

## MONTHLY WEATHER BULLETIN

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Review for October, 2014 and outlook for November, 2014

### HIGHLIGHTS

- Seasonal rainfall continued to feature over some of the bimodal areas during October, 2014 and was favorable for crops growth and pasture development. Out of season rainfall was also observed over some of the unimodal areas.
- The expected rainfall over the bimodal areas during November, 2014 will be favorable for crops growth and development.
- Farmers are advised to take precautionary measures for their safety and properties where frequent rainfall and thunderstorms are predicted.

### SYNOPTIC SITUATION DURING OCTOBER, 2014

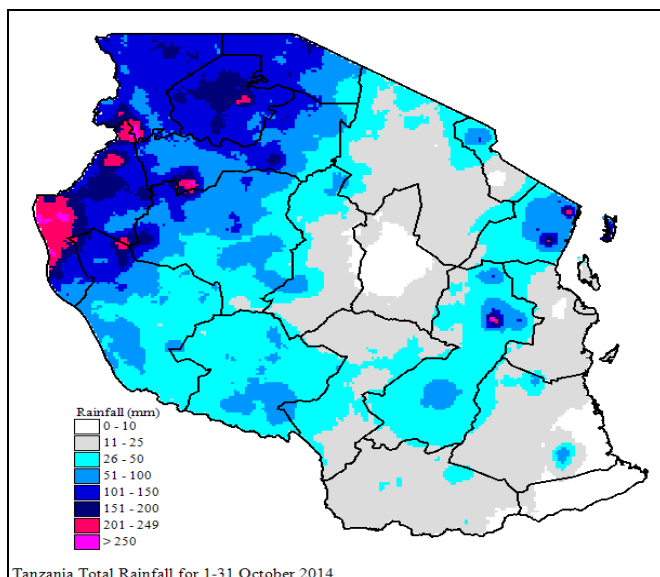
During the month of October 2014, northern hemisphere pressure systems intensified slightly while the southern hemisphere high pressure systems relaxed slightly. However, a low pressure system, which developed over the Mozambique Channel, influenced weather over the west and south-western highlands. This configuration pushed slightly the Inter Tropical Convergence Zone (ITCZ) southwards over the horn of Africa. As for Sea Surface Temperatures (SSTs), neutral to slightly warm temperatures were observed over the Somali coast while the neutral SSTs were experienced over the Tanzanian coast during the month. On the other hand, neutral to cool SSTs observed in the Atlantic Ocean near Angola and Namibian coast contributed to a slightly east-ward movement of the Meridional arm of the ICTZ to the western areas of the country (Kigoma region).

### WEATHER SUMMARY DURING OCTOBER, 2014

#### RAINFALL

In view of the observed synoptic situations during the month, the country continued to receive seasonal rainfall (*vuli*) over some of the bimodal areas. Significant out of season rainfall was also observed over some unimodal areas. Over the bimodal areas, rainfall was received mainly over Lake Victoria basin (Kagera, Mara, Mwanza, Shinyanga, and northern Kigoma regions) and parts of northern coast (Tanga, northern Morogoro, and Pemba). However, some of the bimodal areas especially Arusha, Coast, Unguja and parts of Kilimanjaro region experienced reduced rainfall conditions. Out of season rainfall over the unimodal areas was observed especially in the western region, south-western highlands and southern Morogoro region. The rest of the unimodal areas remained seasonally dry. Figure 1 is Improved Rainfall Estimates from Satellite Rainfall Estimates (RFE) merged with gauge data from Tanzania rainfall stations network showing total rainfall distribution during the month. As depicted in Figure 1, the highest total rainfall (above 250 mm) was recorded over Kigoma, Shinyanga and Kagera

(both in the bimodal areas). Out of season rainfall above 26 mm can also be observed over western and south-western highlands.



**Figure 1:** Improved Rainfall Estimates from Satellite Rainfall Estimates (RFE) showing total rainfall distribution during October, 2014

#### MEAN AIR TEMPERATURE

Mean maximum temperature during the month of October, 2014 ranged from about 19°C to about 33°C as indicated in Figure 2a below. The highest absolute maximum temperature was 33.3.0°C observed over Mpanda whereas the lowest absolute maximum temperature was 18.8°C observed over Handeni.

The mean minimum air temperatures during October, 2014 ranged from about 10°C to about 24°C as shown in Figure 2b below. The highest absolute minimum temperature was 23.6°C recorded over Pemba whereas the lowest absolute minimum temperature was 10°C recorded over Igeri in south-western highlands.

