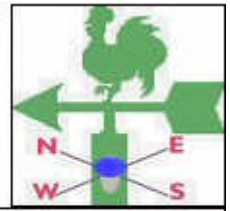




TANZANIA METEOROLOGICAL AGENCY



MONTHLY WEATHER BULLETIN

ISSN No: 0856-0919, Volume 7, Issue 3 March 2005

MARCH - HIGHLIGHTS

- Timely onset of long rains was recorded during mid-March over the northeastern sector of the country.
- There is an increased likelihood of near normal to above normal rainfall over bi-modal areas

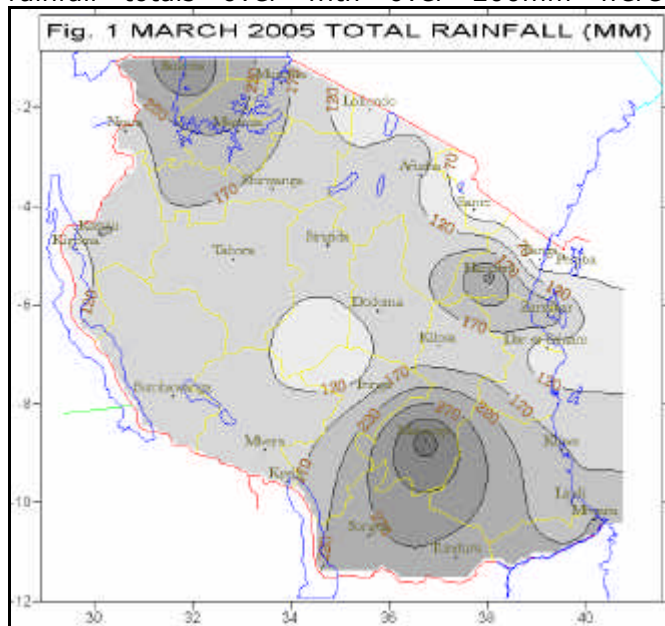
SYNOPTIC SUMMARY

During the month of March, the Azores anticyclone and the St. Helena anticyclone were weak. The Mascarene anticyclone and the Arabian ridge were strong. The zonal component of the Inter Tropical Convergence Zone (I.T.C.Z) was active over the southern areas. Severe tropical storm *Hennie* developed over the southeastern Indian Ocean.

WEATHER SUMMARY

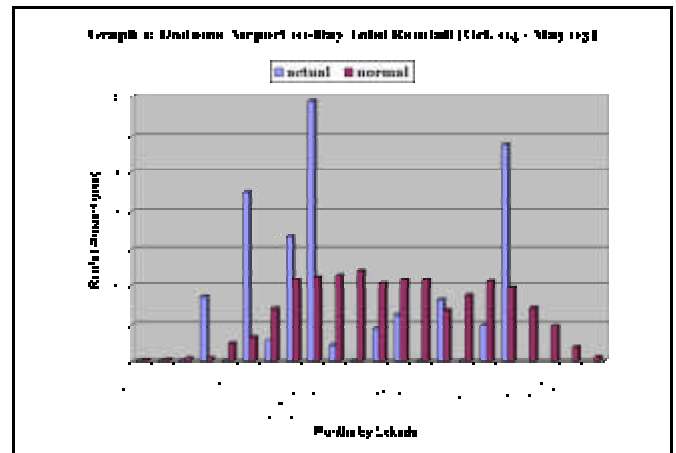
RAINFALL

During March rainfall activities were observed over most parts of the country. Monthly rainfall totals over with over 200mm were



recorded over Mahenge, Handeni and Bukoba districts. Lower monthly rainfall totals at less than

70mm were recorded in Pemba and over the extreme northeastern strip covering Same and Mwanza districts. The rains recorded over the northern coastal belt, northeastern areas and the Lake Victoria Basin marked timely onset of the long rains for 2005 after the below normal 2004 short rains (*vuli*) performance. The pattern of the seasonal rains over unimodal rainfall areas has

