TANZANIA METEOROLOGICAL AGENCY

DEKADAL WEATHER REVIEW

No: 12. 2013/14 Cropping Season **December 21-31, 2013**

HIGHLIGHTS

- The soil moisture expected during the third dekad of December 2013 was beneficial for crop and pasture development mainly over the bimodal sector.
- Farmers over the unimodal sector are advised to engage largely on planting of crops as soil moisture expected during the period favorable for the planting activity as well as crop growth mostly in their early stages.

SYNOPTIC SUMMARY

During the third dekad of December 2013, the northern hemisphere high pressure systems, (the Azores and Siberian highs) continued strengthening while in the southern hemisphere, the St. Helena high and Mascarine high pressure systems continued relaxing. This setting generally made the Inter–Tropical Convergence Zone (ITCZ) to cover much of the country. The meridional arm of ITCZ slightly retreated west-wards and covered the western sector of the country. In terms of wind flow, low level convergence was maintained throughout the period over the Lake Victoria Basin, western and south-western highlands areas of the country. Less moist north easterly to easterly winds were favored to reach north-eastern high lands and coastal regions of the country and the hinterland especially during second half of the dekad.

WEATHER SUMMARY

In view of the observed synoptic and weather conditions, areas around the Lake Victoria basin, western regions, south-western highlands, southern regions, southern coast and central experienced thundershowers. However, north-eastern highlands and few areas of the northern coastal belt experienced rain showers over few areas associated with strong winds. The highest amount of rainfall during the dekad was recorded at Tabora (231.6 mm), followed by Igeri (142.4 mm), Sumbawanga (134.8 mm), Tumbi (127.9 mm), Mtwara (127.2 mm), Bukoba (110.1 mm), Shinyanga (108.5 mm), Kibondo (101.9 mm), Mbeya (97.8 mm), Mbozi (87.9 mm), Naliendele (81.4 mm), Songea (79.8 mm), Ukiriguru (66.4 mm), Dodoma (56.4 mm) and Hombolo (59.3mm). The remaining stations mainly over the northern coast and north eastern highland areas recorded the lowest dekadal total amounts as depicted by Figure 1a below. Similarly, Figure 1b shows rainfall patterns as percentage of average rainfall obtained from Satellite Rainfall Estimates (RFE) merged with gauge data from Tanzania rainfall stations network whereby western regions, parts of Lake Victoria basin and few areas of south-western highlands experienced above normal rainfall. On the other hand, most areas of central and southern regions of the country experienced normal to below normal rainfall while a large part of the northern coast and north-eastern highlands experienced below normal rainfall (less than 50% of long-term average rainfall).

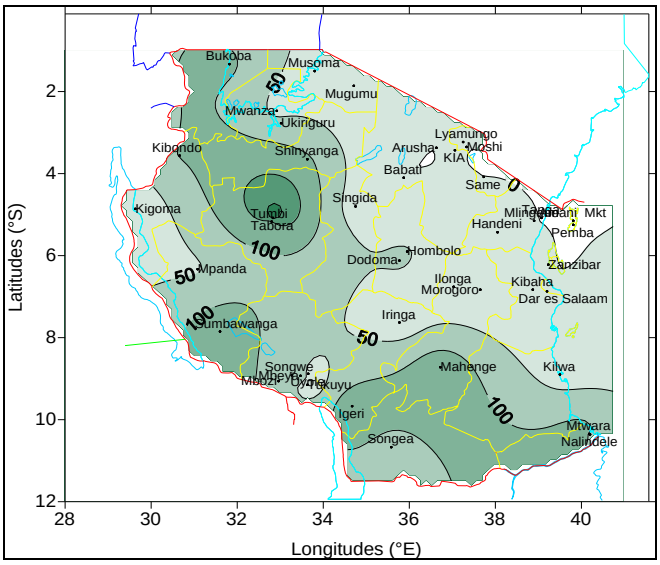

Figure 1a: **December 21–31, 2013 total rainfall distribution in millimeters**

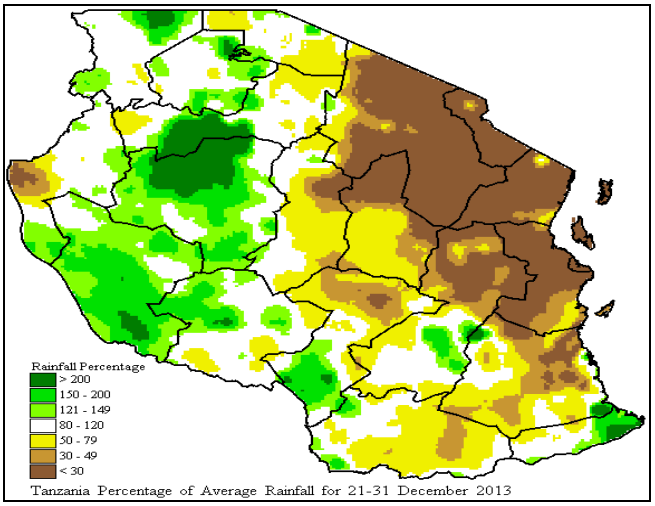

Figure 1b: **December 21–31, 2013 percentage of average rainfall (mm) from Satellite Rainfall Estimates (GeoWRSI).**