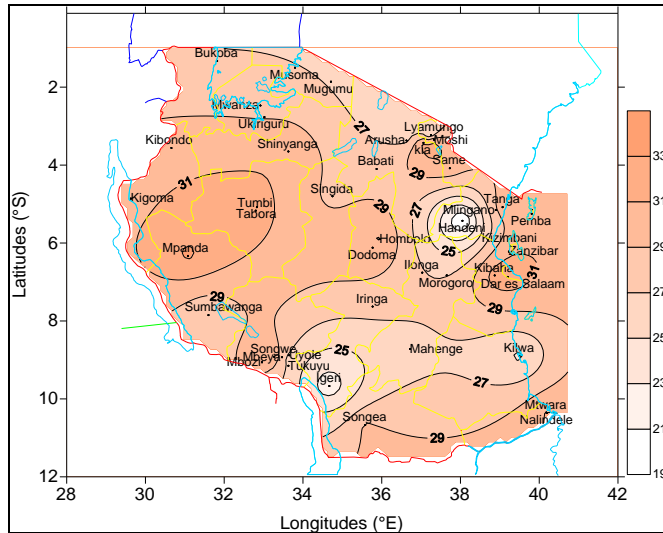


Fig. 2a: October, 2014 mean maximum temperature (°C)

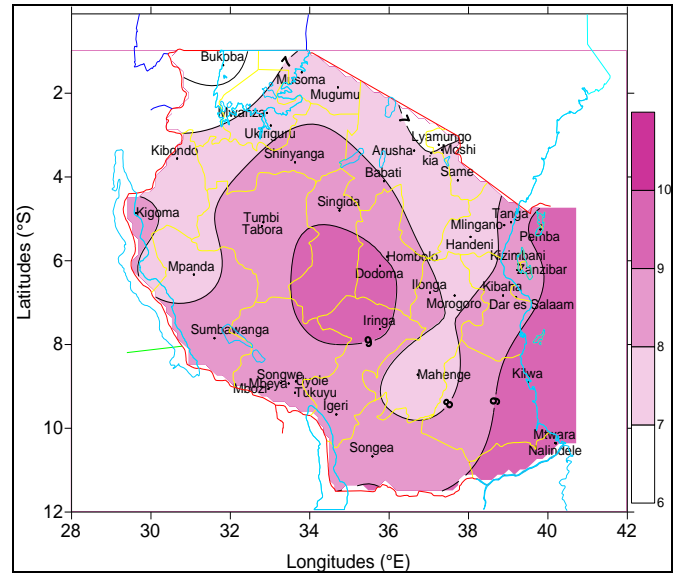


Fig. 3: October, 2014 mean sunshine hours (hrs/day)

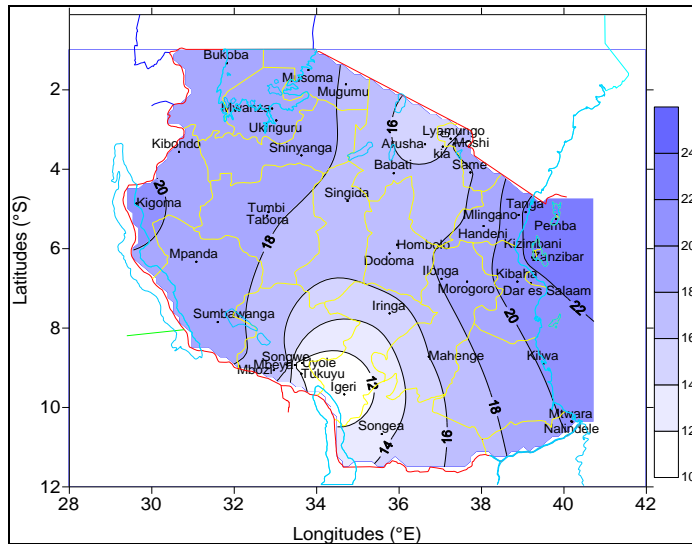


Fig. 2b: October, 2014 mean minimum temperature (°C)

**MEAN SUNSHINE HOURS**

Sunshine durations during the month of October, 2014 ranged from about 5 hours per day to about 10 hours per day. The longest sunshine duration was 9.8 hours/day observed over Kilwa whereas the shortest sunshine duration was 5.4 hours/day observed at Bukoba, as shown in Figure 3.

**MEAN WIND SPEED**

Mean wind speed during the month of October 2014, ranged from about 0 to about 16 km/hr across the country. The highest wind speed was 15.6km/hr recorded over Songwe Airport (Mbeya region) whereas the lowest mean wind speed was 0.4 km/hr recorded over Mtwara as shown in Figure 4 below.

