



STATEMENT FROM THE TWENTY- NINTH SOUTHERN AFRICA REGIONAL CLIMATE OUTLOOK FORUM (SARCOF-29)

26 to 28 August 2024

Harare, Zimbabwe

STATEMENT FROM THE TWENTY-NINTH SOUTHERN AFRICA REGIONAL CLIMATE OUTLOOK FORUM (SARCOF-29) HELD AT RAINBOW TOWERS IN HARARE, ZIMBABWE, 26 – 28 AUGUST 2024.

SUMMARY

Bulk of the SADC region is likely to receive **normal to above-normal** rainfall for most of the period of October to December (OND) 2024 including Mauritius and central Madagascar, apart from north-western part of Democratic Republic of Congo where **above-normal** rainfall is expected. The remainder of the region is likely to **normal to below normal** rainfall during this period of the 2024/25 season including the island states of Comoros and Seychelles.

The period January to March (JFM) 2025 is expected to have **normal to above normal** rainfall for most of the region except for, south-western fringes of South Africa, south-eastern and western most of DRC, north-western Angola, Tanzania, northern Zambia, northern Malawi, northern Mozambique and central western tip of Madagascar where **normal to below-normal** rains are expected including Comoros and Seychelles. Northern Madagascar is likely to receive **above normal** rainfall during this period of the 2023/24 rainfall season.

Temperature outlook for the entire 2024/25 rainfall season are expected to be mostly above longterm averages over the whole SADC region.

STATEMENT FOR THE TWENTY-NINTH SOUTHERN AFRICA REGIONAL CLIMATE OUTLOOK FORUM (SARCOF-29)

The Twenty-Ninth Annual Southern Africa Regional Climate Outlook Forum (SARCOF-29) was held virtually from 26 to 28 August 2024 to present a consensus outlook for the 2024/2025 rainfall season over the SADC region. Climate Experts from the SADC National Meteorological and/or Hydrological Services (NMHSs) and the SADC Climate Services Centre (CSC) formulated this Outlook. Inputs were acquired from African Centre for Meteorological Application for Development (ACMAD) and Global Producing Centres (GPCs) namely, European Centre for Medium Range Weather Forecast (ECMWF), National Oceanic and Atmospheric Administration (NOAA), Beijing Climate Centre (BCC), Météo-

France, Australian Bureau of Meteorology (BoM), UK Met Office, Japan Meteorological Agency (JMA) and Korea Meteorological Agency (KMA). Inputs from International Research Institute for Climate and Society (IRI) and National Centre for Atmospheric Research (NCAR) were also used in this work. This Outlook covers the major rainfall season from October 2024 to March 2025. The Outlook is presented in overlapping three-monthly periods as follows: October-November-December (OND) 2024; November-December-January (NDJ), December-January-February (DJF) and January-February-March 2025.

NOTE: This Outlook is relevant only to seasonal (three-monthly) timescales and relatively large areas and may not fully account for all factors that influence sub-regional, country-level and local climate variability. As such, it must not be interpreted as indicating probable rainfall anomalies at sub-regional, country-level and local spatial scales, and at shorter - sub-seasonal (monthly) time scales.

Users are strongly advised to contact the National Meteorological and Hydrological Services for interpretation of this Outlook, additional guidance and updates.

METHODOLOGY

Using statistical analysis, other climate prediction schemes and expert interpretation, the climate scientists determined likelihoods of above-normal, normal, and below-normal rainfall for each area (Figures 1 to 3) for overlapping three-monthly periods i.e., October-November-December (OND), November-December-January (NDJ); and December-January-February (DJF) and . Above-normal rainfall is defined as rainfall lying within the wettest third of recorded rainfall amounts recorded over the 1981-2010 period; below-normal is defined as within the driest third of rainfall amounts and normal is the middle third, centred on the climatological mean. Figures 5(a), 5(b) and 5(c) show the Long-term (1981-2010) mean rainfall for October-November-December, November-December-January, and December-January-February seasons, respectively, over SADC countries.

The climate scientists took into account oceanic and atmospheric factors that influence the climate over the SADC region. These include the El Niño-Southern Oscillation (ENSO), which is currently in Neutral phase. The ENSO is projected to reach a weak La Nina phase during the forecast period. Another driver affecting SADC's regional climate - Indian Ocean

Dipole (IOD) is currently in a neutral phase and is forecasted to remain neutral throughout the 2024-2025 rainfall season.

