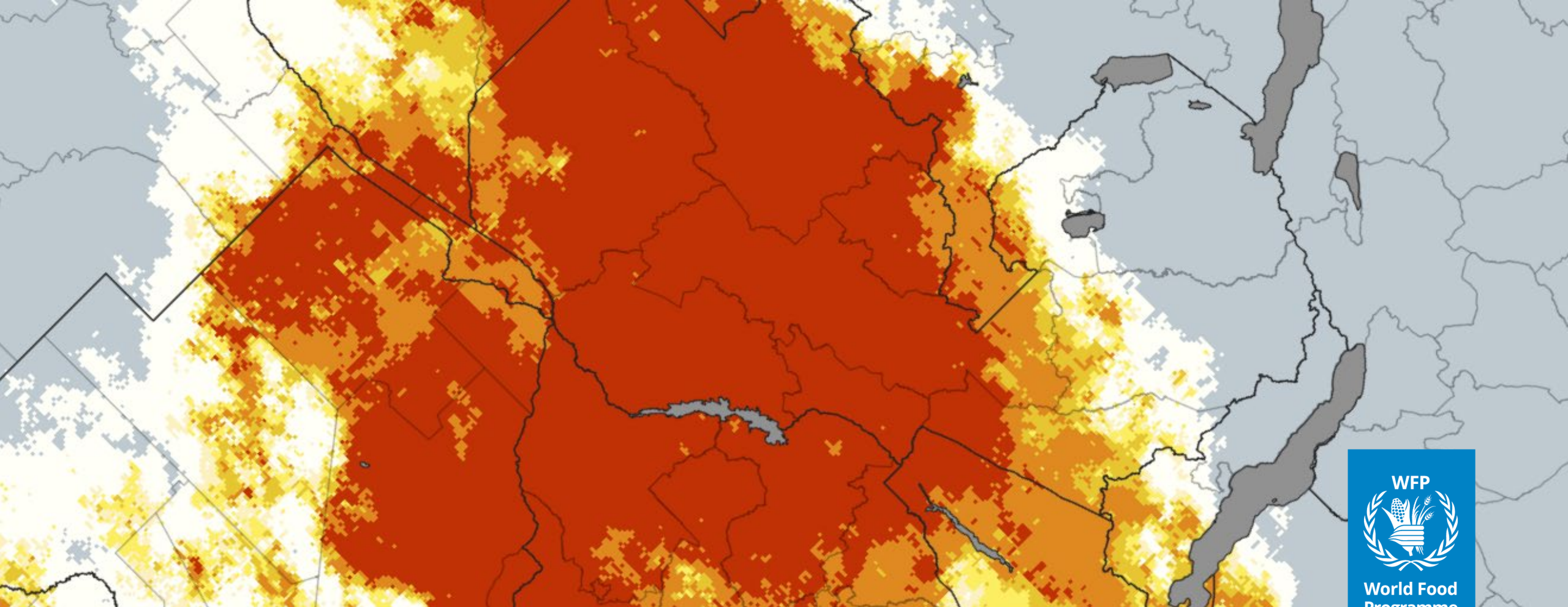




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# Southern Africa Seasonal Monitor #3

WFP Regional Bureau Johannesburg

February 2024

# SUMMARY

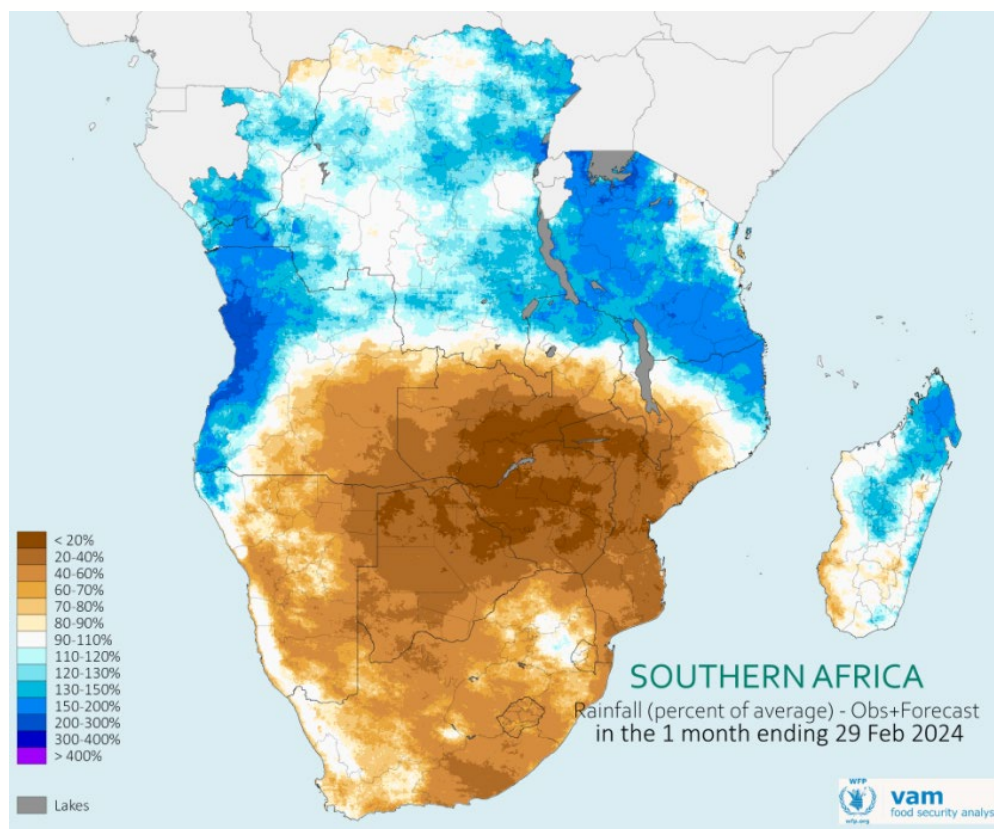
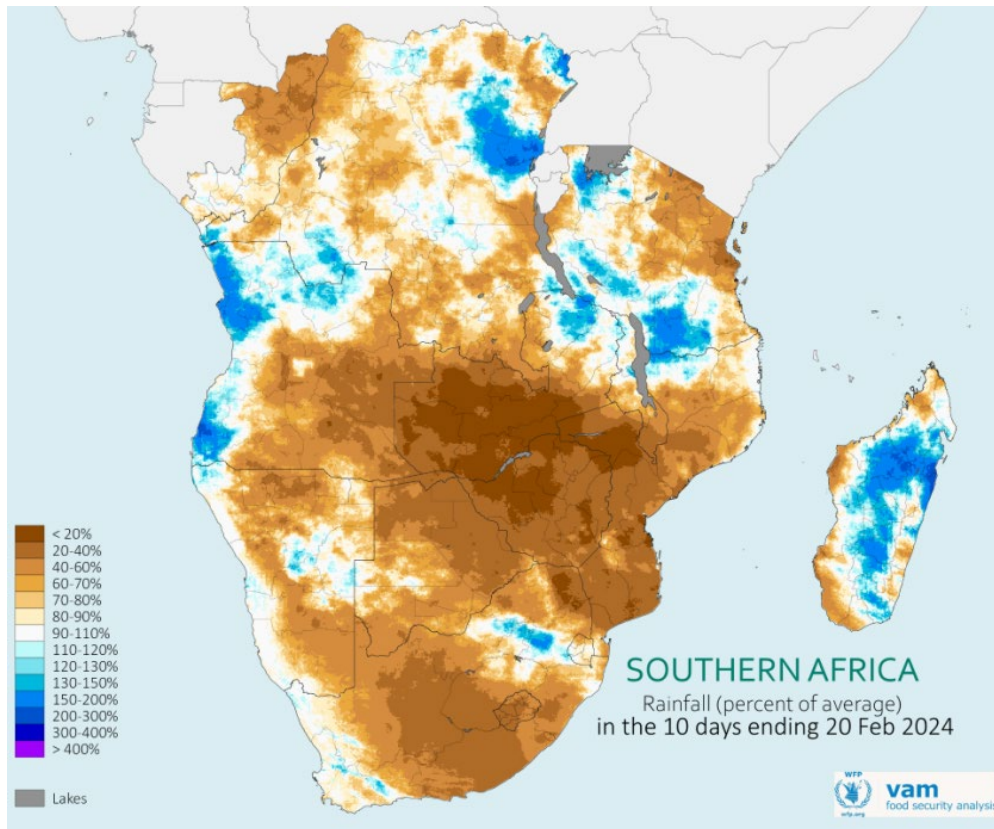
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## Highlights