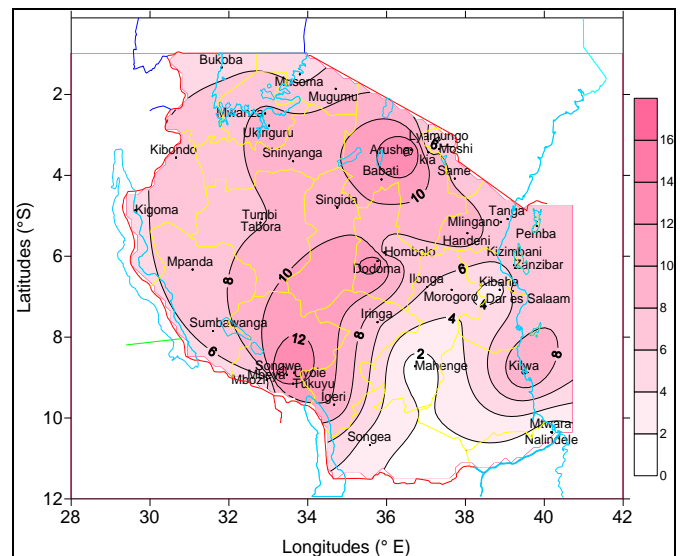


Fig. 4: October, 2014 mean wind speed (km/hr)

### AGROMETEOROLOGICAL SUMMARY DURING OCTOBER, 2014

During the month of October, 2014, the observed seasonal rainfall over the bimodal areas was favourable for crops growth, weeding and fertilizer applications. Maize crop was reported at ninth leaf stage over Mwanza, Mara, northern Kigoma and Tanga regions. The crops were in good condition despite the occurrence of dry spells over some areas. Over the unimodal areas, farmers were finalizing land preparation and acquisition of farm inputs. Water and pasture availability for livestock and wildlife were moderate, but improved over the bimodal areas particularly Lake Victoria basin and northern Kigoma region due to the prevailing *vuli* rains.

### HYDROLOGICAL SUMMARY DURING OCTOBER, 2014

Water levels in dams and river flows discharges were moderate over much of the country but improved over the bimodal areas, particularly Lake Victoria basin northern Kigoma region.

### ENVIRONMENTAL SUMMARY DURING OCTOBER, 2014

During October, 2014 high temperature conditions prevailed across the country except Lake Victoria basin, north-eastern highlands and south-western highlands where temperatures were relatively lower.

### EXPECTED SYNOPTIC SITUATION DURING NOVEMBER, 2014

In November, 2014 the two southern hemisphere high pressure systems are expected to continue relaxing while northern hemisphere systems are expected to continue intensifying. The neutral to warm SSTs over the Somali coast is expected to persist while neutral conditions are expected over the East African coast. The situation is expected to influence weather over the northern coast of Tanzania. The zonal arm of the ITCZ is expected to move southwards and lie over the northern coast of the country. However, due to the expected cool SSTs over the Angola and Namibia coast, the meridional arm of the ITCZ is expected to continue influencing weather over the extreme western areas of Tanzania.

### EXPECTED WEATHER DURING NOVEMBER, 2014

Lake Lake Victoria Basin (Kagera, Geita, Mwanza, Mara, Simiyu and Shinyanga regions together with northern Kigoma regions): frequent thunderstorms and rain showers are expected. Northern coast (Dar es Salaam, Morogoro and Tanga regions, the isles of Unguja and Pemba): frequent rain showers are expected. North-eastern highlands (Kilimanjaro, Arusha and Manyara regions): occasional rain showers are expected. Western regions (Kigoma, Rukwa and Tabora regions): frequent thunderstorms and rain showers are expected. Central areas (Dodoma and Singida regions): few thunderstorms and rain showers are expected. South-western highlands (Southern Rukwa, Katavi, Njombe, Iringa and Mbeya region): mainly dry conditions are expected, with few periods of rains especially over the high grounds. Southern Coast (Mtwara and Lindi regions): mainly dry conditions, with few rain showers are expected. Southern region (Ruvuma region): mainly dry conditions are expected.

### AGROMETEOROLOGICAL OUTLOOK DURING NOVEMBER, 2014

During the month of November 2014, the expected rainfall over the bimodal areas will be favorable for crops growth and development as well as pasture development. Timely weeding is recommended to salvage the soil moisture available for crops. Over the unimodal areas, farmers are advised to finalize land preparation and acquisition of farm inputs ready for planting as soon as the soil moisture is sufficient to support seed germination. Where frequent rainfall is expected (Lake Victoria basin, northern coast and west), farmers are advised to take precautionary measures for their safety and their properties. Farmers are also advised to seek professional advice from nearby Agricultural extension and livestock officers.

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