OUTLOOK

The period October to March is the main period of interest for this outlook for Southern Africa. Owing to the differences and evolution patterns in the predominant rainfall-bearing systems, the rainy season has been subdivided into three overlapping three-month periods (i.e., OND, NDJ, DJF and JFM as defined below).

FIGURE CAPTION

It is emphasised that boundaries between zones should be considered as transition areas. Outlook information is provided only for countries that comprise the Southern Africa Development Community (SADC) region. The colours for each zone indicate four categories: above-normal, normal-to-above, normal-to-below and below-normal, differing in probabilities of rainfall in each of the three tercile categories (below normal, normal and above normal as per legend in the figure). The first colour (blue) indicates the highest probability of rainfall occurring in the above-normal tercile, the second colour (cyan) indicates the highest probability of normal rainfall, but with a tendency to above-normal rainfall. The third colour (yellow) represents the highest probability for normal but with a tendency to below-normal rainfall. The last colour (brown) indicates the highest probability of below-normal rainfall. For example, in Figure 1, for Zone 4 with the colour yellow, depicts that there is a probability of rainfall occurring in the normal-to-below-normal category.

OCTOBER-NOVEMBER-DECEMBER 20234

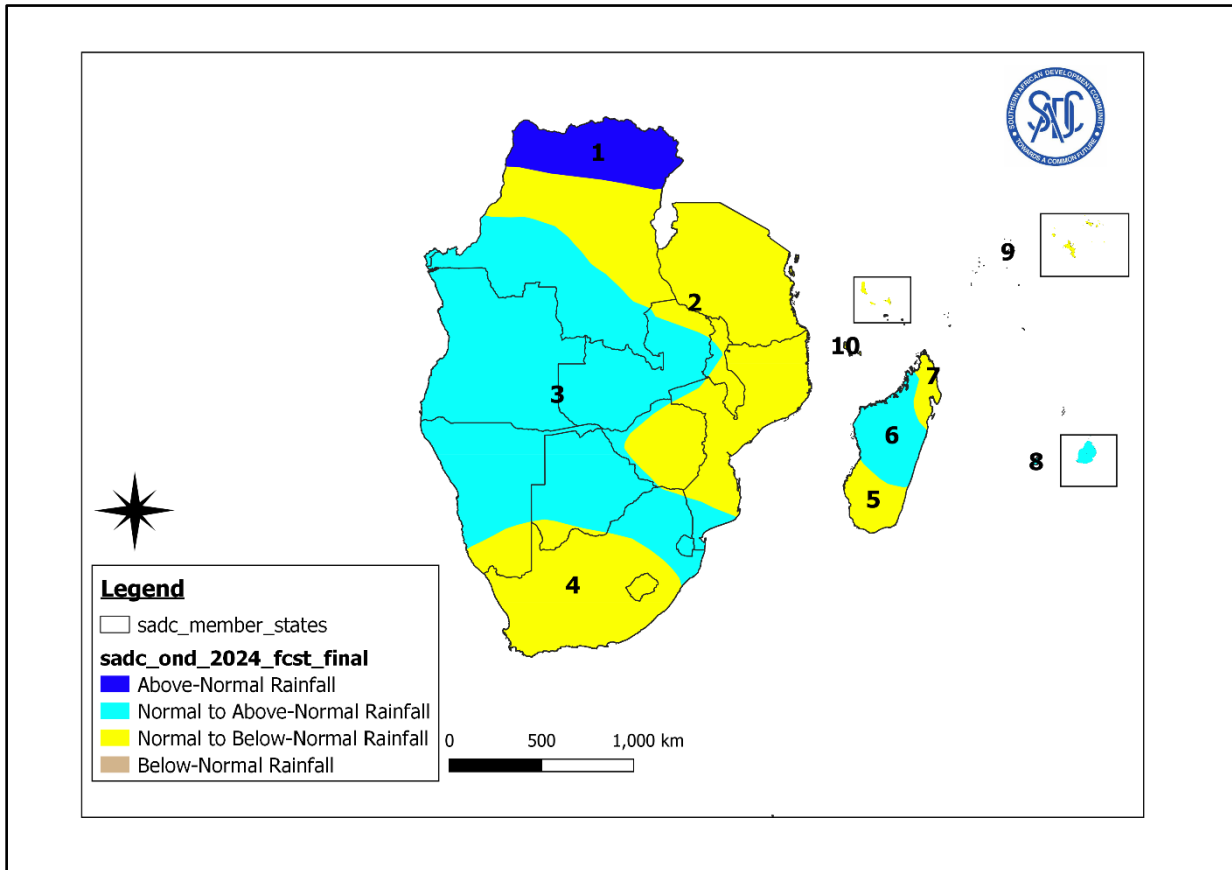


Figure 1: Rainfall forecast for October-November-December 2024

Zone 1: Northern Democratic Republic of Congo (DRC)
Increased chances of above-normal rainfall

Zone 2: Central DRC, northern fringes of Zambia, eastern most Malawi, Tanzania, most of Mozambique and Zimbabwe.
Increased chances of normal to below-normal rainfall

Zone 3: Southern DRC, Angola, most of Namibia, Zambia, Botswana, western fringes of Zimbabwe, north-eastern South Africa, southern Mozambique and eSwatini.
Increased chances of normal to above-normal rainfall

Zone 4: Southern Namibia, southern Botswana, most of South Africa and Lesotho.
Increased chances of normal to below-normal rainfall

Zone 5: Southern Madagascar.
Increased chances of normal to below-normal rainfall

Zone 6: Central Madagascar.
Increased chances of normal to above-normal rainfall

Zone 7: Northern Madagascar.
Increased chances of normal to below-normal rainfall

Zone 8: Mauritius.

Increased chances of normal to above-normal rainfall

Zone 9: Seychelles.

Increased chances of normal to below-normal rainfall

Zone 10: Comoros.

