



Republic Of Zambia

Ministry of Green Economy and Environment
ZAMBIA METEOROLOGICAL DEPARTMENT

RAINFALL FORECAST

2023/2024 SEASON

Issued by

A handwritten signature in blue ink, appearing to read 'Edson Nkonde'.

Edson Nkonde
Director of Meteorology

Telephone: +260 954 755155

P.O. Box 30200, Lusaka

E-mail: weather@mgee.gov.zm

October 2023

GENERAL SITUATION

The El Niño climate phenomenon, characterized by above-average Sea Surface Temperatures (SSTs) in the Pacific Ocean, is expected to persist and influence Zambia's rainfall pattern during the 2023/2024 season. This condition typically results in reduced rainfall in Zambia. As a result, the upcoming 2023/2024 rainfall season is anticipated to exhibit the following characteristics:

- Onset of rains in **October** over Northwestern Province, the northern parts of Luapula and Western provinces;
- onset of rains expected over most parts of Zambia in **November**, with the exception of the southern regions where it is likely to begin by the end of **December**;
- **Normal to Below Normal** rainfall over most parts of Zambia; and
- Periods of **prolonged dry spells** and episodes of **heavy rainfall events**.

DETAILED FORECAST

For the period **October, November and December (OND)**: **Normal to below normal** rainfall is expected over Luapula, Northern, Muchinga, Lusaka, Central and Copperbelt provinces including Lundazi, Chama, Kaoma, Kabompo and Kalabo districts. During this period, **normal to above normal** rainfall is likely over Southern, Western, much of Northwestern and Eastern provinces including Mansa and Mpika districts (**Figure 1**).

During the period **November, December and January (NDJ)**: **normal to below normal** rainfall is likely over much of the eastern half of Zambia including Kabompo District in Northwestern Province. However, **normal to above normal** rainfall is likely over much of Southern, Western, Northwestern and the northern parts of Luapula and Muchinga provinces including Mumbwa District (**Figure 2**).

For **December, January and February (DJF)**: **normal to below normal** rainfall is projected over Copperbelt, Central and Lusaka provinces including Choma, Petauke, Nyimba, Mbala, Zambezi, Kabompo, Chembe, Milenge and Mansa districts. However, **normal to above normal** rainfall is expected in most parts of Eastern, Muchinga, Northern, Luapula, Southern, Western and Northwestern provinces (**Figure 3**).

The last part of the season covering **January, February and March (JFM)**: **normal to above normal** rainfall is likely over most parts of Zambia except for Ikelenge, Mwinilunga, Mpika, Kasama, Livingstone, Mazabuka, Monze, Kafue and Siavonga districts which will receive **normal to below normal** rainfall (**Figure 4**).

N.B.

ABOVE NORMAL:	Rainfall greater than 125% of the average for the period 1981 to 2020 (OND) & 1981 to 2020 (JFM)
NORMAL:	Rainfall between 75% and 125% of the average for the period 1981 to 2020 (OND) & 1981 to 2020 (JFM)
BELOW NORMAL:	Rainfall less than 75% of the average for the period 1981 to 2020 (OND) & 1981 to 2020 (JFM)

NOTE: this forecast is intended for **planning** and is based on **three-month averages**, which may not necessarily represent the monthly rainfall distribution. For interpretation and updates, users are encouraged to reach out to the **Director of Meteorology** in the Ministry of Green Economy and Environment. The season may witness **extended dry spells** and **periods of heavy rainfall** leading to **flash floods**. Therefore, users are advised to utilize the **Daily, Weekly, and 10-Day Agrometeorological Bulletins** for effective management.

