



Zimbabwe Seasonal Monitor

MARCH 2025



ZIMBABWE METEOROLOGICAL SERVICES DEPARTMENT

<http://www.msd.org.zw/>

- The season started very dry for the bulk of the month of October, and some rain was received in November and December started dry until the end of the second dekad, Overall, October to December received rainfall below the long-term average for the bulk of the country.
- January and February received the highest rainfall amount across the country which was above the long-term average. The main rain-bearing system during this period was the Intertropical Convergence Zone. January recorded the highest number of rain days summing up to 20 days in some places. Rainfall received during these two months accounts for more than 70% of the total rainfall that was received for the whole season. Areas in the eastern parts of the country received the highest with some places recording rainfall accumulation exceeding 1000mm.
- The first dekad of March was dry. However, notable rainfall activity was observed between 11 to 13 March 2025, particularly over the eastern highlands, as a result of moisture from Tropical Storm Jude, which made landfall in Mozambique on 10 March 2025. During this period, the highest cumulative rainfall totals were recorded in areas such as Mukandi (96mm), Nyanga (95mm), and Chipinge (81mm).
- However, after Tropical Storm Jude, rainfall activity decreased, and there was not much rainfall expected until the end of March 2025.
- The first three months of the season were drier than normal as predicted by the MSD.

1. Latest rainfall: Early March

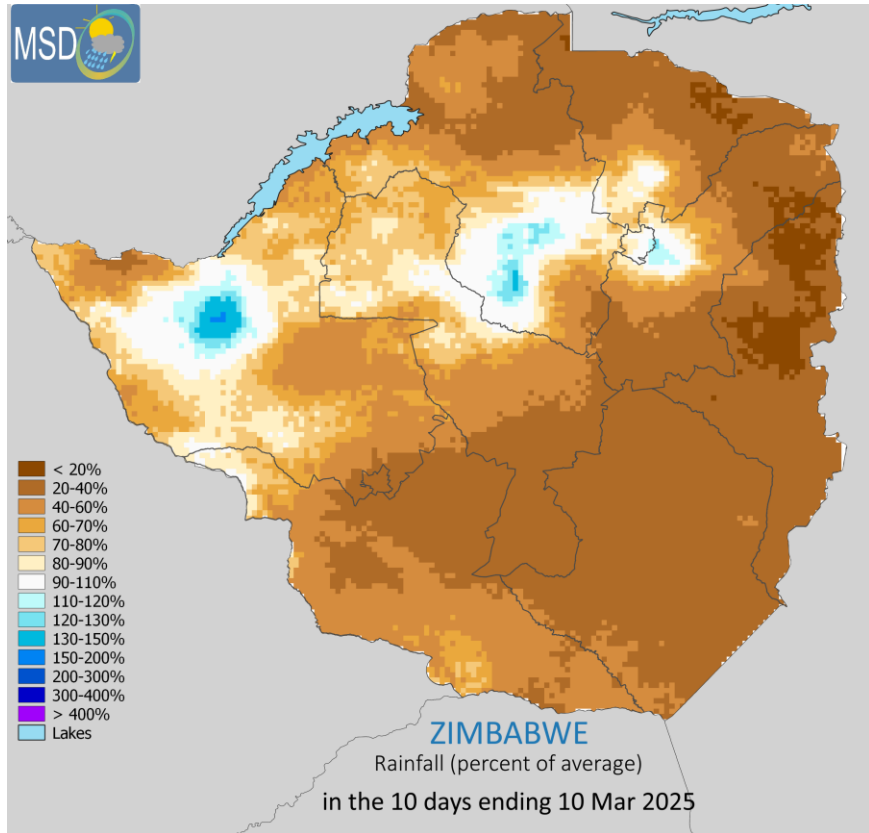


Fig 1(a) Rainfall in the 10 days ending 10 March 2025, as percentage of average, brown shades below normal rainfall and blue means above normal

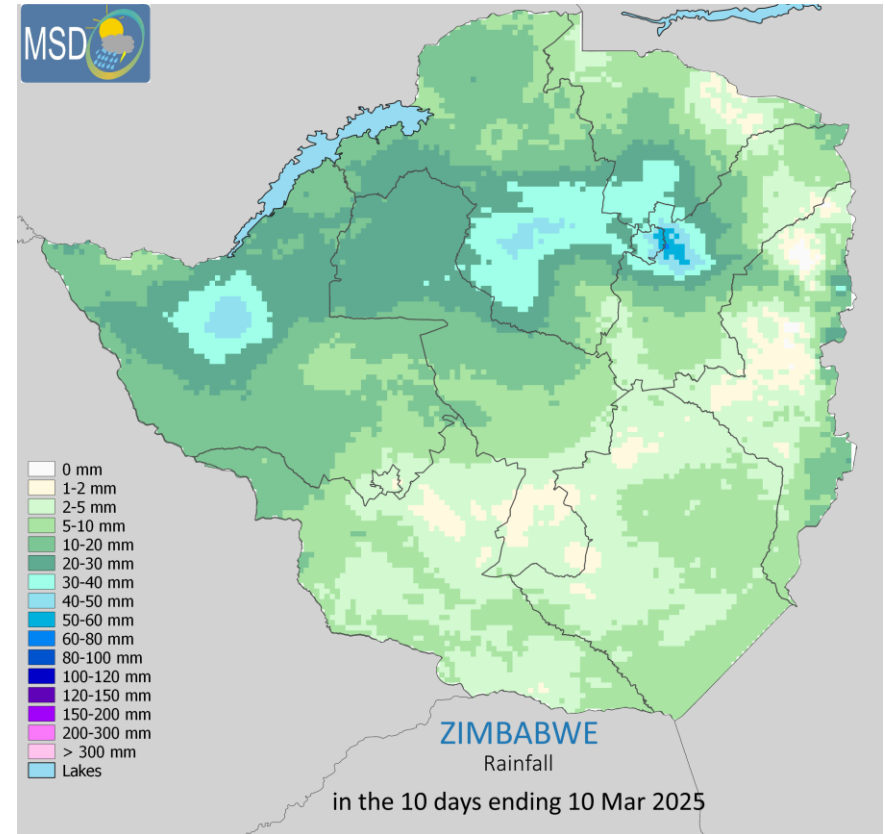


Fig 1(b) Rainfall amounts in the 10 days ending 10 March 2025.

During the 10-day period ending March 10, 2025, most of Zimbabwe experienced below-average rainfall, with widespread dry conditions across the country. However, localized wetter conditions were observed in Matabeleland North, the extreme southern parts of Mashonaland Provinces, and the Harare Metropolitan Province, where rainfall was above the long-term average. The spatial distribution of rainfall suggests a north-south contrast, with northern and central areas generally receiving more rainfall than southern provinces. The northern half of the country recorded higher rainfall totals, with the highest amounts concentrated in Harare Metropolitan and Mashonaland East Provinces, where conditions remained relatively wetter.

In contrast, the southern provinces received less than 20 mm, reflecting much drier conditions during this period. The persistent dryness in southern and southwestern Zimbabwe aligns with prevailing atmospheric circulation patterns that limited significant rainfall activity, potentially linked to subsidence and the weakening influence of the Intertropical Convergence Zone (ITCZ) over these regions. The observed spatial variability in rainfall aligns with seasonal expectations, where localized systems, topographic influences, and moisture convergence zones contribute to uneven distribution. While some areas remained wetter than average, much of the country continued to experience moisture deficits, reinforcing concerns for agricultural and hydrological conditions in the driest regions.

