SOUTHERN AFRICAN DEVELOPMENT COMMUNITY
CLIMATE SERVICES CENTRE

MONTHLY CLIMATE BULLETIN

Bulletin Period: JANUARY 2019

1. INTRODUCTION

The monthly climate watch bulletin was prepared with products generated using Africa Rainfall Climatology version 2 data (ARC2) for rainfall and African Flood and Drought Monitor dataset (AFDM) for temperature. This bulletin provides an analysis of the climate conditions that were experienced in the Southern African Development Community (SADC) during January 2018. It reviews the total rainfall experienced together with the departure from long term average and the minimum and maximum temperatures and their respective anomalies.

2. HIGHLIGHTS

Heavy rainfall was observed over the eastern parts of the region over with significant amounts received over most parts of the region with little to no rainfall received over the south western half of the region. Rainfall performance as compared to the long-term mean was normal to below normal over most of the region with the northern tip and south eastern parts of the region (Figures 1 & 2).

The region experienced warm maximum temperatures with highs recorded over southern central parts of the region. The maximum temperatures were fairly warmer than the long-term mean over the bulk of the region with the coastal areas experiencing cooler than the long-term mean. The minimum temperatures for this month did not change much from those of December 2018, with the bulk of the region experiencing warm temperatures ranging from 20 ^{o}C to 22 ^{o}C and cool minimum temperatures ranging from 15.0 ^{o}C to 17.5 ^{o}C observed over southern tip and some parts of northern central areas of the region.

3. RAINFALL ANALYSIS

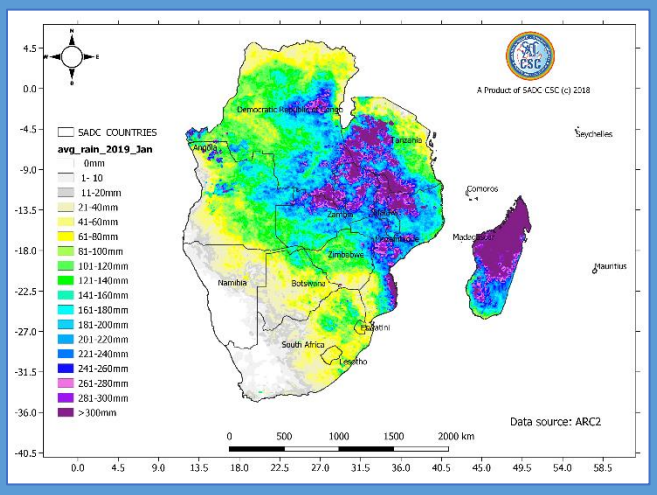

Figure 1: distribution of rainfall for January 2018 (Data source:ARC2)

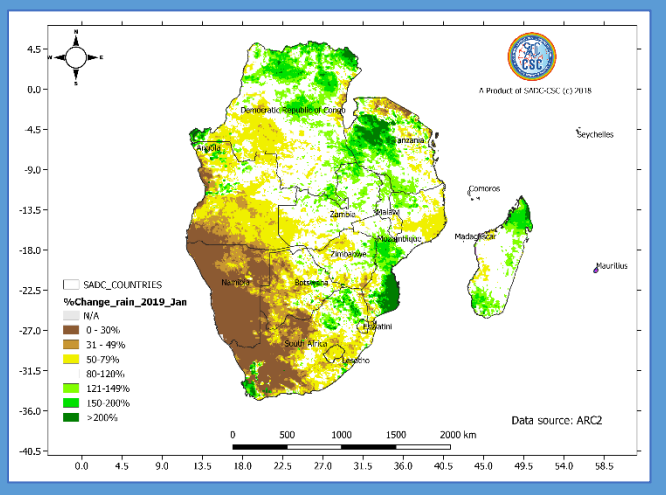

Figure 2: percentage change from long-term average (1983-2012) rainfall for January 2018 (Data source:ARC2)

Heavy rainfall amounts of greater than 300 mm were observed over eastern parts of DRC, western parts of Tanzania, Malawi, eastern half of Zambia, most of central Mozambique, Comoros, bulk of Madagascar, Mauritius and Seychelles. Amounts of less than 20 mm to no rainfall was observed over most of Namibia, western parts of South Africa and south western parts of Botswana, the rest of the region received amounts of 100 mm. Rainfall performance over the south eastern parts of the region covering most of Namibia, western half of South Africa and Botswana was below normal with normal to below normal conditions experienced over most of Angola, south western parts of DRC, western Zambia, eastern Botswana, Zimbabwe, eastern South Africa, Lesotho, Eswatini and northern Mozambique. The rest of the region experienced normal to above normal rainfall with the southern coast of Mozambique receiving above normal rainfall.

4. TEMPERATURE ANALYSIS

REVIEW OF LAST 30 DAYS

MAXIMUM TEMPERATURE

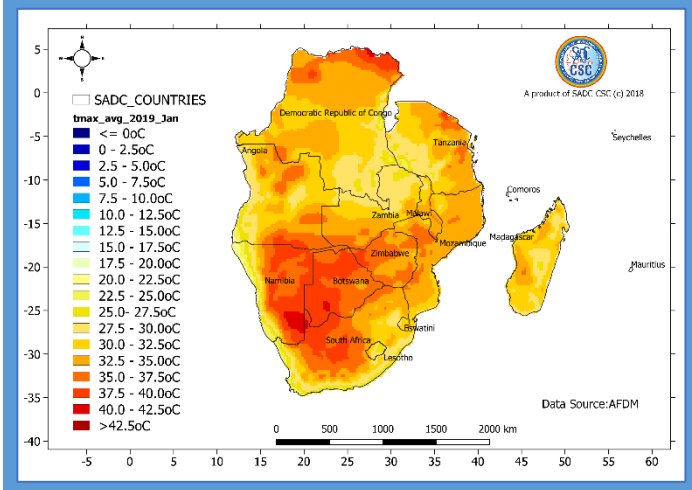

Figure 3: average maximum temperature for January 2018 (Data source AFDM)

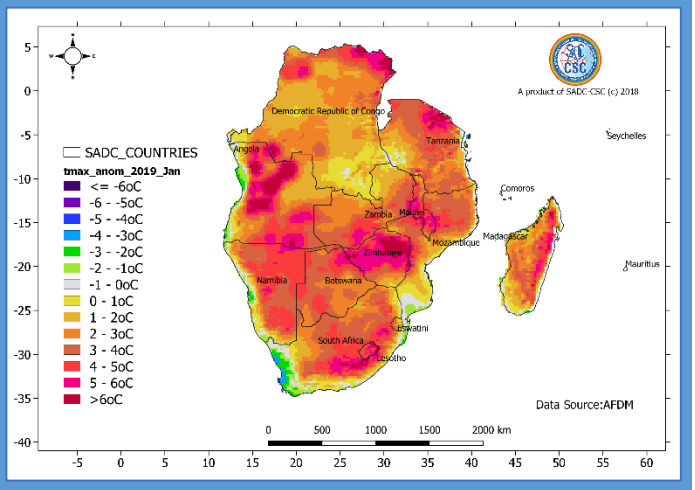

Figure 4: difference from long-term average (1981-2010) maximum temperature for January 2018 (Data source: AFDM)

The bulk of the region experienced warm maximum temperatures ranging from 22.5 ºC to 30.0 ºC with high temperatures of 32.5 ºC to 40.0 ºC recorded over the northern tip of DRC, eastern half of Namibia, bulk of Botswana, eastern Zimbabwe and some parts of central South Africa. The maximum temperatures were fairly warmer than the long-term mean over the bulk of the region with the coastal areas experiencing cooler than the long-term mean.

MINIMUM TEMPERATURE

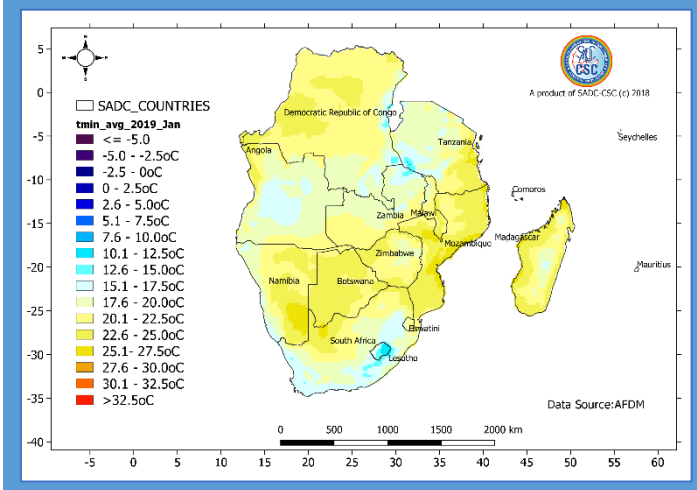

Figure 5: average minimum temperature for January 2018 (Data source AFDM)

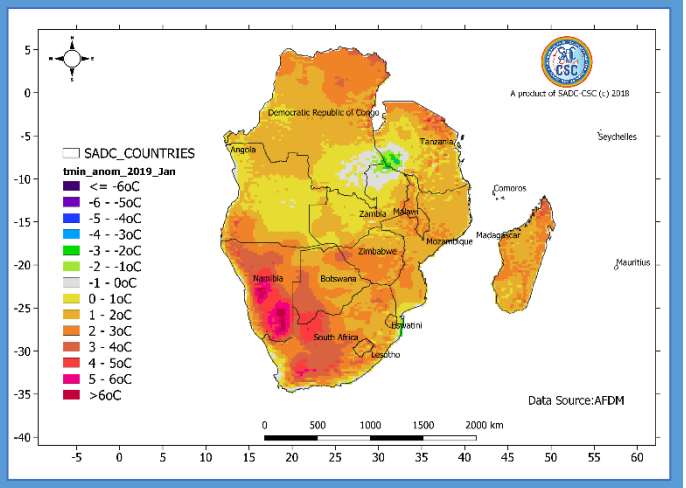

Figure 6: difference from long-term average (1981-2010) minimum temperature for January 2018 (Data source: AFDM)

The minimum temperatures for this month did not change much from those of December 2018, with the bulk of the region experiencing warm temperatures ranging from 20 ^{o}C to 22 ^{o}C which covered most of DRC, south western Zambia, Malawi, eastern Tanzania, most of Zimbabwe, Botswana, Namibia, some parts of northern Southern Africa, bulk of Mozambique, Comoros, Madagascar, Mauritius and parts of Seychelles. Cool minimum temperatures ranging from 15.0 ^{o}C to 17.5 ^{o}C observed over western Tanzania, eastern parts of Zambia, southern tip of DRC, bulk of Angola, western coasts of Namibia, most of South Africa and Lesotho. The bulk of the region experienced fairly warmer than average minimum temperatures ranging from 0 ^{o}C to 1 ^{o}C with south eastern tip of DRC, north eastern Zambia, and parts of south western Tazania experiencing below normal minimum temperatures.

5. CLIMATE OUTLOOK

FORECAST FOR THE NEXT 30 DAYS

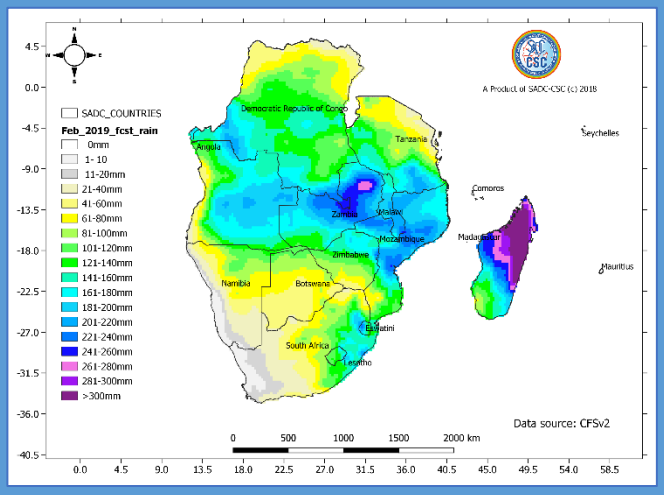

Figure 7: total rainfall forecast for February 2019 (Data source CFSv2)

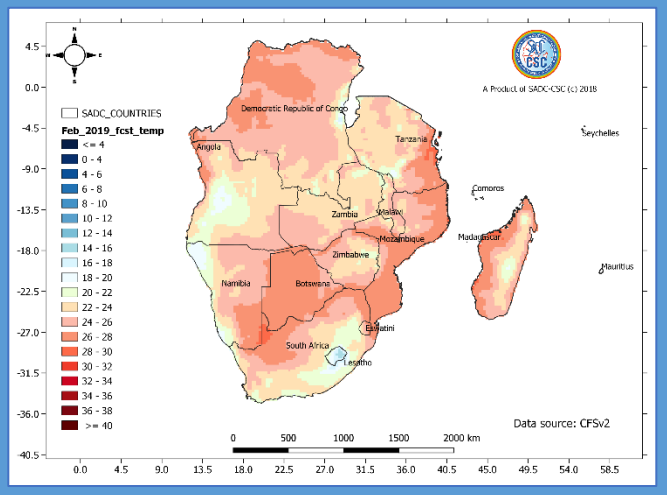

Figure 8: mean temperature forecast for February 2019 Data Source: CFSv2)

The month of rainfall is expected to have good amounts of rainfall with the central and eastern parts of the region likely to have more than 220 mm of rainfall and heavy amounts likely over northern Madagascar. Southern and northern parts of the region are likely to experience moderate amounts of rainfall greater than 100 mm while little to no rainfall will be likely over the south western coast of the region.

Warm temperatures ranging from 24 ^{o}C to 28 ^{o}C are likely to be experienced over central to eastern parts of the region with mild temperatures of 20 ^{o}C to 22 ^{o}C to be experienced over the western and south eastern parts of the region from 1st to 28th February as shown by Figure 8.

This bulletin was produced with financial assistance from the African Development Bank through the Southern African Regional Climate Information Services for Disaster Resilience Development (SARCIS-DR) Project, which is part of the continent-wide Satellite and Weather Information for Disaster Resilience in Africa (SAWIDRA) Program.

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