2023/2024 RAINFALL SEASON FORECAST MAPS

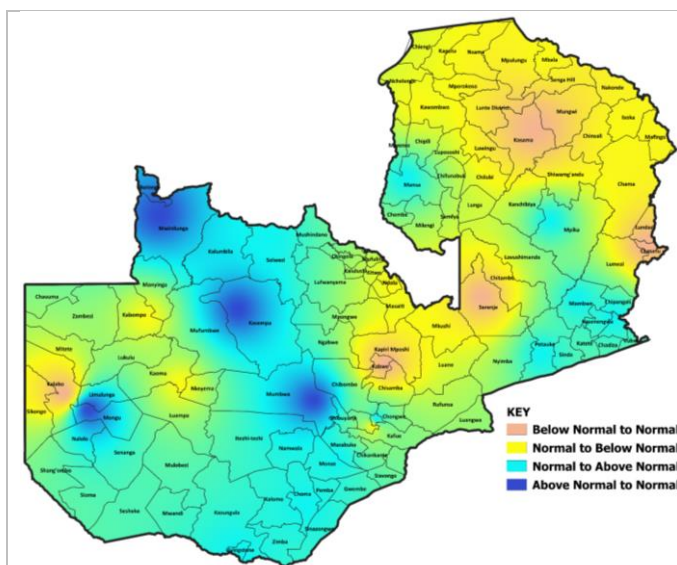


Figure 1: Rainfall Forecast for October, November & December 2023 (OND).

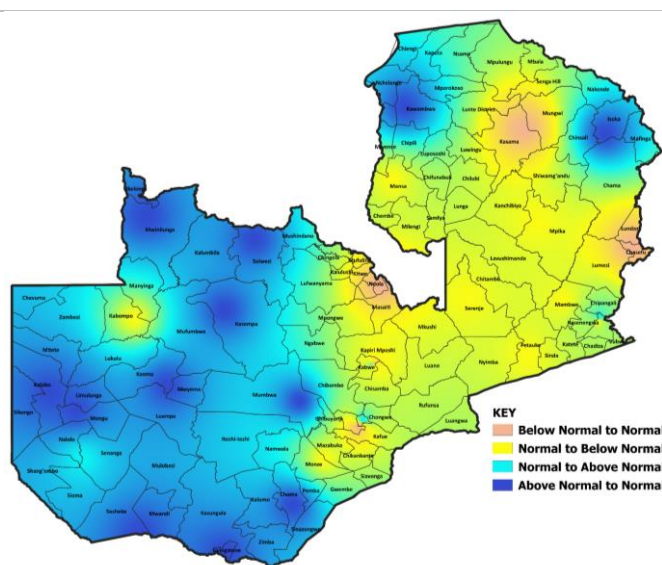


Figure 2: Rainfall Forecast for November, December 2023 & January 2024 (NDJ).

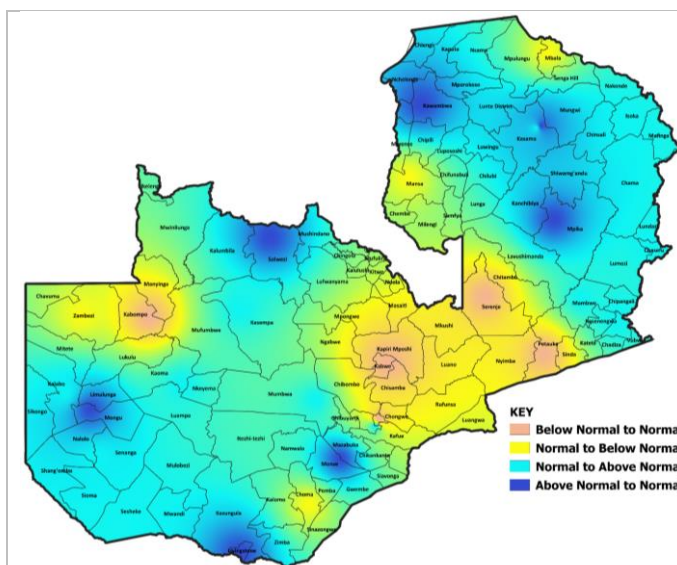


Figure 3: Rainfall Forecast for December 2023 & January, February 2024 (DJF).

