TANZANIA METEOROLOGICAL AGENCY

MONTHLY WEATHER BULLETIN

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HIGHLIGHTS

- ***Favorable soil moisture supply was experienced during the month with most crops in the unimodal sector at mid vegetative stage.***

SYNOPTIC SITUATION

During the month of January 2011, southern hemisphere high pressure cells, St Helena and Mascarine anticyclones were relatively strong while Siberian high and the associated Arabian high continued to be intense. This maintained the rain-making mechanism i.e. Inter-Tropical Convergence Zone (ITCZ) in the southern part of the country. Cool Sea Surface Temperature (SSTs) conditions have been established over the Equatorial central-eastern Pacific, while slight warm SSTs were observed over eastern Indian Ocean (areas around Indonesia) and the central equatorial Indian Ocean. Northeasterly to northwesterly low level winds prevailed over eastern parts of the country during much of the period. Westerly winds were also observed during the month leading into convergence over the southern part of the country which led to enhanced activities over the southwestern highlands, west, central, southern region and southern coast.

RAINFALL SUMMARY

During the month of January 2012 substantial amounts of rainfall were observed over most areas of the country mainly the southern coast, southern, southwestern highlands and central regions. The highest total amount of rainfall observed during the month was at Mahenge 332.7 mm, followed by Songea 286.7 mm, Kilwa 263.0 mm, Mtwara 168.5 mm, Mbozi 164.3 mm, Sumbawanga 150.7 mm, Mbeya 149.9 mm, Dodoma 123.8 mm, Hombolo 122.6 mm, Tabora 116.8 mm, Mpanda 116.2 mm, Singida 107.1 mm, Bukoba 93.8 mm, Igeri 79.7 mm, Morogoro 70.3 mm, Iringa 64.2 mm, Handeni 52.3 mm, Shinyanga 37.8 mm, Kigoma 33.6 mm, Arusha 23.1 mm and Zanzibar 22.3 mm.

Remaining areas over bimodal sector were mainly dry as depicted by Figure 1.

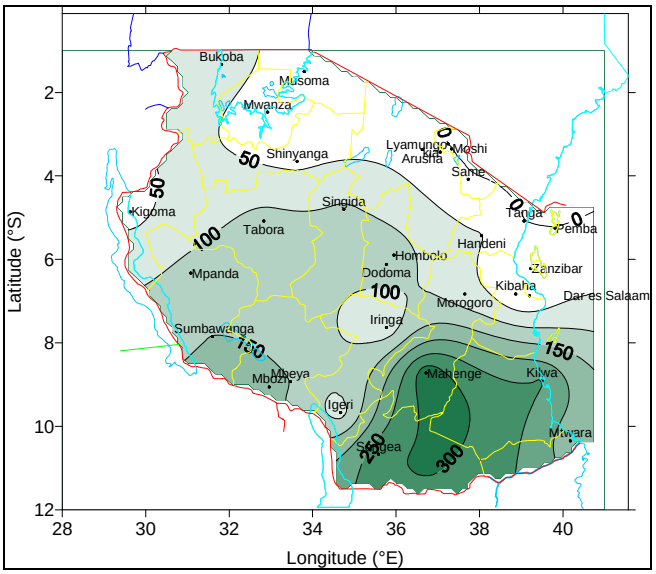

Figure 1: January 2012 Rainfall distribution in (mm).

MEAN AIR TEMPERATURE

Mean maximum temperatures ranged between 21.1°C and 35.6°C as indicated in Figure 2A. The highest absolute maximum temperature of 36.4 °C was reported at Moshi during the third dekad of the month. The lowest mean maximum temperature

was about 21.1°C over Igeri in the southwestern highlands.

