Zimbabwe Seasonal Monitor

DECEMBER 2024

ZIMBABWE METEOROLOGICAL SERVICES DEPARTMENT

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

Highlights

- Below normal rainfall is anticipated the month December 2024. The first dekad had a dry spell through out the period for most parts of the country.
- The rainfall performance so far is below average for the bulk of the country.
- Vegetation conditions is generally below normal conditions for most areas, except for those areas over the eastern and central parts of the country.
- Although the rainfall November was less than average for the month, the rainfall amounts received were sufficient to support plant germination and growth in most parts of country except for the extreme north of Mashonaland West and Central provinces.

1. Latest rainfall: Early December

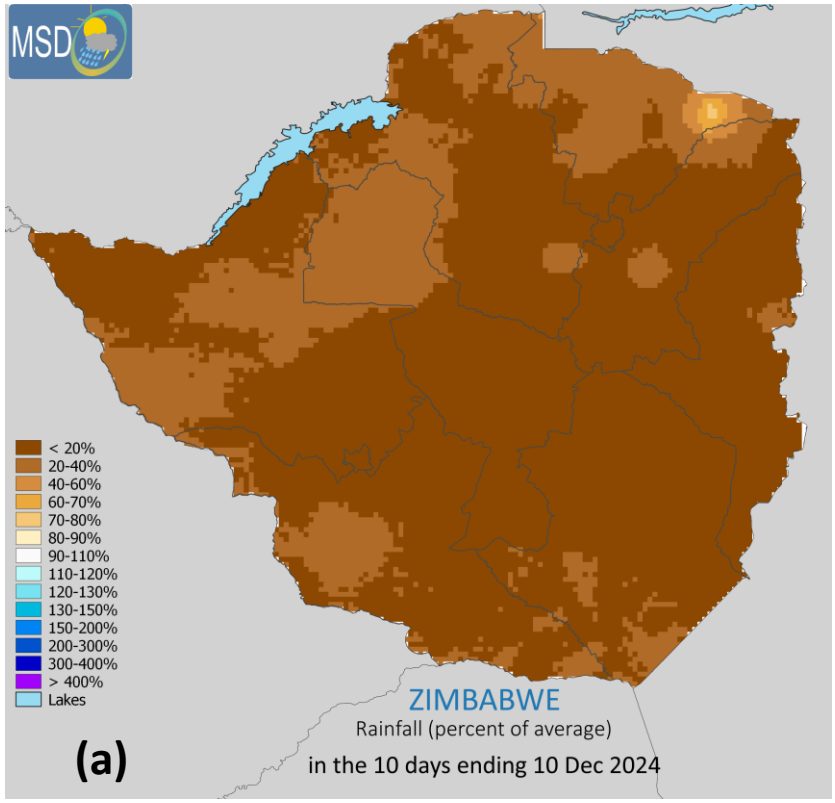


Fig 1(a) *Rainfall as percentage of average in the 10 days ending 10 December 2024, brown shades below normal rainfall and blue means above normal*