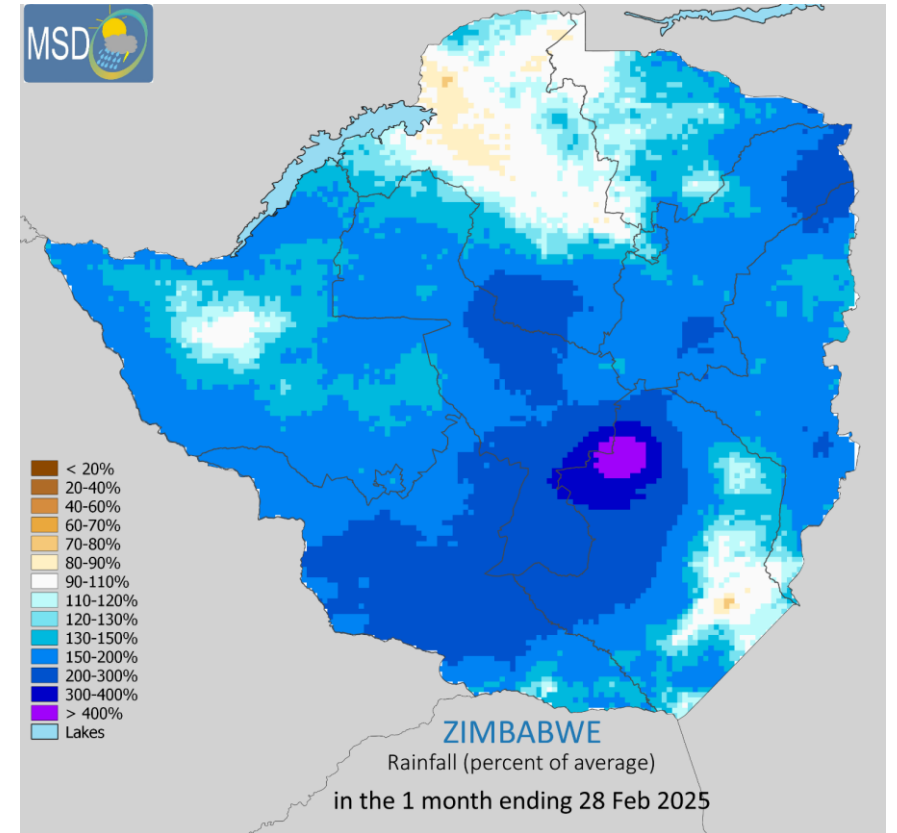
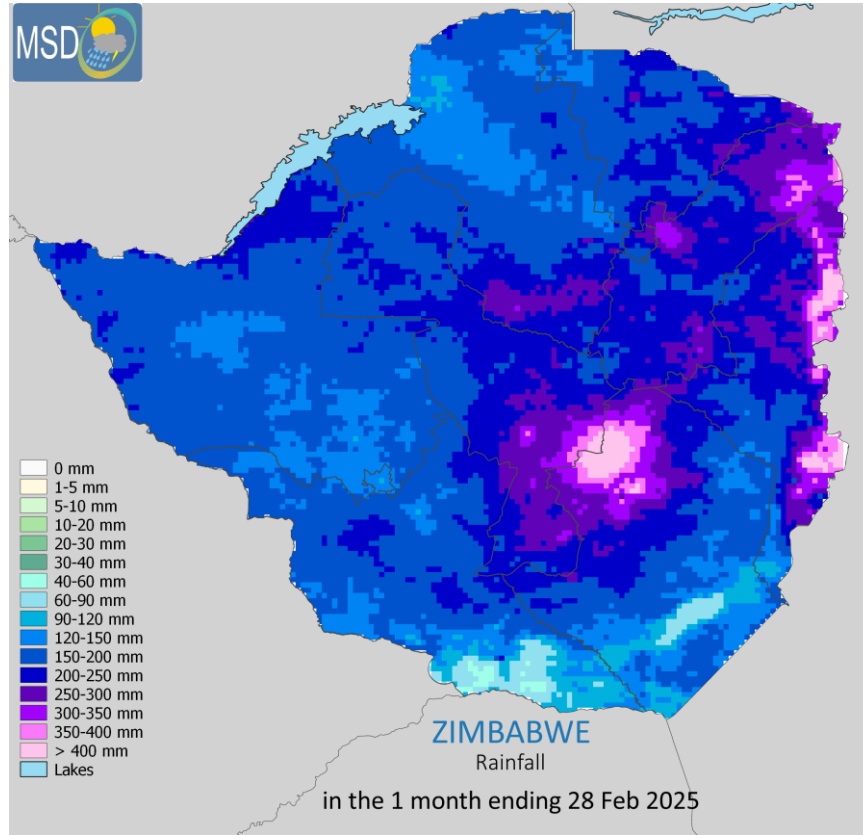


Fig2(a) Rainfall amounts and **(b)** Rainfall as a percentage of the average for the month ending 28 Feb 2025. Brown shades below normal rainfall and blue means above normal

February 2025 was characterized by widespread and above-average rainfall across Zimbabwe, with most areas recording monthly totals above 120mm with few areas in Matabeleland South and Masvingo provinces the totals were ranging between 40-60mm. This increased rainfall activity provided essential moisture for plants, alleviating soil moisture deficits and reducing the risk of widespread crop failures. The improved soil moisture conditions during this period created a critical window for crop recovery, supporting overall agricultural growth and productivity.

Additionally, the above-average rainfall contributed to the replenishment of reservoirs, aquifers, and surface water bodies, ensuring improved water availability for both agricultural and domestic use. The primary system driving the rainfall in January was the Intertropical Convergence Zone (ITCZ), which brought sustained moisture across much of the country, promoting favorable conditions for crop growth and improved vegetation cover.

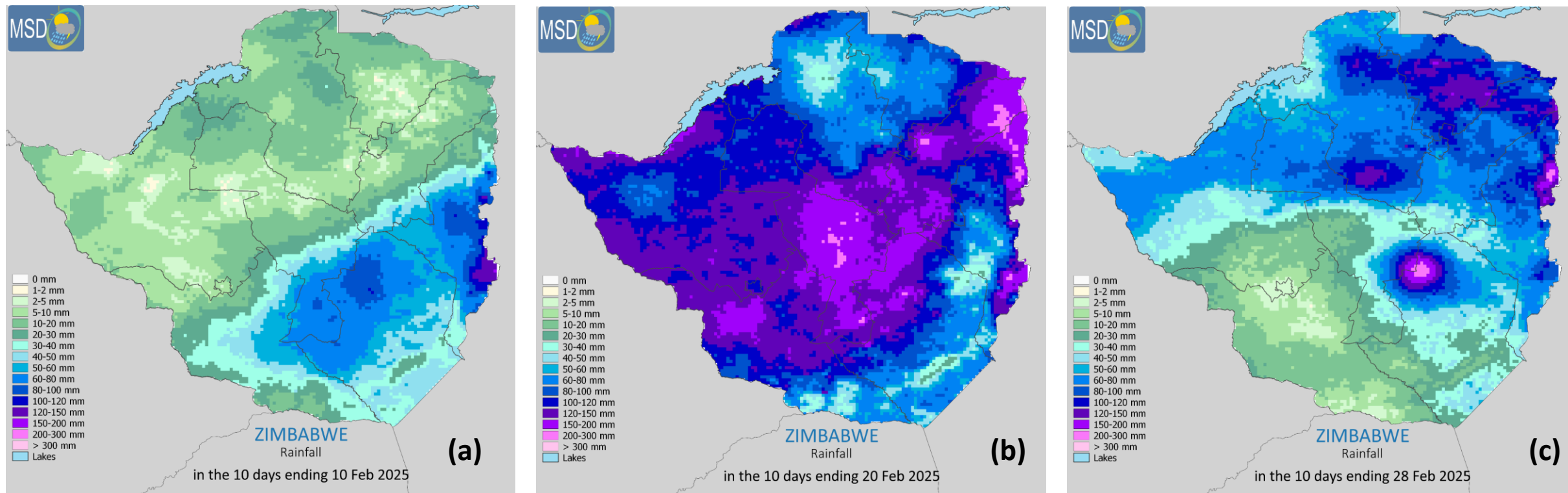


Fig 2 Rainfall amounts in mm, for the 10 days ending 10 Feb 2025 (a), 20 Feb 2025 (b), 28 Feb 2025.

February 2025 was characterized by widespread wet conditions across much of Zimbabwe, though rainfall distribution varied significantly throughout the month.