Increased chances of normal to below-normal rainfall

NOVEMBER-DECEMBER 2024-JANUARY 2025

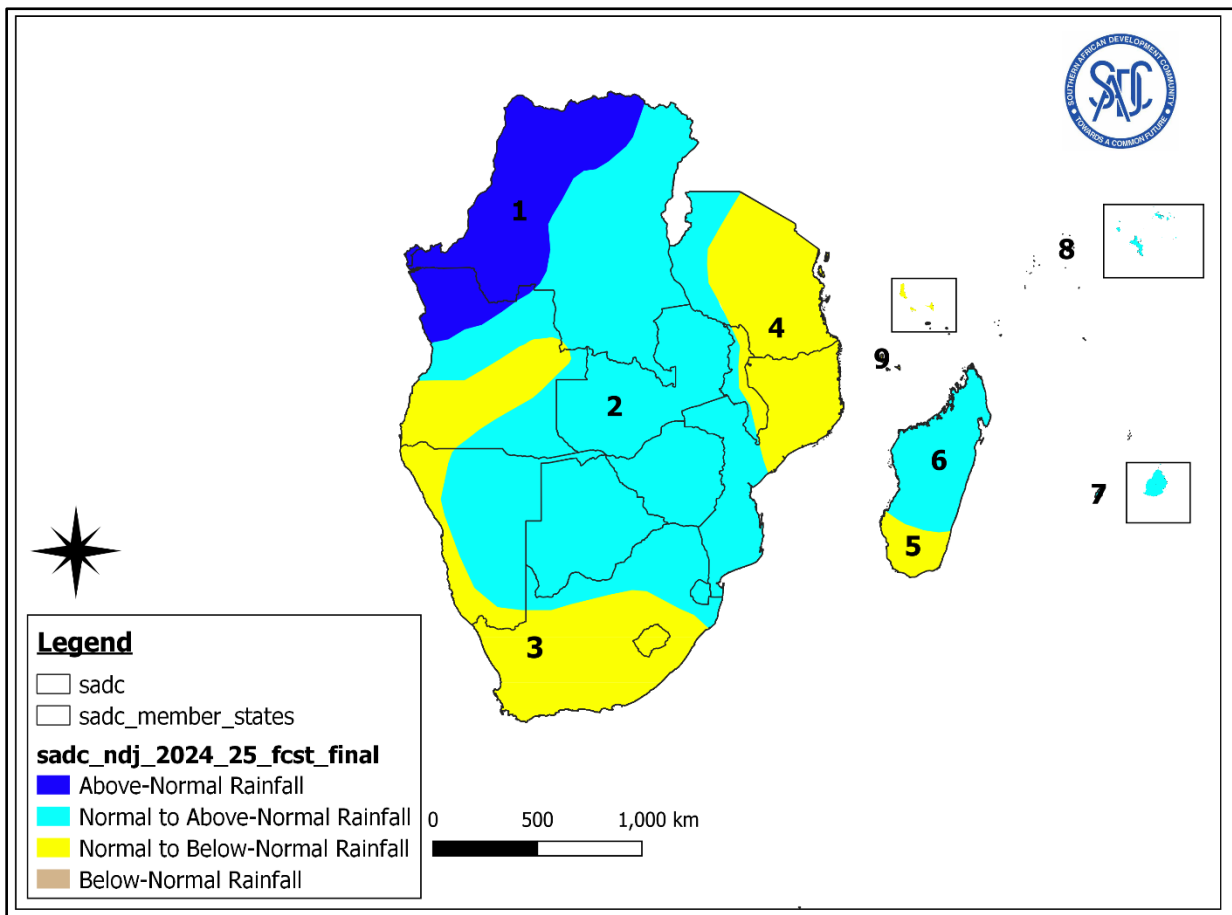


Figure 2: Rainfall forecast for November-December 2024-January 2025

Zone 1: Western DRC and north-western Angola.

Increased chances of above-normal rainfall

Zone 2: Central and southern Angola, eastern most DRC, North-western Tanzania, Zambia, Zimbabwe, Botswana, most of Namibia western Malawi, central to southern Mozambique, eSwatini and north-eastern South Africa.

Increased chances of normal to above-normal rainfall

Zone 3: Central to south-western Angola, western coastal Namibia, most of central South Africa and Lesotho.

Increased chances of normal to below-normal rainfall

Zone 4: Bulk of Tanzania, eastern Malawi and northern Mozambique.

Increased chances of normal to below-normal rainfall

Zone 5: Southern Madagascar.

Increased chances of normal to below-normal rainfall

Zone 6: Northern Madagascar.

Increased chances of normal to above-normal rainfall

Zone 7: Mauritius.

Increased chances of normal to above-normal rainfall

Zone 8: Seychelles.

Increased chances of normal to below-normal rainfall

Zone 9: Comoros.

