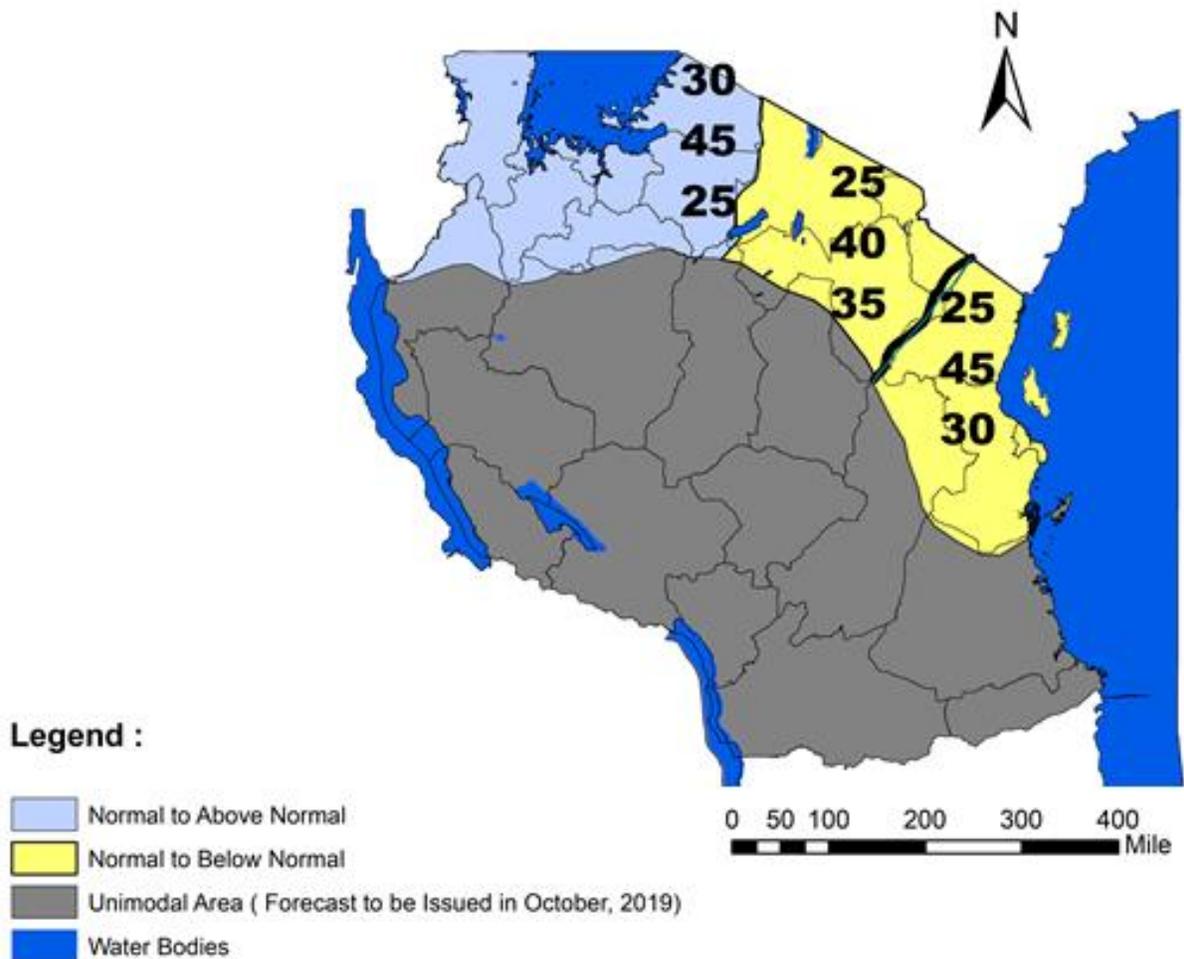


THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF WORKS, TRANSPORT AND COMMUNICATION
TANZANIA METEOROLOGICAL AUTHORITY



CLIMATE OUTLOOK FOR
OCTOBER - DECEMBER, 2019 *VULI* RAINFALL SEASON



Highlights for October –December, 2019 *Vuli* rainfall Season

This statement describes the evolution of the climate systems and outlook for the October to December, 2019 rainfall season, advisories and early warnings to various weather sensitive sectors including Agriculture and food security, Livestock and wildlife, Natural Resources and Tourism, Energy and water, Local Authorities, Health sector and Disaster Management. This season is more significant for the areas of the northeastern highlands, northern coast, Lake Victoria Basin and the northern parts of Kigoma region. The key messages contained in the Outlook indicates that:

a) The ‘Vuli’ 2019 Seasonal rains

- i. Are likely to have elevated chance of normal to above normal over the Lake Victoria basin (Kagera, Geita, Mwanza, Shinyanga, Simiyu and Mara regions).
- ii. Over most areas of the Northern coast together with the Northeastern highlands are likely to be normal to below normal.
- iii. Over the Lake Victoria basin rains are expected to start during the second week of October 2019, except over few areas of Kagera region where the ongoing unseasonal rains are likely to coincide with the *Vuli* season.

b) Expected Impacts

- i. Over areas expected to receive normal to below normal rainfall, there is a likelihood of outbreak of water borne diseases due to periodic shortage of safe water and poor management of urban sewage systems, moreover areas that are expected to receive excessive rains, occurrences of associated water borne diseases are likely to be pronounced.
- ii. Insufficient pasture and water for livestock keeping is expected and likely to trigger conflicts between farmers and pastoralists especially over areas expected to receive normal to below normal rainfall.
- iii. Short periods of heavy rains may be expected even over the areas where normal to below normal rains are likely.

