# TANZANIA METEOROLOGICAL AGENCY

# MONTHLY WEATHER BULLETIN

No. 3 Special Issue: **December 2009/10 season** **Issued on 4th January, 2010**


## Summary

**This statement gives information about the current state of weather and climate systems during December 2009, and projection of the climate systems and outlook for the period of January, 2010**

**The Lake Victoria basin is expected to receive above normal rains while Kilimanjaro region and eastern parts of Arusha are expected to receive mainly normal rainfall. Southern areas and southern coast (Ruvuma, Mtwara and Lindi regions) are likely to experience below normal to normal rainfall. Normal to above normal rainfall is expected over much of the country.**


## Summary on rainfall during December 2009

At the beginning of December 2009 there was a suppression of rains over many areas of the country. However the rains picked up during the third week of December due to intensification of the seasonal rainmaking mechanism, Inter-tropical Convergence Zone (ITCZ), leading to enhanced rains with floods in some parts of the country. Above normal rains were recorded particularly over Lake Victoria Basin, northeastern highlands, southwestern highlands, central areas, Ruvuma and Morogoro regions including Mahenge. On 29th Dodoma received 107mm of rainfall in 24 hours which was the highest record since the station was established.

The following tables depict daily rainfall amounts recorded at various stations from 24th through 31st December 2009 which show that rains were spread all over the country with big amounts.

**24th December 2009**

| Station | Amount (mm) |
|---|---|
| Babati | 72 |
| Dodoma | 38 |
| Iringa | 31 |
| Mahenge | 30.7 |
| Mwanza | 68.9 |
| Bukoba | 29.5 |
| Kibondo | 22.4 |
| Sumbawanga | 28.0 |
| Igeri | 30.5 |
| Hombolo | 35.8 |
| Uyole | 31.5 |

**25th December 2009**

| Station | Amount (mm) |
|---|---|
| Shinyanga | 46.6 |
| Bukoba | 21.3 |
| Mbeya | 22.6 |
| Morogoro | 28.7 |
| Singida | 19.5 |
| Dodoma | 17.8 |
| Tukuyu | 18.8 |
| Kibaha | 26.9 |

**26th December 2009**

| Station | Amount (mm) |
|---|---|
| Singida | 47.2 |
| Dodoma | 60.8 |
| Tabora | 30.7 |
| Morogoro | 52.7 |
| Mahenge | 65.5 |
| Mtwara | 23.0 |
| Marikitanda (Amani) | 35.5 |
| Hombolo | 49.2 |

**27th December 2009**

| Station | Amount (mm) |
|---|---|
| Babati | 30.5 |
| Dodoma | 21.9 |
| Kilwa | 19.9 |
| Mahenge | 32.9 |
| Mwanza | 18.6 |
| Songea | 27.3 |
| Pemba | 34.2 |
| Musoma | 17.7 |
| Marikitanda (Amani) | 54.0 |
| Ifakara | 73.6 |
| Mbimba | 22.4 |
| Mtwara | 15.0 |

**28th December 2009**

| Station | Amount (mm) |
|---|---|
| Singida | 40.9 |
| Marikitanda (Amani) | 33.0 |
| Dodoma | 24.8 |
| Songea | 19.0 |
| Same | 49.0 |
| Tabora | 30.7 |
| Mugumu (Serengeti) | 16.7 |
| Kibondo | 31.7 |

**29th December 2009**

| Station | Amount (mm) |
|---|---|
| Singida | 48.7 |
| Dodoma | 107.0 |
| Hombolo | 34.7 |
| Babati | 25.0 |
| Sumbawanga | 19.7 |
| Ilonga | 53.1 |
| Mbeya | 13.6 |
| Uyole | 16.0 |
| Musoma | 11.2 |
| Ifakara | 35.4 |
| Mahenge | 13.6 |

**30th December 2009**

| Station | Amount (mm) |
|---|---|
| Bukoba | 20.5 |
| Musoma | 24.8 |
| Arusha | 7.8 |
| Pemba | 4.7 |
| Kibondo | 29.0 |
| Igeri | 5.6 |
| Mbimba | 6.7 |
| Songea | 4.7 |
| Shinyanga | 5.7 |
| Mugumu (Serengeti) | 8.0 |
| Nyiberekera (Kagera) | 10.4 |
| Kambarage (Kagera) | 10.9 |

**31th December 2009**

| Station | Amount (mm) |
|---|---|
| Musoma | 12.2 |
| Mwanza | 5.9 |
| Sumbawanga | 26.4 |
| Iringa | 11.6 |
| Tukuyu | 24.4 |
| Igeri | 10.8 |
| Nyiberekera | 6.8 |
| Tumbi (Tabora) | 6.4 |
| Uyole | 4.0 |

## Rainfall distribution

Records for *vuli* rains (September to December 2009) over some parts of the bimodal areas, particularly the Lake Victoria Basin and northeastern highlands, indicate that the rainfall amounts received were above normal to normal over most areas whereas northern coast received mainly normal rainfall amounts with pockets of below normal rains.

