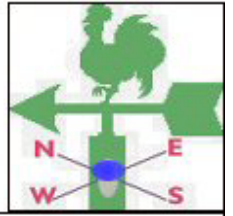




TANZANIA METEOROLOGICAL AGENCY



MONTHLY WEATHER BULLETIN

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HIGHLIGHTS

- Uneven distribution of soil moisture experienced over several areas of the country mainly during the second half of the month hampering crop growth and development.
- Armyworm outbreaks in some unimodal areas (central and southern regions) were brought under control.

SYNOPTIC SUMMARY

The climate systems over the northern hemisphere continued to intensify in January 2010, thus, resulting into migration of the rain zone, Inter-tropical Convergence Zone (ITCZ) further south to northern Mozambique. The Sea Surface Temperatures (SSTs) in the equatorial Pacific Ocean have been anomalously warm for several months and are projected to persist through March 2010. This implies that El Niño conditions are expected to continue across much of the central and east-central equatorial Pacific. Over the south-western Indian Ocean warm SSTs were observed while central neutral conditions have been persisting.

WEATHER SUMMARY

RAINFALL

The beginning of January 2010 experienced enhanced rainfall activities over greater part of the country. However, the rains reduced during the second dekad of the month signifying closer end of short rains. The recorded rainfall amounts for the month at selected stations with percentage of long term means in brackets was lead by Igeri 322.2mm (131.9%), Songea 286.7mm (101.2%), Mtwara 168.8mm (87.4), Kilwa 168.5mm (129.2%), Mbeya 150.2mm(82.0%), Tumbi 149.9mm (101.9%),

Tabora 147.1 mm (99.8%), Handeni 144.1mm (181.3%), Bukoba 131.4mm (82.7%), Tanga 126.6mm (361.7%), Mwanza 123.2mm (118.8%), Hombolo 114.6mm (84.3%),

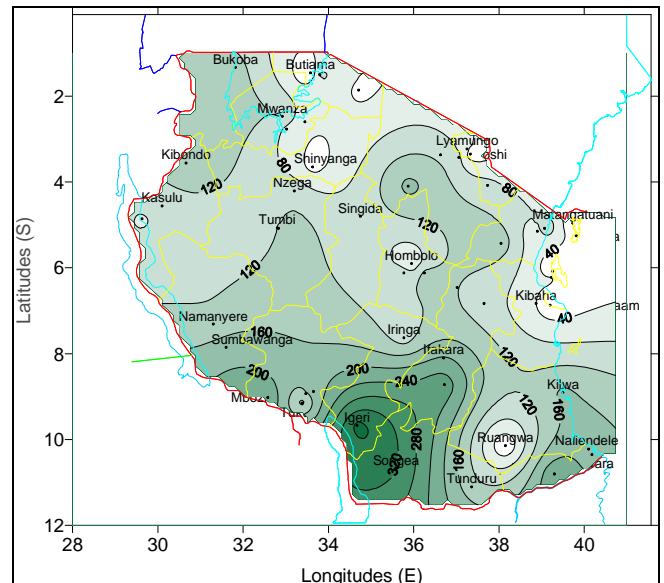


Fig 1A: January 2010 Rainfall distribution (mm)

Tukuyu 106.1 mm(43.2%), Dodoma 103.4mm (77.3%), Morogoro 97.3mm (93.4%), Iringa 97.2mm (87.6), Same 95.0mm (145.5%), Musoma 91.7mm (155.2%), KIA 90.7mm (204.4%), Lyamungo 53.9mm (59.8%), These records show that over parts of bimodal areas particularly the Lake Victoria basin and North-eastern highlands the rains were normal to below normal over most areas with pockets of above normal, whereas Northern coast received above normal to normal with pockets of below normal rains. Over Unimodal areas seasonal rains spread well (normal to above normal) during the first half of the month with pockets of below normal

over South-western highlands whereby the Central, Western, Southern regions including Southern coast normal rainfall conditions were observed.

