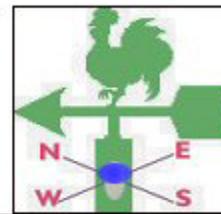




TANZANIA METEOROLOGICAL AGENCY



MONTHLY WEATHER BULLETIN

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SEPTEMBER – HIGHLIGHTS

- Land preparations have started over the areas receiving short rains.
- Areas over the unimodal sector (central, western, southwestern highlands and southern regions) remained dry, with some areas depicting reduced quality and supply of pastures.

SYNOPTIC SUMMARY

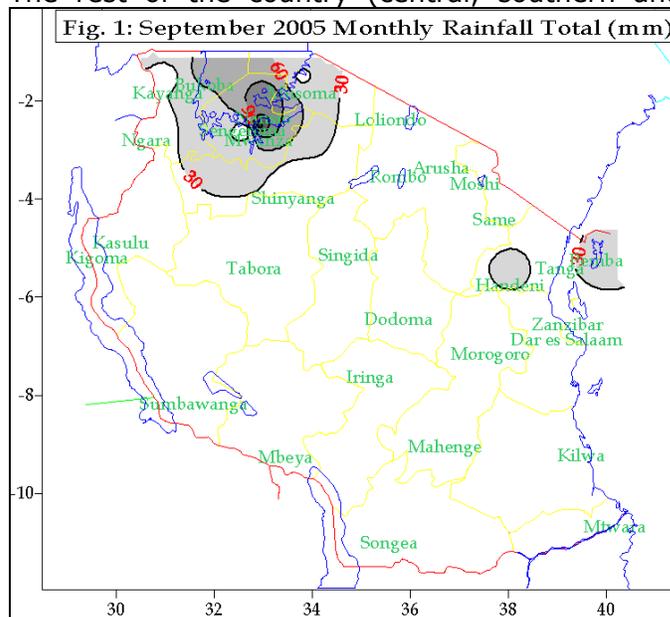
During the month of September, the Siberian and Azores anticyclones over the northern hemisphere intensified gradually and the Arabian ridge started to organize itself pushing the rain making mechanism-Inter-Tropical Convergence Zone (ITCZ) further south. The St. Helena and Mascarene anticyclones and the East African ridge relaxed, thus changing the wind direction from southeasterly to easterly flow towards the end of the month. The prevailing Cold Sea Surface Temperature (SST) over the western Indian Ocean influenced rainfall anomalies over a few areas of the northern coast. The Congo trough over equatorial Central Africa deepened. The near equatorial trough was active over the western Indian Ocean thus causing the southeasterly wind flow to become southwesterly over the eastern coast thereby reducing the influx of moisture to the coastal areas.

WEATHER SUMMARY

RAINFALL

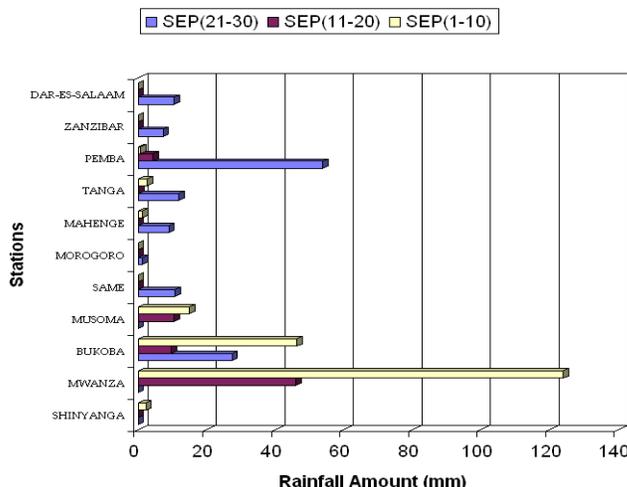
During September rainfall activities were observed over some parts of the Lake Victoria Basin (LVB) and over a few areas of the northern coastal belt. As shown in Figure 1, occasional rains over northwestern areas (Kagera and Mwanza regions) suggest early onset of *vuli* rains. From Graph 1, rainfall amounts during the month were generally less than 20 mm per dekad in most of the stations except over Bukoba and Mwanza where rainfall recorded was more than 20 mm.