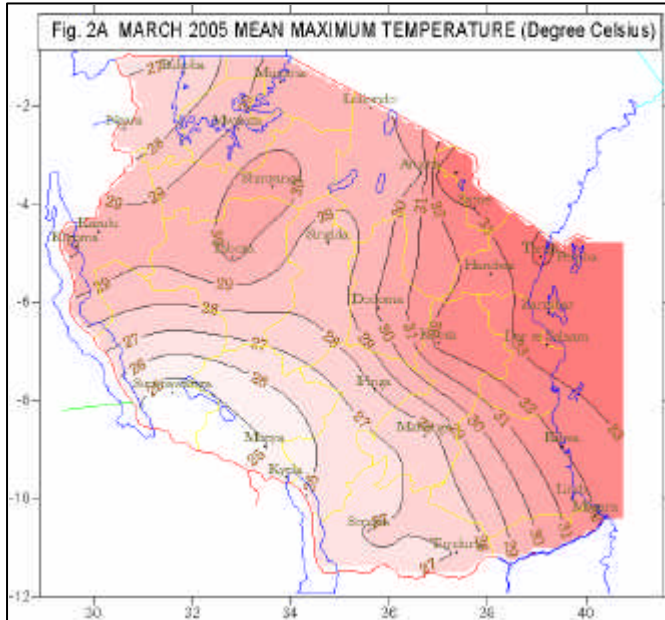


been characterized by varied distribution over space and time. Looking at the example of Dodoma meteorological station, (Graph 1), long dry spells persisted in between spikes of above normal rains. During the first 20 days of March the graph depicts rainfall amounts recorded to have been less than 20mm. Such dry conditions also occurred in February (the second 10-days) and in the first half of January.

MEAN AIR TEMPERATURE

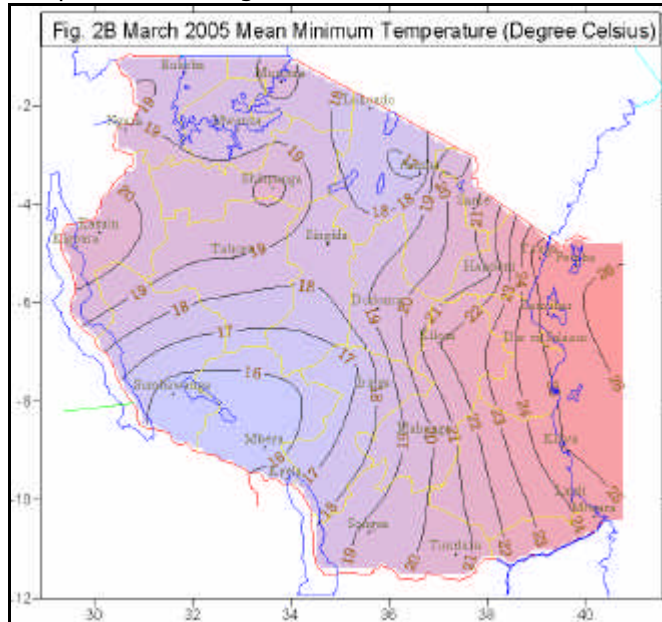
Temperatures for the month of March depicting air mean maximum and minimum observations during the period appear in Figures 2A and 2B respectively. Observed mean maximum temperature ranged between 34°C and 25°C. Higher mean maximum temperatures above 30°C were recorded over the eastern

coastal belt including an inland spot over Shinyanga district. The highest extreme value of 33.8°C was recorded at Tanga airport. Lower mean maximum temperatures near 25°C were observed over the highland areas of southwestern



as shown in Figure 2A.

