TANZANIA METEOROLOGICAL AGENCY

DEKADAL WEATHER REVIEW

No: 15. 2012/13 Cropping Season

January 21- 31, 2013

HIGHLIGHTS

During the dekad growing crops over the unimodal sector of the country will benefit from the expected normal to above normal soil moisture supply, while the lower soil moisture levels expected over much of the bimodal sector is a possible risk to the late maturing crops in the region.

SYNOPTIC SUMMARY

During the third dekad of January, 2013, the southern hemisphere high pressure cells (anticyclones) were noted to observe gradual relaxation. On the other hand, Azores anticyclone and Siberian high over the northern hemisphere were significantly intensifying with time. As a result, the Meridional arm of the Inter-Tropical Convergence Zone (ITCZ) was slightly located in the extreme western site of the country while the zonal arm of the ITCZ moved southwards to southern sector of the country. These settings caused penetration of the north-easterlies/north-westerlies over some parts of the country, thus influenced little rainfall over most parts of the country (Lake Victoria basin, western regions, northeastern highlands and northern coastal regions) at the beginning of the dekad. Sustained warm and cool sea surface temperature (SST) pattern was observed over the eastern Indian Ocean and Central Indian Ocean respectively while warm to neutral conditions was observed over western Indian Ocean. The overland ridge from southern Africa was generally relaxed, allowing penetration of the easterlies to the country thus causing showers over some parts of the coastal regions. The occurrence of the Tropical cyclone "FELENG" in southwestern Indian Ocean just east of Madagascar influenced the setting up of the westerly wind flows over most part of the country which enhanced heavy rainfall over most parts of the country at the end of the dekad.

RAINFALL SUMMARY

During the third dekad of January, 2013, moderate to heavy rains associated with thunderstorms were recorded over some parts of the country especially over the Lake Victoria Basin, western, central, south-western highlands, southern coast and southern areas of the country while over northeastern highlands and northern coastal regions of the country were mainly dry as shown in *Figs 1a and 1b.* The highest rainfall amount for the period was recorded at Singida 167.9 mm, Morogoro 130.2 mm, Mtwara 114.7 mm, Naliendele 103.3 mm, Igeri 86.0 mm, Songea 83.7 mm, Dodoma 789.2 mm, Ilonga 70.9 mm, Uyole 64.2 mm, Sumbawanga 60.7 mm, Hombolo 58.5 mm, Bukoba 57.6 mm, Tukuyu 56.7 mm, and Tabora 52.9 mm. Remaining areas mainly over the coastal belt, western and northeastern highlands received rainfall less than 30 mm for the period as shown in Figure 1a below.

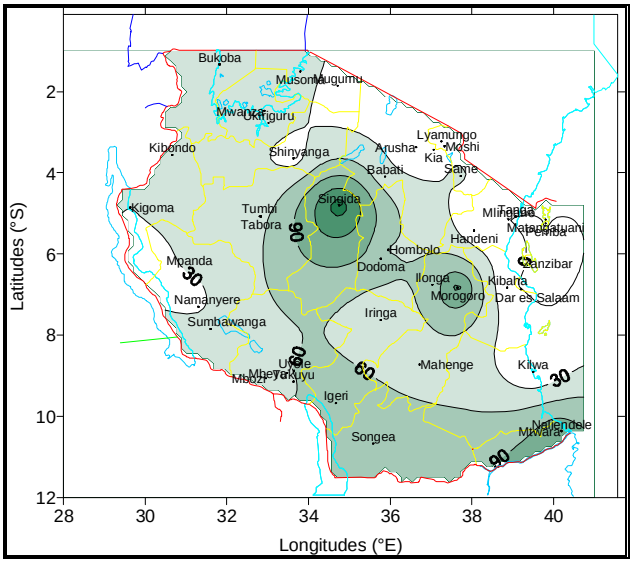

Figure 1a: January 21-31, 2013 Rainfall distribution (mm)