MEAN AIR TEMPERATURE

During the month under review the country experienced cool to hot temperatures whereas the higher altitude areas of the country (Southwestern and Northeastern highlands) experienced cool temperatures as indicated in Figure 2A.

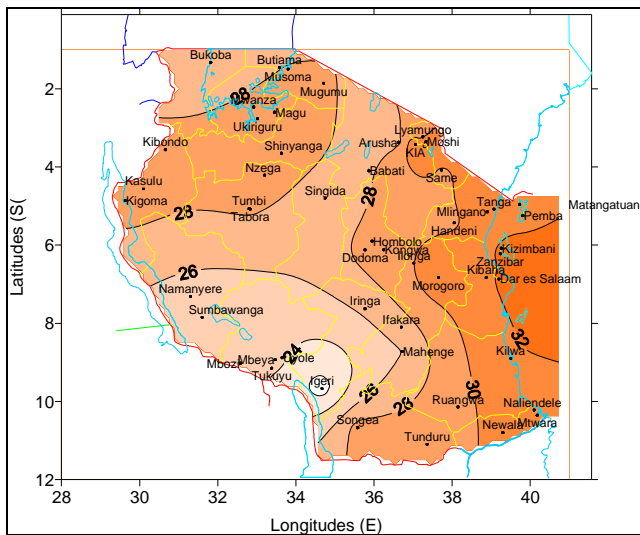


Fig2A: January 2010 Mean Maximum Temperature (°C)

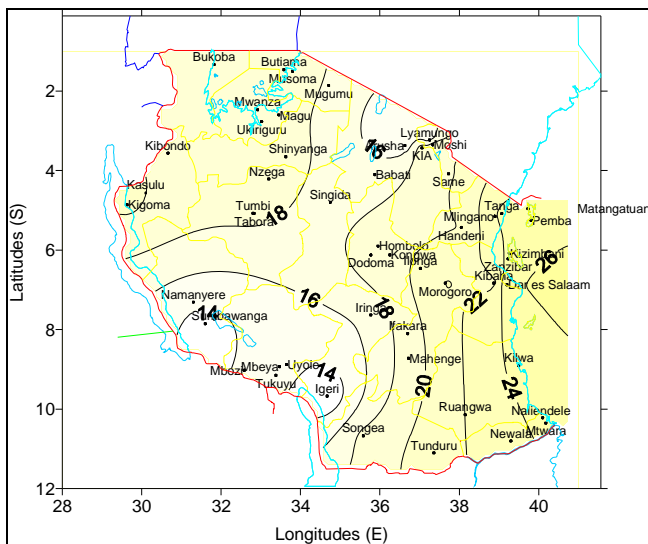


Fig 2B: January 2010 Mean Minimum Temperature (°C)

Mean maximum air temperatures recorded ranged between 24 °C and 33 °C. The highest absolute maximum temperature of 33.6 °C was recorded at

Dodoma during the third dekad of the month. The lowest mean maximum temperature was 23.6 °C at Sumbawanga in the Southwestern highlands.

The mean minimum air temperatures recorded ranged from 13 °C to 26 °C. The lowest value of mean minimum temperatures recorded was 13.1 °C at Sumbawanga in the Southwestern highlands while the highest value of 25.8 °C was Kilwa over the coastal belt.

MEAN SUNSHINE HOURS

Sunshine duration records across the country during January show that the mean bright sunshine hours ranged from about 5 hrs/day over Southwestern areas of the country to more than 7 hrs/day over Northern, Eastern and Central and the Southern part as shown in Figure 3. The shortest mean duration was 3.9 hrs/day recorded over Southwestern areas while the longest was 8.9 hrs/day observed over Northeastern highlands.

