

MONTHLY WEATHER BULLETIN

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Review for May, 2014 and outlook for June, 2014

HIGHLIGHTS

- The expected seasonal dry conditions over the unimodal areas will be favourable for crop harvesting and storage.
- Very cold weather conditions are likely over high ground areas in the southwestern highlands.

SYNOPTIC SITUATION DURING MAY, 2014

During the month of May 2014, the northern hemisphere high pressure systems continued to relax while the southern hemisphere systems intensified. These configurations resulted into further northward movement of zonal arm of the Inter Tropical Convergence Zone (ITCZ), allowing the East African ridge to build up and cover most parts of the country from its position in the southern parts. As for Sea Surface Temperatures (SSTs), neutral temperatures were observed over the Somali coast during the month and neutral to slight warm SSTs were observed over Tanzanian coast. A series of tropic atmospheric easterly wave formed over the western Indian Ocean and caused more moisture influx over the coastal areas. However, neutral SSTs in the Atlantic Ocean near Angola and Namibian coasts contributed to maintain the Meridional arm of the ICTZ over the extreme western areas of the country.

WEATHER SUMMARY DURING MAY, 2014

RAINFALL

Observed synoptic situations, the country received significant rainfall mainly in the bimodal areas. Most of the unimodal areas were generally dry except for few pocket areas particularly over the southern coast which received significant rainfall. Results from Satellite Rainfall Estimates (RFE) merged with gauge data from Tanzania rainfall stations network (Figure 1a) shows a pattern of total rainfall distribution during the month whereby many places of the bimodal areas received significant rainfall greater than 100 mm. Figure 1b also shows rainfall performance as percentage of long term average rainfall whereby many places of the bimodal areas received above normal rainfall. A few places of the unimodal areas received above normal rainfall while a large part of the unimodal areas received below normal rains.

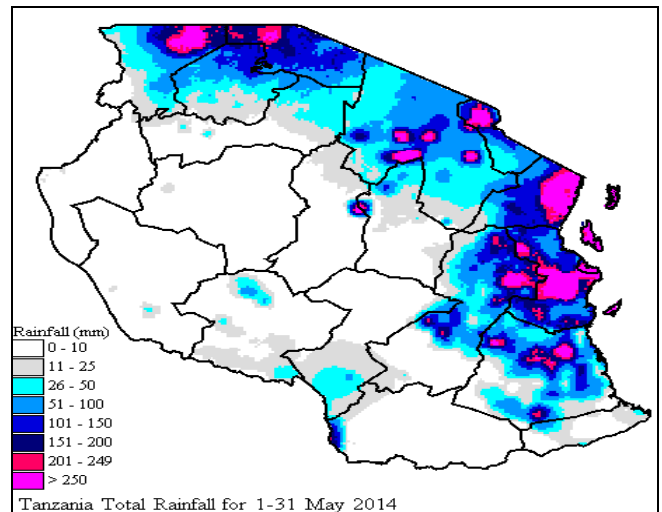


Fig. 1a: May, 2014 total rainfall distribution in millimeters.

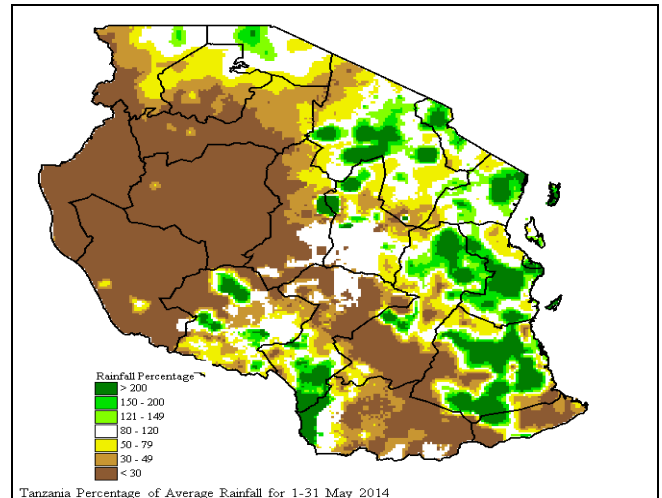


Figure 1b: Satellite Rainfall Estimates (GeoWRSI) merged with gauge data from Tanzania rainfall stations network showing percentage of long-term average rainfall.

MEAN AIR TEMPERATURE

Mean maximum temperature during the month of May, 2014 ranged between 18 °C and 30°C as indicated in Figure 2a. The highest absolute maximum temperature was 31.1°C observed at Kigoma Airport

whereas the lowest absolute maximum temperature was 17.1°C observed over Igeri in the southwestern highlands.