- Southern Africa is under the influence of El Niño patterns, associated with below-average rainfall for most of the region and below-average harvests. The 2023/2024 rainy season has been marked by a delayed onset of the rains, irregular rainfall alternating between wetter and drier than average conditions and a prolonged dry spell, which commenced in late January and persists until today;
- The central part of the region, across the Zambia, Zimbabwe and Botswana border, is experiencing the driest February in the past forty years. Severe rainfall deficits have also occurred in southern Malawi, eastern Angola and parts of Mozambique. The short-range outlook indicates that the dry spell will continue into March and the long-range outlook indicates most of the region will receive below average rainfall overall;
- The extremely dry conditions are likely to have a significant, negative impact on maize production in Zambia, Zimbabwe, southern Malawi and central Mozambique. Botswana, Namibia and southeast Angola are also likely to be affected. While South Africa, the region’s leading maize producer, has been spared the most extreme conditions, it is not likely to reach production levels of recent years;
- Northern parts of the region, however, typically receive above-average rainfall during El Niño years and this season have received severe excess rainfall and resultant flooding, which also may negatively affect crop conditions. The short-range outlook indicates that wetter than average conditions will continue for Tanzania and parts of DRC, Republic of Congo, Angola and Madagascar;
- Excessive rainfall in Tanzania, DRC, Republic of Congo and Madagascar have brought floods and landslides. On the border between DRC and Republic of Congo, there was severe flooding on the Congo River in late December and early January. In Tanzania, heavy rainfall led to a severe landslide in Hanang district in January. In Madagascar, Tropical Storm Alvaro made landfall in early January and heavy rainfall since the start of February has led to flooding in the north of the country;
- Based on the latest available data, the areas of concern are Zambia, Zimbabwe, southern Malawi, central Mozambique, southeastern Angola and northeastern Botswana. Lesotho, eSwatini, and southern Madagascar may also be affected. The rainfall deficits from January to March in these countries will have substantial, adverse impacts on the harvest and consequent implications for food security in the Southern Africa region during the upcoming lean season in late 2024.

# LATEST RAINFALL – February



*Left: Observed rainfall in the second dekad of February 2024*

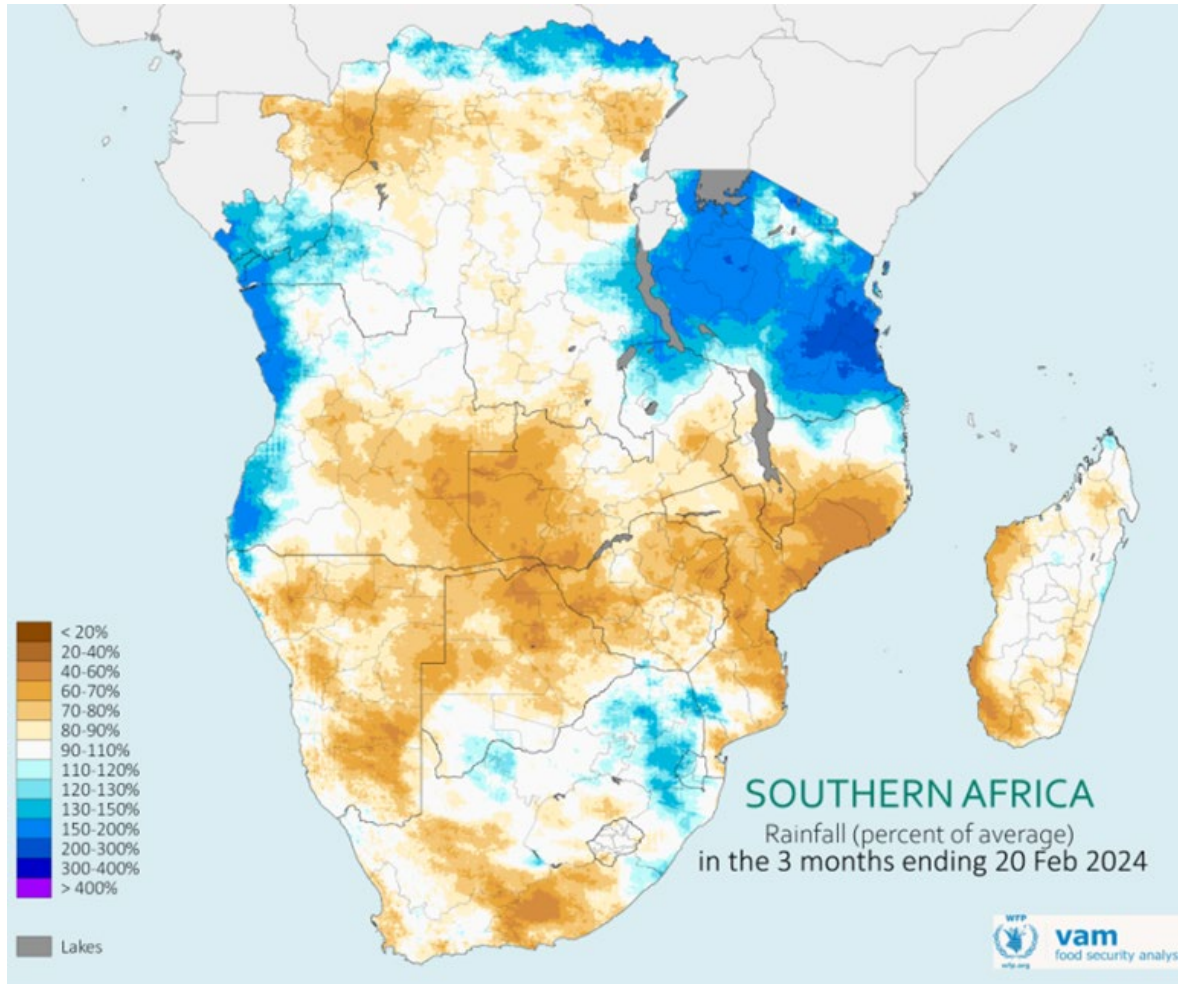
*Right: Observed and forecasted rainfall in February 2024 as a proportion of the long-term average.*

*Blues for above average conditions, oranges and browns for below average conditions.*

The extremely dry conditions that commenced in the last dekad of January have persisted throughout February. In February, crops across the region are generally in the vegetative and reproductive phase and are therefore highly sensitive to water stress. February has brought a lot less rainfall than expected to many countries in the region, with parts of Zimbabwe, Zambia, Mozambique, Malawi and Botswana receiving less than 20 per cent of normal rainfall for this time of year. This is likely to result in negative consequences for the harvest.

In contrast, the month of February brought above average rainfall to coastal and northern Angola, Republic of Congo, DRC, Tanzania and northern Madagascar.

