TANZANIA METEOROLOGICAL AGENCY

MONTHLY WEATHER BULLETIN

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HIGHLIGHTS

- **Land preparation to be concluded over Bimodal Tanzania following anticipated "*masika*" season.**
- **Field crops over most of unimodal areas progressing well at various stages between early vegetative to maturity.**

The climate systems over the northern hemisphere slightly relaxed in February 2010 while the southern high pressure systems indicated slight intensification thus resulting into northward migration of the rain zone, Inter-tropical Convergence Zone (ITCZ). The Sea Surface Temperatures (SSTs) over the south-western Indian Ocean were observed to be warm. Southerly to southeasterly low level wind flow was observed over the coastal areas of the country.

WEATHER SUMMARY

RAINFALL

The Lake Victoria Basin, parts of northeastern highlands (Arusha region), southern coast and few areas over the northern coast received normal to above normal rainfall except over few areas as shown in Fig. 1A and 1B. Among stations which received more than 200 mm of rainfall were Bukoba which recorded above normal rainfall of 385.1 mm, Mtwara 310.1 mm, Mahenge 264.4 mm, Songea 230.9 mm, Amani 308.3 mm, Mwanza 216.8 mm and Kilwa 205.2 mm. Other stations reported less than 200 m of rainfall as shown in figure 1A and 1B.

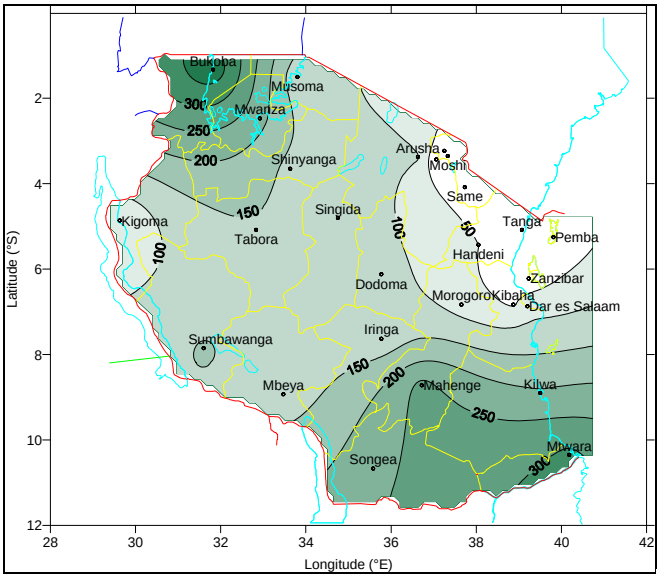

Fig 1A: February 2010 rainfall distribution (mm)

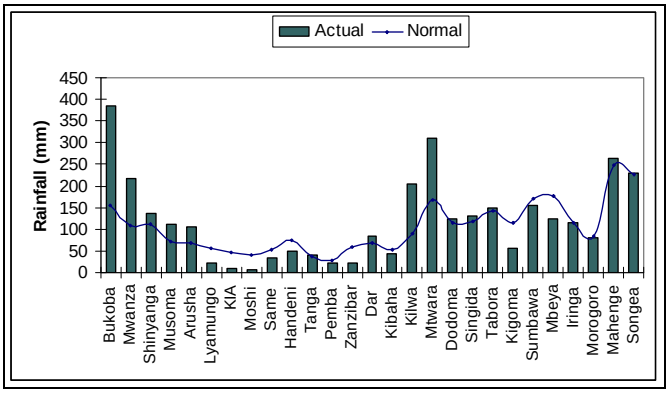

Fig 1B: February 2010 rainfall distribution against normal

MEAN AIR TEMPERATURE

During the month under review the country experienced warm to hot temperatures whereas high altitude areas of the country (southwestern and northeastern highlands) experienced warm temperatures as indicated in Figure 2A.

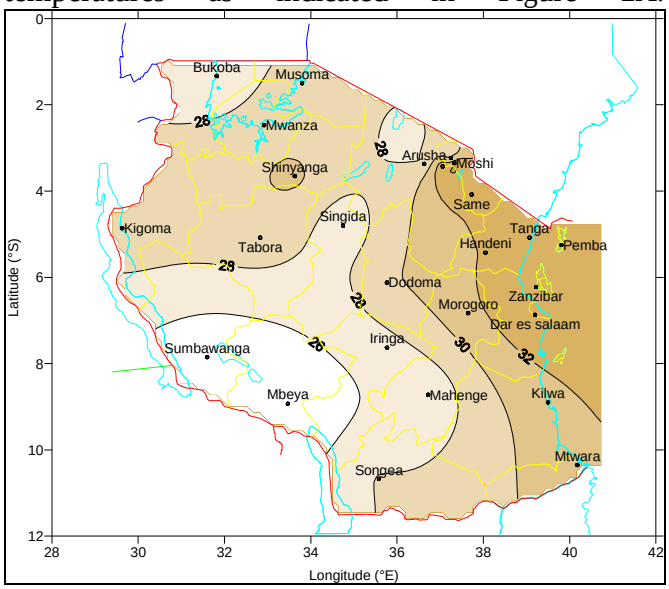

Fig2A: February 2010 Mean Maximum Temperature (°C)