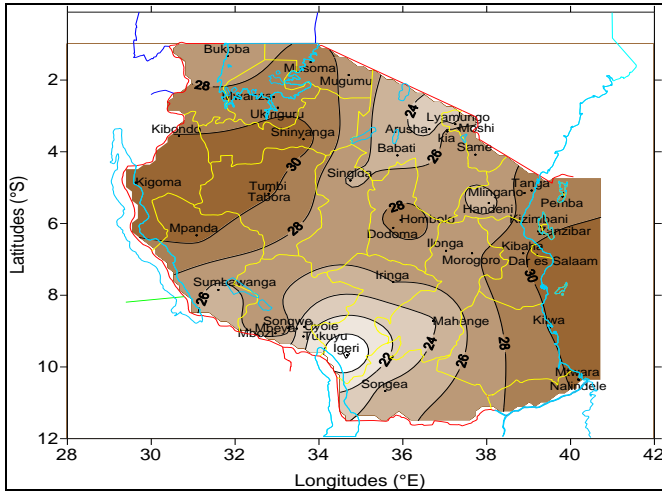


Fig. 2a: May, 2014 mean maximum temperature (°C)

The mean minimum air temperatures ranged between 10°C and 24°C as shown in Figure 2b. The highest absolute minimum temperature was 24.2°C recorded at Pemba, while the lowest absolute minimum temperature was 9.7°C recorded at Igeri in the southwestern highlands.

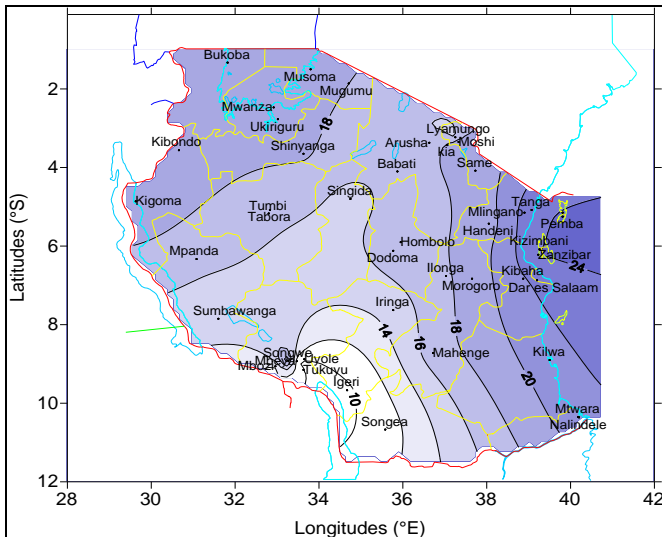


Fig. 2b: May, 2014 mean minimum temperature (°C)

MEAN SUNSHINE HOURS

Sunshine durations across the country during the month of May, 2014 ranged from 2 hours per day to about 10 hours per day. The shortest sunshine duration was 2 hours per day observed at Lyamungu, while the longest sunshine duration was 10 recorded over Shinyanga airport as shown in Figure 3.

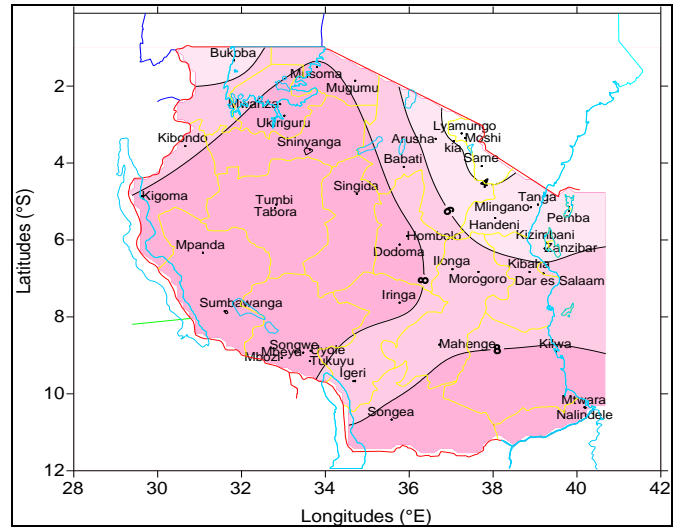


Fig. 3: May, 2014 mean sunshine hours (hrs/day)

MEAN WIND SPEED

Mean wind speed during the month of May 2014, ranged from 1 to 37 km/hr across the country. The highest wind speed was 37 km/hr recorded over Hombolo, while the lowest wind speed was 1km/hr recorded over Mahenge as shown in Figure 4.