# THE SEASON SO FAR - OVERALL



*Rainfall in the three months until 20 February 2024 as a proportion of the long-term average. Blues for above average conditions, oranges and browns for below average conditions.*

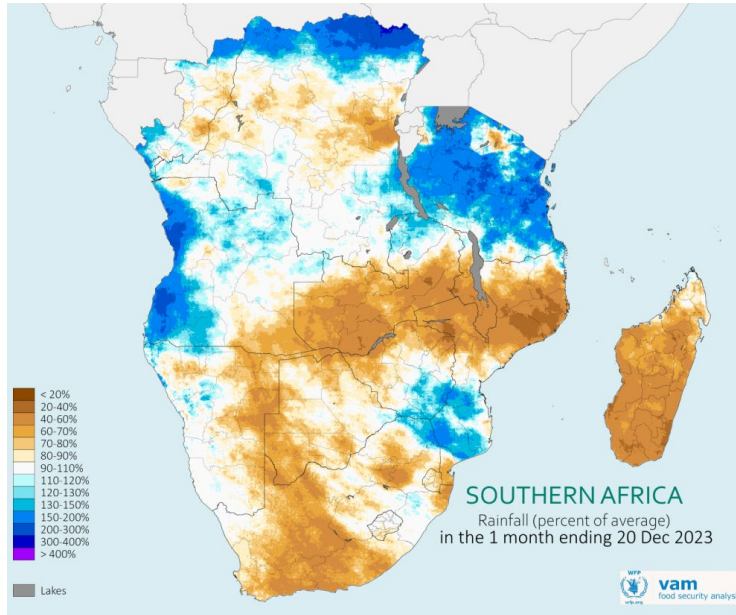
The El Niño forecast has materialised in Southern Africa, with below average seasonal rainfall totals across most countries in the region and above average rainfall in Tanzania, parts of DRC, Republic of Congo and Angola.

Some wetter than average areas like Tanzania, have been fairly consistently so during since late 2023. However, in areas that show overall drier than average patterns, rainfall had been irregular in its spatial and temporal distribution, alternating between dry and wet period, before it settled into a stable and decidedly much drier than average patterns since late January.

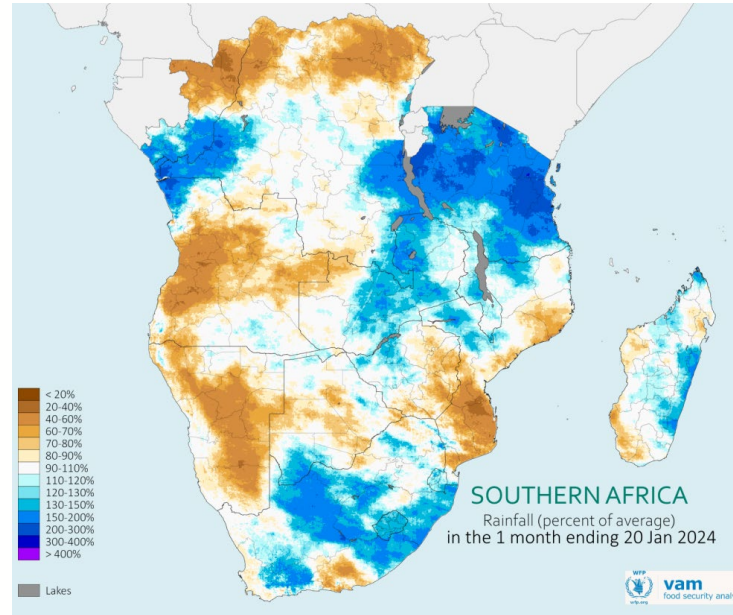
It is this more recent dryness that may lead to serious problems for many countries in the region.

# THE SEASON SO FAR – December to February

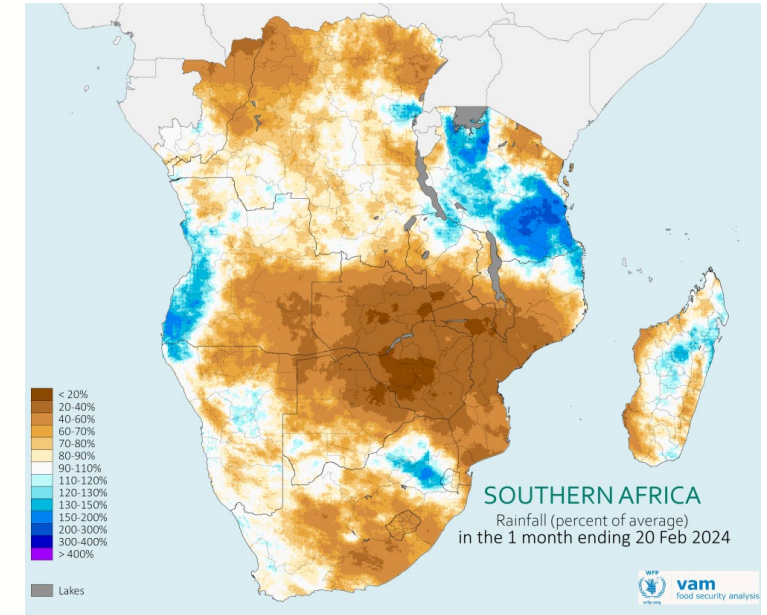
December 2023



January 2024



February 2024

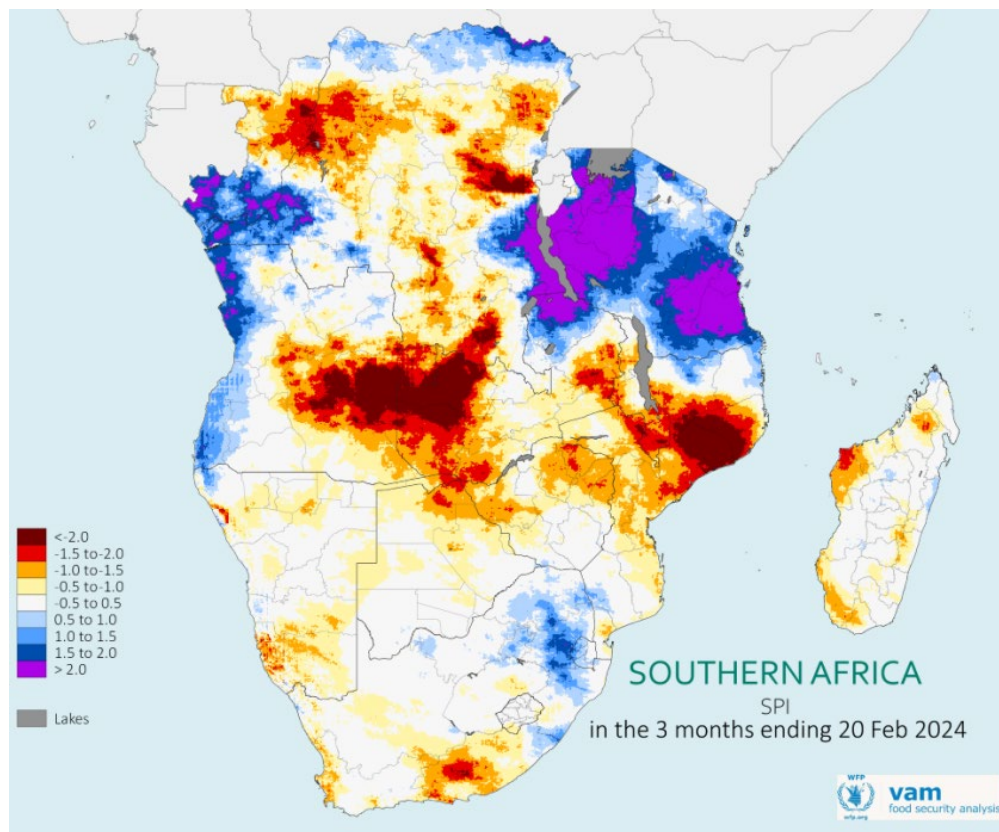


*Left: Rainfall in the month of December 2023. Centre: Rainfall in the month of January 2024. Right: Rainfall in the month of February 2024 as a proportion of the long-term average. Blues for above average conditions, oranges and browns for below average conditions.*

