



MINISTRY OF ENVIRONMENT, CLIMATE AND WILDLIFE
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Minimizing Risks through Science

METEOROLOGICAL SERVICES DEPARTMENT

2024/25 SEASONAL RAINFALL FORECAST FOR ZIMBABWE

04 September 2024

1. SUMMARY

This national forecast is being issued after the consensus regional rainfall outlook shared during the Twenty Ninth Southern Africa Regional Climate Outlook (SARCOF-29), held in Harare, Zimbabwe from 26th to 28th of August 2024.

The Meteorological Services Department, within the Ministry of Environment, Climate and Wildlife has issued the national rainfall forecast through the National Climate Outlook Forum (NACOF) which was held on the 4th of September 2024. The NACOF provides the national seasonal rainfall outlook, which is downscaled from the Southern Africa Climate Outlook Forum (SARCOF) to capture the influence of the local climate drivers. This platform brings together national stakeholders to discuss the seasonal rainfall projection for the forthcoming rainy season and the sector-specific implications. Subsequent to this, the Meteorological Services Department will provide regular updates as the season progresses.

The 2024/2025 rainfall season coincides with a weak La Niña phase. There are prospects of better rainfall for the country from the second sub-season until the end of the forecast period, which spans from November-March. The forecast for the 2024/2025 rainfall season is based on the accumulated rainfall for each sub-season, without taking into consideration its temporal distribution.



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2. INTRODUCTION

The rainfall forecast for the 2024/2025 season covers the months October 2024 to March 2025. The forecast is demarcated into four sub-seasons, October-November-December (OND), November-December-January (NDJ), December-January-February (DJF) and January-February-March (JFM). This year the country has been divided into dynamical zones following the forecast signal in each sub-season. Areas indicating the same forecast signal are categorised into one zone.

The main global climate driver the El Niño Southern Oscillation (ENSO) is currently in the neutral phase and is expected to transition into a weak La Niña phase starting October 2024 reaching a peak in the DJF sub-season. The La Niña phase has a higher chance of normal to above normal rainfall over the southern parts of the SADC region including Zimbabwe. However, the country is expected to receive normal to below-normal rainfall for the period October 2024 to December 2024.

An improvement in the rainfall performance is expected for the sub-seasons: November-December-January (NDJ) 2024-2025, December-January-February (DJF) 2024-2025 and January-February-March (JFM) 2025 with normal to above normal rainfall anticipated across the country.

3. RAINFALL OUTLOOK FOR ZIMBABWE FOR 2024/2025 SEASON

The seasonal rainfall forecast is divided into four sub-seasons: October to December (OND) 2023, November to January (NDJ) 2024/25, December to February (DJF) 2024/25 and January to March 2025 (JFM).

The country is demarcated into dynamic forecast rainfall zones that follows the forecast signal. Areas that show the same forecast signal are categorised into same forecast zones.



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Terminology

- i. **Normal** – long-term average rainfall received in an area
- ii. **Normal to below-normal** – cumulative rainfall **most** likely to be within the long-term average range with a chance of going **below** this range
- iii. **Normal to above-normal** – cumulative rainfall **most** likely to be within the long-term average range with a chance of going **above** this range
- iv. **Above normal** - cumulative rainfall **most** likely to be **above** the long-term average range with a chance of falling within the long-term average range
- v. **Below normal** - cumulative rainfall **most** likely to be **below** the long-term average range with a chance of falling within the long-term average range.

Above-normal rainfall is defined as rainfall amount exceeding 125% of the long-term average (normal rainfall) of the climatic period from 1981-2010; below-normal is defined as rainfall amount less than 75% of the long-term average; normal to below normal rainfall falls within 75% to 100% range of the long-term average; while normal to above normal rainfall is defined as rainfall amounts falling within 100 to 125% range of the long-term average.

4. 2024/2025 SEASON RAINFALL OUTLOOK

The period October 2024 to March 2025 is the main rainfall season over most parts of the country. Owing to the differences in evolution patterns in the predominant rainfall-bearing systems, the rainy season has been subdivided into four overlapping three-month periods (OND, NDJ, DJF and JFM as defined below).

The **October 2024 to March 2025 forecast** is as follows:

a) Rainfall outlook for the October to December (OND) 2024 period

The country is expected to receive normal to below normal rainfall for the OND sub-season (Fig 1a). Fig 1b refers to the long-term average (normal) for OND.