(I) SEASONAL RAINFALL OUTLOOK OCTOBER – DECEMBER, 2019

Based on the current and expected climate systems (As indicated in part II of this statement), normal to below normal rains are expected over most areas of the Northeastern highlands together with the northern coast. However, areas of the Lake Victoria Basin and northern parts of Kigoma region (Kibondo) are likely to feature normal to above normal rains.

1. October to December Seasonal rains (Vuli)

The October to December (OND) rainfall season (*Vuli*) is more significant for the areas of the northeastern highlands, northern coast including the Isles of Unguja and Pemba, Lake Victoria Basin and the northern parts of Kigoma and Morogoro regions. The *Vuli 2019* rains are expected to be normal to below normal over most parts of Northeastern Highlands and northern coast. Furthermore, normal to above normal rains are expected over most areas of the Lake Victoria basin together with the northern parts of Kigoma region.

1.1 Lake Victoria Basin: (Kagera, Mara, Mwanza, Geita, Simiyu and Shinyanga regions):

Over the Lake Victoria basin, rains are expected to start during the second week of October 2019 and are expected to spread to Mwanza, Mara, Geita, Simiyu and Shinyanga regions between the third and fourth week of October 2019, except over few areas of Kagera region where the ongoing unseasonal rains are likely to coincide with the *Vuli* season. The rains are expected to be normal to above normal over most areas. These rains are expected to cease between the first and second week of January 2020.

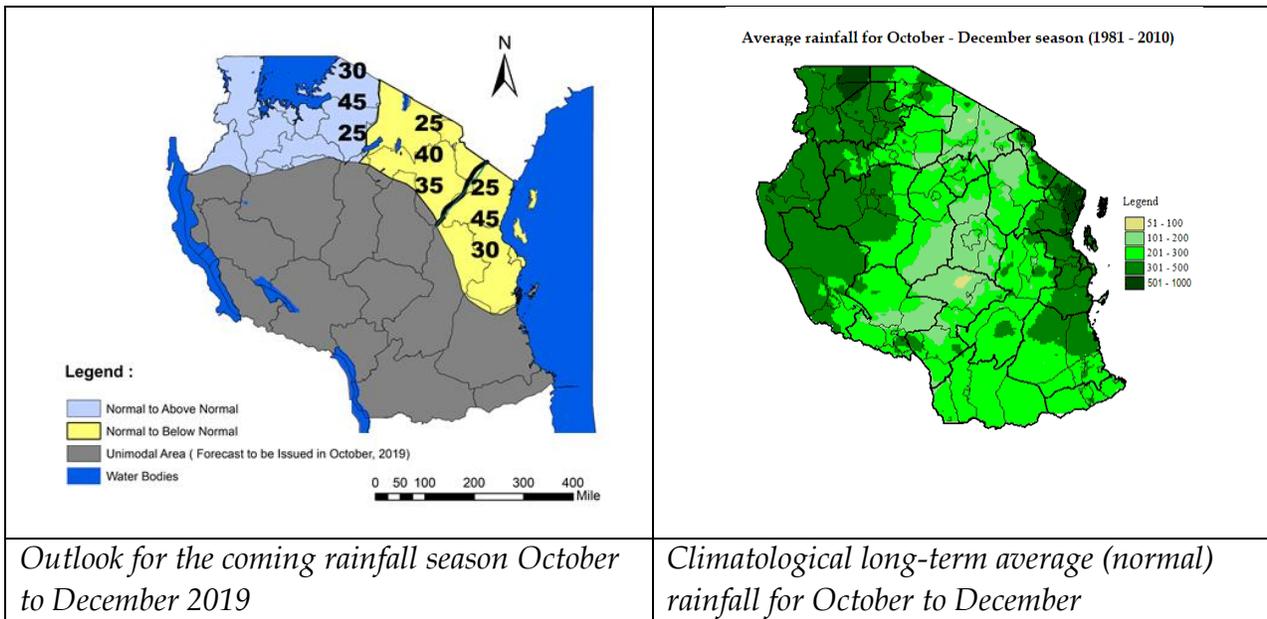
1.2 Northern Coast areas and its Hinterlands: (Dar es Salaam, Tanga and Pwani regions, Islands of Unguja and Pemba and northern Morogoro areas):

Rains are expected to commence during the second week of October 2019 and are likely to be normal to below normal over most areas, but the distribution is expected to be poor and characterized by prolonged dry spells over most areas. Normal rains are

expected to resume from the second week of November 2019. The cessation is expected to be during the fourth week of December 2019.