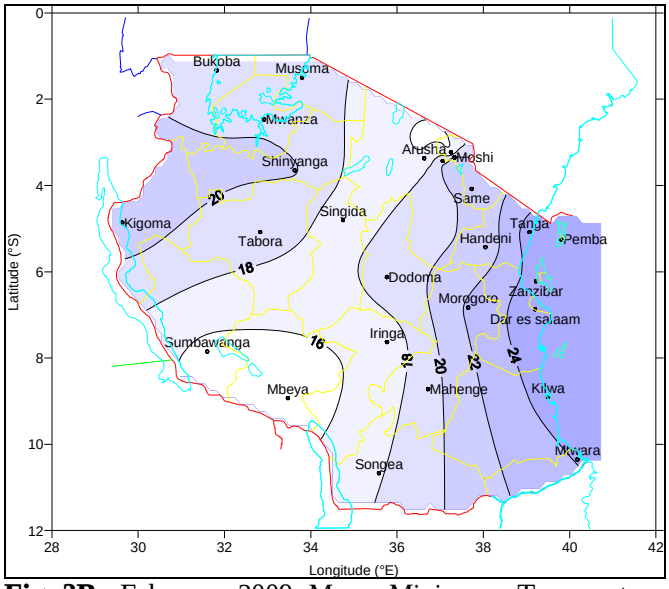

Fig 2B: February 2009 Mean Minimum Temperature (°C)

Mean maximum air temperatures recorded ranged between 26 ºC and 34 ºC. The highest absolute maximum temperature of 34.2 °C was recorded at Dar es Salaam during the third dekad of the month. The lowest mean maximum temperature was 24.1°C at Sumbawanga in the southwestern highlands.

The mean minimum air temperatures recorded ranged from 14 ºC to 26 ºC. The lowest value of mean minimum temperatures recorded was 14.3 °C at Mbeya in the southwestern highlands while the highest value of 26.2 °C was Dar es Salaam over the coastal belt.

MEAN SUNSHINE HOURS

Sunshine duration records across the country during February show that the mean bright sunshine hours ranged from about 5 hrs/day over southwestern highlands to more than 9 hrs/day over northern coast areas as shown in Figure 3.

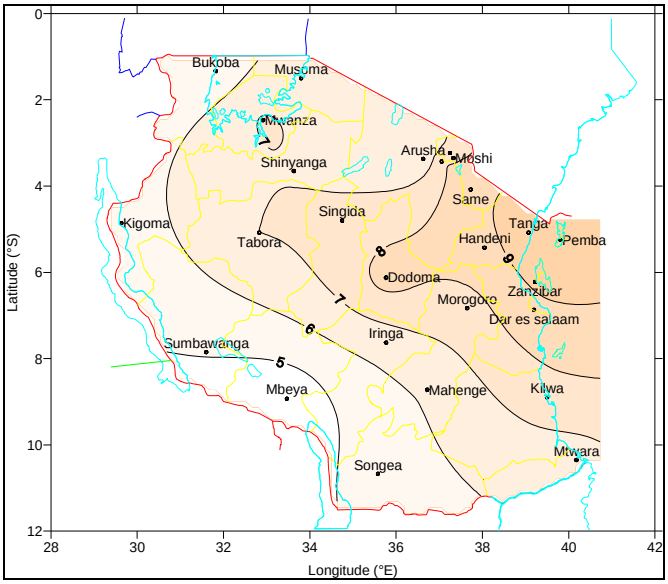

Fig 3: February 2010 Mean Sunshine Hours (hrs/day)

MEAN WIND SPEED

Mean wind speeds across the country ranged between 3 to more than 10 km/hr during the month of February as shown in Figure 4. Some parts of southwestern highlands experienced wind speeds exceeding 10 km/hr. Low wind speed of below 4 km/hr was recorded over some parts of northeastern highlands (Lyamungo). Windy conditions experienced over some parts of southwestern highlands (Mbeya) and north eastern highlands (Same) enhanced evaporation rates.

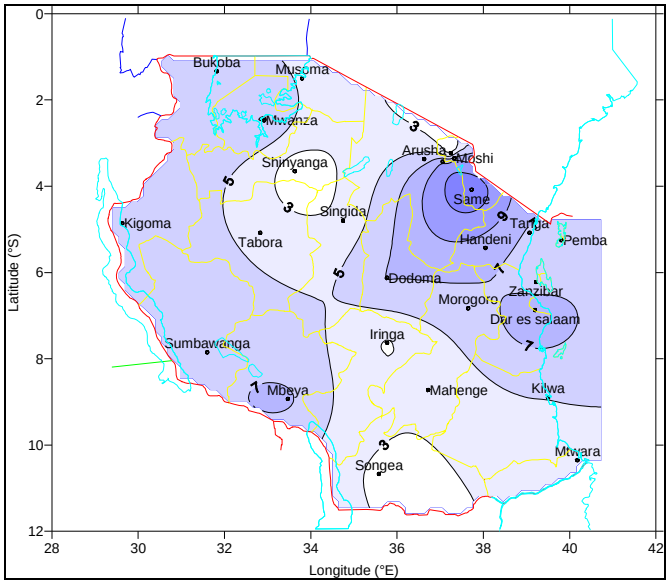

Fig 4: February 2010 Mean wind speed (km/hr)