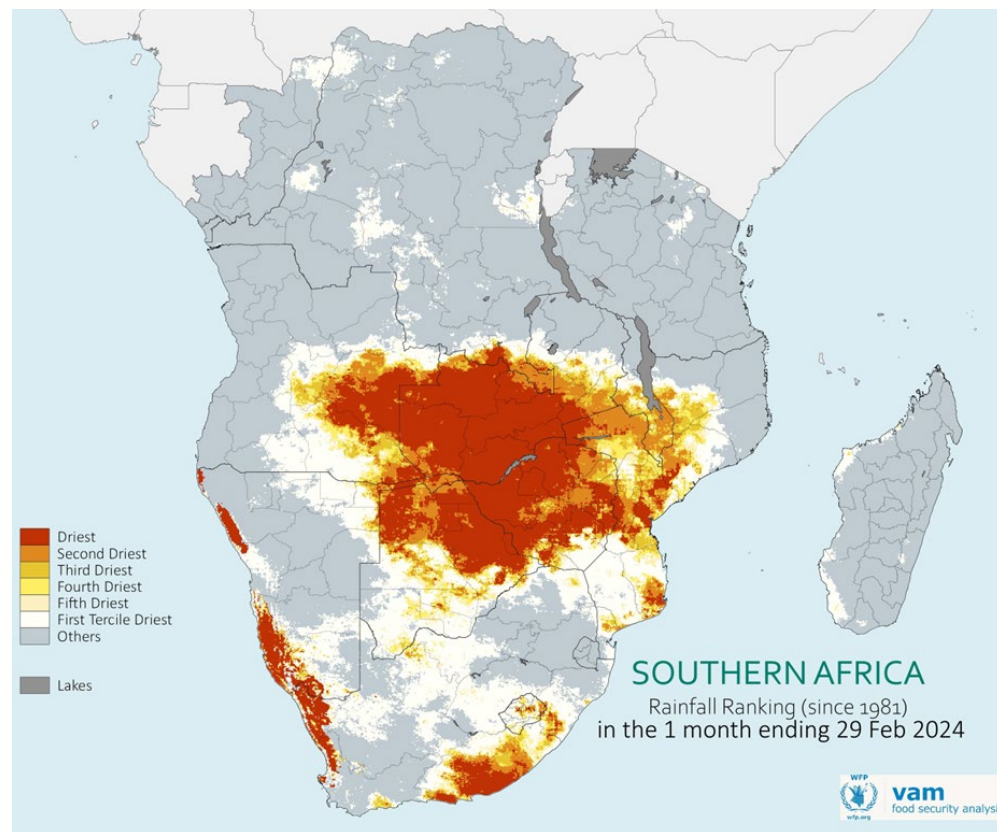
For the southern part of the region, the season had a late start due to a dry spell in November and early December. Favourable December and January rains enabled the planting to commence in most countries in the region. From mid-January, however, extremely dry conditions returned and have persisted throughout February.

The northern part of the region has experienced average to above average rainfall for most of the season. Tanzania has consistently received above average rainfall. DRC, Republic of Congo, Madagascar and eastern Angola have alternated between drier and wetter than average periods in different areas. Heavy rainfall during parts of the season have led to flooding in Tanzania, Madagascar, DRC and Republic of Congo.

# THE SEASON SO FAR - OVERALL



According to the 3 month SPI index, Nampula and Zambezia provinces in Mozambique, Northwestern and Western provinces of Zambia, southern Malawi, Moxico province in Angola and parts of DRC are experiencing abnormally dry conditions. On the other hand, east and west Tanzania, east and west DRC and southern Republic of Congo are experiencing abnormally wet conditions.

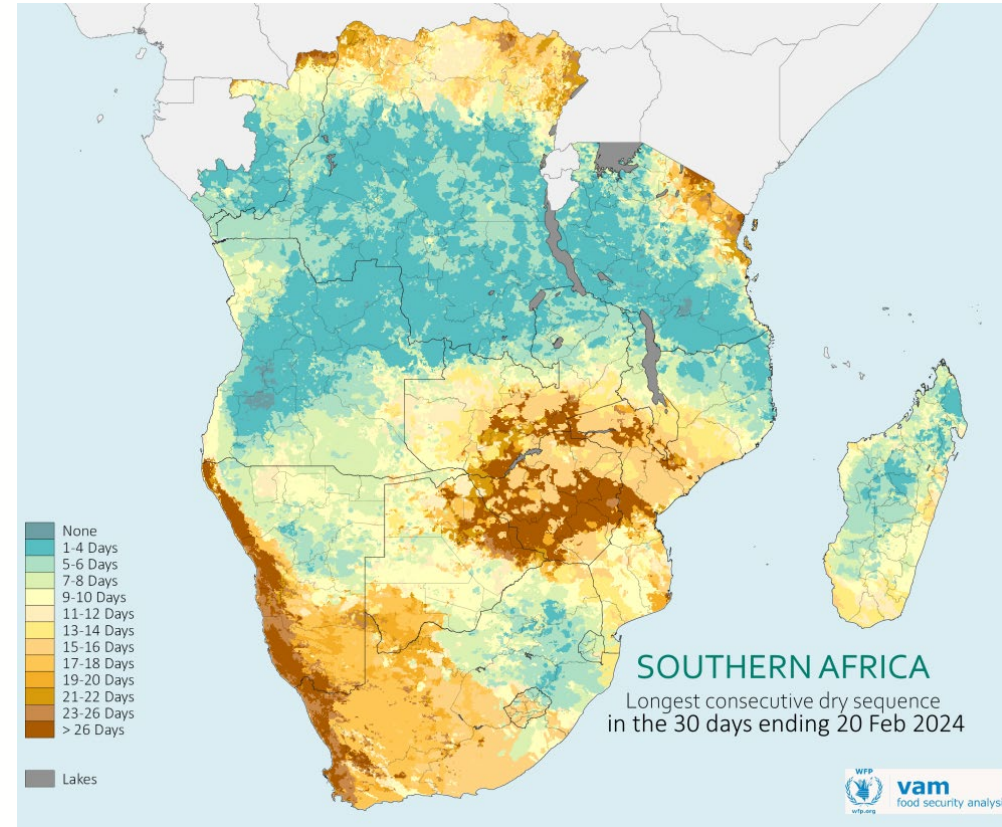
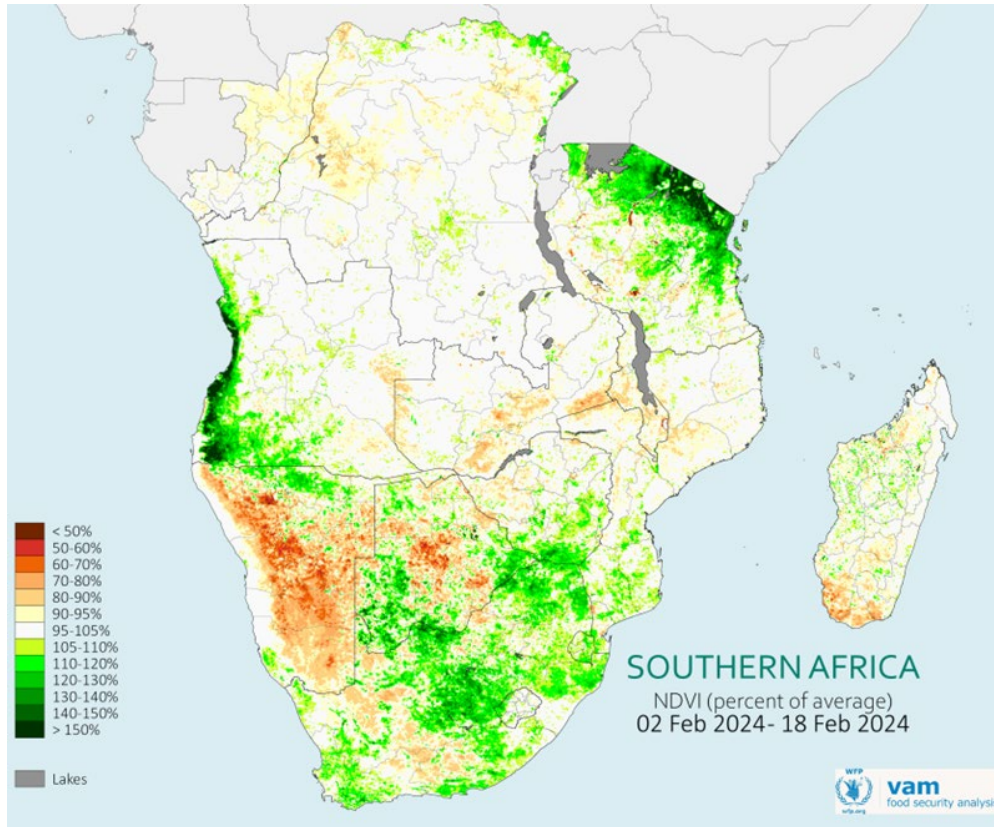