During the first ten days of February, southern and eastern Zimbabwe received the highest rainfall accumulations, with localized areas recording significantly above-average totals. The highest rainfall amounts are highlighted in purple in Figure 2a, indicating regions that experienced intense rainfall activity. Rainfall activity intensified during the second dekad of the month, most of the country recording over 60 mm of rainfall (Fig 2b).

The final ten days of February were relatively drier compared to the second dekad. Much of the country recorded rainfall amounts below 30 mm, reflecting a decline in rainfall activity. However, eastern and northern Zimbabwe continued to experience higher rainfall totals, exceeding 60 mm, as shown by the blue shading in Figure 2(c). Meanwhile, southern Zimbabwe remained drier than the rest of the country, as indicated by the green shading in Figure 2(e). These fluctuations in rainfall patterns were largely influenced by shifts in atmospheric circulation and localized moisture convergence, contributing to the observed variations between dekad

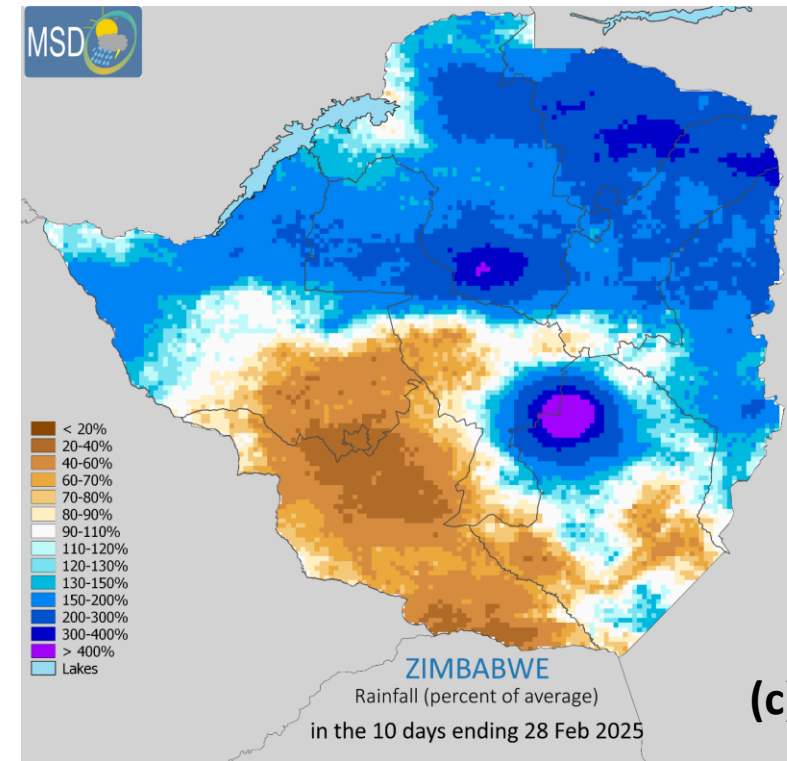
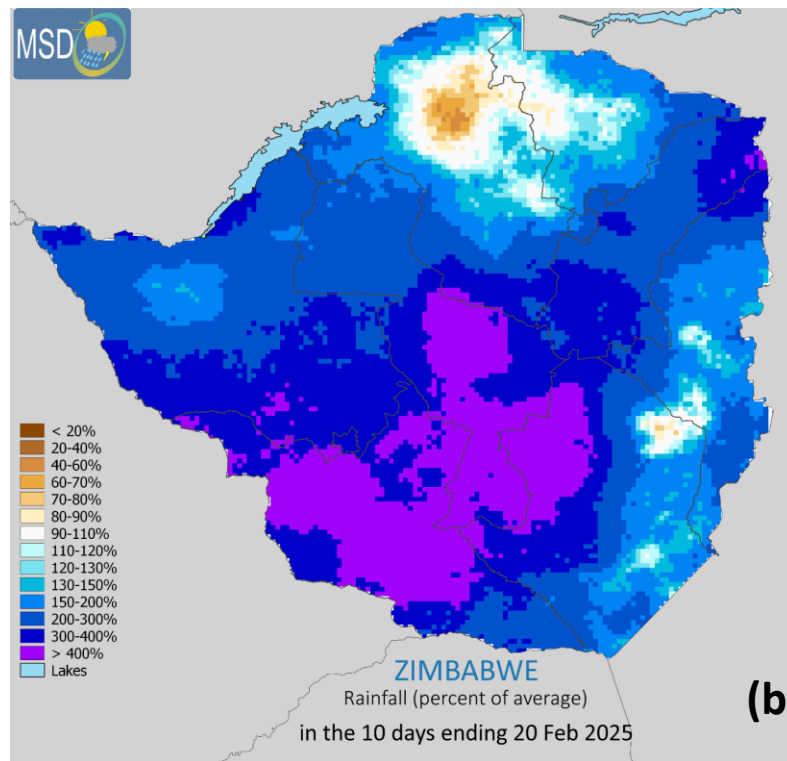
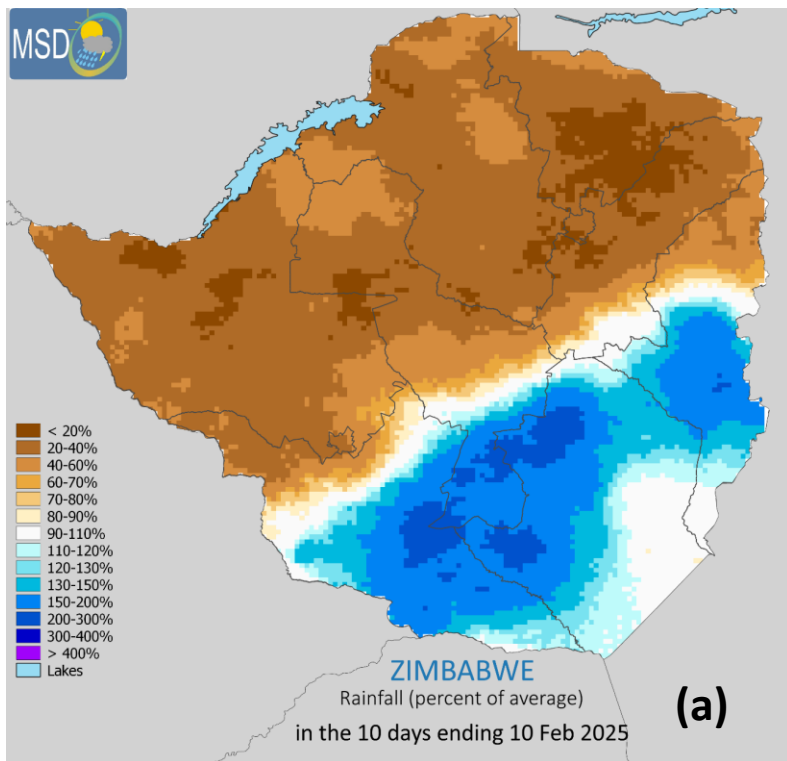


Fig 2 Rainfall as a percentage of average for the 10 days ending 10 Feb 2025 (a), 20 Feb 2025 (b), 28 Feb 2025.

February 2025 was characterized by highly variable rainfall patterns across Zimbabwe, with notable shifts in distribution over the course of the month. During the first dekad (1–10 February), southern Zimbabwe received above-average rainfall, while northern areas remained drier than normal, as shown by the blue and brown shading in Figure 2(a). Rainfall activity intensified significantly in the second dekad (11–20 February), with widespread precipitation exceeding normal seasonal averages across most of the country (Figure 2b). Some regions, particularly in Midlands, Masvingo, and Matabeleland South, recorded exceptionally high rainfall totals, surpassing 400% of the long-term average (indicated in purple).

However, this wet spell was followed by a notable shift in the third dekad (21–28 February), where southern regions experienced a sharp decline in rainfall, as seen in Figure 2(c). Meanwhile, northern areas continued to receive enhanced rainfall, largely influenced by the Intertropical Convergence Zone (ITCZ), which funneled moisture into these regions. Notably, Masvingo remained an outlier, experiencing intense localized rainfall events, as highlighted by the purple shading in Figure 2(c). These fluctuations reflect changing atmospheric dynamics throughout the month, emphasizing the role of moisture convergence, convective activity, and ITCZ shifts in shaping Zimbabwe’s rainfall distribution.