IMPACT ASSESSMENT

Agrometeorological and Crop Summary

Replenishment of soil moisture continued well during the third dekad of December 2013, mainly over the unimodal sector and few areas of the bimodal sector, particularly the Lake Victoria basin. The soil moisture amounts obtained over the bimodal sectors was favorable for development mainly of the late planted crops especially over regions around the Lake Victoria basin, Northern coast and Northeastern highlands. Maize crop as observed over this sector was largely at tasselling and wax ripeness stages while beans crop was at full ripeness stage. Both crops were in good state as observed over Sengerema, Bukoba, Musoma and Zanzibar. However, in the North-eastern highlands particulaly Kilimanjaro region, beans crop was at flowering stage but in poor state due to soil moisture stress experienced during the dekad. Similarly, maize crop in the Northern coast and north-eastern highlands experienced wilting condition due to moisture deficit that occurred during the dekad. Over the unimodal sector, the soil moisture obtained during the dekad was favorable mainly for planting and crop establishment as well as for weeding as in some areas. A case of floods and water logging was reported from Tabora municipality affecting crops at their early stage. Pastures and water availability for livestock and wildlife have improved largely over the bimodal sector.

Hydrological Summary

Water levels in dams and river-flows improved significantly over most parts mainly of bimodal sector of the country.

Environmental Summary

During the period warmer temperature conditions prevailed over much of the country.

EXPECTED SYNOPTIC CONDITIONS DURING JANUARY 1-10, 2014

During the first dekad of January, 2014 pressure systems over the northern hemisphere are expected to intensify significantly while their counterparts in the southern hemisphere are expected to relax further. On the other hand, expected neutral sea surface temperatures in West Indian Ocean of Tanzanian coast will contribute to drier north-easterly flow over the coast. Low level wind convergence is expected to dominate over the Lake Victoria basin, western, south-western, central and southwestern highlands.

Slight warming of SSTs is expected to be observed over Atlantic Ocean closer to Angola coast. This configuration is anticipated to cause easterlies which will be in phase with the retreat of the Meridional arm of Inter–Tropical Convergence Zone (ITCZ) slightly west wards.

EXPECTED WEATHER DURING JANUARY 1-10, 2014

Lake Victoria basin (Kagera, Geita, Mwanza, Mara, Simiyu and Shinyanga regions including northern parts of Kigoma region): Frequent thunderstorms and showers are expected. Northern coast (Dar es Salaam, Morogoro and Tanga regions together with the Isles of Unguja and Pemba): showers are expected over few areas. North eastern highlands (Kilimanjaro, Arusha and Manyara regions): Showers are expected over few areas. Western regions (Kigoma, Rukwa and Tabora regions): Frequent thundershowers are expected. Central areas (Dodoma and Singida regions): Rain showers and isolated thunderstorms are expected. South-western highlands (Southern Rukwa, Katavi, Njombe, Iringa and Mbeya region): Rain showers with isolated thunderstorms. Southern coast (Mtwara and Lindi regions): Rain showers and thunderstorms are expected over few areas. Southern region (Ruvuma region): Rain showers and thunderstorms.

AGROMETEOROLOGICAL OUTLOOK DURING JANUARY 1-10, 2014

Continued favorable soil moisture expected over the unimodal sector during the first dekad of January will be beneficial mainly for finalizing planting of crops in the region, while over the bimodal sector the situation will favor further crop establishment mainly for the late planted crops over Lake Victoria basin, northeastern highlands as well as northern coast to northern parts of Kigoma region. However, the *vuli* rains are expected to cease over some of the bimodal areas during the period. Timely weeding is therefore recommended to salvage little soil moisture available for crops. Farmers are advised to seek professional advice from their extension officers.

Prepared by
TANZANIA METEOROLOGICAL AGENCY
3rd, 4th & 10th Floors - Ubungo Plaza – Morogoro Road.
P.O. Box 3056 Tel. 255 -(0) 22 – 2460706-8 ; Fax: 255 - (0) 22 – 2460718 E-mail: (1) met@meteo.go.tz (2) agromet1_tz@meteo.go.tz
Dar es Salaam UNITED REPUBLIC OF TANZANIA