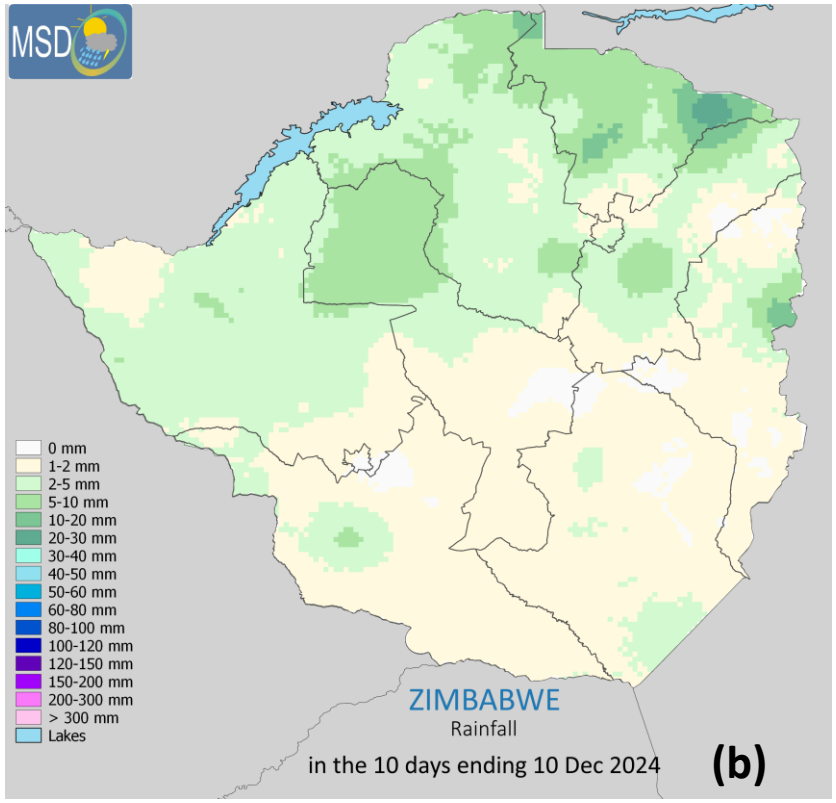


Fig 1(b) *Rainfall amounts in the 10 days ending 10 December 2024. Lowest values shown by white and highest shown by pink colour.*

Fig 1(a) shows that the bulk of the country experienced very dry conditions during the first ten days of December with rainfall anomaly as low as 20% below the long term average. These dry conditions during this planting or early vegetative stages, could affect germination or lead to stunted growth of crops in some places due to insufficient soil moisture.

Very little amount of rainfall was received during the first ten days of December, particularly in the southern parts of the country, as illustrated by Fig 1(b). Mashonaland, northern parts of Midlands, and Matabeleland provinces received slightly higher rainfall amounts, however, it was quite low. It significantly affected agricultural activities such as planting during the first dekad of December.

2. The season so far: October-November 2024

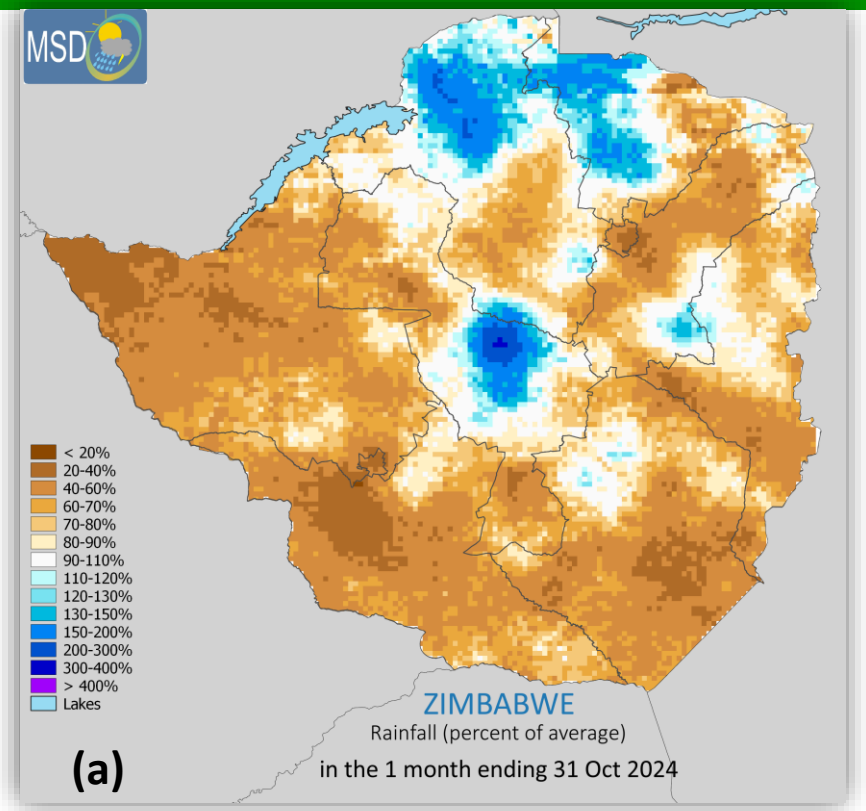


Fig 2:(a) *October 2024* ***Rainfall*** *Percentage of average. Brown means below average, blue means above average.*