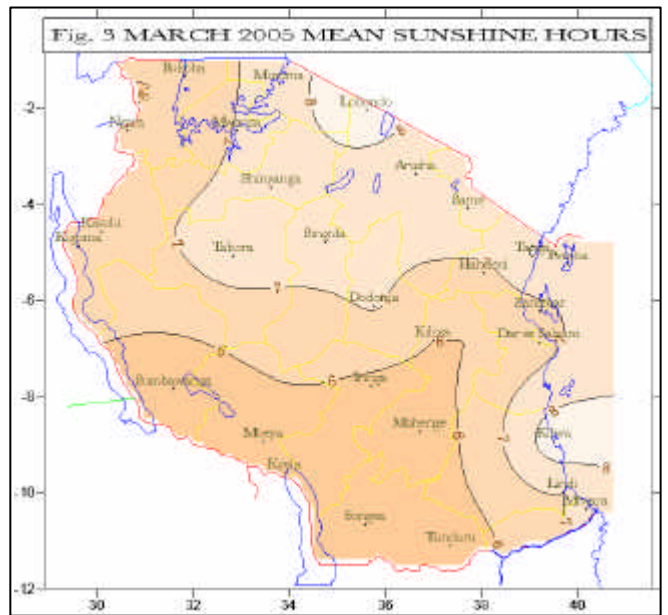
On the other hand, mean minimum air temperatures ranged from 16 to 25°C and the



extreme minimum temperature of 14.0°C was observed at Mbeya Meteorological Station during the second 10-days of March.

SUNSHINE HOURS

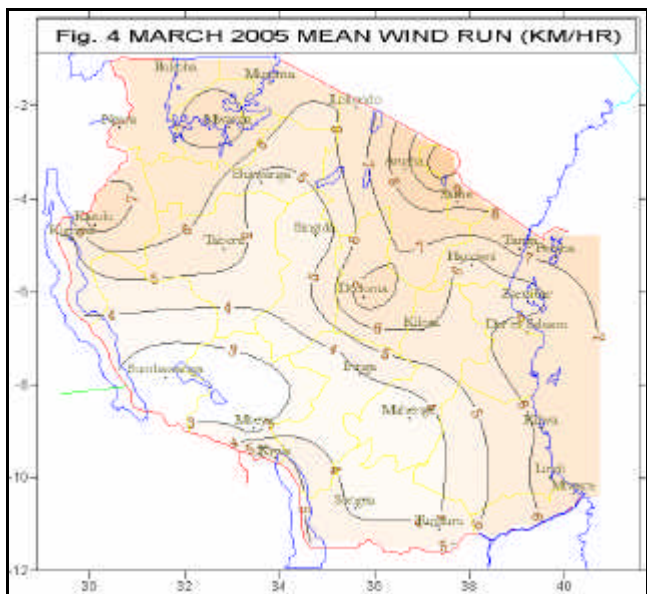
Figure 3: indicates the spread of mean sunshine hours during March observed across the country. Durations of bright sunshine ranged from half day light hours to about 8 hours. Highest durations mainly up to 8 hours/day dominated parts of northeastern areas and parts of the eastern coast belt as shown in Figure 3. Persisting cloud cover influx from Congo air mass was the main cause of reduced hours of bright



sunshine over most areas. As for the northern coastal belt and northeastern areas clear skies dominated the first half of March in advance of onset of increased seasonal cloud activities.

MEAN DAILY WINDSPEED

Mean wind run across the country during the month of March ranged from 3km/hr to a maximum of just above 9km/hr as shown in Figure 4 on the next page. Spots of higher wind speed occurred over the northern sector of the country with the 9km/hr speed recorded in Kilimanjaro region. Lower wind speeds, around 3km/hr, dominated over southwestern areas.