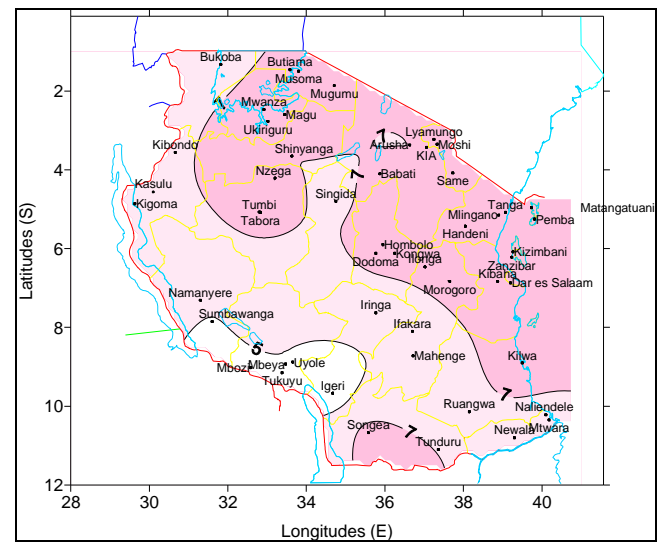


Fig 3: January 2010 Mean Sunshine Hours (hrs/day)

MEAN WIND SPEED

Mean wind speed across the country ranged from 4 to more than 10 km/hr during the month of January as shown in Figure 4. Some parts of eastern experienced wind speed exceeding 12 km/hr. Low wind speed of below 4 km/hr was recorded over

some parts of Northeastern highlands, Western and pockets over the Southern.

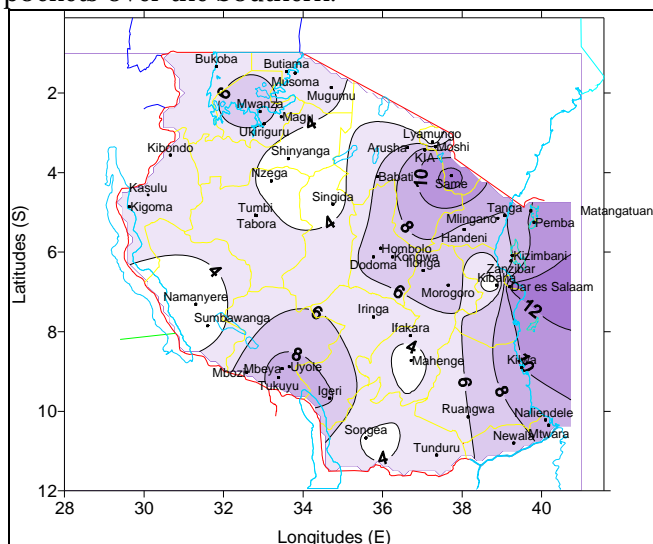


Fig 4: January 2010 Mean wind speed (km/hr)

SATELLITE INFORMATION

Figure 5 depicts more improvement of vegetation coverage during the second dekad of January 2010 as Normalized Difference Vegetation Index (NDVI) from METEOSAT satellite sensor. In the second dekad of January 2010, the satellite depicted NDVI between medium to very high indices over most of the areas of Central, Western, South and Southwestern highlands as shown in Figure 5 below. However, there were some few areas with very low indices of vegetation, thus depicting improvement of pasture availability for livestock.