Fig 2a shows that October was drier than usual in most parts of the country except for the extreme northern parts of the country (northern parts of Mashonaland West and Mashonaland Central Province) and the central parts of the Midlands Provinces. Less than normal rainfall received in October, did not have much impacts on Agriculture since nothing much had been done during this month in terms of planting.

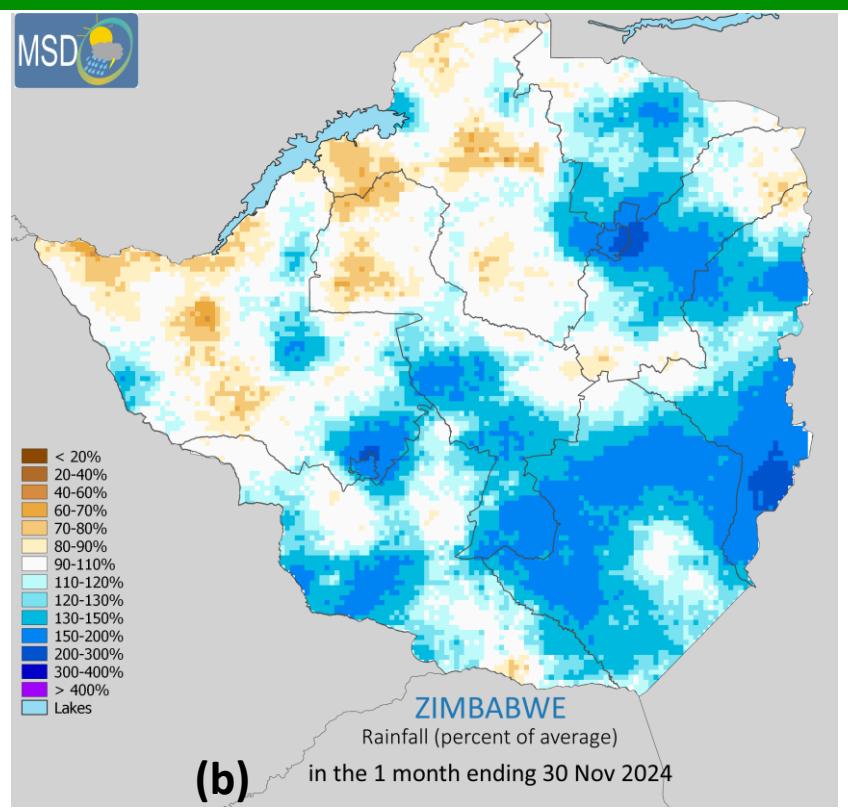


Fig 2: (b) November 2024 Rainfall *Percentage of average. Brown means below average, blue means above average.*

There was an improvement in rainfall received in November compared to October rainfall as indicated in Fig 2b. The areas that received the most rainfall were the southern and eastern parts of the country. The northwestern parts received the least. This rainfall was adequate for farmers to start planting in most parts of the country.

