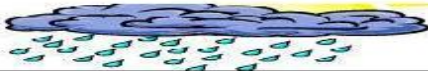




# TANZANIA METEOROLOGICAL AGENCY



## SEASONAL WEATHER FORECAST

No.7 Special Issue: **October – December 2012 Season**

Issued on **5<sup>th</sup> September, 2012**

### Summary

*The Bulletin contains a brief review of the performance of March to May 2012 rainfall season, and evolution of the climate systems, and outlook for the October to December (OND) 2012 rainfall season, and advisories on the likely impacts. Outlook for October to December (OND), 2012 rainfall season indicates that the Lake Victoria basin (Kagera, Mwanza, Mara, Geita, and Simiyu regions), northern Kigoma, western (Katavi and Tabora regions), central (Singida, and Dodoma regions) are expected to receive above normal rains. Much of the rest regions; coastal areas (Dar es Salaam, Tanga, Coast, Mtwara and Lindi regions), Islands of Unguja and Pemba, northeastern highlands (Arusha, Kilimanjaro, and Manyara regions), southwestern highlands (Rukwa, Mbeya, Njombe, and Iringa regions) are expected to receive mainly normal to above normal rainfall. This Outlook is relevant only for seasonal time scales and over relatively large areas and some variations may occur. It should also be noted that durations of dry spell events are common even in normal to above normal rainfall conditions.*

### RAINFALL PERFORMANCE

#### March to May 2012 Rainfall Season

During March to May 2012 the Lake Victoria Basin (Kagera, Geita, Simiyu, Mara and Mwanza regions) experienced normal to above normal rainfall except for Shinyanga region which received below normal rainfall. The southern coast (Mtwara and Lindi regions) received normal rainfall while western parts of the country (Tabora and Kigoma regions) experienced normal to below normal rainfall. On the other hand central areas (Dodoma and Singida regions) and southwestern highlands (Rukwa, Mbeya, Katavi, Njombe and Iringa regions) received mainly below normal rainfall with pockets of normal rainfall. Southern areas (Ruvuma region) received below normal rainfall. Areas over northeastern highlands (Arusha, Kilimanjaro and Manyara regions) and northern coast (Tanga, Dar es Salaam, Coast and Morogoro regions as well as Unguja and Pemba Isles) received normal to below normal rainfall. Generally, rainfall distribution was poor in most parts of the northeastern sector of the country.

### EXPECTED CLIMATE SYSTEMS DURING OCTOBER-DECEMBER 2012

Observed and predicted sea surface temperature anomalies over the Tropical Pacific, Indian and Atlantic Oceans were analyzed. Other factors such as atmospheric circulation processes that bring moisture into the region were considered. During the October-December 2012 rainfall season, warm SSTs are predicted over the Tropical Pacific Ocean which implies a likelihood of weak El-Nino conditions. The current neutral to slight warming over western Indian Ocean (East African coast) coupled with slight cooling over eastern Indian Ocean (over Indonesia) indicates a mild positive Indian Ocean Dipole during the season. Westerly wind anomalies are

expected in October, November and December, 2012 over the southwestern Indian Ocean, thus moderate northeasterly to easterly wind are expected towards the East African coast. However, the likelihood of increased warming across much of the southwestern Indian Ocean during the month of December is likely to trigger enhanced westerly wind across the country and probable occurrence of tropical cyclones over the southwestern Indian Ocean.

### RAINFALL OUTLOOK DURING OCTOBER- DECEMBER 2012

From the prevailing climate systems explained above, the October - December 2012 rainfall outlook is described below and the map is shown in Figure 1.

#### Short Rains (Vuli) over Bimodal areas

The October to December rainfall season (*Vuli*) is more significant for the northeastern highlands, northern coast areas, Lake Victoria Basin and northern Kigoma. The rains are expected to be above normal over the Lake Victoria Basin and northern Kigoma, while over northeastern highlands, northern coast, extreme eastern part of Shinyanga and isles of Unguja and Pemba the rains are expected to be normal to above normal.

The onset of the short rainfall season (*Vuli*) is expected to commence in September, 2012 over Lake Victoria Basin and gradually spreading to other areas.

**Lake Victoria Basin** (Kagera, Mara, Mwanza, Geita, Simiyu and Shinyanga regions): Rains are expected to start during the third week of September, 2012 over Kagera region and northern Kigoma areas and gradually spreading to Mwanza, Shinyanga, Mara, Geita and Simiyu regions during the fourth week of September, 2012. The rains are expected to be above normal over most areas. **Northern coast areas and hinterland** (Dar es Salaam, Tanga, and Coast regions, northern Morogoro areas and Isles of Unguja and Pemba): The rains are expected to commence in the first week of October, 2012 and likely to be normal to above normal over

most areas. **Northeastern highlands:** (Kilimanjaro, Arusha and Manyara regions): Rains are expected to commence in the second week of October 2012 and are likely to be normal to above normal.