AGROMETEOROLOGY

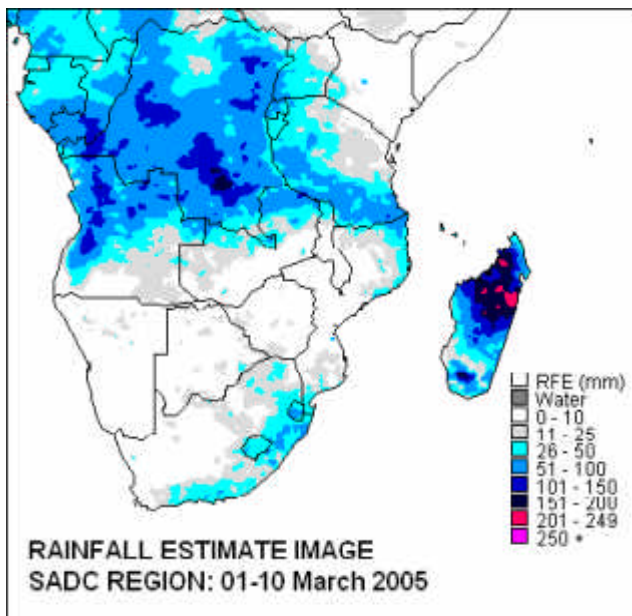
High variation in the spread of soil moisture was observed across the country during the month. Northeastern continued to depict higher soil moisture deficits followed by central areas while southern, southwestern and western areas registered adequate levels.

Field crop development was generally past the flowering stage into the seed setting stage for maize over the unimodal rainfall receiving areas. Maize crop was generally in good state promising moderate final yields. Over the northern coast belt, northeastern areas and the Lake Victoria Basin, land preparation was the major field activity in preparation of the long rains growing season. Unfortunately, field crops (maize, beans, and sorghum) wilted at different stress levels due to prolonged dry spells over central region and late planted crops in Karatu and Ngorongoro districts.

Cassava was at all stages across the country and supplies of the harvested crop continued to feed into town markets. There was a general improvement also on the pasture condition across the country.

SATELLITE INFORMATION

Figure 5 depicts a METEOSAT picture of rainfall estimates during the first 10 days of March.



Rainfall estimates for the 10 days were generally less than 100mm confirming the ground truth for a number of areas (e.g. Dodoma). Higher estimates covered the southern, southwestern and western areas. The picture as seen from the southern Africa block depicts a western influx of cloud activities from the Congo air mass.

HYDROMETEOROLOGY

There has been a light increase in water levels in rivers and water reservoirs was over bimodal rainfall receiving areas. Water for industrial and domestic purposes should be used sparingly.

ENVIRONMENTAL

Localised windy and dry conditions across the country that prevailed during the month maintained prospects for diseases such as colds, coughs, pneumonia and asthma.

**WEATHER OUTLOOK FOR
MARCH - MAY**

SEA SURFACE TEMPERATURE PATTERNS

From 2 to 4 March 2005 Climate Scientists and experts from Meteorological Services of Greater Horn of Africa (GHACOF), Regional and International Meteorological Institutions convened in Mombassa, Kenya to formulate consensus seasonal outlook guidance for March – May 2005 rainfall season in the eastern African sub – region. Tanzania Meteorological Agency participated in this conference.

The forum reviewed the state of the global climate system and its implications for the sub – region. Among the principal factors taken into account were the observed and predicted Sea Surface Temperatures (SSTs) in the tropical Pacific Ocean and over much of the tropical Atlantic and Indian Oceans.

The current sea surface temperature (SST) anomalies over much of Atlantic and southwestern Indian Oceans are warmer than average while southern central Atlantic and

In view of the above, for the March – May rainfall season over bi-modal areas (Lake Victoria, Northeastern highlands and Northern coast) there is an increased likelihood of near normal to above normal rainfall. However, some areas in the northeastern highlands and northern coast are likely to get normal rainfall with pockets of below normal rainfall. Uni-modal areas are expected to receive normal to below normal rainfall as shown in Figure 6.

It should be noted that heavy and short duration events are common even in below normal rainfall conditions. It should also be noted that the March to May rainfall season is more significant for the northern sector of the county.

(I) Long Rains (Masika)

The long rains season in the northern (bimodal rainfall) sector of Tanzania are due to commence in the second and third week of March 2005. The details are as follows:

Lake Victoria basin: Rains are expected to start during the third week of March in Kagera region and northern parts of Kigoma region, gradually spreading to other areas (Mwanza and Mara regions) during the fourth week of March 2005. These rains are expected to be normal to above normal.

