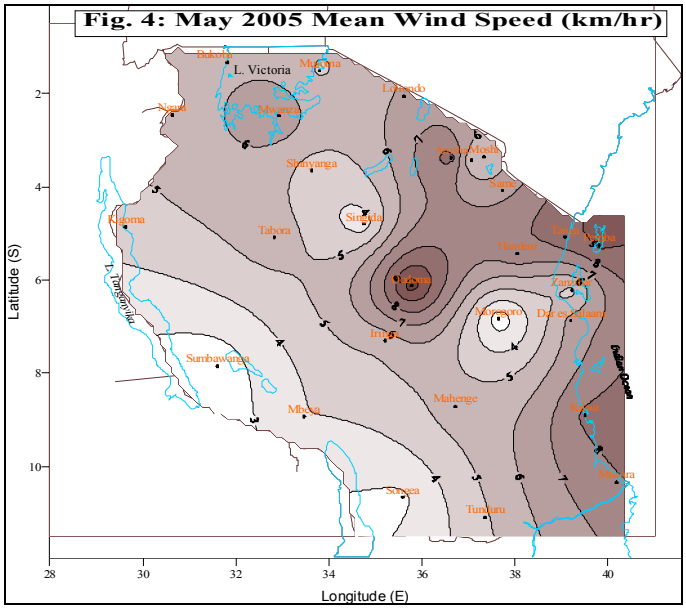
hours/day, with the longest duration of 10 hours/day recorded over Mbeya in the southwestern highlands.

Generally, many hours of sunshine were experienced over areas in unimodal rainfall regime as a result of decrease in cloud activity during the month. However, Mahenge district experienced sunshine duration of 7 hours/day and less. Shorter durations (less than 6 hours/day)were observed over west of LVB(Kagera region), Morogoro north, Handeni district, and Kagera, Kilimanjaro and Arusha regions.



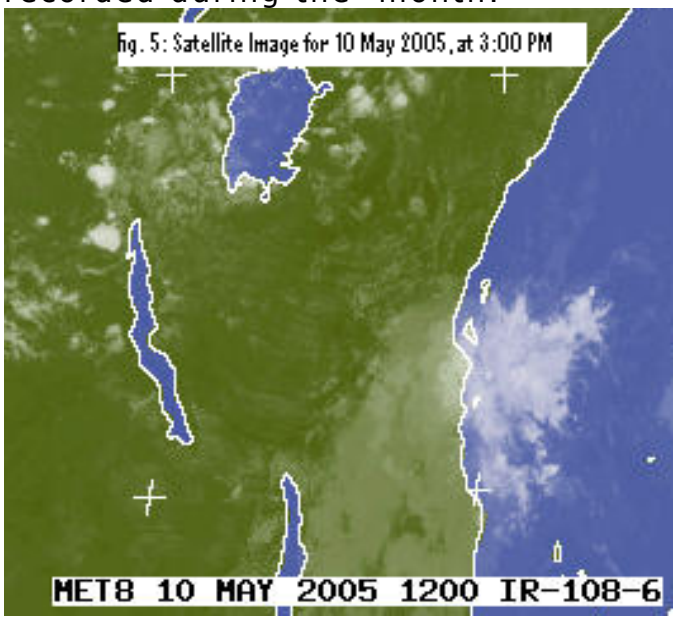
MEAN DAILY WINDSPEED

Mean wind run across the country during the month of May ranged from about 3 km/hr to a maximum of just above 10 km/hr as shown in Figure 4. Spots of higher wind speed occurred over Dodoma, Arusha and Tanga regions, and Pemba island, with Dodoma airport recording the maximum of 10.6 km/hr. On the other hand, slight winds (less than 3 km/hr) dominated in Sumbawanga (2.3 km/hr), Songea (2.8 km/hr) and Morogoro municipality(2.3 km/hr).



SATELLITE INFORMATION

Figure 5, displays cloud cover on 10/5/05 that typically persisted over the coastal belt of the country and was the cause of heavy rains recorded during the month.



AGROMETEOROLOGY

Showers received during May over bimodal rainfall areas improved soil moisture conditions in those areas, whereas over unimodal rainfall areas a declining trend of soil moisture supply continued. This situation was really conducive to the

cropping activities that were persisting over both rainfall patterns. The crops that were between vegetative and ripeness stages over the bimodal sector (LVB, northeastern highlands and Northern coast) performed well except for some pockets (Simanjiro, Magu, Same, Karatu)where they experienced late seasonal onset and prolonged dry spells. Over the remaining areas, crop (cereals and pulses) stages ranged from ripeness to post harvesting whereby the dropping of soil moisture levels and longer sunshine durations sped up the drying of ripened crops and facilitated harvesting of the dry-down crops. However in Kagera (Ngara district), short durations of sunshine and isolated showers affected both drying of crops and harvesting processes of pulses (beans). Other crops, particularly cassava, was in good state and at various stages.

According to May 2005 food security update report given by FEWS Net Tanzania, crop yield prospects are generally expected to be below that of last year due to the poorly distributed and low amounts of rainfall in most of the country in 2004/2005 growing season.

HYDROMETEOROLOGY

There has been only a slight increase in water levels in rivers and water reservoirs due to improved rainfall amounts over the northeastern highlands and northern coastal belt.

Water for industrial and domestic purposes should be used sparingly.

ENVIRONMENTAL

Windy, cooler and dry conditions across the country that prevailed during the month, enhanced prospects for diseases such as colds, coughs, pneumonia and asthma.

EXPECTED WEATHER SITUATION DURING JUNE 2005

The Arabian, St. Helena and Azores anticyclones are expected to remain relatively weak while the Mascarene anticyclone and the associated ridge (East African) are likely to remain intense. The I.T.C.Z will remain to the north of equator while the near equatorial trough will remain active over the northern coastal areas. The southeasterly wind south of 5°S turning into southwesterly flow north of 5°S over the eastern coast of East Africa will become a dominant feature during the month.

EXPECTED WEATHER SITUATION DURING JUNE 2005

The northern coast and islands of Zanzibar and Pemba will experience partly cloudy conditions with occasions of showers over few areas and sunny periods. Lake Victoria basin will feature partly cloudy conditions with showers and thunderstorms over few areas and sunny periods. Regions over the Central, western, southern, southwestern and northeastern highlands will experience windy, partly cloudy conditions with chilly mornings and sunny periods.

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