Left: Standard Precipitation Index (SPI) is a drought index based on precipitation. Increasingly severe rainfall deficits are indicated as SPI decreases below  $-1.0$  (orange to dark red), while increasingly severe excess rainfall are indicated as SPI increases above  $1.0$  (blue to purple).

Right: Rainfall Ranking map shows the rainfall anomaly in comparison to rainfall quantities since 1981 in order of driest. Red/brown for driest, orange for second driest and yellows for third, fourth and fifth driest.

A rainfall ranking analysis, comparing February 2024 rainfall to historical February data, shows that most of Zambia and Zimbabwe and parts of Botswana and Angola have experienced the driest February on record (since 1981). Other areas in Malawi and Mozambique have been the second driest on record. These extreme conditions support a scenario of significant impacts on crop production.

# GROWING SEASON CONDITIONS – Vegetation and Dry Spells



*Left: Vegetation development compared with the long-term average. Green shades for above average vegetation, orange shades for below average vegetation.*

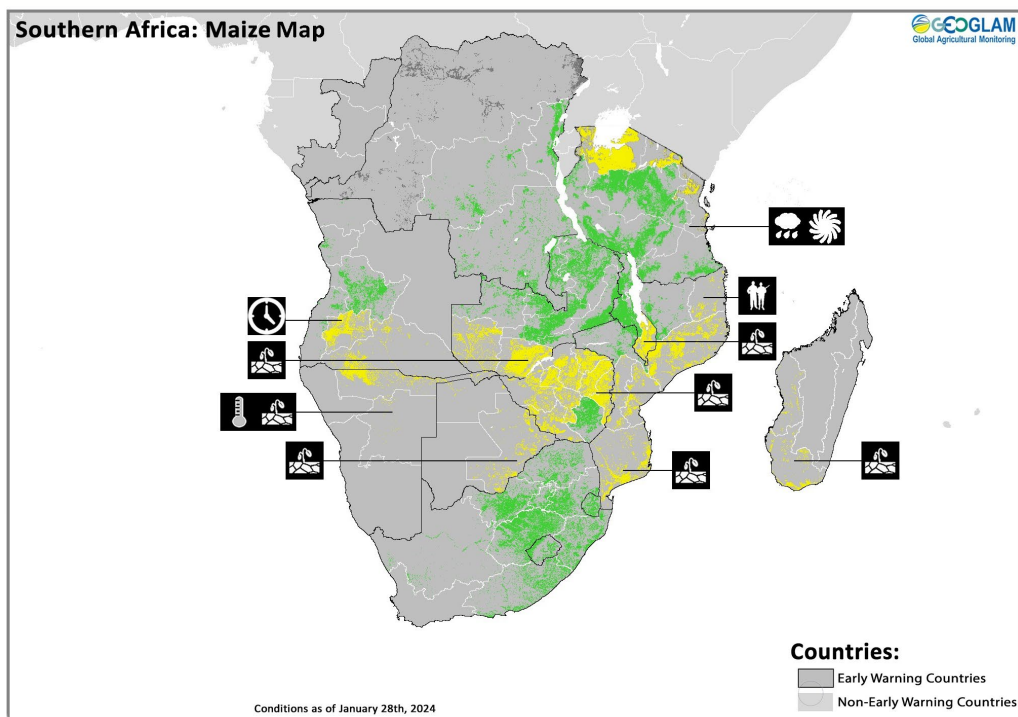
*Right: Longest consecutive dry sequence. (dry spell)*

Large areas of the region are currently experiencing average to above average vegetation cover: the effects of persistently high rainfall are clearly visible in coastal Angola and northern Tanzania, leading to very beneficial conditions for pastoral livelihoods. In contrast, markedly below average vegetation cover can be seen in Namibia, parts of Botswana and southern Madagascar which have been affected by persistent significantly drier than average conditions.

In areas affected by the current February dry spell, above average vegetation cover is still evident, but degradation of vegetation has begun to manifest in Zambia, Zimbabwe and Mozambique and is expected to deteriorate further in the coming period due to on going dry conditions. The satellite vegetation signal once boosted by early season rainfall takes time to respond to a sudden and sharp reversal in rainfall conditions.

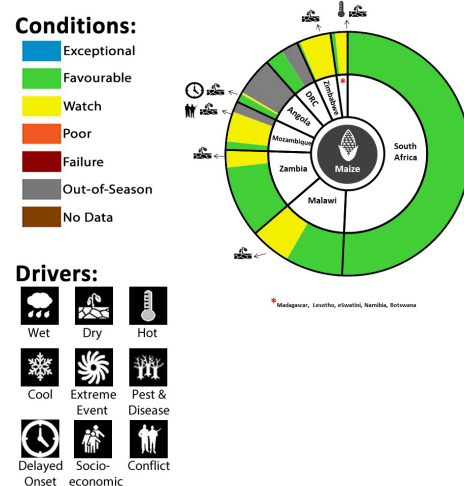
Given the irregularity of the rainfall, alternating between wetter and drier periods, most countries have experienced dry spells. Parts of Zimbabwe, Mozambique, Zambia have experienced long dry spells of more than 26 days.

# GROWING SEASON CONDITIONS – Crop Conditions



The Geoglam Early Warning Crop Monitor for maize in Southern Africa.

Note that the data presented in the map is from 28th January. The areas of concern remain similar, but the conditions have likely deteriorated.



Across Southern Africa, where most crops are in the vegetative and reproductive stage, there are mixed crop conditions. In certain areas, the shortening of the agricultural season due to dry spells and elevated temperatures leading to increased evaporation are likely to have negative impacts on the harvest. Dry conditions have been reported to be affecting crop conditions in large parts of Zambia, Zimbabwe and Malawi, and parts of Angola, Mozambique, Namibia and Madagascar. Wet conditions and flooding have affected crops in northern Tanzania and conflict is affecting agricultural activities in Cabo Delgado.