3. Latest rainfall: November

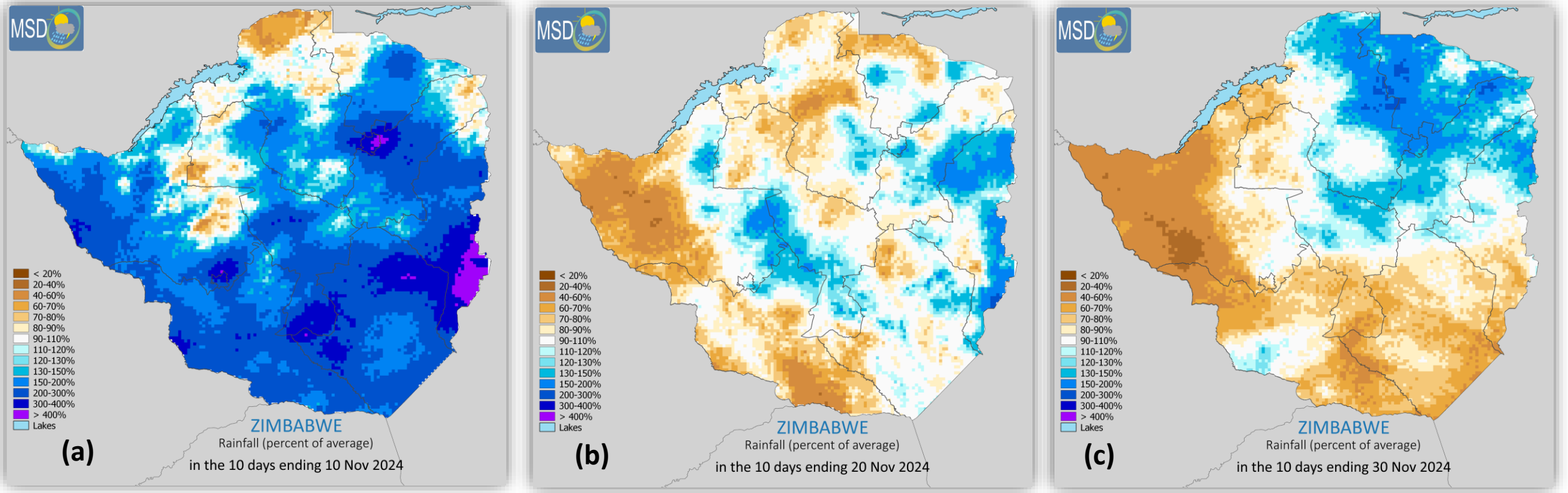


Fig 3 *Rainfall anomaly in the 10 days ending* ***(a)*** *10 November* ***(b)*** *20 November, (**c**) 30 November 2024. Brown mean below average and blue means above average*

Much of the November rainfall was received during the first ten days of the month, as Fig 3(a) indicates that most places received above average. Only the extreme northern parts of the country received below-average rainfall. November rainfall for the first ten days was sufficient for planting. Most farmers started planting during this dekad. However, the second and third dekad, Fig 3(b-c), did not perform very well. Matabeleland, Masvingo, and southern parts of Manicaland were the most affected by the reduced rainfall. This had a great impact on crops that were planted during the first dekad. Possible impacts in some places are crop failure to germinate or complete wilting. Significant parts of the country experienced prolonged dry spells from the second dekad of November until the end of the first dekad of December, especially Matabeleland, Masvingo, and southern parts of Manicaland Provinces. This resulted in significant moisture stress.