Seasonal rains over **uni-modal** areas spread well during the period whereby over central regions above normal rainfall amounts were recorded, normal to above normal rainfall amounts were recorded over south-western highlands. Over western areas normal to below rainfall amounts were recorded over southwestern areas while southern areas recorded normal to below normal rainfall amounts.. The southern coast (Lindi and Mtwara region) received below normal rainfall

Rainfall amounts in millimeters recorded during October to December 2009, for a few selected stations, with their percentage of long term means in brackets, are indicated below:

Over the Lake Victoria Basin, Mwanza recorded 582.6mm (144.0%), Bukoba 799.9mm (123.4%), Musoma 413.2mm (172.8%) and Shinyanga 410.1mm (137.2%) of long term average rainfall. Northeastern highlands, Moshi received 275.8mm (183.3%), Lyamungu 340.2mm (145.9%), Same 160.5mm (89.9%), KIA 163.0mm (140.9%) of rainfall. Northern coast, Tanga received 446.9mm (109.2%), Pemba 315.6mm (105.3%), Mlingano 340.4mm (80.7%), Handeni 266.8mm (110.2%), Kizimbani 410.3mm (68.6%), Zanzibar 396.3mm (71.6%), Morogoro 199.3mm (96.9%) and Dar es salaam 110.7mm (33.0%). Central and southwestern highlands, Dodoma received 373.5mm (246.4%), Hombolo 244.1mm (145.6%), Iringa 173.0mm (117.7%), Mbeya 275.2mm(104.5%), Tukuyu 373.3 mm(79.4%) and Igeri 287.1mm (86.3%) of rainfall.

Western region, Tabora received 362.6 mm (104.6%), Kigoma 259.8mm (63.8%) and Tumbi received 234.5mm (68.5%) of rainfall. Southern coast and southern Region, Mtwara received 148.5mm (58.8%), Kilwa 88.3mm (35.3%) and Songea 223.9mm (93.2%) of rainfall.

## Outlook

It should be noted that the short rains (VULI) season has ended, however, moderate El Nino conditions which are projected to persist through March 2010 are likely to influence rainfall over parts of Lake Victoria Basin, northern coast including the isles of Zanzibar and Pemba, and north-eastern highlands during the month of January 2010.
Normal to above normal rainfalls over unimodal areas are expected to be experienced over most areas of western, south-western highlands and central regions. However, southern coast and parts of southern region are expected to experience mainly below normal rainfall.

## Advisory

### Agriculture

The expected above normal soil moisture supply over some areas of western, south-western highlands and central regions may be excessive and retard the crop growth. The public is forewarned to take caution.
The excessive soil moisture supply in bimodal rainfall areas are threatening the beans crop which has attained post vegetative to maturity stages and would have benefited from more sunshine than cloudy conditions. However, the maize crop is doing well under the circumstances. Water logging in some areas is threatening crops in the fields.

In unimodal rainfall areas planting has been finalized in most places while it is in final stages in others. For better soil moisture management and suitable crops

to be grown in the farms, farmers are advised to seek guidance from Extension Officers for appropriate agronomic practices.

### Pastures and Water for Livestock

Pastures and water availability for livestock and wildlife have improved over much of the country.

### Water Levels in dams and Lakes

Water levels in Lakes and dams are expected to rise and rivers discharges are expected to increase in most parts of the country except southern areas where water should be used sparingly and wherever possible water harvesting techniques should be applied.

It should be noted that this is an El Nino year expected to be associated with very heavy rainfall and floods in most parts due to the fact that the Indian Ocean has responded in a typical El Nino fashion whereby mostly a dipole develops with simultaneous cooling and warming over Indonesia and western Indian Ocean respectively, thus, triggering dynamics for rainfall enhancement.

## Information for noting

The Agency will continue to monitor the weather and climate systems, asses their implication on Tanzania and issue advisories and warnings accodingly. The tropical cyclone season over the southwest Indian Ocean is expected to continue up to April 2010 and their occurrences during the season may influence the rainfall as they occur

*Prepared by*
TANZANIA METEOROLOGICAL AGENCY
3rd, 4th & 10 th 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