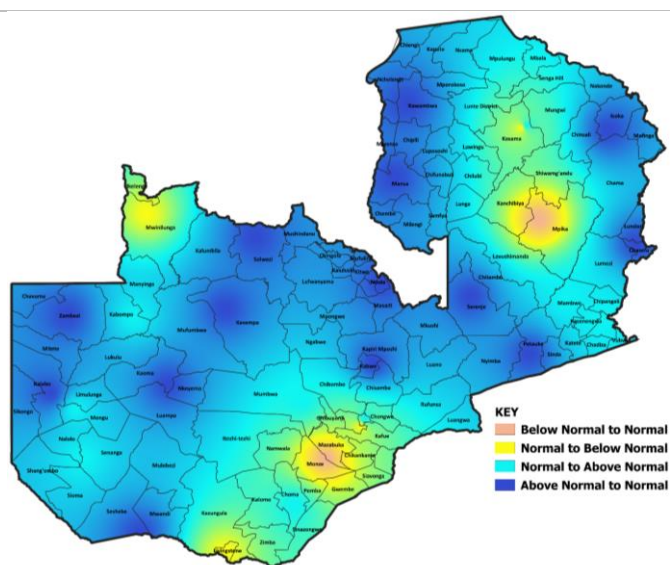


Figure 4: Rainfall Forecast for January, February & March 2024 (JFM).

NORMAL (AVERAGE) RAINFALL BASED ON THE 1981-2020 CLIMATOLOGY (BASELINE)

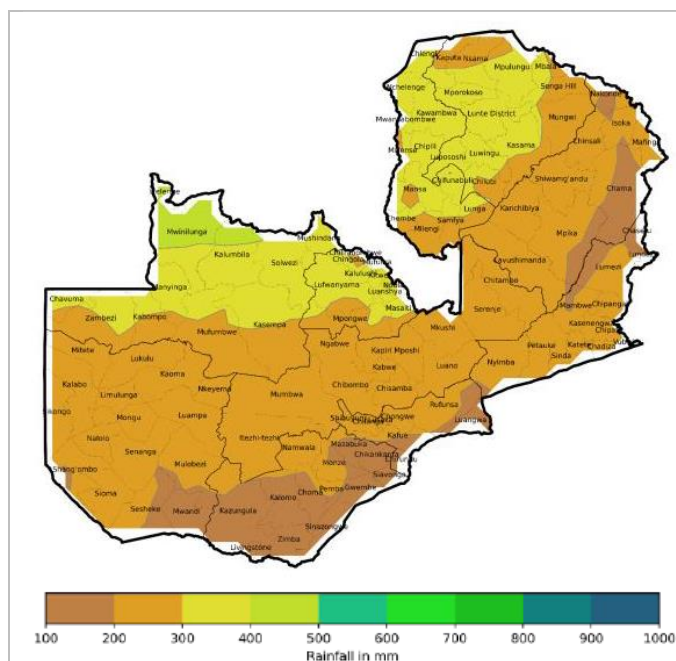


Figure 5: Normal (Average) Rainfall for October, November & December (OND)

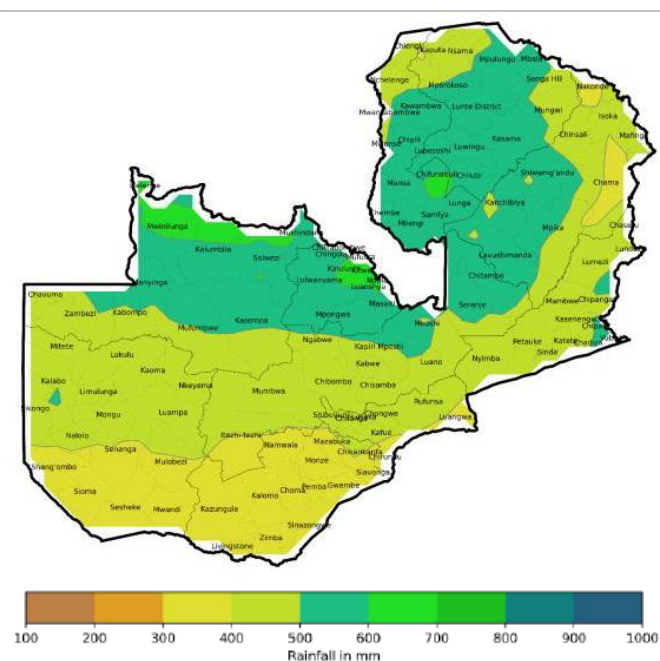


Figure 6: Normal (Average) Rainfall for November, December & January (NDJ)