4. Latest rainfall: November

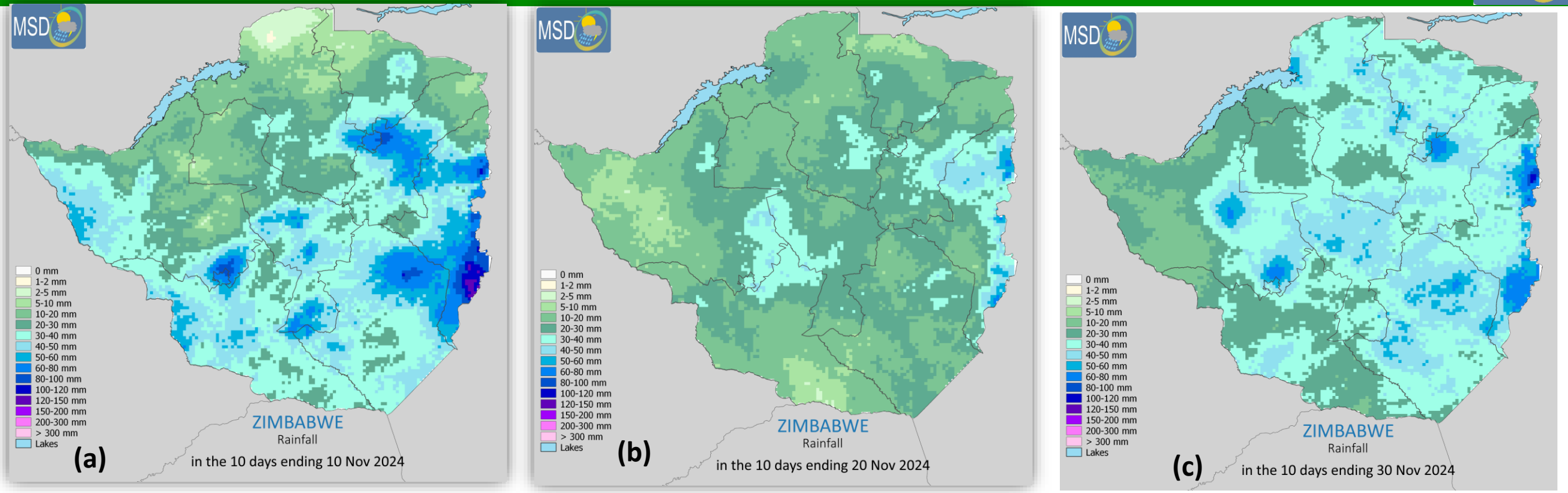


Fig 4 Rainfall amounts in the 10 days ending (a) 10 November 2024 (b) 20 November, (c) 30 November 2024. White to pink represent rainfall from lowest to highest

Although the rainfall distribution in was even spatially and temporally during the month of November, the amounts were not evenly distributed. The first and the last ten days received more rainfall amounts in the range of **30 to 40mm** in Matabeleland South, Masvingo, Manicaland, Midlands, all Mashonaland. Although the amounts for the two dekad were almost the same, the last dekad rainfall was below average due to the increase in the long term average dekadal rainfall as the season continue to unfold. The second ten days however received lowest rainfall amounts, **10-20mm**. November rainfall was enough to promote germination and vegetative growth for the crops.

5. Vegetation and Temperature

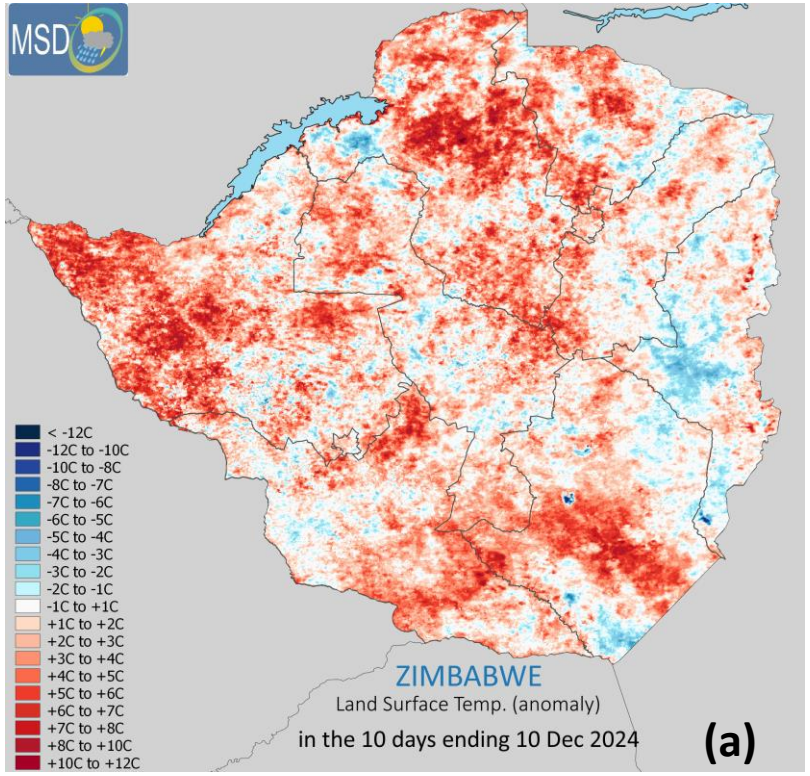


Fig 5 (a) *Land surface temperature as a percentage of the average, by 10 December 2024. Red means hotter than normal and blue means cooler than normal*