3. Season so far: OND 2024 and JF 2025

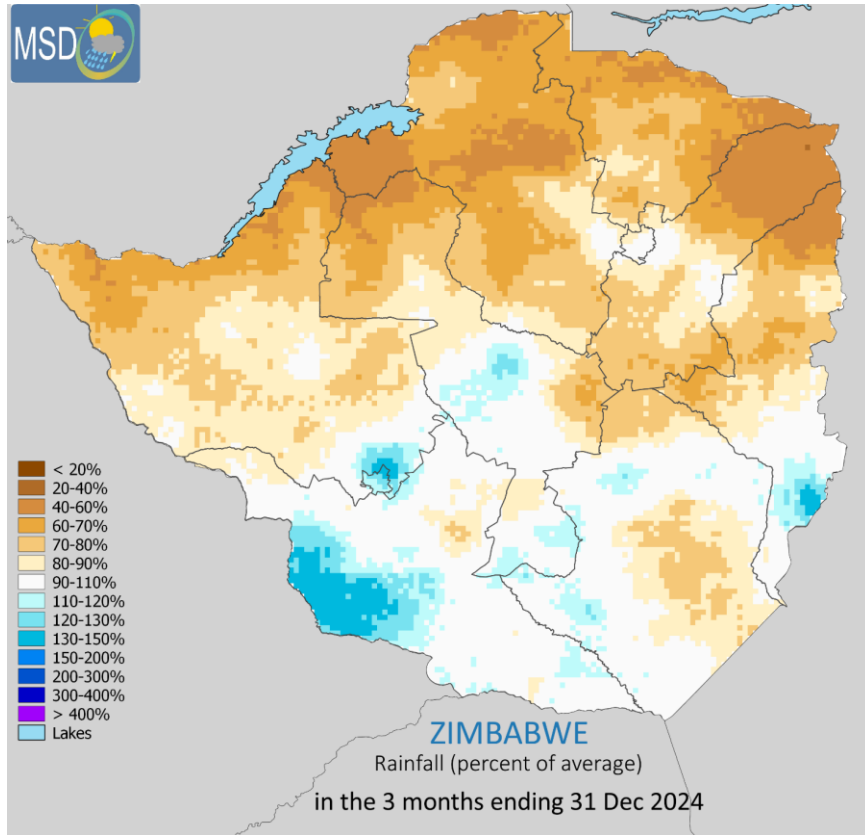


Fig 3(a) Rainfall for the for OND 2024 , as a percentage of average

The October–December 2024 (OND) rainfall anomaly map (Figure 3a) shows that most of northern and western Zimbabwe experienced below-average rainfall, as indicated by the widespread brown shading. In contrast, localized wetter-than-normal conditions were observed in extreme southeastern Zimbabwe, where rainfall exceeded 130% of the long-term average (light blue shading). The delayed onset of the Intertropical Convergence Zone (ITCZ) and the influence of westerly cloud bands contributed to this uneven rainfall distribution, with moisture concentrated in the east and southeast, while much of the country remained drier than normal. The January–February 2025 (JF) rainfall anomaly map (Figure 3b) highlights a strong recovery in rainfall across most of Zimbabwe.

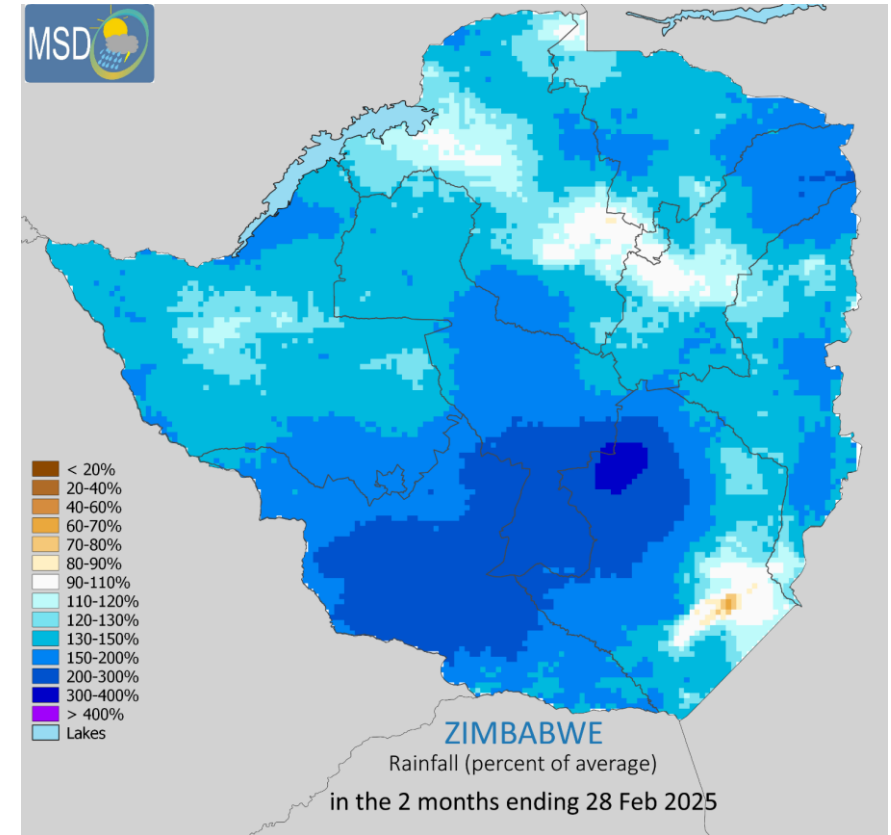


Fig 3(b) Rainfall in the 2 months ending 28 February 2025, as a percentage of average

Widespread above-average rainfall is evident in central, eastern, and southern parts of the country. These areas benefited from the strengthened ITCZ and increased moisture convergence, leading to significantly wetter-than-normal conditions. The transition from below-average rainfall in OND 2024 to well-above-average rainfall in JFM 2025 illustrates the seasonal shift in rainfall drivers. The early-season deficits in the north and west negatively impacted early crop establishment, but the excessive rainfall in January and February helped replenish soil moisture, support crop recovery, and improve water availability nationwide. However, the extreme anomalies observed in some areas also increased the risk of localized flooding, particularly in Masvingo and parts of eastern Zimbabwe.

4. Rainfall Distribution: Extreme events – Rain events

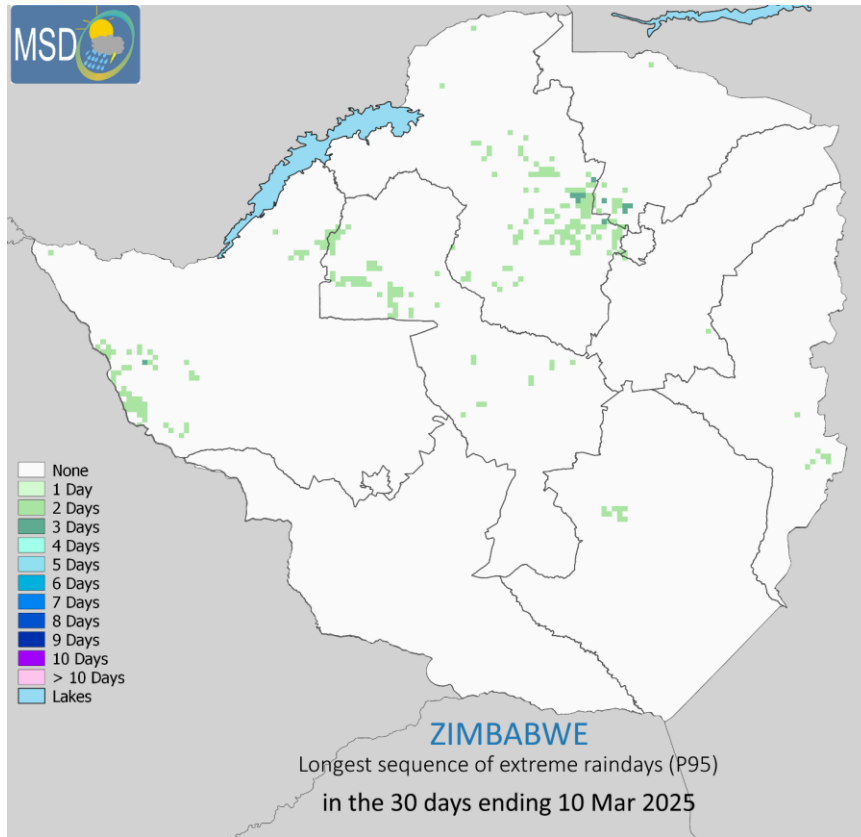


Fig 4(a) Longest sequence of extreme raindays (>95% percentile) in the 30 days ending 10 Mar 2025