In Zambia, the government announced an export ban on maize on the 21<sup>st</sup> February due to fears about the harvest prospects. In addition, a government-led aerial crop assessment was conducted last week, a joint rapid food security assessment will be launched by the Food Security Cluster next week and the Ministry of Agriculture intends to conduct the crop forecast survey early.

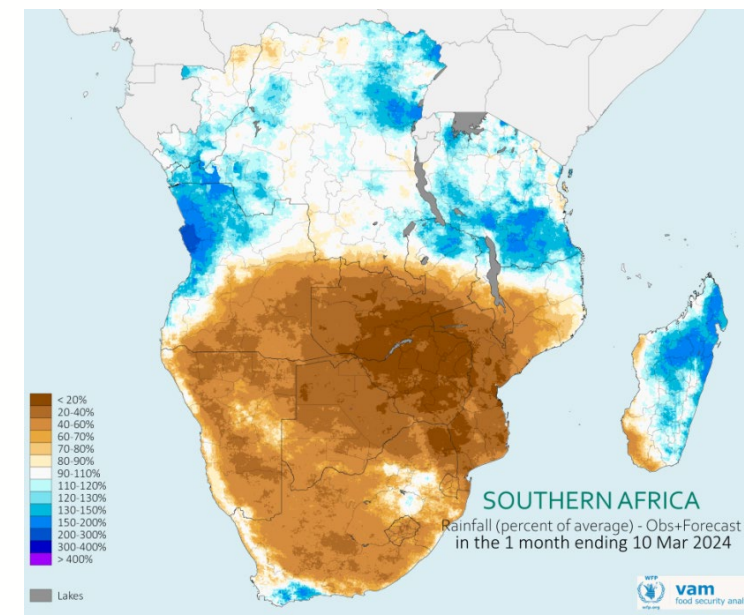
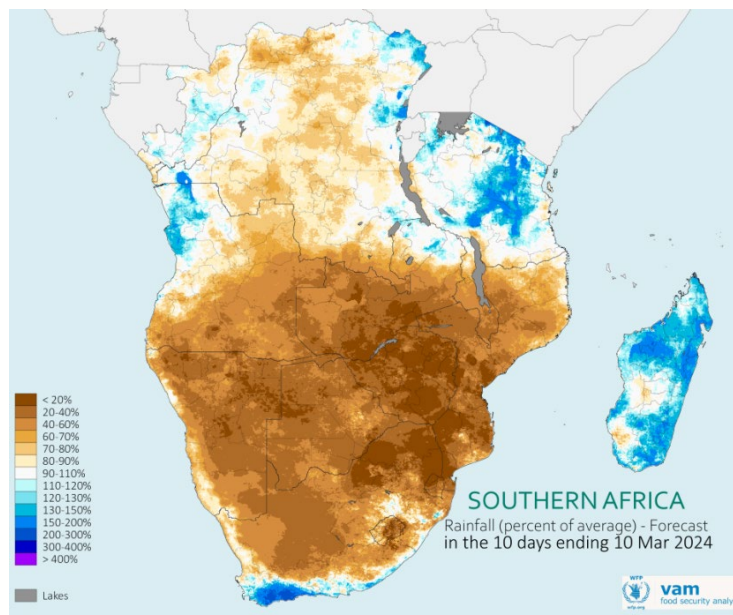
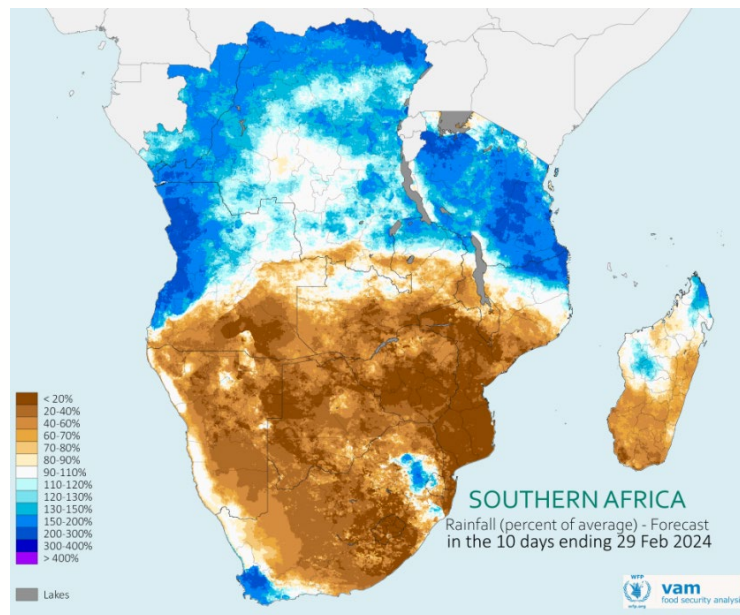
In Zimbabwe, concerns of the effects of below average rainfall on crop conditions remain in most areas. The yearly crop and livestock assessments will be conducted in April and May.

In Malawi, below average rainfall is likely to affect crops in the south, which is especially concerning in areas where crops failed last year due to the passing of Cyclone Freddy, and erratic rainfall may affect plants in the centre and north. The Ministry of Agriculture is consolidating the First Round Crop Assessments and will release the results in March.

In Tanzania, the centre and south appears to have favourable conditions, but the northern croplands have likely been negatively impacted by heavy rainfall and flooding.

South Africa is the main maize producer in Southern Africa, accounting for two thirds of regional production, and therefore its harvest outcomes are critical for the region. While South Africa has been spared the extreme conditions experienced elsewhere, it may not attain production levels of recent years. The second largest maize producers, Zambia and Malawi, are likely to be significantly impacted as well as Botswana, Namibia and southeast Angola.

# SHORT RANGE OUTLOOK



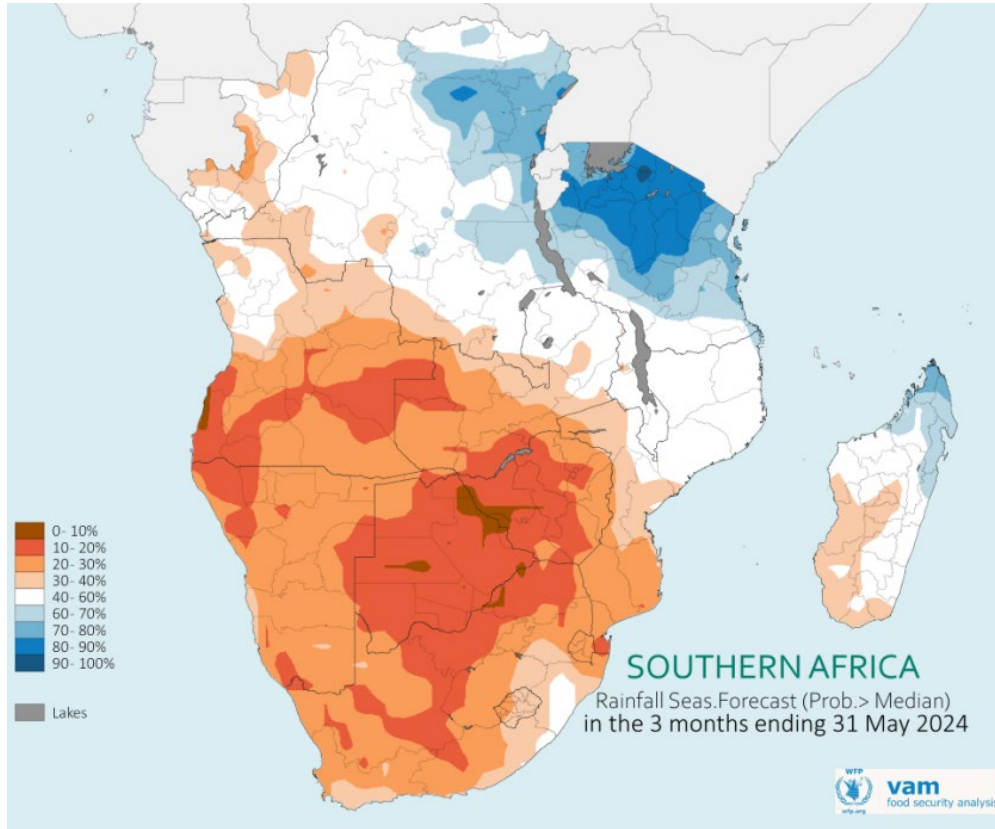
Left: Forecasted rainfall in the third dekad of February 2024. Centre: Forecasted rainfall in the first dekad of March 2024. Right: Combined observed and forecasted rainfall in the month ending 10<sup>th</sup> March 2024 as a proportion of the long-term average. Blues for above average conditions, oranges and browns for below average conditions.