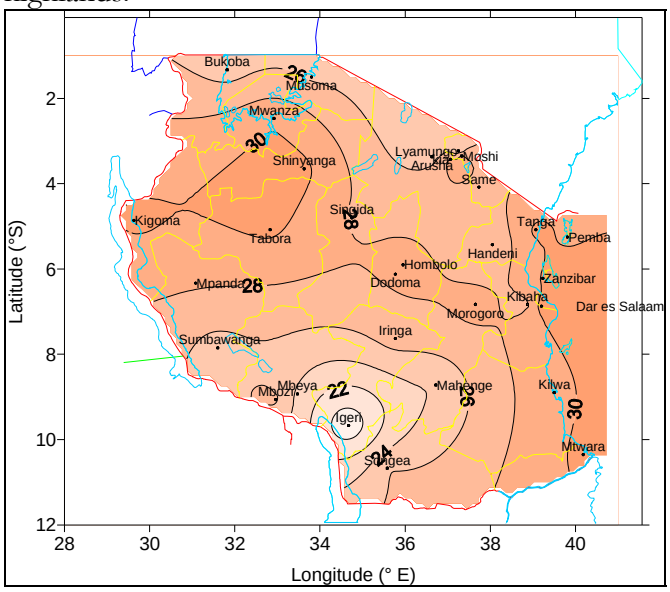

***Figure 2A**: January 2012 Mean maximum temperature (°C)*

During the month under review the country experienced cool temperatures, where the lowest recorded temperatures were experienced over southwestern highlands of the country, notably Igeri, as indicated in Figure 2B.

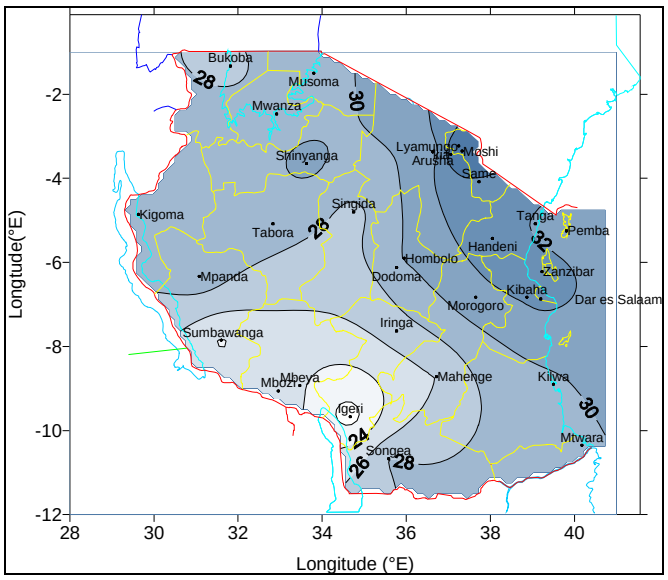

***Figure 2B:** January 2012 Mean minimum temperature (°C)*

Mean minimum air temperatures ranged from 11.7 ºC to 25.5 ºC while the absolute mean minimum temperature value was 11.7 °C at Igeri in the third dekad of the month.

MEAN SUNSHINE DURATION

Sunshine durations across the country during January 2012 ranged from about 4 hrs per day as the shortest observed duration over areas of Songea, Iringa and Mbeya, to about 9hrs per day as over northern parts of the country (Musoma, Mwanza, Arusha, Manyara, Moshi, Tanga and Dar es Salaam) as in Figure 3 above.

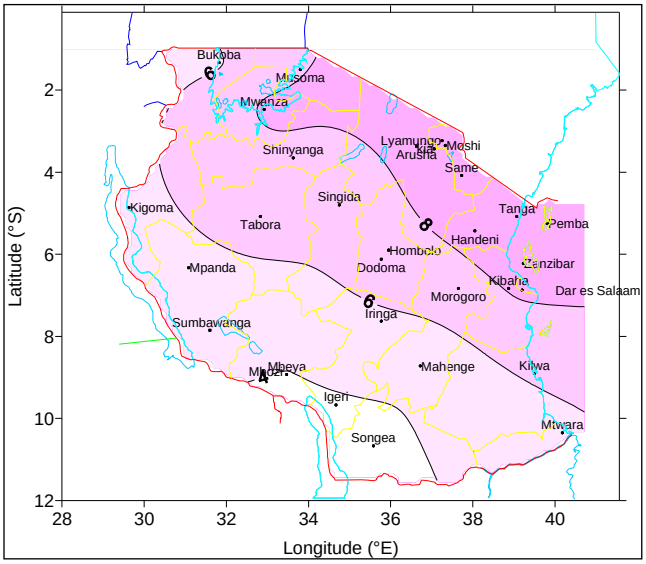

***Figure 3:** January 2012 Mean Sunshine hours (hrs/day)*

MEAN WIND SPEED

Mean wind speed across the country ranged between 1 to 14 km/hr during the month of January 2012 as indicated in Figure 4 below. Windy conditions during the period were recorded over parts of northeastern highlands as well as the coastal belt including Tanga, Dar es Salaam, Lindi, Mtwara, and over the Isles of Zanzibar and Pemba.