Increased chances of normal to below-normal rainfall

DECEMBER 2024-JANUARY-FEBRUARY 2025

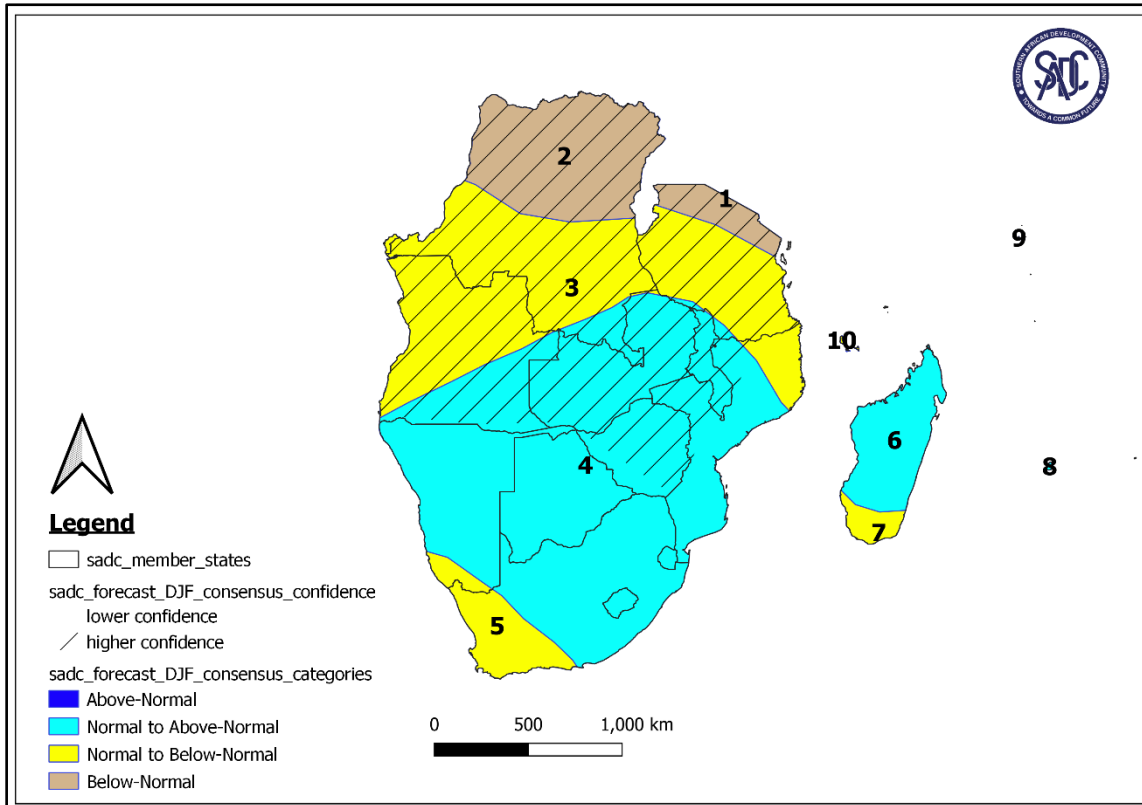


Figure 3: Rainfall forecast for December 2024-January-February 2025

Zone 1: Northern fringes of Tanzania.

Increased chances of below-normal rainfall

Zone 2: Northern DRC.

Increased chances of below-normal rainfall

Zone 3: Most of Tanzania, north-eastern Mozambique, northern tip of Malawi, southern most DRC and Angola.

Increased chances of normal to below-normal rainfall

Zone 4: South-eastern Angola, most of Namibia, Botswana, Zambia, Zimbabwe, Malawi, most of South Africa, Lesotho, eSwatini, and most of Mozambique.

Increased chances of normal to above normal rainfall

Zone 5: South-western Namibia and south-western South Africa.

Increased chances of normal to below-normal rainfall

Zone 6: Southernmost Madagascar.

Increased chances of normal to below-normal rainfall

Zone 7: Most of Madagascar.

Increased chances of normal to above-normal

Zone 8: Mauritius.

Increased chances of normal to above-normal rainfall

Zone 9: Seychelles.

Increased chances of normal to below-normal rainfall

Zone 10: Comoros.