SATELLITE INFORMATION

Figure 5 depicts some improvement of vegetation coverage during the first dekad of February 2010 as Normalized Difference Vegetation Index (NDVI) from METEOSAT satellite sensor. In the first dekad of February 2010, the satellite depicted NDVI between high to very high indices over most parts of the northeastern highlands (Arusha, Kilimanjaro and Manyara), coastal belt, eastern parts of Shinyanga region, central (Dodoma and Singida regions), western (Kigoma and Tabora regions), and southwestern highlands due to soil moisture improvement as a result of the ongoing seasonal rains. Thus, there is more improvement of pasture and water for livestock.

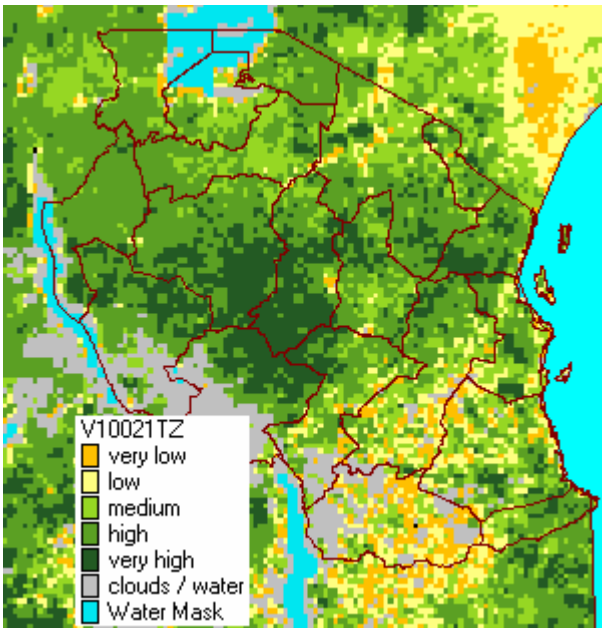

Fig 5: Vegetation condition during February 1-10, 2010

AGROMETEOROLOGICAL SUMMARY

Suitable conditions prevailed for land preparation over bimodal areas of the country. Soil moisture supply during the period was adequate for crop development and weeding over unimodal areas. Status of most crop development across unimodal areas of the country was moderate with pockets of poor state as initially caused by excessive, delayed or poor supply of soil moisture mainly during early stages of the crops.

The crops were generally ranging from emergence to ripeness stages. The early planted maize and bean crops mainly over lower altitudes have reached ripeness stage for maize and harvesting for beans in moderate state. Second planting phase normally for beans over southwestern highlands is about to start, while paddy was at between transplanting and vegetative stages. Wheat over parts of Mbeya region was being planted as was for sorghum in Kongwa district in Dodoma region.

Market supply for cassava over several areas continued fairly well.

Pasture and water availability are good and livestock conditions are normal.

HYDROMETEOROLOGICAL SUMMARY

The ongoing rains have boosted water levels in lakes and dams and rivers in their respective catchments**.** Water availability for human, industrial and energy generation has improved but should be used sparingly.

ENVIRONMENTAL SUMMARY

Temperatures are warm and uncomfortable mainly over coastal areas.

EXPECTED SYNOPIC SUMMARY DURING MARCH 2010

The Sea Surface Temperatures (SSTs) in March 2010 are projected to be generally warm over south-western tropical Indian Ocean and slightly cooler over southern Madagascar in the Indian Ocean. Weak westerlies from Congo are expected to continue flowing towards western, central and southern regions including southwestern highlands thus sustaining rainfall activities over the areas.

EXPECTED WEATHER SITUATION DURING MARCH 2010

Over Lake Victoria basin (Kagera, Mwanza, Mara regions) and Kibondo area are expected to feature normal to above normal rainfall over some areas. Rains are expected to start in the first week of March 2010 in Kagera region and are expected to spread over the rest of the region during the second week. In most parts of Mwanza, Mara and western Shinyanga the rains are expected to start during the second week of March, 2010. Western (Kigoma and Tabora regions), Southwestern highlands (Iringa, Rukwa and Mbeya) and southern region are expected to feature normal to above normal rainfall over most areas. Localized heavy rains are likely to occur. Rains over northern coast (Dar es Salaam, Tanga Zanzibar and Pemba Islands) and Morogoro region are expected to start during the first week of March and are expected to be mainly normal, Central areas (Dodoma and Singida regions) the ongoing seasonal rains are expected to be mainly normal. Northeastern highlands (Kilimanjaro, Arusha and Manyara regions) the onset of rains is expected during the second week of March 2010. The rains over these areas are expected to be mainly normal. Most of the southern coast (Mtwara and Lindi regions) areas are expected to get normal rainfall with occasional heavy rains during March.

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