The rest of the country (central, southern and



southwestern areas) remained dry a normal

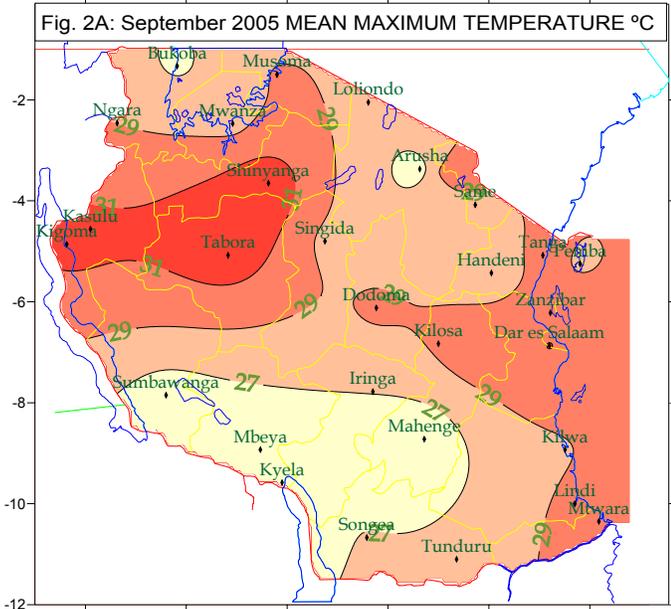
Graph 1: 2005 Short Rains (Vuli) Performance



feature for the time of the year.

MEAN AIR TEMPERATURE

Temperatures for the month of September are expressed as mean air maximum and minimum temperatures as shown in Figs. 2A and



2B respectively. Observed mean maximum temperature ranged between 32.7°C and 25.3°C.

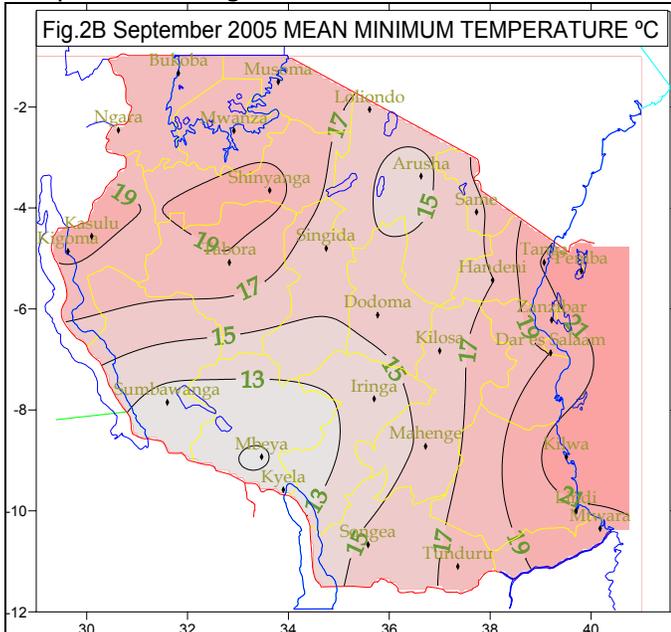
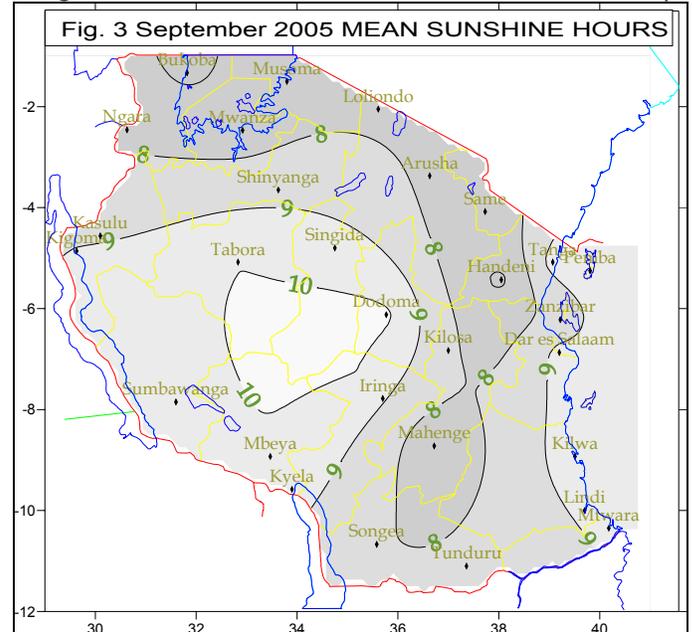


Fig.2A shows that the highest mean maximum temperatures (higher than 31 °C) across the country were observed over Kigoma, Tabora and Shinyanga regions, with the highest record of 32.7 °C observed over Shinyanga town. The lowest values (slightly below 27 °C) were observed over Arusha and southwestern highlands regions.

On the other hand, Fig.2B shows that the mean minimum air temperatures ranged from just below 11 to just above 21 °C, whereas the extreme minimum temperature of 9.3 °C was observed at Mbeya Met Station during the first dekad, a significant warming by about 3 °C compared to the situation during August.