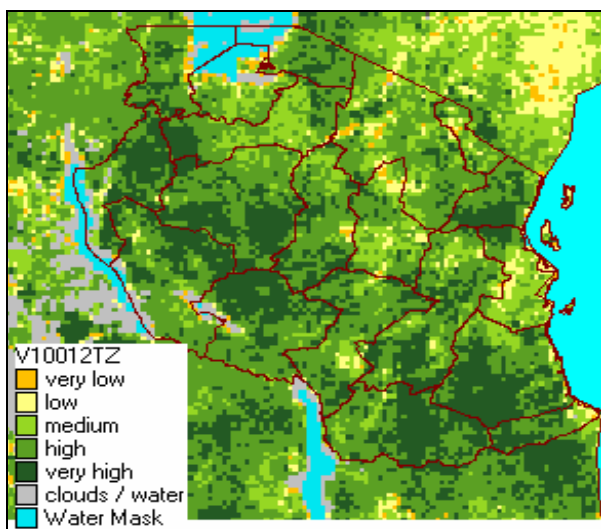


Fig 5: Vegetation condition during January, 2010

AGROMETEOROLOGICAL SUMMARY

Dry spells were persistent during January causing soil moisture stress to crops over most areas of the country. Crops mainly maize, beans, sorghum and paddy that were at growth and development stages ranging from emergence to wax ripeness, in good state, eventually got harrmpared. Several parts of Bimodal areas particularly Coast, Northern coast, Northeastern highlandsnd and Lake Victoria basin (Magu, Shinyanga, Pangani and Hai, Same and Moshi (Lyamungu) districts) observed pockets of temporary to permanent wilting of crops mainly maize. Likewise, over Unimodal areas that cover Western, Central and Southern parts including Kasulu, Nzega, Kongwa, Babati, Kibaha, Ruangwa, Shinyanga and Meatu districts also involved in the dry spell consequence.

For beans crop it was graded poor to moderate state at between budding and ripeness stages as observed over parts of Kagera region (Lake Victoria basin), Rombo (lower), Lyamungu (northeastern highlands) and Kigoma north, as well as southern and southwestern highlands. The unreliable crop state was due to uneven distribution of soil moisture obtained in these areas during early stage of the crop and later.

Paddy crop also faced some hindrance starting from the early stage when the ponds into which it was transplanted, got shallower or dried up as was the case with most areas particularly Shinyanga, Magu and Nzega districts, though doing well in Ruvnma region (Tundururu district). Few areas in Kongwa and Mpwapwa (Dodoma region) and Kilosa in Morogoro region left with bare fields after the flood-flash sweep up. Planting, replanting and gap filling were the major field activities continued over Ifakara and Ilonga (Morogoro region) following late replenishment of soil moisture observed during the second half of the month, as well as for Simanjiro, Monduli and Loliondo districts in Northeastern highlands where similar field activities progressed fairly.

Armyworm outbreaks spoilt young crops in some Unimodal areas and in the Island of Zanzibar but the situation is under control.

Market supply for cassava over several areas continued fairly well.

Pastures and water availability generally retuned to normal.

HYDROMETEOROLOGICAL SUMMARY

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

ENVIROMETEOROLOGICAL SUMMARY

Temperatures over most parts of the county were rising along with humidity levels making it rather uncomfortable particularly over the coastal belt.

EXPECTED SYNOPTICSITUATION DURING FEBRARY 2010

Sea Surface Temperatures (SSTs) in February 2010 are projected to be generally warm over Southwestern tropical Indian Ocean with pockets of cooling over the coast of Tanzania but slightly warmer over a greater part of tropical central Indian Ocean.

EXPECTED WEATHER SITUATION DURING FEBRARY 2010

Weak westerlies from Congo are expected to continue flowing towards Western, Central and Southern regions including Southwestern highlands, thus sustaining rainfall activities over those areas. The normal extended Short rains (Vuli) has ended, however, the moderate El Nino conditions over the Pacific Ocean which are projected to persist through March 2010 and warming over south-western tropical Indian Ocean with pockets of cooling over the coast of Tanzania during February 2010 is likely to influence rainfall over parts of Lake Victoria basin and few places of North-eastern highlands. During the month of February mainly normal rainfall conditions are expected over those areas including the hinterland of Northern coast. Normal to above normal rainfall over Unimodal areas is expected over most areas of Western, South-western highlands and Central regions. However, Southern coast and parts of Southern region are expected to experience mainly below normal rainfall.

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