Forecast: Increased chances of normal-to-below normal rainfall



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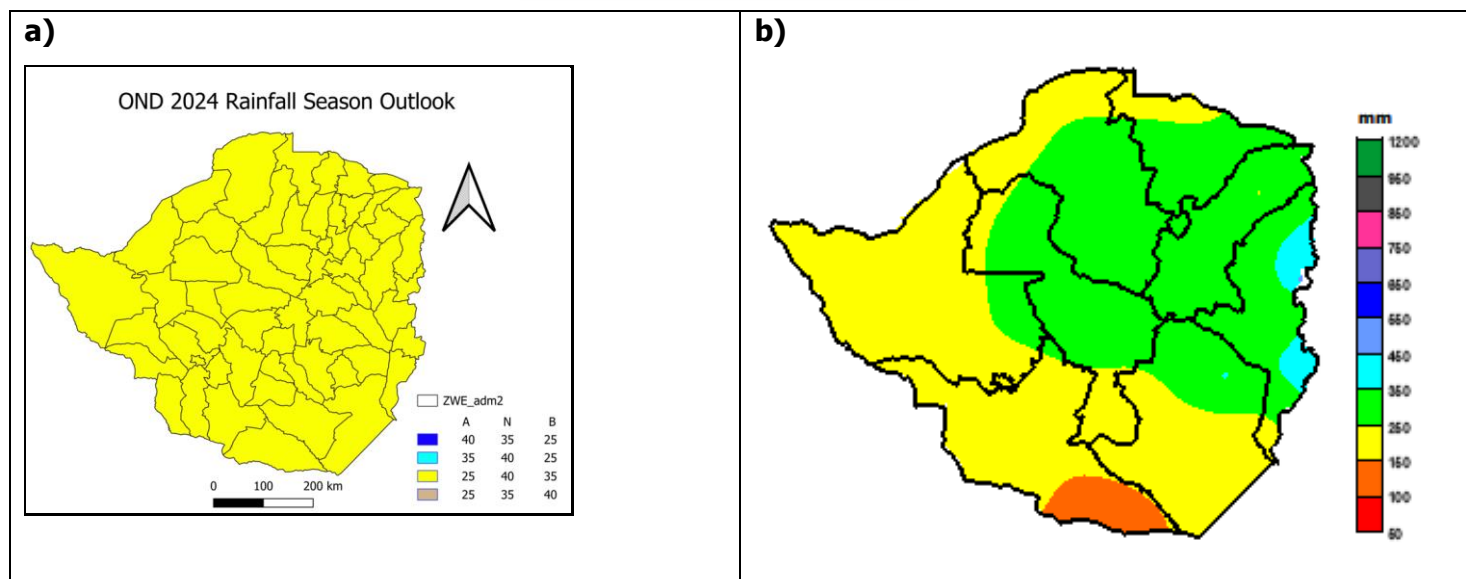


Figure 1**(a)** Seasonal outlook for October-November-December 2024, **(b)** Long term mean rainfall for October-November-December (1981-2010)

(b) Rainfall outlook for the November to January (NDJ) 2024/2025 period

The country is expected to receive normal to above normal rainfall for the NDJ sub-season (Fig 2a). Fig 2b refers to the long-term average (normal) for NDJ.