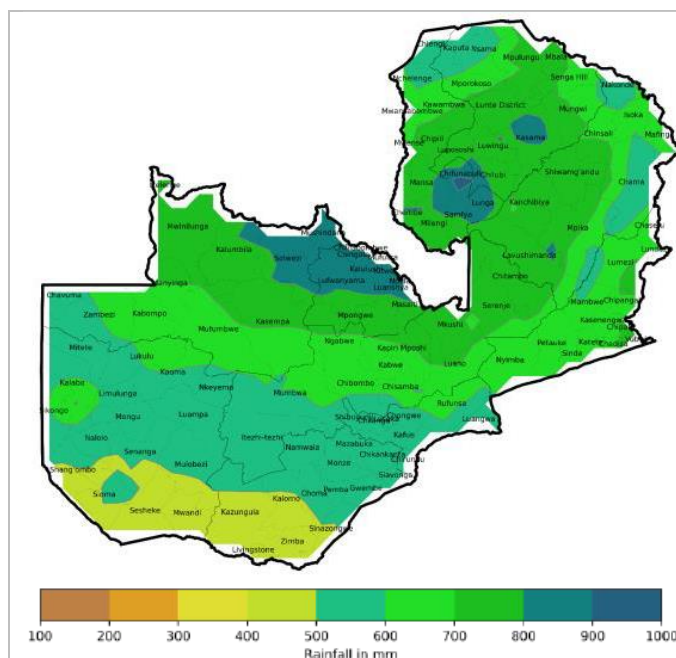


Figure 7: Normal (Average) Rainfall for December & January, February (DJF)

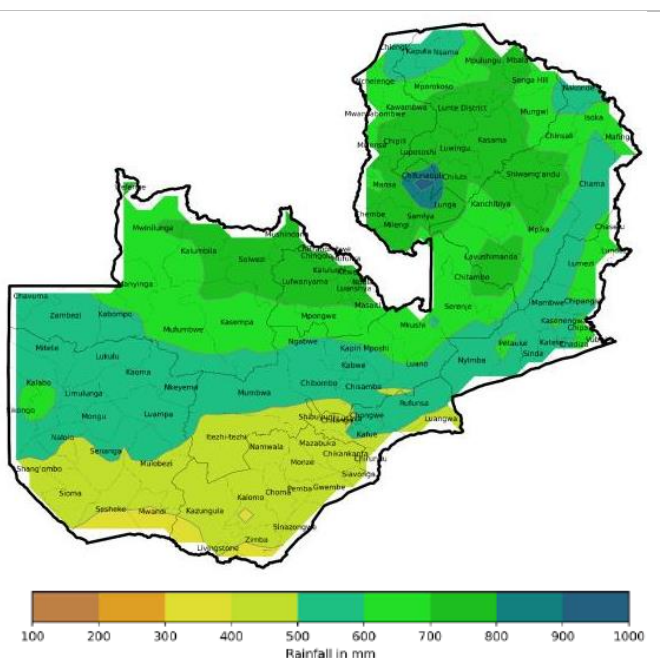


Figure 8: Normal (Average) Rainfall January, February & March (JFM)

PROJECTED ONSET OF THE 2023/2024 RAINFALL SEASON

NOTE:

Dekad 1 = 1st to 10th of a month

Dekad 2 = 11th to 20th of a month

Dekad 3 = 21st to 30th or 31st of a month

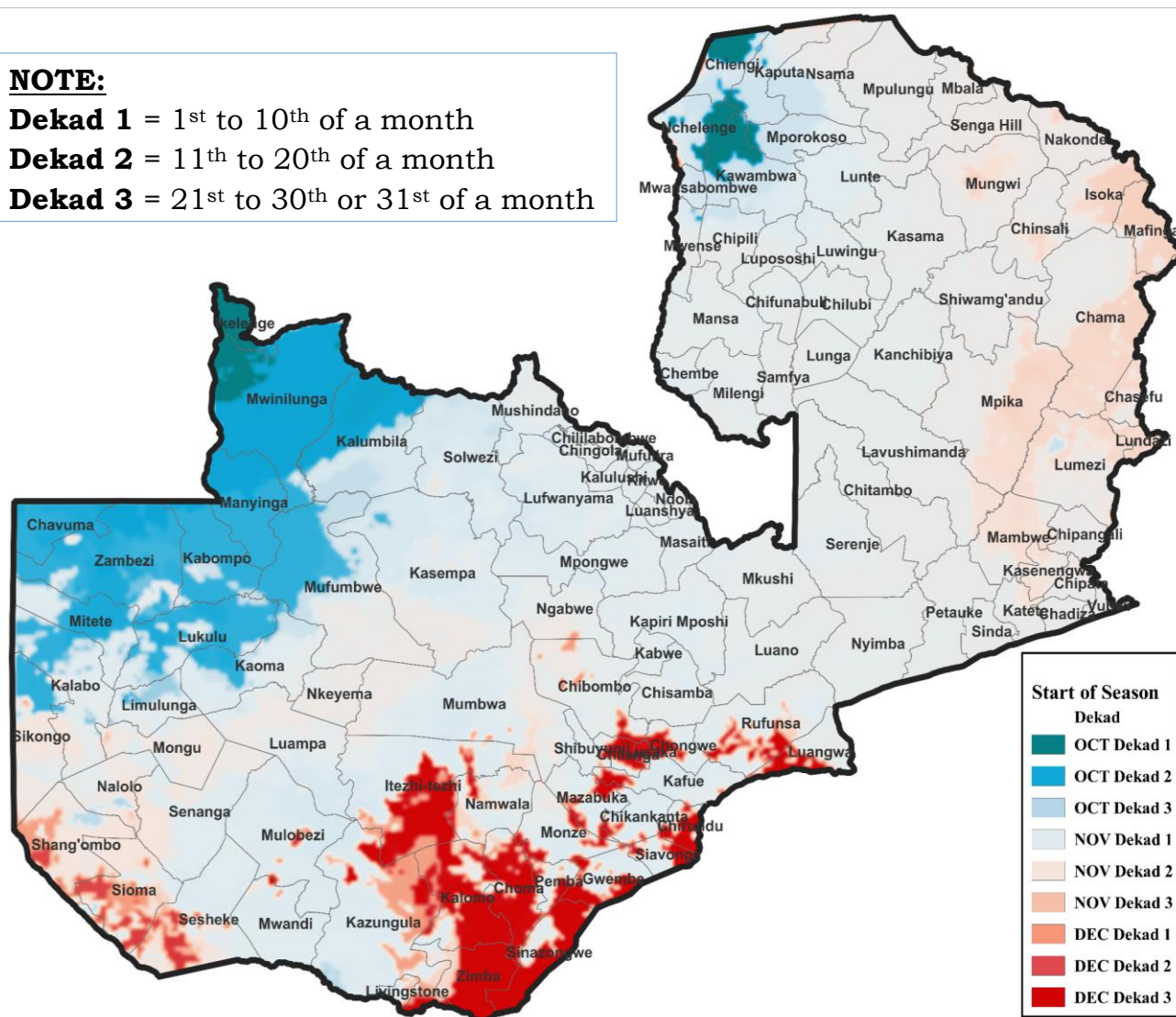


Figure 9: Projected Onset of Rains over Zambia