



STATEMENT FROM THE TWENTY THIRD ANNUAL SOUTHERN AFRICA REGIONAL CLIMATE OUTLOOK FORUM (SARCOF-23) HCTA, LUANDA, ANGOLA, 28 –30 AUGUST 2019.

SUMMARY

Bulk of SADC is likely to receive normal to above-normal rainfall for most of the period October to December (OND) 2019. However, northern Mozambique, southern Tanzania, Northern Malawi, northernmost Zambia, bulk of DRC, north-western half of Angola, northern Madagascar and Comoros are likely to receive normal to below-normal rainfall.

The January to March (JFM) 2020 period is likely to have normal to above normal rainfall for most parts of the region. However, the eastern half of Tanzania, eastern half of Botswana, westernmost parts of Namibia, bulk of South Africa, bulk of Mozambique, southern Malawi, eastern Lesotho, central Zambia, southernmost Madagascar, south-western most Angola, Eswatini and Zimbabwe are more likely to receive normal to below normal rainfall.

STATEMENT FOR THE TWENTY-THIRD ANNUAL SOUTHERN AFRICA REGIONAL CLIMATE OUTLOOK FORUM (SARCOF-23)

The Twenty Third Annual Southern Africa Regional Climate Outlook Forum (SARCOF-23) was held in Luanda, Angola from 28 to 30 August 2019 to present a consensus outlook for the 2019/2020 rainfall season over the SADC region. Climate scientists from the SADC National Meteorological and/or Hydrological Services (NMHSs), the SADC Climate Services Centre (CSC) formulated this Outlook. This Outlook covers the major rainfall season from October 2019 to March 2020. The Outlook is presented in overlapping three-monthly periods as follows: October-November-December (OND); November-December-January (NDJ); December-January-February (DJF); and January- February-March (JFM).

This SARCOF-23 Outlook Statement is relevant only to seasonal (overlapping three-monthly) time-scales and relatively large areas and may not fully account for all factors that influence regional and national climate variability, such as local and month-to-month variations (intra-seasonal). Consequently, ***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 4) for overlapping three-monthly periods i.e. October-November-December (OND), November-December-January (NDJ); December-January-February (DJF); and January- February-March (JFM). Above-normal rainfall is defined as rainfall lying within

the wettest third of recorded (30 years, that is, 1971 -2000 mean) rainfall amounts; below-normal is defined as within the driest third of rainfall amounts and normal is the middle third, centred on the climatological median. Figure 5 (a), 5(b), 5(c) and 5(d) show the Long-term (1971-2000) mean rainfall October-November-December, November-December-January, December-January-February and January-February-March season over SADC countries.

The climate scientists took into account oceanic and atmospheric factors that influence our climate over the SADC region, including the El Niño-Southern Oscillation (ENSO) which is currently in its neutral phase. The ENSO is projected to continue in the neutral phase during the entire forecast period. Additional inputs were considered from other global climate prediction centres 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), Famine Early Warning Systems Network (FEWSNET), International Research Institute for Climate and Society (IRI), Korea Meteorological Agency, Japan Meteorological Agency (JMA), National Centre for Atmospheric Research (NCAR) and UK Met Office.

OUTLOOK

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

FIGURE CAPTION

It is emphasized 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 the probabilities of rainfall in each of the three categories, below-normal, normal and above-normal. The first colour (blue) indicates the probability of rainfall occurring in the above-normal category, the second colour (cyan) is for normal to above-normal rainfall, while the third colour (yellow) represent the probability for normal to below-normal rainfall and the last colour (brown) is for below-normal rainfall. For example in Figure 1, for Zone 3 with the colour yellow, depicts that there is a high probability of rainfall occurring in the normal to below-normal category.

OCTOBER-NOVEMBER-DECEMBER 2019

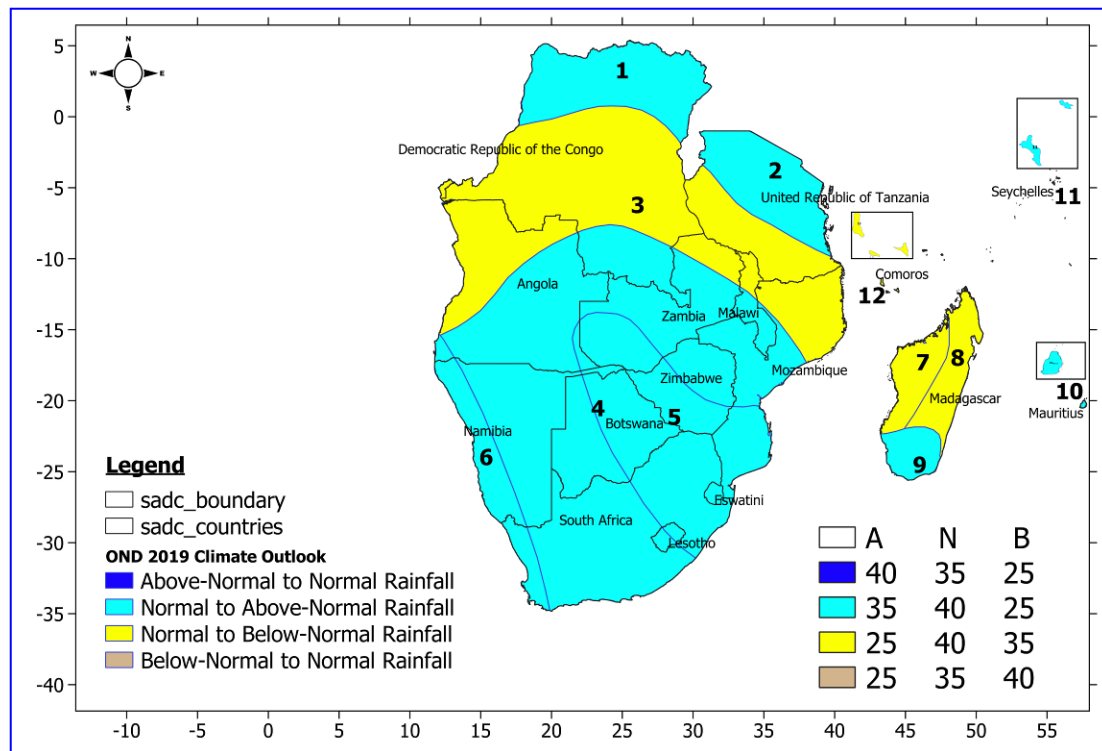


Figure 1: Rainfall forecast for October-November-December 2019

Zone 1: Northern Democratic Republic of Congo (DRC).

Increased chances of normal to above-normal rainfall

Zone 2: Northern Tanzania.

Increased chances of normal to above-normal rainfall

Zone 3: Northern Mozambique, Southern Tanzania, northern Malawi, northernmost Zambia, bulk of DRC and north-western half of Angola.

Increased chances of normal to below-normal rainfall

Zone 4: Central Mozambique, southern Malawi, northern half of Zimbabwe, most of Zambia, southernmost DRC, south-eastern half of Angola, bulk of Namibia, western half of Botswana, most of central and western parts of South Africa, western parts of Lesotho.

Increased chances of normal to above-normal rainfall

Zone 5: Extreme south-western Zambia, Caprivi area, south-easternmost Angola, south-western half of Zimbabwe, eastern half of Botswana, most of northern South Africa, eastern Lesotho, Eswatini, and southern Mozambique.

Increased chances of normal to above-normal rainfall

Zone 6: South-western most Angola and western coastal areas of Namibia and South Africa.

Increased chances of normal to above-normal rainfall

Zone 7: Western Madagascar.

Increased chances of normal to below-normal rainfall

Zone 8: Eastern Madagascar.

Increased chances of normal to below-normal rainfall

Zone 9: Southern Madagascar

Increased chances of normal to above-normal rainfall

Zone 10: Mauritius.

Increased chances of normal to above -normal rainfall

Zone 11: Seychelles.

Increased chances of normal to above-normal rainfall

Zone 12: Comoros.

Increased chances of normal to below-normal rainfall

NOVEMBER-DECEMBER 2019-JANUARY 2020

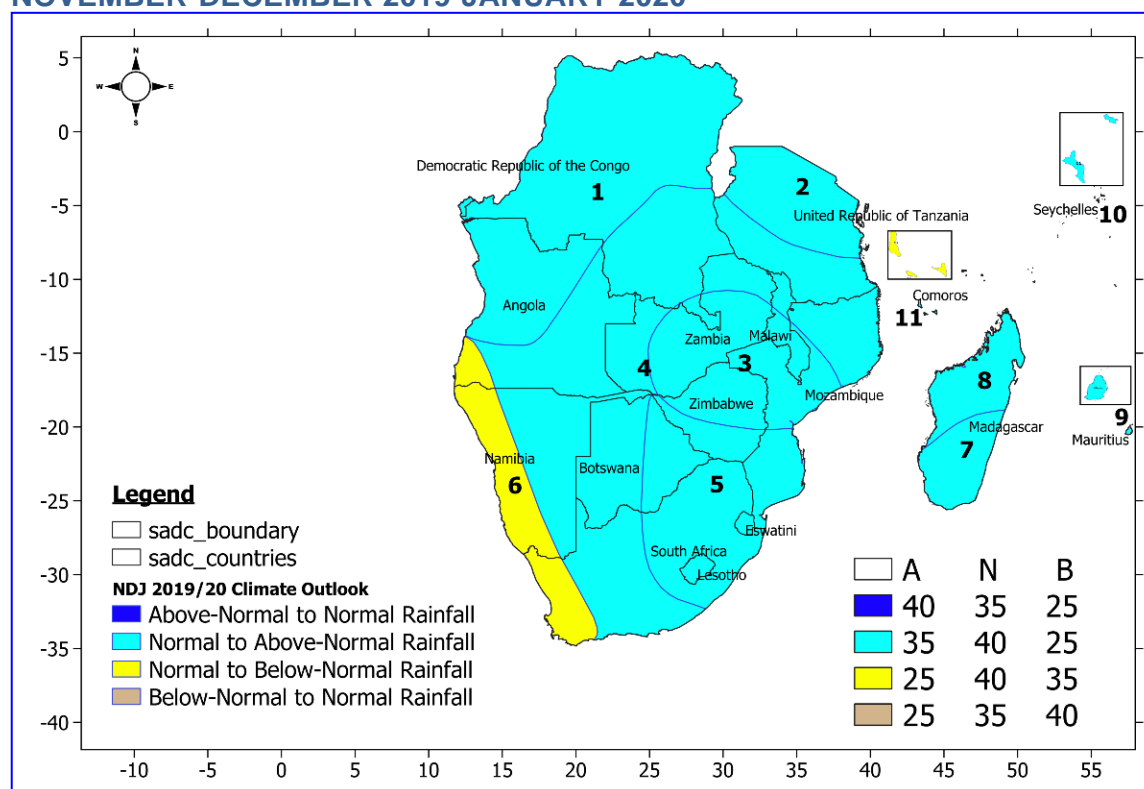


Figure 2: Rainfall forecast for November-December 2019-January 2020

Zone 1: Bulk of DRC and northernmost Angola.

Increased chances of normal to above-normal rainfall

Zone 2: Northern half of Tanzania.

Increased chances of normal to above-normal rainfall

Zone 3: Northern Mozambique, southern half Tanzania, northern Malawi, eastern Zambia, southern DRC, bulk of Angola, most of Namibia, western half of Botswana, most of central and western parts of South Africa.

Increased chances of normal to above-normal rainfall

Zone 4: Central parts of Zambia, southern Malawi, northern half of Zimbabwe and central parts of Mozambique.

Increased chances of normal to above-normal rainfall

Zone 5: Southern half of Zimbabwe, eastern half of Botswana, north and central South Africa, Lesotho, Eswatini and southern Mozambique.

Increased chances of normal to above-normal rainfall

Zone 6: South-westernmost Angola, western fringes of Namibia and South Africa.

Increased chances of normal to below-normal rainfall

Zone 7: Western of Madagascar.

Increased chances of normal to above-normal rainfall

Zone 8: Southernmost Madagascar.

Increased chances of normal to above-normal rainfall

Zone 9: Mauritius.

Increased chances of normal to above-normal rainfall

Zone 10: Seychelles.

Increased chances of normal to above-normal rainfall

Zone 11: Comoros.

Increased chances of normal to above-normal rainfall

DECEMBER 2019-JANUARY-FEBRUARY 2020

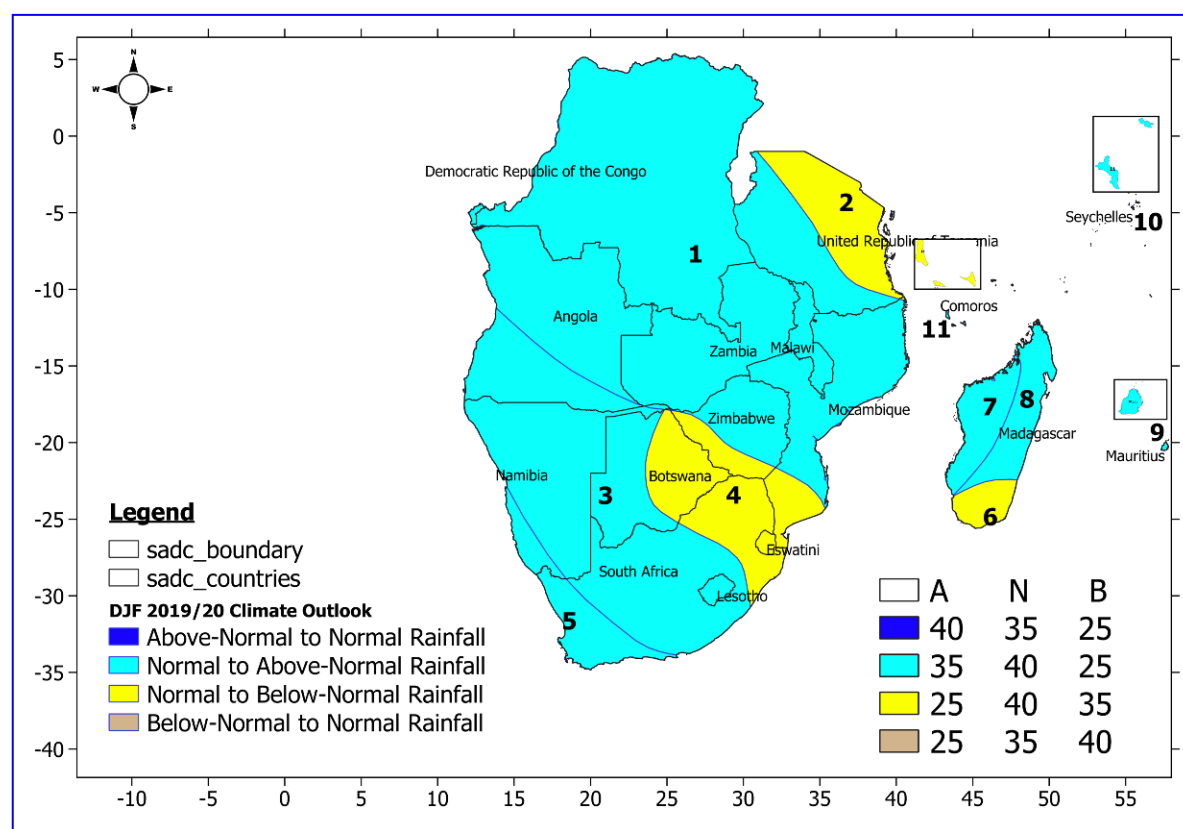


Figure 3: Rainfall forecast for December 2019-January-February 2020

Zone 1: DRC, Zambia, Malawi, bulk of Angola, most of Zimbabwe, greater part of Mozambique and western half of Tanzania.

Increased chances of normal to above-normal rainfall

Zone 2: Eastern half of Tanzania.

Increased chances of normal to below-normal rainfall

Zone 3: South-western Angola, most of Namibia, western half of Botswana, most of central and western parts of South Africa and Lesotho.

Increased chances of normal to above-normal rainfall

Zone 4: Southern third of Zimbabwe, eastern half of Botswana, north and central South Africa, Eswatini and southern Mozambique.

Increased chances of normal to below-normal rainfall

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

Increased chances of normal to above-normal rainfall

Zone 6: Southernmost Madagascar.

Increased chances of normal to below-normal rainfall

Zone 7: western Madagascar.

Increased chances of normal to above-normal rainfall

Zone 8: east-most of Madagascar.

Increased chances of normal to above-normal rainfall

Zone 9: Mauritius.

Increased chances of normal to above-normal rainfall

Zone 10: Seychelles.

Increased chances of normal to above-normal rainfall

Zone 11: Comoros.

Increased chances of normal to above-normal rainfall

JANUARY-FEBRUARY-MARCH 2020

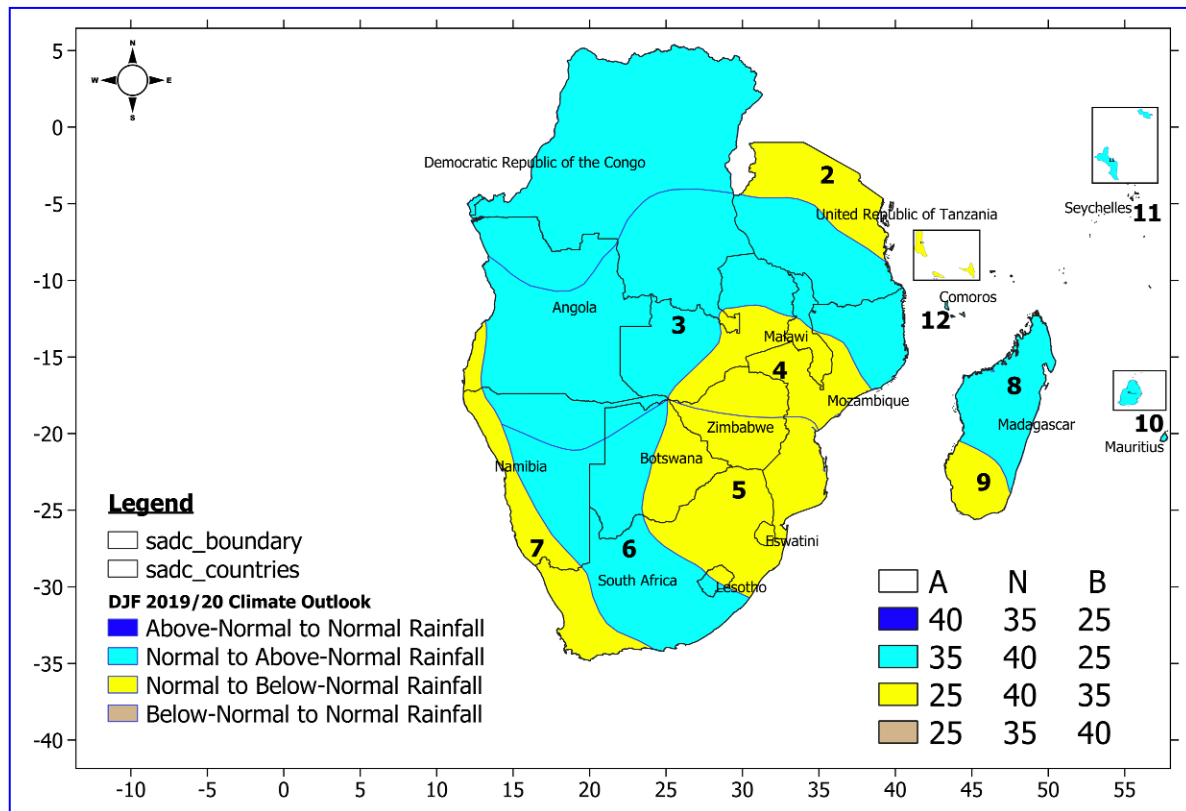


Figure 4: Rainfall forecast for January-February-March 2020

Zone 1: Bulk of DRC and northernmost Angola.

Increased chances of normal to above-normal rainfall

Zone 2: Northernmost Tanzania.

Increased chances of normal to below-normal rainfall

Zone 3: Northern Mozambique, bulk of Tanzania, northern Malawi, northern and western Zambia, bulk of Angola, south eastern DRC, north-western tip of Botswana and northernmost Namibia.

Increased chances of normal to above-normal rainfall

Zone 4: Central Mozambique, southern Malawi, central Zambia and northern half of Zimbabwe.

Increased chances of normal to below-normal rainfall

Zone 5: Southern Mozambique, southern half of Zimbabwe, eastern half of Botswana, central and northern South Africa, Eswatini and eastern Lesotho.

Increased chances of normal to below-normal rainfall

Zone 6: Western half of Botswana, central to southern Namibia, western Lesotho and central South Africa.

Increased chances of normal to above-normal rainfall

Zone 7: South-western tip of Angola, western fringes of Namibia and South Africa.

Increased chances of normal to below-normal rainfall

Zone 8: Central and Northernmost Madagascar.

Increased chances of normal to above-normal rainfall

Zone 9: Southernmost Madagascar.

Increased chances of normal to below-normal rainfall

Zone 10: Mauritius.

Increased chances of normal to above-normal rainfall

Zone 11: Seychelles.

Increased chances of normal to above-normal rainfall

Zone 12: Comoros.

Increased chances of normal to above-normal rainfall

LONG-TERM RAINFALL MEANS

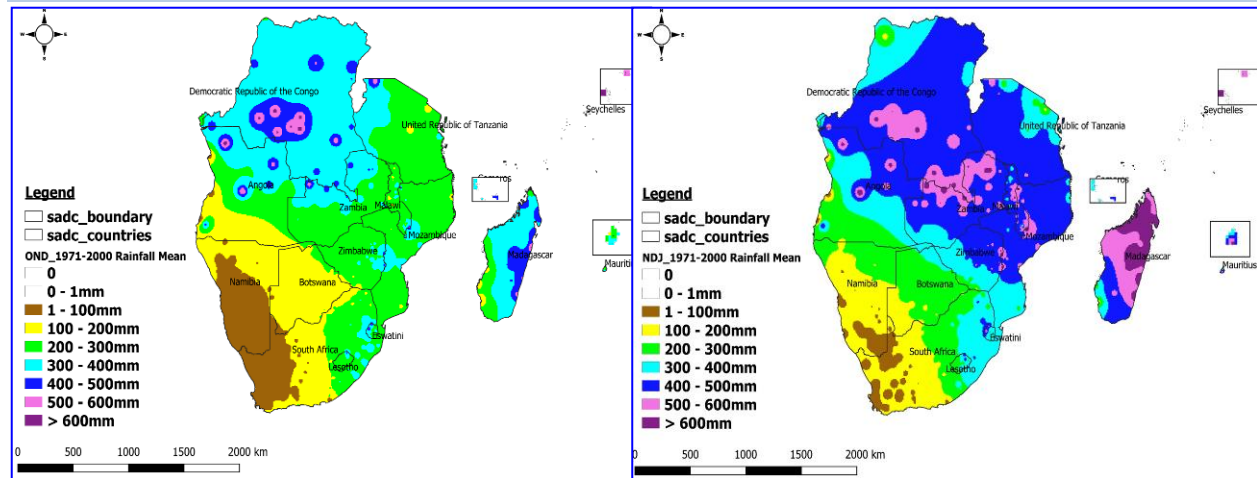


Figure 5, Long-term mean rainfall over SADC countries (a) October-November-December (1971-2000), (b) November-December-January (1971-2000)

The long-term mean 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 mean 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 mean rainfall is below 100 millimetres. The legend shows the amounts

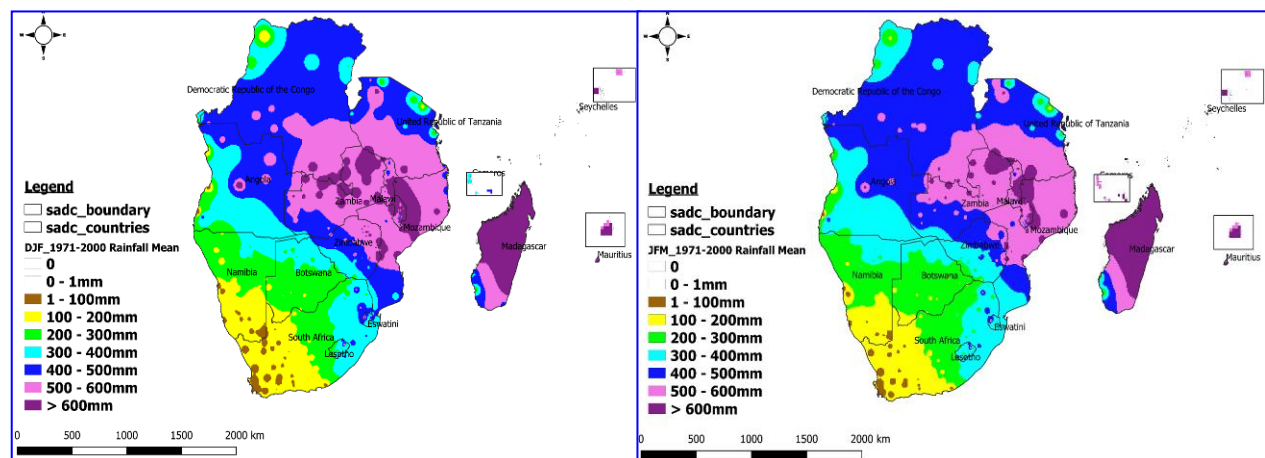


Figure 5, Long-term mean rainfall over SADC countries (c) December-January-February (1971-2000) and (d) January-February-March (1971-2000)

The long-term mean 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 mean rainfall is below 100 millimetres. The January-February-March (Figure 5(d)) shows a significant reduction in the rainfall received in most of the southern parts of the region with the central and eastern parts remaining wet. Mauritius shows sustained rainfall pattern, while Madagascar shows an increase of rainfall in most parts except the extreme south western parts of the country.

SPONSORSHIP

The Twenty-Third Annual Southern Africa Climate Outlook Forum was hosted by the Angola's *Instituto Nacional de Meteorologia e Geofísica*. Support was provided by Government of the Republic of Angola, SADC Member States, European Union through the African Development Bank, and other partners.