The short-range forecast predicts persistently dry conditions across most of the region through the end of February and into March, coinciding with the crucial vegetative and flowering stages for crops. By mid-March the situation will be difficult to reverse as seasonal rainfall typically tapers off thereafter.

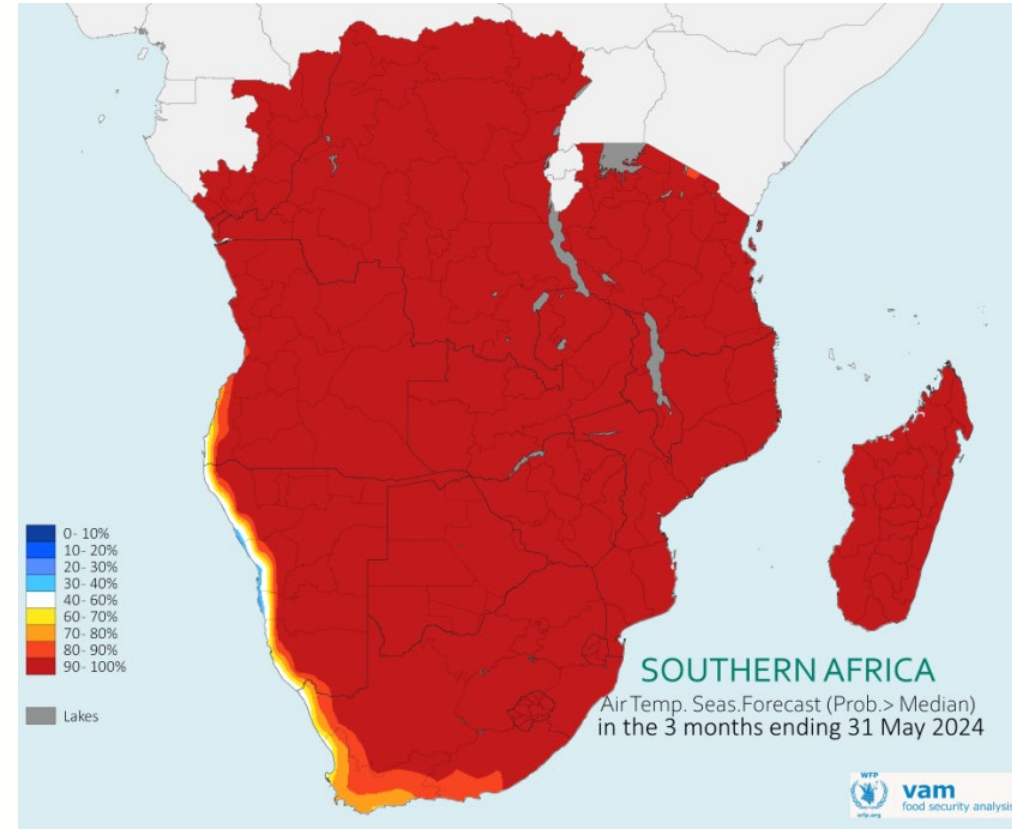
As a consequence, severe decreases in maize yields are expected in the affected countries, namely Zambia, Zimbabwe, Malawi, Mozambique, Botswana, Namibia, and Angola. Even South Africa, which was spared the harshest conditions earlier in the season, may experience some yield reduction due to the February and March dryness.

# LONG RANGE OUTLOOK: Mar-May 2024

*Probability of MAM rainfall being above usual from ECMWF seasonal forecast, issued 6 Feb 2024*



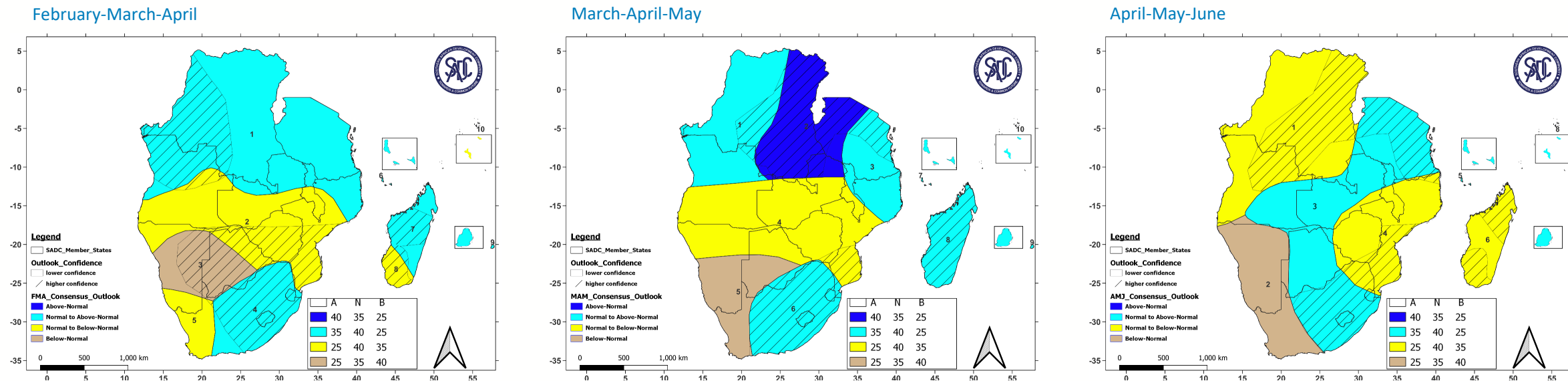
*Probability of MAM air temperature being above usual from ECMWF seasonal forecast, issued 6 Feb 2024.*



The long-range outlook continues to reflect the El Niño pattern of below-average rainfall and above average temperatures for most of the region, which is likely to lead to below-average harvests and reduced maize supply for next lean season. The above average air temperature will further exacerbate the areas with below average rainfall through evaporation.

The areas where above average rainfall is expected to continue, Tanzania, parts of Madagascar and DRC, are likely to have above average vegetation. However, the benefits of moisture brought by cyclones or floods may be outweighed by the damage caused and crop conditions could suffer.