SUNSHINE HOURS

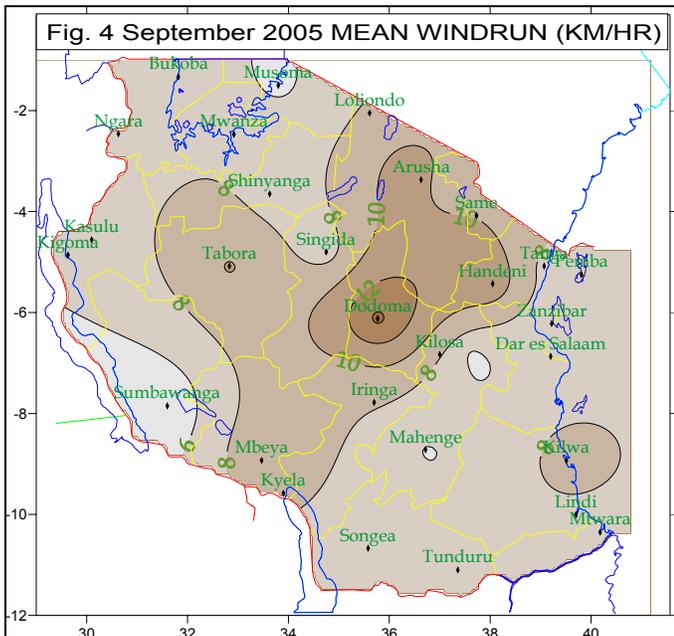
Figure 3, indicates the spread of mean sunshine hours during September as observed across the country. Durations of mean bright sunshine ranged from 7 to about 10 hours/day.



The highest durations mainly up to more than 9 hours/day dominated the central, western, southwestern highlands and coastal belt. The Lowest durations around half daylight hours were experienced over some parts of Kagera region due to increased influx of cloud cover from Congo forest on the northwestern side of the country.

MEAN DAILY WINDSPEED

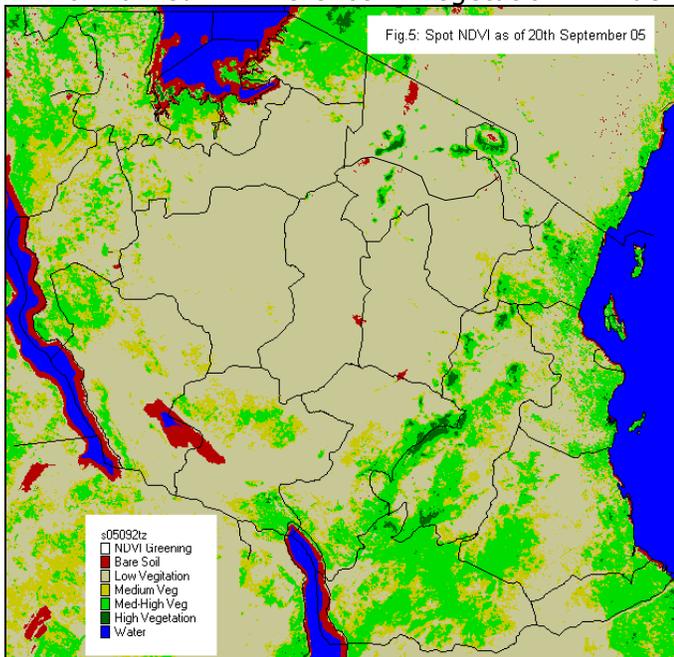
Mean wind run across the country during the month of September ranged from about 4 km/hr to a core maximum wind speed of just above 14 km/hr as shown in Figure 4. The core of higher wind speeds (greater than 10 km/hr) is oriented along the northeast axis and occurred over central and parts of northeastern areas. Lower wind speeds less than 8 km/hr dominated over southern, western and northwestern regions and coastal belt.



Slight winds (speeds between 4 and 6 km/hr) were experienced over a few areas of Rukwa and Mara regions.

SATELLITE INFORMATION

Figure 5 depicts vegetation greenness as Spot Normalized Difference Vegetation Index



(SNDVI) from METEOSAT satellite sensor at the end of the second 10-days of September 2005. Due to seasonal dry conditions over some areas of the country notable decreases in the greening indices (low vegetation) appear to cover most parts of southwestern and northeastern highlands

and central regions. However a few pockets of high vegetation greening were observed over areas around Udzungwa mountains.