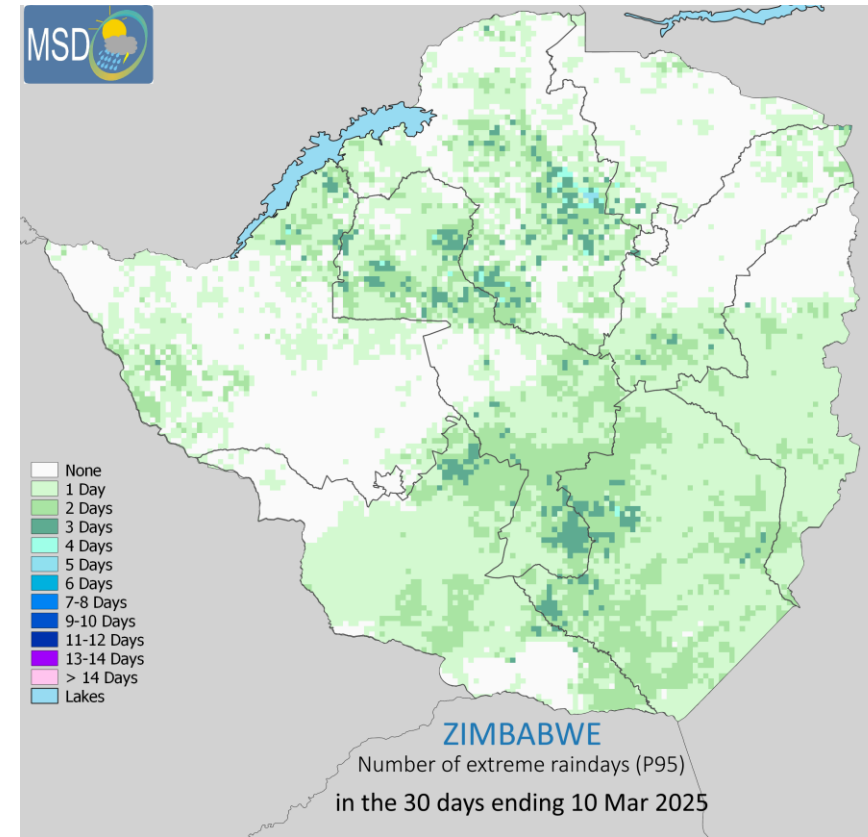


Fig4(b) Number of extreme raindays (>95% percentile) in the 30 days ending 10 Mar 2025

The analysis of extreme rain events for the 30-day period ending March 10, 2025, indicates that most of Zimbabwe did not experience prolonged sequences of extreme rainfall. The majority of the country recorded three or fewer consecutive extreme rain days, as shown by the scarcity of green shading on the map. This suggests that prolonged heavy rainfall events were rare. A few localized areas in the south and northeast experienced up to three consecutive extreme rain days, but no region recorded a prolonged sequence of extreme wet days.

The total number of extreme rain days varied across the country, with most areas experiencing fewer than three extreme rainfall days. However, higher concentrations of extreme rainfall were observed in some localized pockets in southern and northeastern Zimbabwe, where certain areas recorded between 3 to 5 extreme rain days. Despite these localized events, no widespread persistent extreme rainfall was recorded across the country during this period. The spatial distribution of extreme rainfall events suggests that while some regions experienced short bursts of intense rainfall, these events were not prolonged or widespread. The lack of extended extreme wet spells is consistent with the overall seasonal trend of variable but well-distributed rainfall across Zimbabwe.

4. Rainfall Distribution: Extreme events - Dry periods

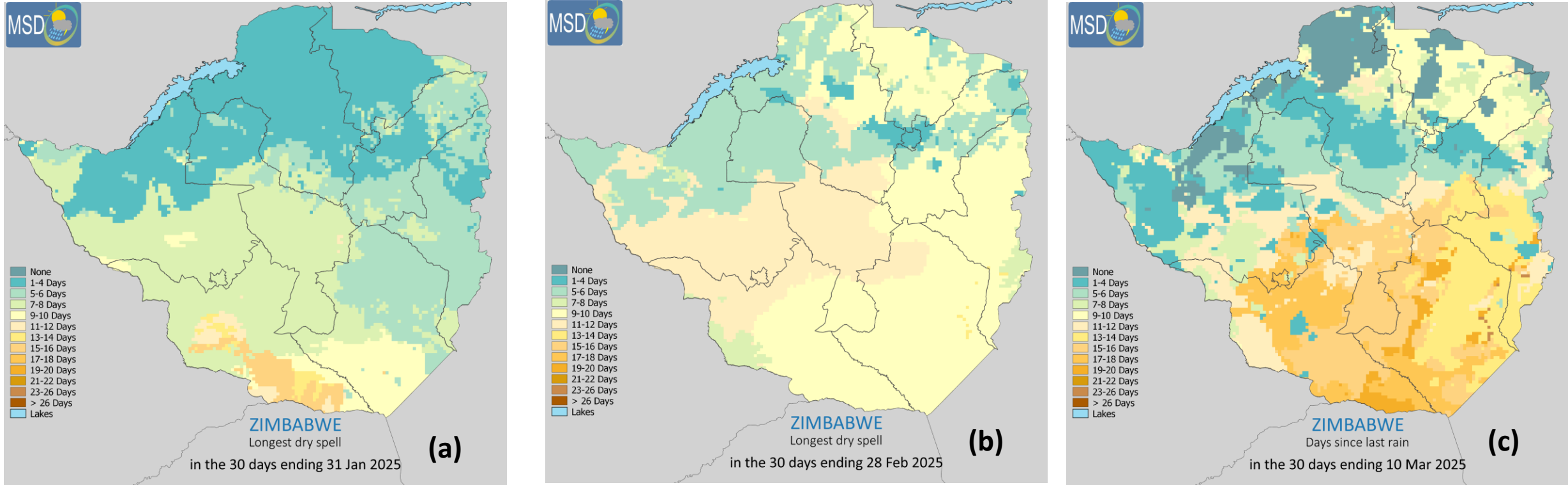


Fig 4 longest number of consecutive dry days (a) ending 31 Jan 2025 (b) ending 28 Feb 2025 (c) ending 10 Mar 2025

The distribution of dry periods from January to early March 2025 shows a progressive intensification of dry conditions, particularly in the southern and western parts of Zimbabwe. At the end of January, most of the country experienced dry spells lasting up to 8 days. However, prolonged dry conditions were observed in parts of Matabeleland South, where some areas endured up to 18 consecutive dry days (brown shading). By the end of February, dry conditions became more widespread, with much of the country experiencing dry spells lasting up to 12 days. Some northern areas, however, saw shorter dry periods of six days or less, as indicated by the blue shading, reflecting the influence of intermittent rainfall events. By early March, southern Zimbabwe was predominantly covered in brown, indicating that more than 11 days had passed since the last significant rainfall.

In contrast, northern areas showed fewer consecutive dry days, as depicted by blue-shaded regions, where rainfall associated with the Intertropical Convergence Zone (ITCZ) helped mitigate prolonged dryness. Some localized patches in northern districts continued to receive occasional rainfall, reducing the duration of dry spells in those areas. Overall, these maps reveal a clear contrast in dry conditions between the northern and southern regions, with southern Zimbabwe experiencing longer, more severe dry spells. This progressive drying trend from January to March reflects shifting atmospheric circulation patterns, leading to increased moisture deficits in the south while northern areas benefited from periodic rainfall linked to the ITCZ.