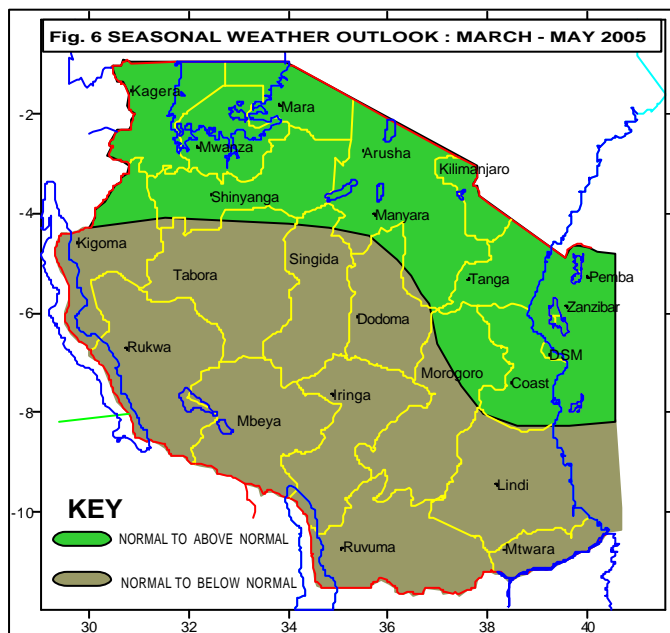
Northern coastal areas and hinterland: (Dar es Salaam, Tanga, Coast, northern Morogoro regions and isles of Zanzibar and Pemba). The rains will commence around second to third week of March and are expected to be normal with pockets of below normal rainfall.

Northeastern highlands: (Kilimanjaro, Arusha and Manyara regions) the onset is expected during the third to fourth week of March. The rains in these areas are likely to be mainly normal with pockets of below normal rainfall.

(II) Seasonal Rains

Western areas: (Tabora, Rukwa, Southern parts of Kigoma and Shinyanga). The rains are expected to last to the end of April. These rains are expected to be mainly normal with some areas receiving below normal rainfall.

Central, Southern and Southwestern areas: (Singida and Dodoma, Mbeya, Iringa, Ruvuma, Mtwara and Lindi regions). The rains are expected to last to the end of April. These rains are



southeastern Indian Oceans are dominated by cooler than average SSTs. It should be noted that development of tropical cyclones in the Indian Ocean during March - May period may influence the rainfall patterns in the sub-region.

expected to be mainly normal with some areas receiving below normal rainfall.

IMPACTS

Low and poorly distributed rainfall led to long dry spells in pockets of northern coast, north eastern highlands, most of central areas and pockets of south western highlands and southern areas, whereby crops, particularly maize, were water stressed for long periods and in some cases led to crop failure. The unimodal areas of Central, Southern and Southwestern highlands were mainly affected in February. The resumption of rains in these areas should provide adequate moisture to sustain the crop to the end of the cropping season. In the bimodal areas of the northern highlands (Kilimanjaro, Arusha and Manyara regions), northern coast, northern Morogoro and Tanga regions, Zanzibar and Pemba where the long rains are about to commence, farmers are advised to complete land preparation quickly and plant as soon as the rains start with quick maturing and drought tolerant varieties.

The low level of rainfall activity, which prevailed and is expected to last until May is not helping much in raising the level of water in rivers and dams. It is hence advised that water for domestic, industrial, irrigation purposes, etc. should be used sparingly.

Farmers are advised to seek further guidance from Agricultural Officers.

This Outlook is relevant only for seasonal time scales and over relatively large areas. Local and month-to-month variations may occur.

The Tanzania Meteorological Agency will continue to monitor the evaluation of relevant weather systems and issue and relevant advisories and additional guidance regularly.

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