AGROMETEOROLOGY

Soil moisture deficits continued into September over many areas of the country except for a few parts of bimodal rainfall regime particularly the Lake Victoria Basin and the northern coast (Tanga region and Islands of Zanzibar and Pemba) that experienced some replenishments through occasional rains. This condition was favorable for land preparation that was carried out across the area and planting of *vuli* crops (beans and maize) in pockets as reported from Karagwe, Bukoba and Ukerewe districts in Kagera and Mwanza regions respectively. Other crops like cassava, potatoes and bananas also benefited from such moisture replenishment. Areas over the unimodal sector (central, western, southwestern highlands and southern regions), remained dry, with some areas depicting reduced quality and supply of pastures.

HYDROMETEOROLOGY

Low water levels in rivers and lakes were experienced during the period. Water for industrial and domestic purposes should be used sparingly.

ENVIRONMENTAL

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

WEATHER OUTLOOK FOR SEPTEMBER - DECEMBER 2005 SEASON

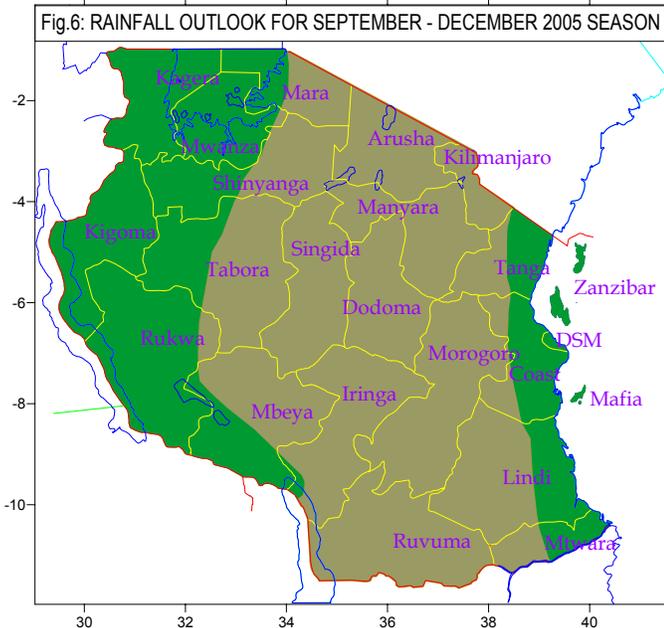
Short Rains (*Vuli*)

The September to December rainfall season is more significant for the northern sector of the country (Northern Coast, Northeastern Highlands, Lake Victoria Basin and Northern Kigoma).

Lake Victoria basin: (Kagera, Mara and Mwanza regions): short rains are expected to be mainly normal with some areas getting above normal (Fig.6).

Northern coastal areas and hinterland: (Dar es Salaam, Tanga, Coast, and north Morogoro

and below normal in parts of Dodoma, Singida and Northern Iringa regions.



regions and isles of Zanzibar and Pemba):

The rains are expected to commence around first week of October 2005 and are expected to be mainly normal with a few areas getting above normal.

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

Seasonal Rains

The western areas: (Tabora, Rukwa, Southern parts of Kigoma and Shinyanga). The seasonal rains are likely to set in during the first week of November. These rains are expected to be mainly normal to above normal.

Central, Southern and Southwestern areas: (Singida and Dodoma, Mbeya, Iringa, Ruvuma, Mtwara and Lindi regions): Onset of the seasonal rains over these areas is expected in the third and fourth week of November 2005, with a likelihood of being normal over most areas

It should be noted that heavy and short duration episodic events are common even in below normal rainfall conditions.

IMPACTS

Areas over LVB and northern Kigoma, the northern coast (Coast, Dar es Salaam, Tanga and northern parts of Morogoro regions, Zanzibar and Pemba Isles) are expected to receive sufficient rains for agriculture and pasture. Farmers should prepare to carry out a normal growing season.

Over the northeastern highlands (Arusha, Manyara and Kilimanjaro regions) the farmers should make early land preparations and plant fast growing and drought resistant crop varieties.

To properly utilize the rains, farmers should adhere to principles of good husbandry including early land preparation, use of appropriate seeds, timely planting, implementation of proper plant population and spacing, control of weeds, pests and diseases, fertilizer application and irrigation. Farmers are strongly advised to plant immediately when the rains start.

In central regions (Dodoma, Singida, Tabora) and in southern and western regions (Mtwara, Lindi, Ruvuma, Iringa, Mbeya, Rukwa and Kigoma) where rains will start in November/December farmers should continue with land preparations and input supply activities during the intermediate period.

Farmers are advised to seek further guidance from Agricultural Extension Officers.

The expected rains will give an improved water supply situation over the northern sector of the country.

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

Prepared by

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