Fig 5a. The land surface temperatures shows that warmer than normal conditions were experienced in most parts of the country with the exception of very few places in Manicaland where temperatures were cooler than normal. The impacts of these condition include increased water evaporation from soil and plant surfaces, reducing soil moisture and possibly moisture stress.

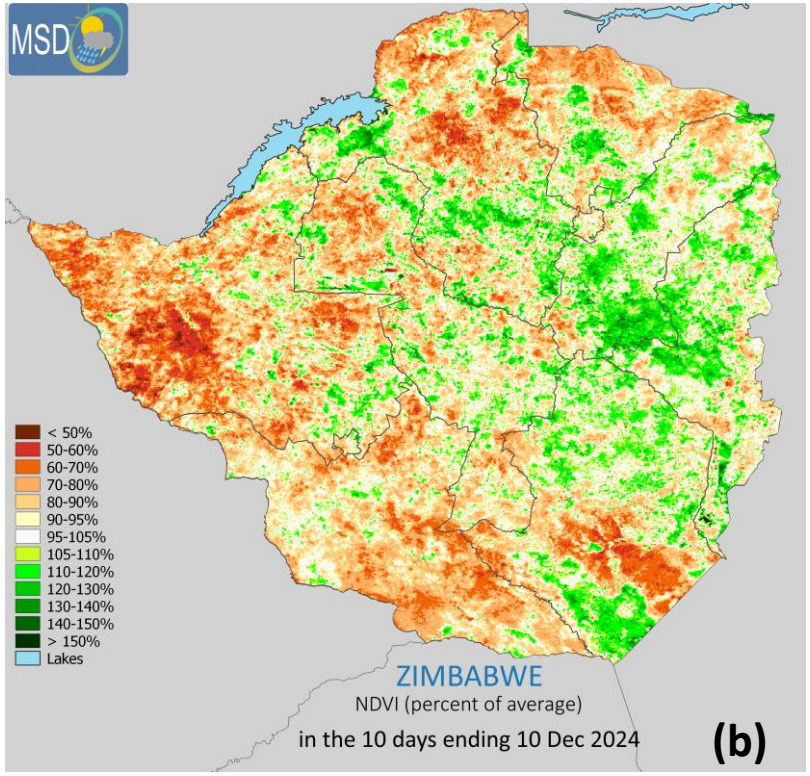
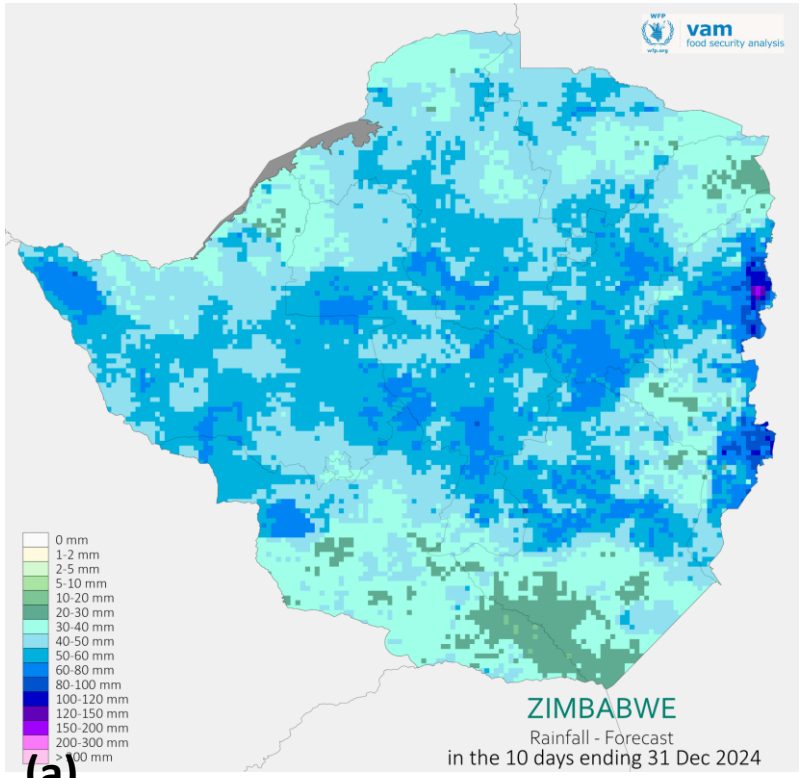