**Seasonal Rains (Msimu): November 2011 to April 2012**

The November to April rainfall season is more significant for the western, central, southwestern highlands, southern region and southern coast. The rains are likely to be normal to above normal over most areas.

**Western areas** (Tabora, Rukwa, Katavi and Kigoma regions): Rains are expected to start in the third week of October, 2012 over Kigoma and in the second week of November, 2012 over Tabora, Rukwa and Katavi regions. The rains are expected to be normal to above normal over Rukwa and Kigoma regions while Katavi and Tabora regions are likely to experience above normal rainfall. **Central areas** (Singida and Dodoma regions): Rains are expected to start during the fourth week of November, 2012 and are likely to be above normal.

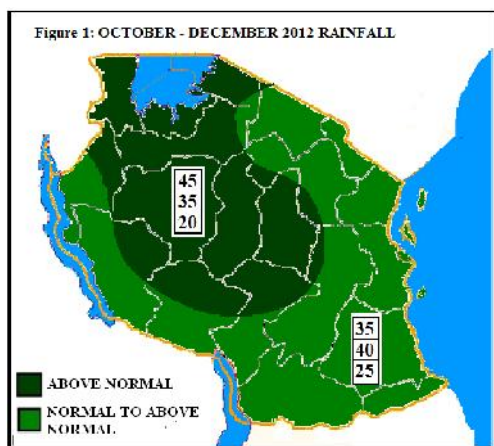


Fig. 1: Rainfall outlook for October to December 2012

**Southwestern highlands:** (Mbeya, Iringa, and Njombe regions and southern Morogoro areas): Rains over these regions are expected to start during the fourth week of November, 2012. The rains are likely to be normal to above normal over Njombe and southern parts of Mbeya and Morogoro regions. Northern parts of Iringa and Mbeya regions are likely to experience above normal rainfall.

**Southern region and Southern Coast:** (Ruvuma, Mtwara and Lindi regions): Rains are expected to start during the fourth week of November, 2012 and are likely to be normal to above normal over most areas.

**IMPACTS AND ADVISORIES**

**Agriculture and Food Security**

Normal to above normal rainfall is expected over much of the country. The associated impacts on social-economic sectors and their respective advisories are highlighted as follows:

**Agriculture and food Security**

Sufficient soil moisture levels are likely to favour normal cropping season. However, risk of fungal diseases and excessive soil moisture levels and flooding (especially in low ground areas) are likely to impede crop development while high use of agricultural inputs is expected to raise production costs. Farmers are advised to prepare their farms and acquire agricultural inputs early while making appropriate land use management and right choice of crop varieties to plant. Over much of the country, farmers are advised to continue with normal cropping season as normal to above normal rains are expected. However, above normal rains may lead to excessive soil moisture condition which is likely to impede crop development. Farmers are therefore encouraged to seek advice from agricultural extension officers.

**Pastures and Water for Livestock**

Pasture and water availability for livestock and wildlife over much of the country is likely to be good. However, high risk of disease outbreak for instance Foot and Mouth Disease (FMD) and Rift Valley Fever (RVF) are likely. Pastoralists and agro-pastoralists are advised to harvest and conserve pasture for use during dry period. Also, regular dipping and vaccination against pests and diseases are highly recommended. Wildlife- human conflicts due to wildlife migration and agricultural activities and damage of infrastructures inside national parks and game reserves are likely. It is advised to avoid cultivation along wildlife corridors while good plans for tourist activities are recommended.

**Water and Energy**

Water levels over dams and rivers are expected to improve from their current levels over much of the country. Despite of the fact that the expected rains are normal to above normal, water for hydropower electric generation should be used sparingly, while recommending water harvesting and storage practices.

**Health**

There is a high chance of Malaria and cholera, outbreaks over the areas which are expected to receive above normal rainfall while normal transmission elsewhere, necessary precautions should be taken over those areas.

**Disaster Management and Local Authorities**

Municipals are advised to open up and clear storm water drainage systems to avoid water accumulation due to surface runoff so as to reduce the impacts of floods.

The disaster management authorities and other stakeholders are advised to take necessary measures such as law enforcement, good practice of environmental conservation and adequate supply of medicines and clean water that would ensure preparedness, response, and mitigation of any negative impacts that may result from the expected above normal rainfall.

Media

The media is advised to obtain, make regular follow-ups and disseminate weather information as provided by Tanzania Meteorological Agency (TMA). On the other hand, the public is advised to make follow-ups of the information regarding seasonal forecasts and updates through media.

Note

*It should be noted that this year's October to December rainfall season is likely to be influenced by weak to moderate El-Niño conditions associated with periods of enhanced rainfall. The Agency strongly advises all users including agriculture, food security, livestock, wildlife, water resources, health sectors, etc to seek more advice from experts in their respective sectors.*

Prepared by

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