Forecast: Increased chances of normal to above normal rainfall



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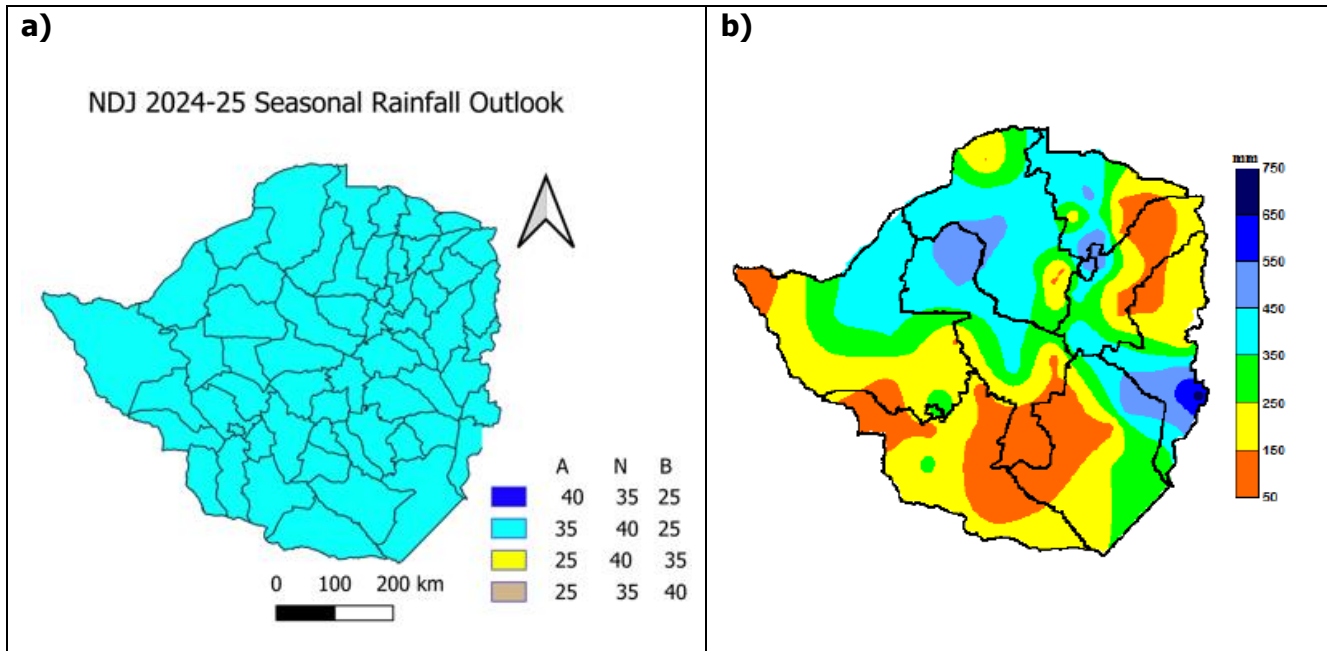


Figure 2**(a)** Seasonal outlook for November-December-January 2024/25., **(b)** Long term mean rainfall for November-December-January (1981-2010)

(c) Rainfall outlook for the December to February (DJF) 2024/25 period

The whole country is expected to receive normal to above normal rainfall for the sub-season (Fig 3a). Fig 3b refers to the long-term average (normal) for DJF.

Forecast: Increased chances of normal-to-above normal rainfall

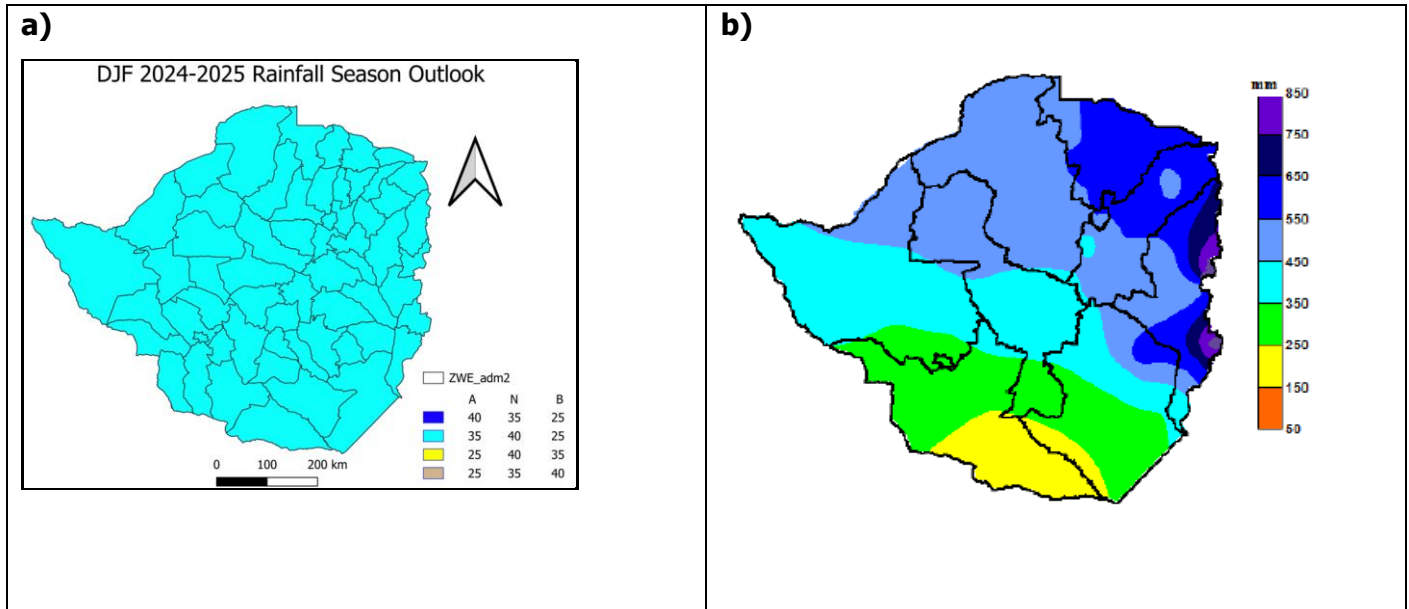


Figure 3**(a)** Seasonal outlook for December-January-February 2024/25. **(b)** Long term mean rainfall for December-January-February (1981-2010),

(d) Rainfall outlook for the January to March (JFM) 2025 period

The whole country is expected to receive normal to above normal rainfall for the sub-season (Fig 4a). Fig 4b refers to the long-term average (normal) for JFM.