Fig 5 (b) *NDVI anomaly by 10 December 2024.*

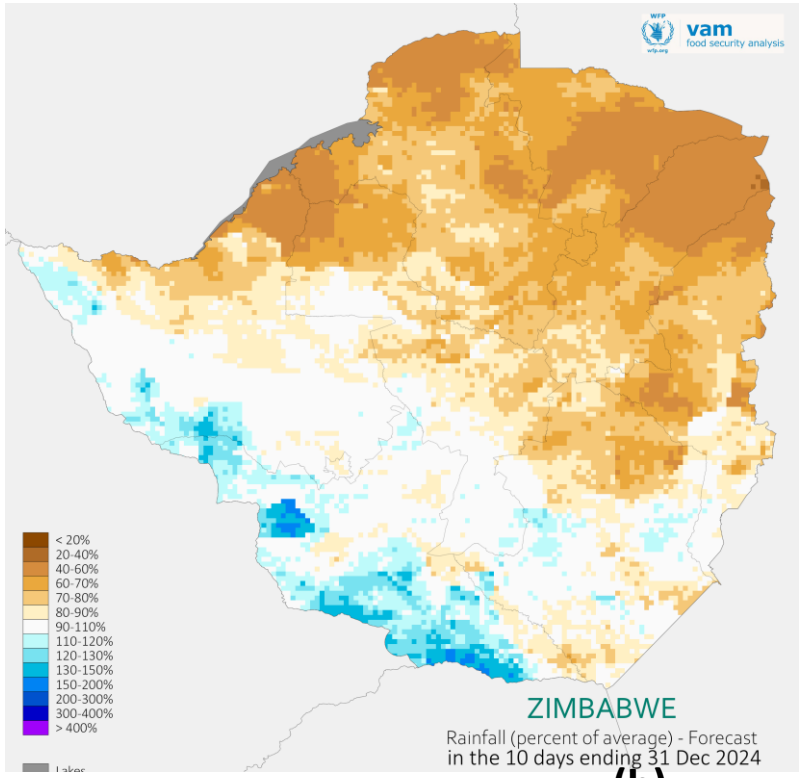
Fig 5b. Below-normal vegetation conditions are confined to the low veld area (the Zambezi, Limpopo-Save valleys, and Matabeleland North). This is associated with lower soil moisture, leading to increased irrigation needs. In contrast, the central and eastern regions show normal to above-normal NDVI, which supports better quality forage essential for livestock health and productivity.

6. Short-Range Outlook: End of December 2024



(a)

Fig 6 (a): *Rainfall forecast Amounts for the 10 days ending 31 December 2024, White is the lowest and pink is the highest*



(b)

Fig6(b): *Rainfall forecast anomaly for the month ending 31 December 2024. Browns = drier than average, blues = wetter than average*

For the last ten days of December Fig 6(a), the bulk of the country should receive rainfall in the range of 40-80mm. Highest amounts are expected in some parts of Matabeleland North, Midlands, Mashonaland, Harare, some parts of Masvingo, and the extreme eastern parts of Manicaland Provinces. The extreme southern parts of the country, Matabeleland South, extreme northern parts of Mashonaland East should receive slightly less amounts. Fig 6(b) shows that expressed as a percentage of average, Matabeleland provinces some parts of Midlands, southern parts of Masvingo, and southern parts of Manicaland should receive normal to above normal rainfall during the last ten days of December while the rest of the country should receive normal to below normal rainfall. The wet spell expected during this forecast period could bring a relief to crops that had been affected by the December dry spell.