5. Vegetation and Temperature : March Dekad 1

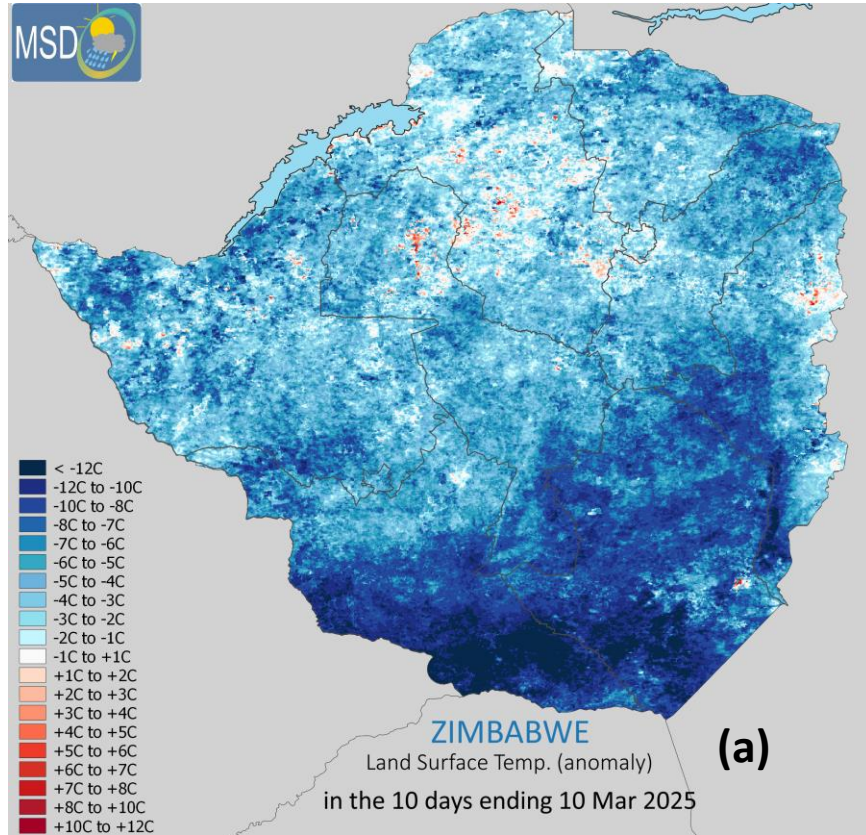


Fig 5 (a) Land surface temperature as a percentage of the average, by 10 March 2025. Red means hotter than normal and blue means cooler than normal

During the first dekad of March, land surface temperatures across Zimbabwe showed cooler-than-normal conditions across the country. The southern parts of the country, particularly in Matabeleland South, Masvingo and Manicaland experiencing much cooler temperatures. The northern regions exhibited a few patches of warmer-than-normal conditions. The cooler conditions in the south are beneficial as they reduce evaporation and evapotranspiration rates, leading to improved soil moisture retention.

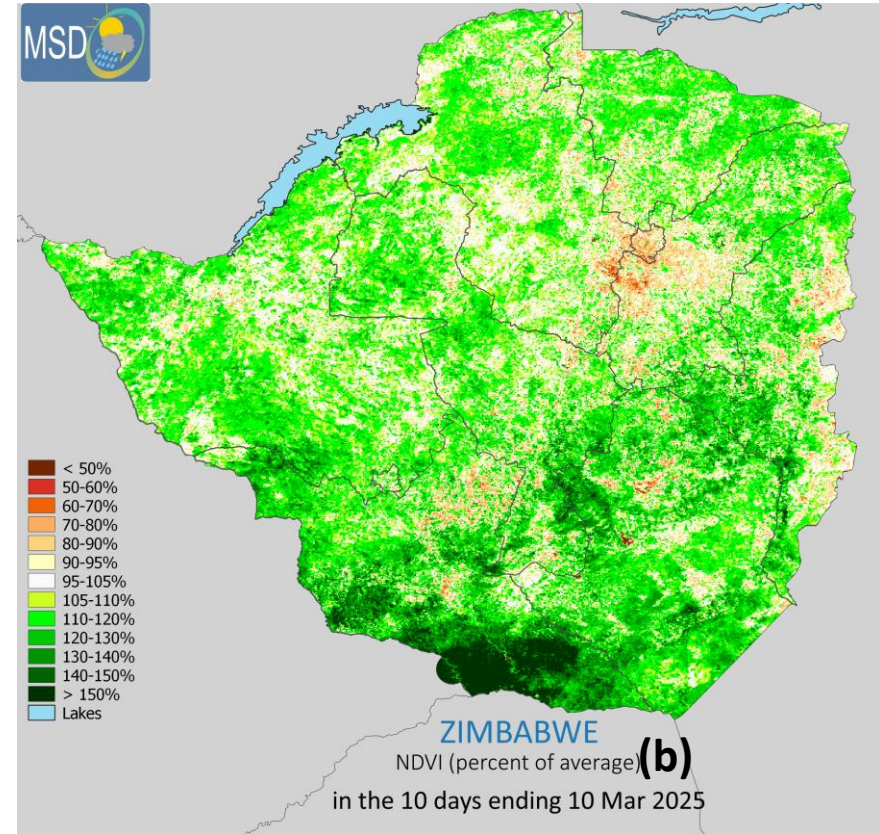


Fig 5 (b) NDVI anomaly by 10 March 2025.

In terms of vegetation, normal to above-normal vegetation conditions were observed across most areas, with the highest positive NDVI anomalies recorded in the southern parts of Matabeleland South. This indicates improved soil moisture, which supports better quality forage essential for livestock health and productivity. However, a few localized patches exhibited normal to below-normal vegetation conditions, suggesting areas where moisture deficits may still persist. Overall, the combination of cooler temperatures and improved vegetation cover provides favourable conditions for crop growth and livestock production in the southern regions of the country.