Increased chances of normal to below-normal rainfall

JANUARY-FEBRUARY-MARCH 2025

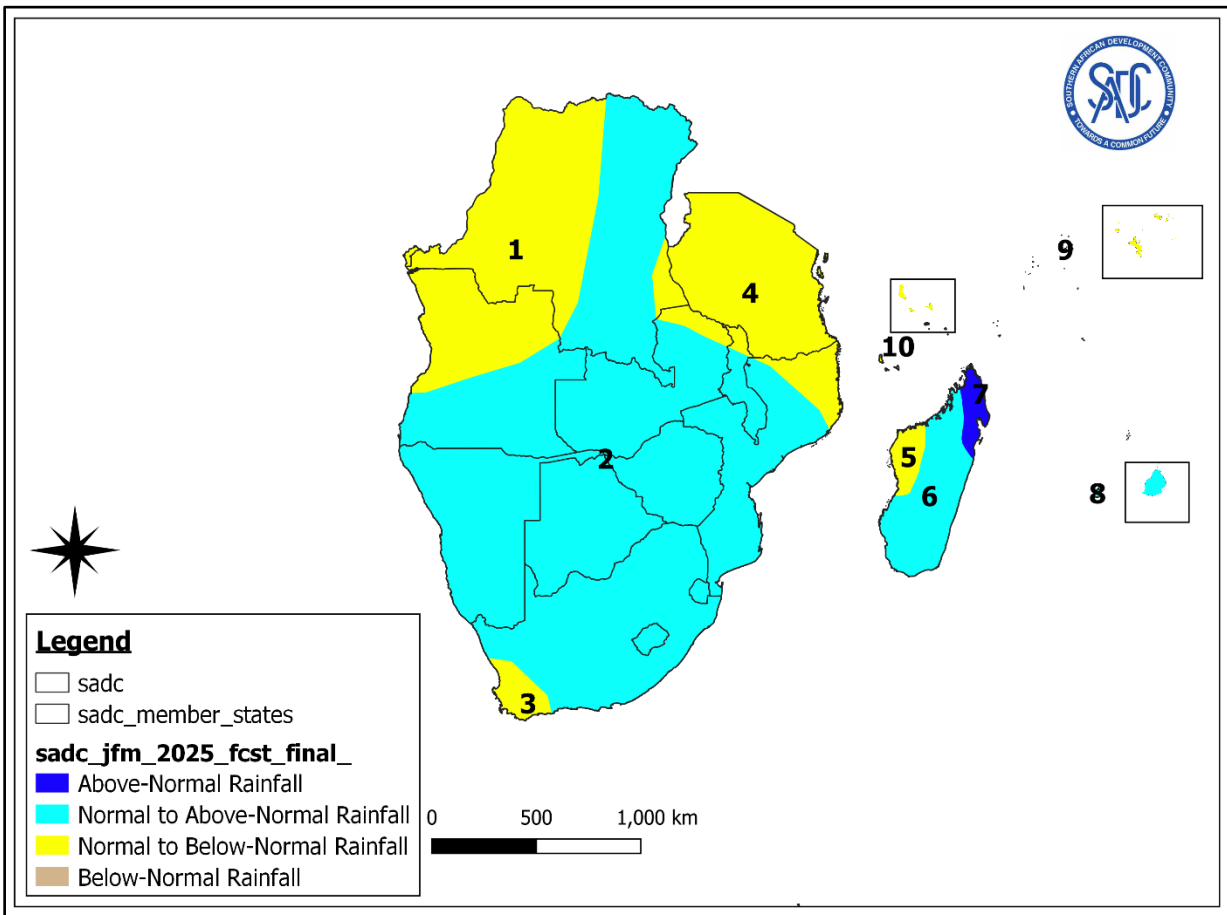


Figure 3: Rainfall forecast for January-February-March 2025

Zone 1: Western DRC and north western Angola.

Increased chances of normal to below-normal rainfall

Zone 2: Eastern DRC, southern Angola, most of Zambia, Malawi, Zimbabwe, Botswana, Namibia, most of South Africa, Lesotho, Eswatini and most of Mozambique.

Increased chances of normal to above-normal rainfall

Zone 3: South-western South Africa.

Increased chances of normal to below-normal rainfall