# LONG RANGE OUTLOOK: SARCOF



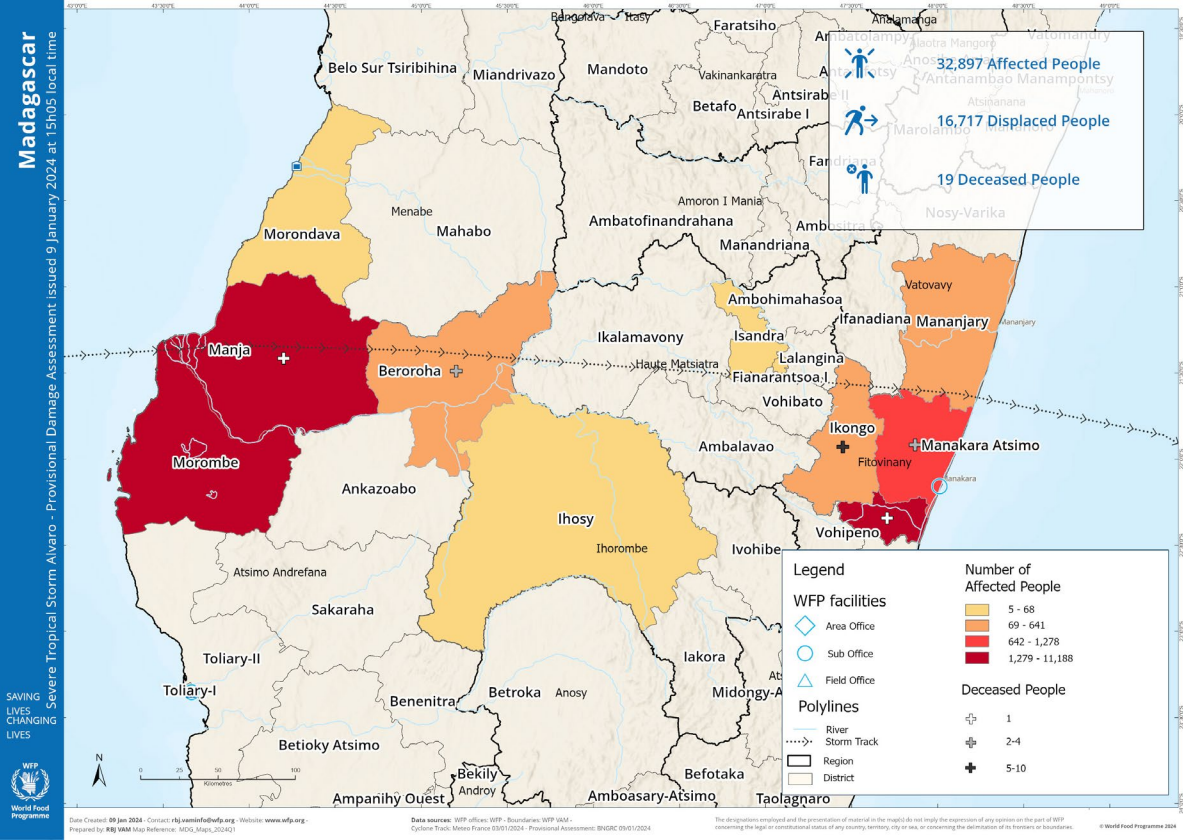
Left: Consensus-based Rainfall forecast for February to April; Centre: Consensus-based Rainfall forecast for March to May; Right: Consensus-based Rainfall forecast for April to June

The Twenty-Eighth Southern Africa Regional Climate Outlook Forum (SARCOF-28) was held in Maputo, Mozambique from 29 to 31 January 2024 to present a consensus outlook for the rest of the season.

For the February to April period, which is the most important period for crop conditions, SARCOF-28 concluded that the central and southwestern parts of the region are expected to receive normal to below-normal rainfall, with below normal rainfall in Botswana and Namibia, and southeastern and northern parts of the region are expected to receive normal to above-normal rainfall.

For the March to May period, SARCOF-28 concluded that eastern DRC, western Tanzania and northeastern Zambia would receive above-normal rainfall and western South Africa would receive below normal rainfall. For the April to June period, northwest Angola, DRC and Madagascar are expected to receive normal to below-normal rainfall and Zambia, Botswana and eastern Angola are expected to receive normal to above-normal rainfall. Notably, SARCOF-28 has forecasted that Zimbabwe, Namibia and western South Africa are expected to consistently receive normal to below-normal rainfall from February to June.

# CYCLONIC ACTIVITY



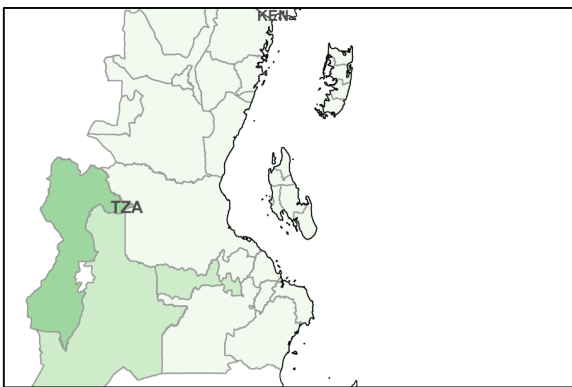
BNGRC provisional damage assessment; 9th January 2024

The cyclone season in the South West Indian Ocean (SWIO) has consisted of six named tropical systems: Alvaro, Belal, Candice, Anggrek, Djoungou and Eleanor.

Alvaro is the only tropical system to have made landfall on Madagascar and affected 33,000 people, displaced 17,000 and caused 19 deaths. In addition, an estimated 3,000 hectares of rice fields and 7,000 houses have been flooded, causing damage to livelihoods prospects. Belal, Candice and Eleanor affected the Mascarene Islands.

While below average cyclonic activity is expected overall this season, the forecast for cyclonic activity in the vicinity of Madagascar is near normal to above normal. Further tropical activity remains possible during the remaining month of the cyclone season.

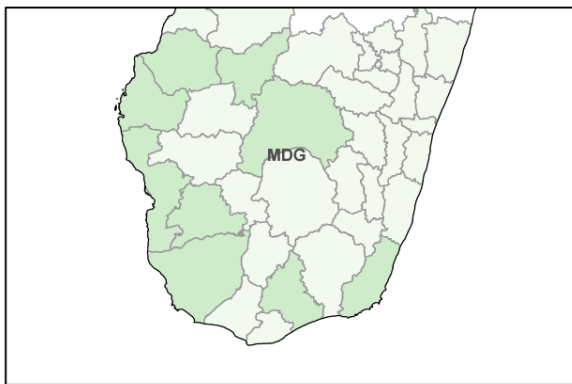
# FLOOD EVENTS – estimated cropland within flooded areas



Tanzania 17Nov23 35,826 hectares



Tanzania 10Feb23 57,335 hectares

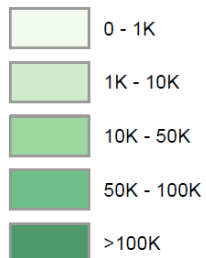


Madagascar 5Jan24 32,676 hectares



Madagascar 19Feb24 120,736 hectares

Estimated flooded  
cropland (has)



Republic of Congo 21Nov23 &  
5Jan24 239 hectares

The 2023/2024 season has brought flooding to the Southern Africa region. While abundant rainfall leads to favourable vegetation coverage, extreme rainfall events can cause crop damage.

Multiple flood events occurred in Tanzania, Republic of Congo, Madagascar. Zambia and DRC have experienced localised flooding.

In Tanzania, in addition to the flooding in November and February, heavy rainfall in Hanang district at the beginning of December triggered severe mudslides. In DRC and Republic of Congo, there was severe flooding in late December caused by the rising of the Congo River.

WFP ADAM satellite-based estimates of flood impacts suggest that there are approximately 200,000 hectares of cropland in areas affected by flooding since November 2023.

Depending on the strength of the flooding and the time of the planting, these flooding events may have negative consequences for the 2024 harvest in the affected countries.

FOR FURTHER INFORMATION:

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