6. Short-Range Outlook: End of March 2025

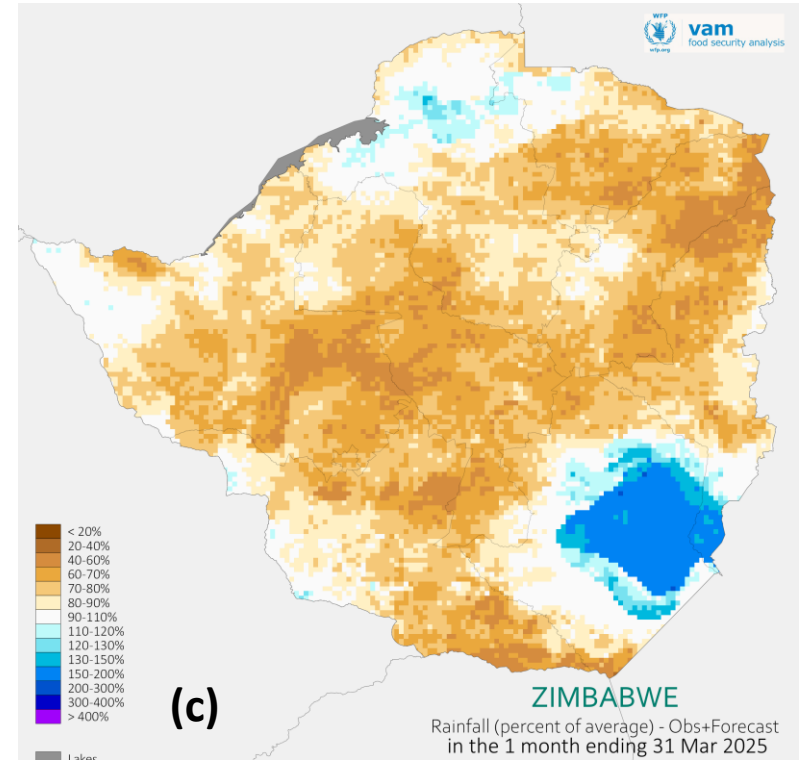
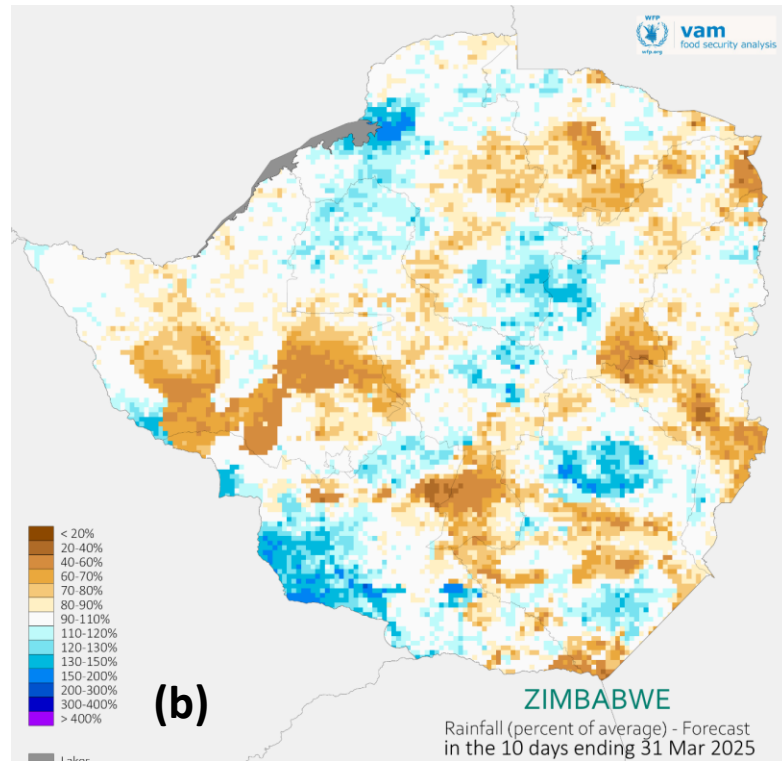
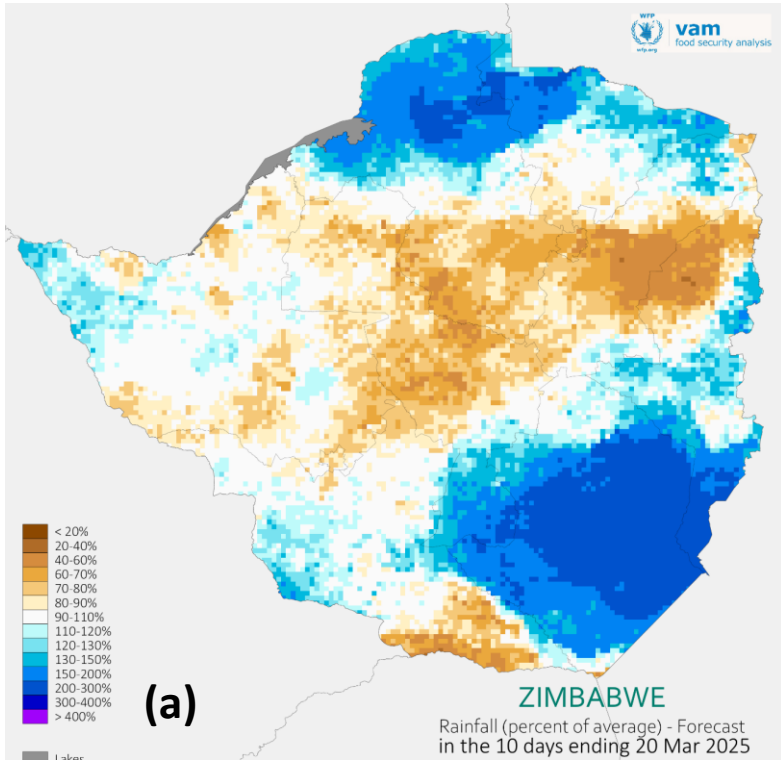


Fig 6: Rainfall forecast for the 10 days ending 20 Mar 2025 **(a)**, in the 10 days ending 31 Mar 2025 **(b)** as percent of average. Browns = drier than average, blues = wetter than average

Fig 6(c): Rainfall forecast for the month ending 31 Mar 2025 as percent of average. Browns = drier than average, blues = wetter than average

The short-range forecast for the end of March indicates a decrease in rainfall amounts, with normal to above-normal rainfall expected in most parts of the Masvingo, southern areas of Manicaland and Mashonaland West and Central Provinces. The rest of the country it expected to receive rainfall percentage lower than 90%. The long-range forecast for February to April 2025 suggests a wetter-than-average period, with rainfall accumulation expected to be 100-125% of the long-term average. This outlook provides a positive signal for crop growth and water availability, although there is an increased risk of localized flooding in low-lying areas. the short-term outlook suggests drier conditions for most of the country by the end of March, certain regions such as Masvingo, southern Manicaland, and parts of Mashonaland West and Central Provinces may still receive normal to above-normal rainfall. The long-range forecast for February to April 2025 is more optimistic, indicating a wetter-than-average period that could benefit agriculture and water resources.

6. Short-Range Outlook: End of March 2025

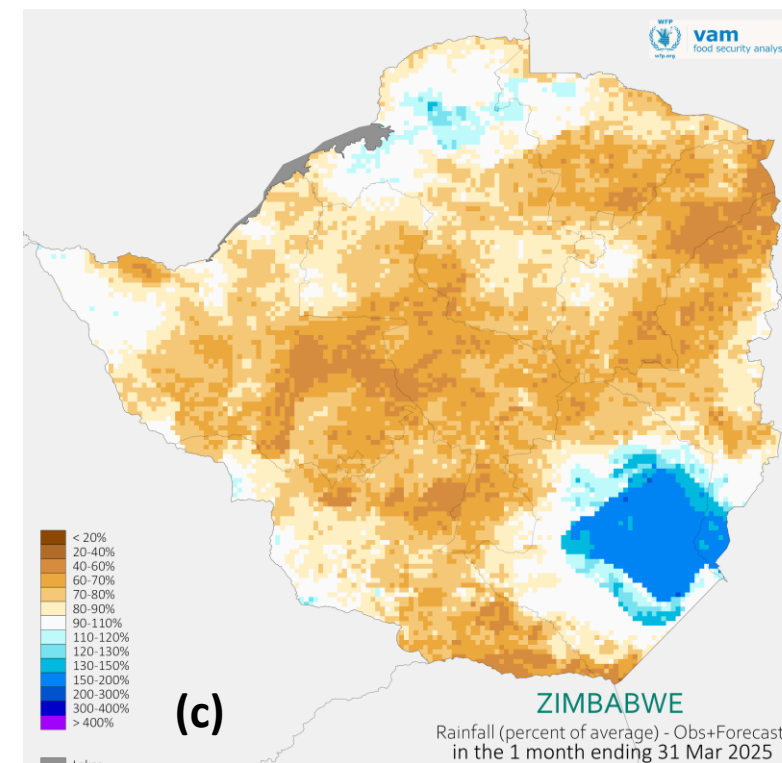
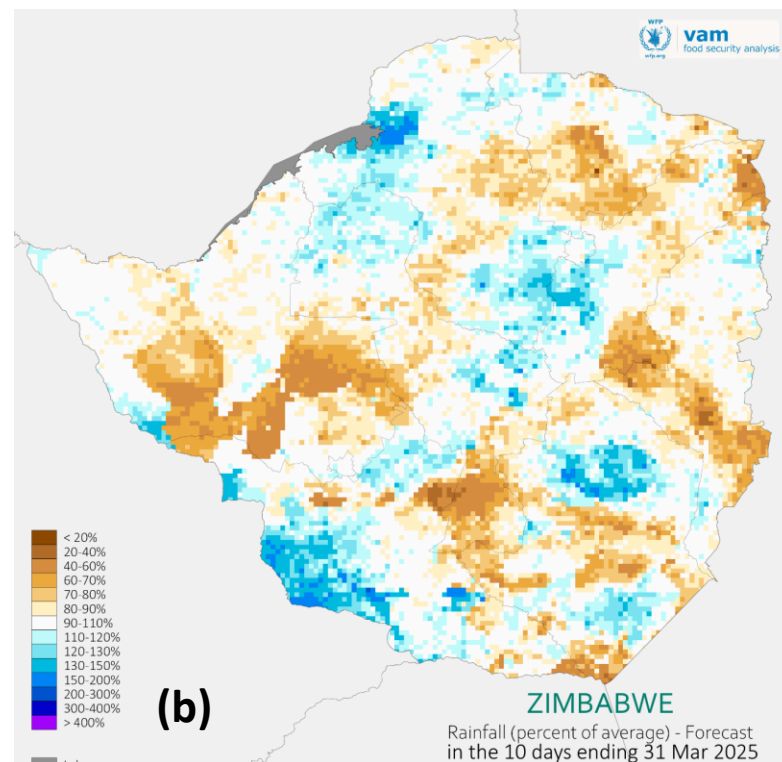
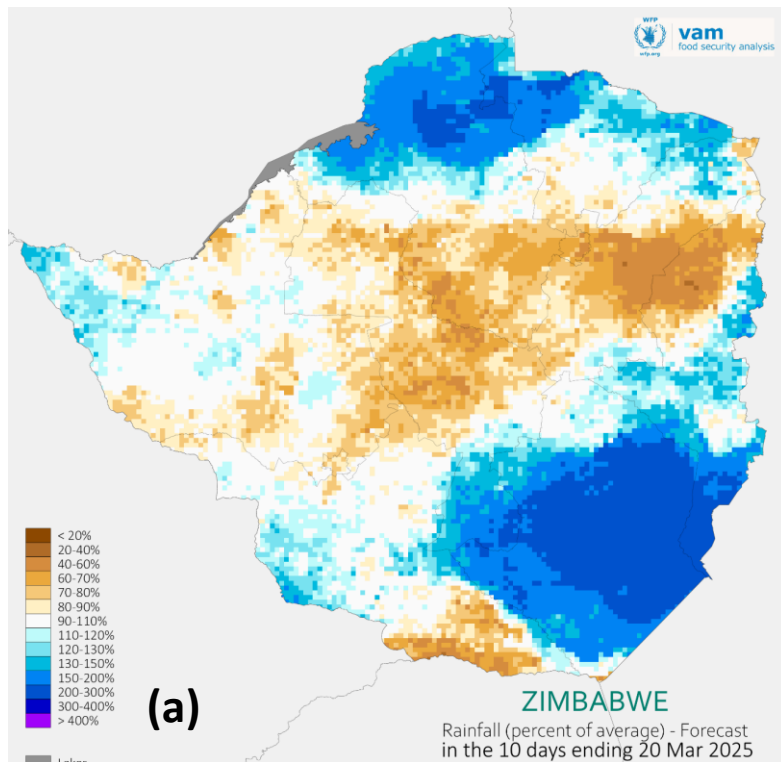