Zone 4: Tanzania, eastern fringes of DRC, northern fringes of Zambia, northern Malawi and northern Mozambique.

Increased chances of normal to below normal rainfall

Zone 5: Southernmost Madagascar.
Increased chances of normal to below-normal rainfall

Zone 6: Central Madagascar.
Increased chances of normal to above-normal rainfall

Zone 7: Northern Madagascar.
Increased chances of above-normal rainfall

Zone 8: Mauritius.
Increased chances of normal to above-normal rainfall

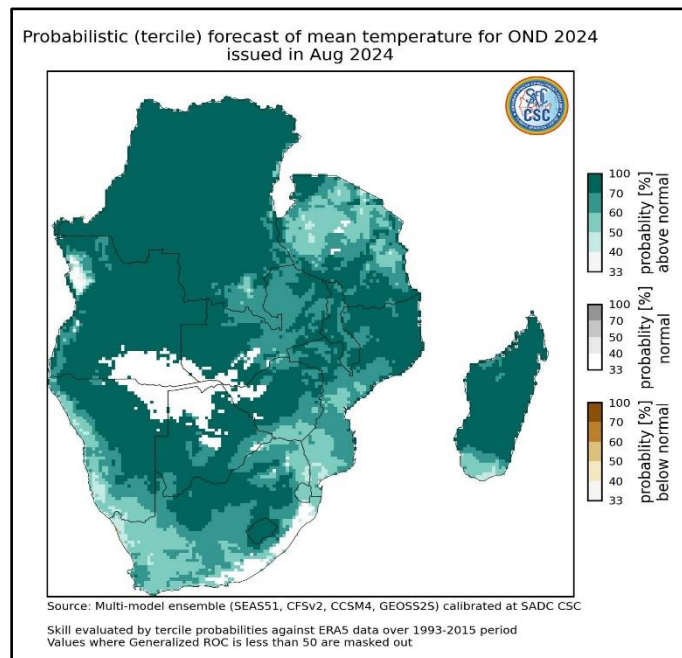
Zone 9: Seychelles.
Increased chances of normal to below-normal rainfall