Forecast: Increased chances of normal-to-above normal rainfall

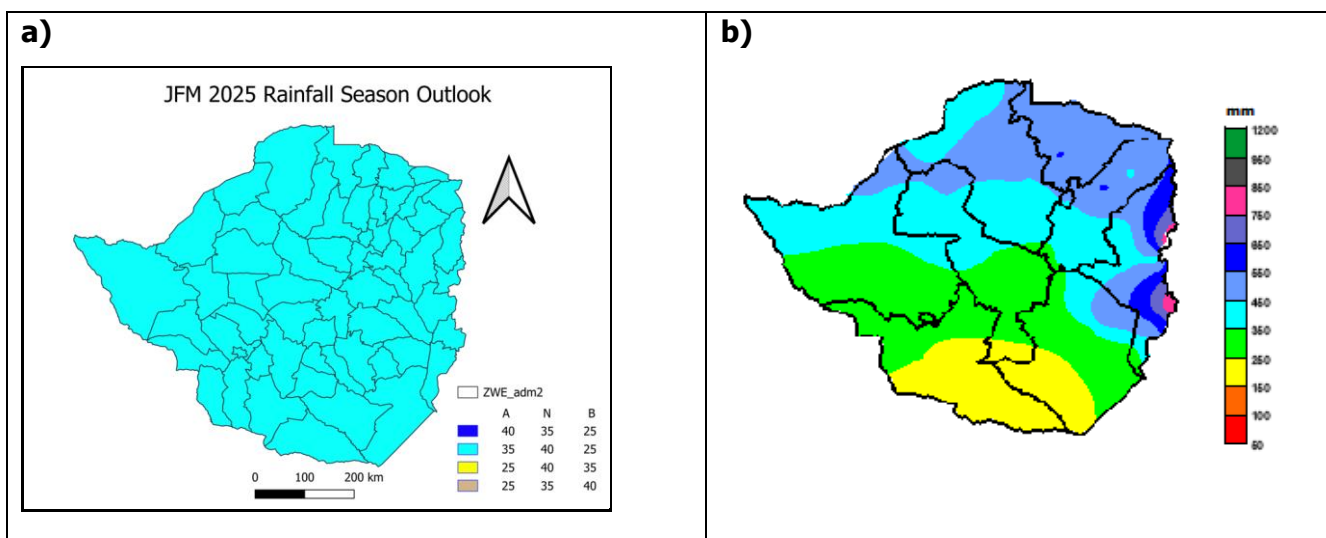


Figure 4**(a)** Seasonal outlook for January-February-March 2025. **(b)** Long term mean rainfall for January-February-March (1981-2010)

IMPLICATIONS/ADVISORIES FOR THE 2024/2025 RAINFALL SEASON OUTLOOK

The forecast is for cumulative rainfall for three month periods: OND, NDJ, DJF and JFM. The normal to below normal rainfall for the first sub-season (OND) will likely result in a late start to the season in places.

The tropical cyclone forecast will be availed as the rainfall season progresses.

Given the intra-seasonal variability of the rainfall in any season, the following recommendations are being proposed

- The cloud seeding programme to be implemented during the season to enable rainfall enhancement if required.
- Use of irrigation to maximize on the temperatures during the first half of the season (October to December) and during periods of prolonged dry spells during the season.
- Contingency plans for extreme events such as violent storms, prolonged dry spells, flash floods to be in place.
- Water harvesting and conservation programmes to be maintained given the intra-seasonal rainfall variability.
- Agricultural activities such as planting and fertilizer application should be guided by the 10-day weather forecasts.

CONCLUSION

The Meteorological Services Department will continue to monitor seasonal climate indicators which influence Zimbabwe's rainfall as they evolve. Thus, the seasonal rainfall predictions will be updated on a monthly basis beginning end of October. In addition to this forecast, there will be daily weather forecasts and 10-day weather bulletins that will account for short term variabilities such as dry and wet spells.