Fig 6: Rainfall forecast for the 10 days ending 20 Mar 2025 (a), in the 10 days ending 31 Mar 2025 (b) as percent of average. Browns = drier than average, blues = wetter than average

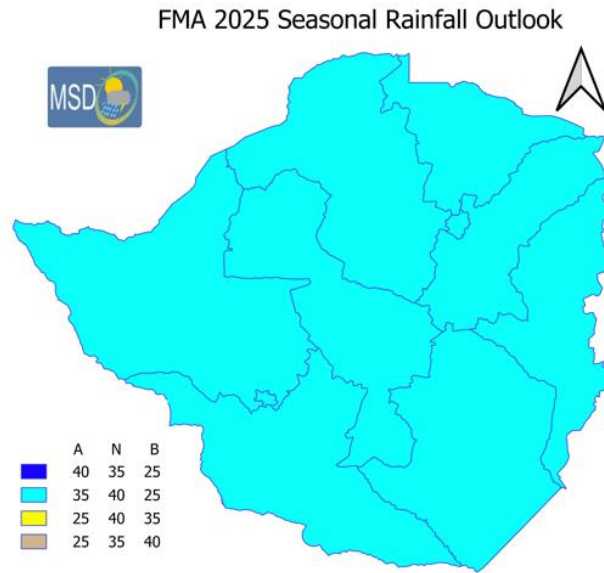
Fig 6(c): Rainfall forecast for the month ending 31 Mar 2025 as percent of average. Browns = drier than average, blues = wetter than average

The short-range forecast for the end of March 2025 indicates a gradual decline in rainfall activity, with most of Zimbabwe expected to experience below-average rainfall. The first half of the period shows mixed rainfall patterns, with above-average rainfall expected in southeastern Zimbabwe, particularly in Masvingo and southern Manicaland. Meanwhile, drier-than-normal conditions are anticipated in central and western parts of the country, where rainfall percentages are projected to be below 80% of the long-term average .

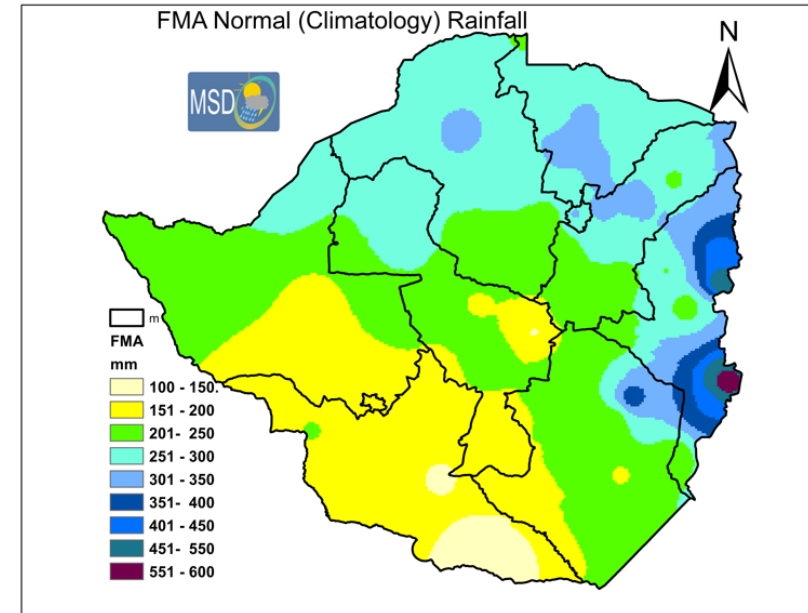
By the final 10 days of March, drier conditions are expected to dominate, with most of Zimbabwe likely to receive below-normal rainfall. The exception remains localized pockets in southeastern Zimbabwe, where rainfall may still be near or slightly above average. The monthly indicates that most of the country will experience below-normal rainfall, reinforcing the drying trend toward the end of the month. However, Masvingo and parts of southeastern Zimbabwe continue to show above-normal rainfall anomalies, suggesting some localized wet conditions in an otherwise dry period. The anticipated dry conditions could increase moisture stress for late-season crops in areas already experiencing below-average soil moisture levels. However, the long-range forecast for February–April 2025 remains optimistic, with rainfall expected to be 100–125% of the long-term average, signaling favorable conditions for water resources and late-season agricultural activities. Despite this positive seasonal outlook, the localized below-average rainfall expected in late March may lead to short-term water deficits in some areas.

6. Outlook: Long Range

Long Range (February-March-April)



(a)



(b)

Fig9a Probabilistic Forecast. b. Then long-term average rainfall

February-March-April is expected to be relatively wetter than the long-term average across the country. The expected cumulative rainfall for the three months (February to April) is likely to be more than the long-term rainfall average for the same period. Technically it should fall within the range 100-125 percent of the long-term average, which is the normal to above normal range. The long-term average is 30 years for each station across the country and that is considered the normal rainfall for that place. Map Fig 7(a) is the probabilistic forecast and Fig 7(b) is the long-term mean.

- This monthly bulletin is produced by the Zimbabwe Meteorological Services Department.
- Focus of the Bulletin: seasonal monitoring and early warning when necessary, highlighting areas of concern.
- World Food Program (WFP) assisting in the incorporation of satellite data to observations to address the concern of coverage of the area of interest.

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