Zone 10: Comoros.
Increased chances of normal to below-normal rainfall

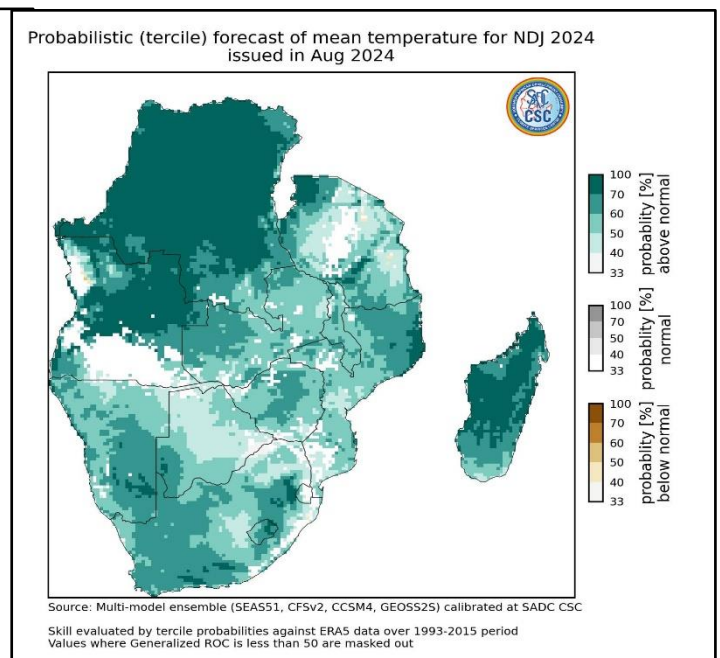
TEMPERATURE OUTLOOK

The period October to March is the main period of interest for this outlook for Southern Africa. Temperature outlook covering the period from October 2024 to January 2025 indicates a highly likelihood for above normal temperatures in most parts of the region.

OCTOBER-NOVEMBER-DECEMBER 2024



NOVEMBER-DECEMBER 2024-JANUARY 2025



GLOBAL PRODUCING CENTRES' (GPCS) OVERVIEW OF THE 2024/25 SEASON

The above presented outlook is broadly consistent with the forecasts generated with the multi-model ensemble of international dynamical climate forecast models presented by the World Meteorological Organization. In summary, increased probability of normal to above normal conditions is forecasted consistently across the October to March 2024/25 period for the central part of SADC region (Zambia, Botswana, Zimbabwe and central Mozambique) as well as small island states of Mauritius. Increased probability of normal to below normal conditions during the October to December (OND) period is forecasted for south-western Zambia, Zimbabwe, Botswana, and north-east South Africa. The areas with increased probability of below normal rainfall are expected to expand to cover northern DRC and northern Tanzania by the December to February (DJF) period. In the remaining areas, including Madagascar, dynamical models do not indicate increased probabilities of rainfall anomalies, suggesting likelihood of normal conditions. The ensemble has a demonstrated forecast skill in south-eastern parts of the SADC region, and over Tanzania and small island states, but limited elsewhere, including Madagascar. The forecasted probabilities are broadly consistent with the known influence of La Niña on the regional climate.

LONG-TERM MEDIAN RAINFALL (1981-2010)