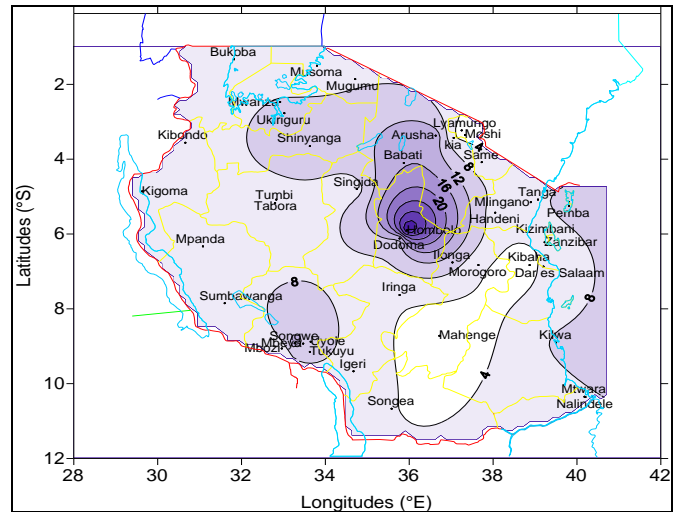


Fig. 4: May, 2014 mean wind speed (km/hr)

AGROMETEOROLOGICAL SUMMARY

During the period under review, the rainfall received over the bimodal areas was favourable for crops development mostly at advanced growth stages. Maize crop over most of the bimodal areas during the month was mainly at waxy ripeness stage as observed in Mara, Kilimanjaro, Tanga, Coast and Morogoro regions. The crop was generally in average conditions and good harvests are expected. Over the unimodal areas, maize crop was already at full ripeness stage with good condition as well. However, periods of heavy rains

over some of the bimodal areas including Kilimanjaro region led to flooding and water lodging conditions that damaged crops in the field over few areas. Prolonged dry spell was also reported over western Kagera region particularly Ngara district. Pastures and water availability for livestock and wildlife was generally good over much of the country.

HYDROLOGICAL SUMMARY

Water levels in dams and river flows discharges were generally normal over most areas of the country.

ENVIRONMENTAL SUMMARY

During the period, slight cool temperature conditions prevailed in the country.

EXPECTED SYNOPTIC SITUATION DURING JUNE, 2014

In June, 2014 the two southern hemisphere high pressure systems are expected to intensify while the northern hemisphere high pressure systems and the Arabian ridge are expected to relax. The zonal arm of the ITCZ is expected to shift northwards further from the northern parts of the country. The meridional arm of the ITCZ is likely to move westwards which causes reduction of rainfall over western and the Lake Victoria basin. Slight neutral to warm Sea Surface Temperatures (SSTs) currently observed over the South Western Indian Ocean (SWIO) closer to Tanzania, are expected to persist, thus resulting to few occasional rainfall and at times short episodes of moderate rainfall.

EXPECTED WEATHER DURING JUNE, 2014

Lake Victoria Basin (Kagera, Geita, Mwanza, Mara, Simiyu and Shinyanga regions together with northern Kigoma regions): Normal rains and cool conditions are expected. Northern coast (Dar es Salaam, Morogoro and Tanga regions, the isles of Unguja and Pemba): A few rains with short periods of enhanced rainfall are expected. Cool nights are also expected. Northeastern highlands (Kilimanjaro, Arusha and Manyara regions): Mainly cool conditions with occasional rains are expected over high grounds. Western regions (Kigoma, Rukwa and Tabora regions): Mainly dry, cool conditions and occasional showers are expected over few areas.

Central areas (Dodoma and Singida regions): Mainly dry, windy and cool conditions are expected. Southwestern highlands (Southern Rukwa, Katavi, Njombe, Iringa and Mbeya region): Mainly dry and cool conditions are expected. Very cold weather conditions are likely over high grounds. Southern Coast (Mtwara and Lindi regions): Mainly dry and cool conditions are expected. A few rain showers are likely at times. Southern region (Ruvuma region): Mostly cloudy, dry and cool conditions are expected.

AGROMETEOROLOGICAL OUTLOOK DURING JUNE, 2014

During the month of June 2014, the expected rainfall over the bimodal areas will be useful for late grown crops and root crops. The expected seasonal dry conditions over most of the unimodal areas will be favourable for crop harvesting and storage activities. Where extreme weather events are expected (cold conditions for most areas and winds for central areas), community is advised to take precautionary measures for their safety and property. Farmers and livestock keepers are strongly advised to seek professional advice from nearby agricultural and livestock extension officers.