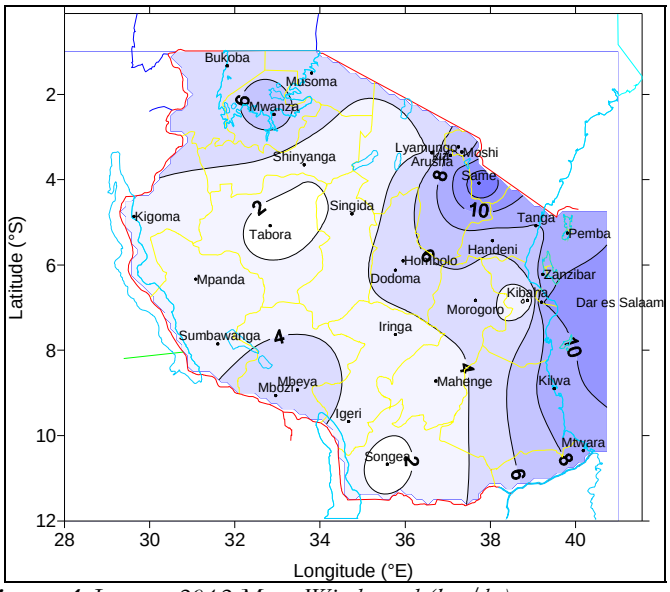

Figure 4: *January 2012 Mean Wind speed (km/hr)*

AGROMETEOROLOGICAL SUMMARY

Favorable soil moisture supply was experienced during the month with most crops in the unimodal sector entering mid vegetative stage, whereas the terminated soil moisture supply that observed over bimodal sector adversely affected crops towards maturity phase. Most crops like maize, beans and paddy over bimodal areas (Lake Victoria basin, northeastern highlands, and northern coast) were reported at near to full ripeness and in good condition, except for a few areas located in the east of Lake Victoria particularly Magu district and parts of northern coast mainly Tanga region hit by soil moisture stress with crops at stages between flowering and maturity.

Over the unimodal sector, most crops were reportedly performing well at stages ranging from mid vegetative to near ripeness. Paddy crop also was progressing well from sowing in northern coast areas to transplanting and vegetative stages for the rest of the country. Sorghum was at mid vegetative as well and in good state mainly over central parts, while cassava flourishing well at various stages including weeding to harvesting and in good state.

Pastures were generally adequate over much of the country.

HYDROMETEOROLOGICAL SUMMARY

Water levels in lakes, dams and discharges in river flows including their respective catchments were boosted.

ENVIRONMENTAL SUMMARY

Temperatures over most areas in the country were increasing. Low relative humidity dominated over most areas but was getting higher along the coastal belt.

EXPECTED SYNOPTIC SITUATION DURING FEBRUARY 2012

During January 2012, the Azores and the Siberian anticyclones, and the Arabian ridge are expected to remain intense. The Mascarene anticyclone is expected to relax while St. Helena anticyclone is expected to intensify thus pushing the meridional component of the ITCZ towards the western part of the country. On the other hand, the zonal arm of the ITCZ is expected to oscillate over the southern sector of the country, thus influencing rainfall activities over unimodal areas. The above configuration is expected to result in the penetration of westerly winds over western areas towards the central parts of the country. The northeasterly to northwesterly winds are expected to dominate over the eastern part of the country leading to convergence of low level winds over southern half sector of the country. Below average Sea Surface Temperatures (SSTs) are expected over central eastern equatorial Pacific Ocean. Warm SSTs conditions are expected to prevail over the great part of the Indian Ocean, including southwestern Indian Ocean.

EXPECTED WEATHER DURING FEBRUARY 2012

During February mainly normal rainfall conditions are expected over the most part of the country: Lake Victoria Basin (Kagera, Mwanza, Mara and Shinyanga regions): These areas are expected to feature normal rains. Western regions (Kigoma, Rukwa and Tabora regions): These areas are expected to experience normal to below normal rains. Northern coast (Dar es Salaam, Morogoro and Tanga regions, the isles of Unguja and Pemba): The areas are expected to experience normal rains.

Central areas (Dodoma and Singida regions): These areas are expected to feature normal to below normal rains. Northeastern highlands (Kilimanjaro, Arusha and Manyara regions): These areas are expected to feature normal to below normal rains. Southwestern highlands (Southern Rukwa, Iringa and Mbeya region): These areas are expected to feature normal rains. Southern coast (Mtwara and Lindi regions): These areas are expected to feature normal rains. Southern region (Ruvuma region): These areas are expected to feature normal rains

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