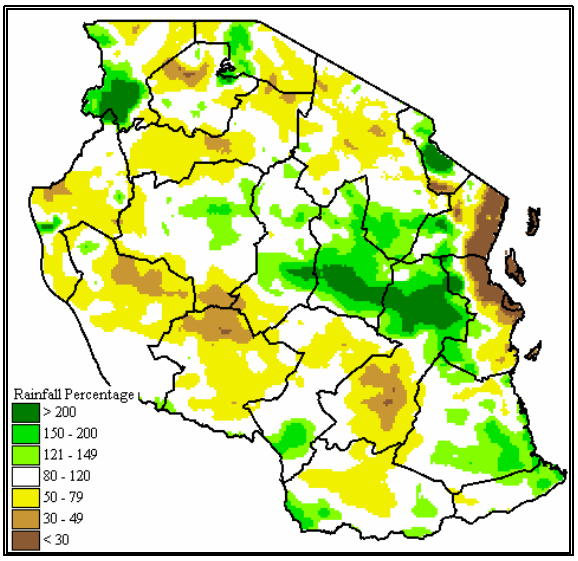

Figure 1b: January 21-31, 2013 Percentage of average rainfall from GeoWRSI

The Geospatial Water Requirement Satisfaction Index (GeoWRSI) model with inputs from Satellite Rainfall Estimates (RFE) merged with gauge data from Tanzania rainfall stations network also indicates similar pattern of the rainfall performance during the dekad whereby most parts of northern coast received rainfall less than 30% of the long term average as shown in Figure 1b above.

IMPACT ASSESSMENT

Agrometeorological and Crop Summary

Soil moisture supply during the dekad was beneficial for the crops mainly over the unimodal sector although a decreasing trend observed over bimodal sector is normal for the period but a risk to late grown crops largely observed over northeastern highlands and northern coast areas. Crops such as maize and beans over parts of Lake Victoria basin particularly Kagera and Mara regions were at ripeness to harvesting stage and in good state though the late grown crops were somewhat different due the experienced decreasing soil moisture levels. However, over the unimodal sector prevailed generally adequate soil moisture supply with pockets that were hit by long dry spells mainly observed around parts of central areas such as Dodoma during the start of the dekad and improved towards the end of the period though resulted to flash floods that once swept away good number of acres of field crop (onions) as reported from Singida. Other areas of the sector including northeastern, western, southwestern highlands, southern coast and southern regions received moderate soil moisture supply during the period.

Pastures and water availability for livestock and wildlife were boosted almost countrywide.

Hydrological Summary

Water levels in dams and river-flow have increased mainly over unimodal sector due to moderate and substantial rains experienced over some parts of the sector during the dekad.

Environmental Summary

Temperatures remained generally high over much of the country as well as warm to humid air observed mainly over the coastal areas that occasionally caused discomfort.

EXPECTED SYNOPTIC SYSTEMS DURING FEBRUARY 1-10, 2013

During this period, the southern pressure systems particularly the Mascarene are expected to maintain their relatively low intensity while their counterpart to the north are expected to continue intensifying; thus, expected to strengthen the ITCZ over unimodal areas of the country, especially over western, South-western highlands, Southern regions, Southern coast regions and central regions of the country.

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EXPECTED WEATHER DURING FEBRUARY 1-10, 2013

Lake Victoria Basin (Kagera, Mwanza, Mara, Geita, Simiyu and Shinyanga regions), north-eastern highlands (Kilimanjaro, Arusha and Manyara regions), and northern coast (Dar es Salaam, Morogoro and Tanga regions, the isles of Zanzibar and Pemba) are expected to be mainly dry. Western regions (Kigoma and Tabora regions) and central areas (Dodoma and Singida regions) are expected to feature moderate and normal rains. Southwestern highlands (Rukwa, Iringa and Mbeya regions), Southern Coast (Mtwara and Lindi regions), and southern region (Ruvuma region) are likely to feature normal to above normal rains.

AGROMETEOROLOGICAL OUTLOOK DURING FEBRUARY 1-10, 2013

During the dekad, growing crops over the unimodal sector of the country will benefit from the expected normal to above normal soil moisture supply, while the lower soil moisture levels expected over much of the bimodal sector is a possible risk to the late maturing crops in the region.

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