6. Outlook: Long Range

Long Range (December-January-February)

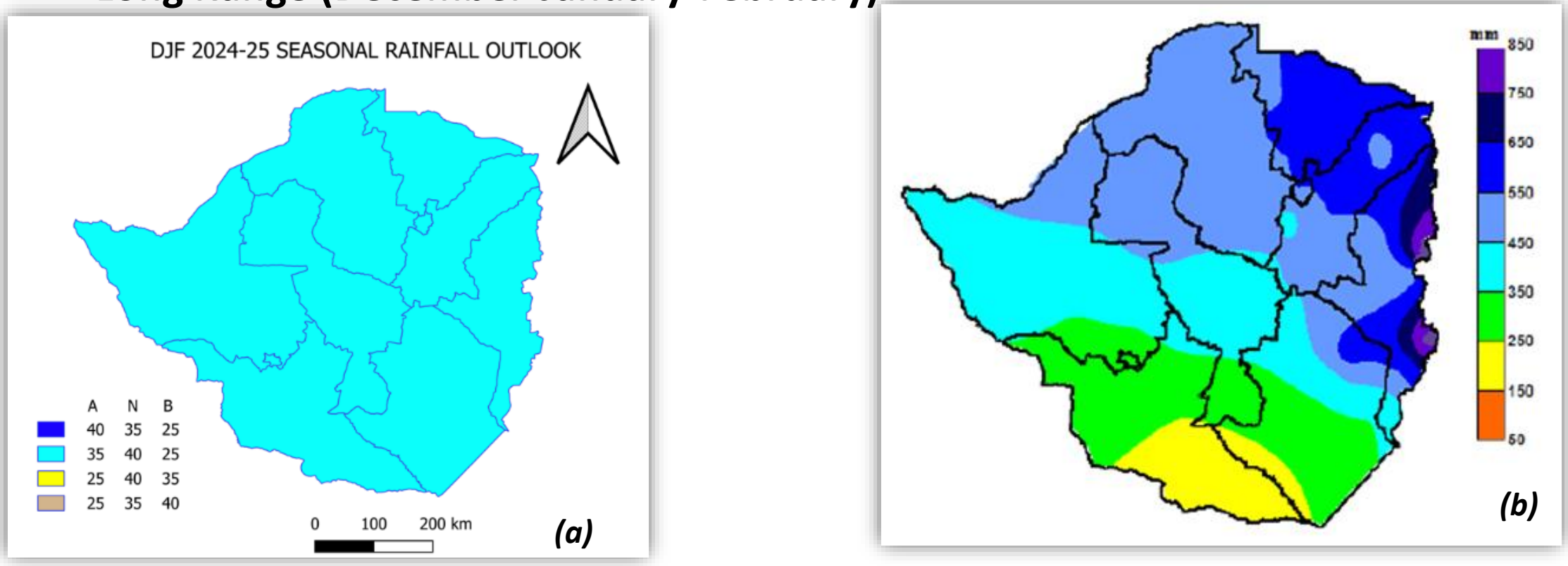


Fig7a Probabilistic Forecast. b. Then long-term average rainfall

The third part of the season December-January-February is expected to be relatively wetter than the long-term average rainfall across the country. That is the expected rainfall accumulation for the three months December to February should be more than the long-term rainfall for the same period. Technically it should fall within the range 100-125 percent of the long-term average. Which is 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 (b) is the long term mean.

About the Seasonal Monitor

- 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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