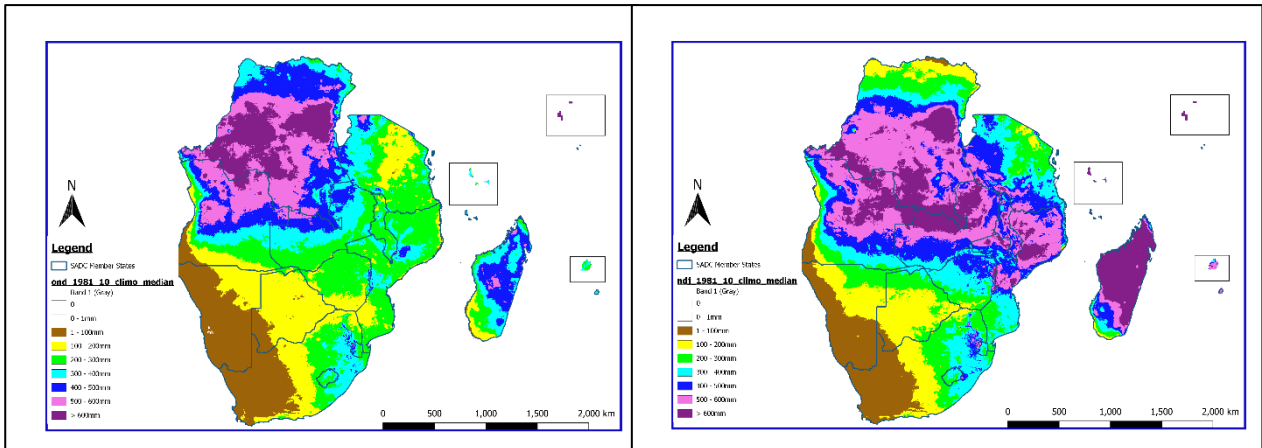


Figure 5, Long-term median rainfall over SADC countries (a) October-November-December (1981-2010), (b) November-December-January (1981-2010)

The long-term median rainfall for October-November-December (Figure 5(a)), increases from Southwest to Northeast over contiguous SADC in either case. Over Madagascar the rains increase from West to East, while the rains are more uniformly distributed in Comoros, Mauritius and Seychelles. The November- December-January long-term median total rainfall (Figure 5(b)) shows maxima of above 500 millimetres over much of Malawi, Zambia, Angola, southern half of DRC, central and Northern Mozambique as well as Mauritius, Madagascar and Seychelles. The remainder of the region receives rainfall less than 400 millimetres gradually decreasing south-westwards to southwest of South Africa and Namibia where the median rainfall is below 100 millimetres. The legend shows the amounts

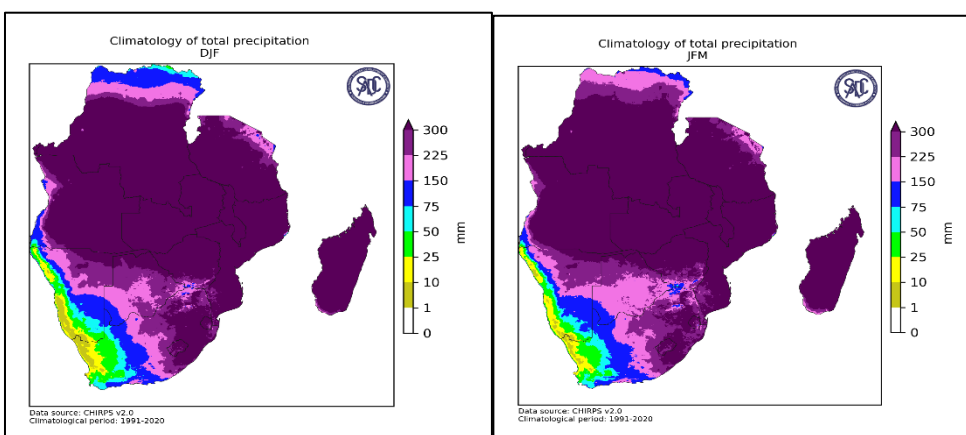


Figure 5, Long-term median rainfall over SADC countries (c) December-January-February (1991-2020)

The long-term median for December-January-February rainfall (Figure 5(c)) shows maxima of above 600 millimetres over much of Malawi, Zambia, Angola, southern half of DRC, central and northern Mozambique as well as Mauritius, Madagascar and Seychelles. The remainder of the region receives rainfall less than 400 millimetres gradually decreasing south-westwards to southwest South Africa and Namibia where the median rainfall is below 100 millimetres. For January-February-March rainfall (Figure 5(d)) shows maxima of above 600 millimetres over much of Malawi and upper parts the region.

SPONSORSHIP

The Twenty-Ninth Southern Africa Climate Outlook Forum was hosted with support from SADC Member States, the European Union through the Intra-ACP Climate Services, World Food Programme, UK Met Office Wiser Project and related Applications project, and other partners.