1.3 North-Eastern Highlands: (Kilimanjaro, Arusha and Manyara regions):

Rains are expected to commence during the fourth week of October 2019 and are likely to be normal to below normal over most areas of Kilimanjaro, Arusha and Manyara regions. Cessation is expected to be during the fourth week of December 2019.



It should be noted that events of heavy and short duration rainfall might occur even over areas with normal to below normal rainfall conditions.

(II) CLIMATE SYSTEMS OUTLOOK

The observed warmer than average sea surface temperature over the central Indian Ocean (CIO), north west Indian Ocean (NWIO) and the western part of the Indian Ocean (WIO) is likely to persist from October – December period. This is expected to lead to diffluent flow of the winds off the coast, as the WIO is less warm than the CIO. Hence, reducing rains over much parts of the northern coast as well as the north eastern highlands. Moreover, the observed and expected warming is likely to influence occurrences of tropical cyclones over the southwest Indian Ocean. On the other hand,

cool temperature over the southeast Atlantic Ocean (off Angola Coast) is expected to persist and therefore may continue influencing rains over western part of the country. Otherwise, average sea surface temperature (SSTs) condition over the Central Equatorial Pacific Ocean is expected to have less influence to the rainfall pattern during October - December 2019 period.

(III) LIKELY IMPACTS AND ADVISORY

Agriculture, Food Security, Fisheries and Livestock Production

In areas where normal to below normal rains are expected, soil moisture deficiency is anticipated. Insufficient pasture and water for livestock keeping is also expected and likely to trigger conflicts between farmers and pastoralists.

Pastoralists should be sensitized and advised to harvest their cattle while in good condition. Livestock keepers should be encouraged to keep livestock according to the capacity of grazing areas and to seek more advice from agricultural and livestock extension officers in their areas. Fishery sector in these areas can also be impacted due to possible inadequate water levels in fish production dams and therefore fish farmers are advised to prepare for proper ponds/dams water management.

For areas where normal to above normal rains are expected, favorable conditions for normal cropping practices as well as sufficient pasture and water for livestock keeping are anticipated.

Energy, Water and Minerals

Over the areas where normal to above normal rains are expected, sufficient water availability is likely to improve water levels over the dams and rivers. In small-scale mining activities, safety precaution should be observed as excessive water in the soil may trigger landslides and cave-ins.

However, over the Northeastern highlands and Northern coast, where normal to below normal rains are likely, water levels over the lakes, dams and rivers are expected to have insignificant improvement from the current levels, thus efficient use of water for irrigation, domestic use and power generation are highly advised. The use of

renewable energy is highly encouraged to merge the expected energy gap from hydropower generation.

Local Authorities

Clean water supply and wastewater management infrastructure may be impacted, especially during the time of heavy rains, therefore local authorities as well as the community are advised to clear water drainage systems so as to avoid possible water accumulation due to surface runoff and floods.

Health sector

In areas that are expected to receive excessive rains, occurrences of associated water borne diseases are likely to be pronounced. On the other hand, over areas expected to receive normal to below normal rainfall, communities are likely to utilize unsafe water due to the anticipated shortage of water and cause outbreak of water borne diseases. Therefore, responsible authorities and communities are advised to take appropriate health measures needed to minimize the expected negative impacts on health.

Disaster Management

It is advised to step up preparedness and mitigation mechanisms such as close monitoring as the season progresses for timely communication of early warning information, preparedness and contingency planning for floods and hazards triggered by floods even over the areas where below normal to normal rains are expected, resource mobilization and strengthen response for response preposition preparedness and response items for effective response. It is also advised to strengthen communication and advocacy campaign and communication mechanisms at all levels.

Media

Recommendation is made to the media to make regular follow-up on weather and climate information and warnings, and disseminate accordingly and appropriately. Also, media are encouraged to seek and obtain inputs from relevant sectors when preparing and communicating cross cutting issues related to Weather and Climate to

the Public as well as co-sharing of climate stories within the climate journalist community.

Tanzania Meteorological Authority (TMA) advises all users of weather information including farmers, livestock keepers, wildlife conservation authorities, hydrological and health sectors to continue seeking and utilizing experts' advice on their relevant sectors.

NB: The current status of seasonal forecasting allows for prediction of spatial and temporal averages over larger areas and may not fully account for all physical and dynamical factors that influence short-term climate variability. Users of this outlook are, therefore urged to make good use of daily, ten day and monthly updates issued by the Tanzania Meteorological Authority.

Tanzania Meteorological Authority (TMA) will continue to monitor developments of the weather systems and issue updates whenever appropriate.

Issued by Tanzania Meteorological Authority: