



INTRA-ACP CLIMATE SERVICES AND RELATED APPLICATIONS PROGRAMME

SOUTHERN AFRICAN DEVELOPMENT COMMUNITY

CLIMATE SERVICES CENTRE (SADC-CSC)

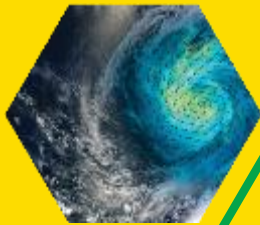
REGIONAL CLIMATE MONTHLY MONITOR

REPORTING MONTH: JUNE 2024

ISSUE NO. 10

YEAR: 2024

ISSUE DATE: 18 JULY 2024



FINANCIAL RESOURCES



European Union

TECHNICAL PARTNERS



ClimSA

INTRA-ACP CLIMATE SERVICES AND RELATED APPLICATIONS PROGRAMME



An initiative of the Organisation of African, Caribbean and Pacific States funded by the European Union



BENEFICIARIES



A. HIGHLIGHTS

- **Rainfall during the month of May 2024 was well below the monthly long-term average** over most of the contiguous SADC region, except over extreme north of DRC, and northern parts of Tanzania where above average rainfall was observed.
 - **Persistent long term drought conditions continued** over much of the central and western parts of the sub-continent. Parts of southern Madagascar also experienced moderately dry conditions.
 - The **minimum temperature anomalies** were mostly close to slightly above the long-term average over most of the SADC region.
 - Positive **maximum temperatures anomalies of 2-4°C above average**, were recorded almost everywhere within the subcontinent, during the month of May 2024.
 - Almost 30 **days of daytime heat wave conditions were observed** in May over most of the southern part of the SADC region, and the northernmost part that encompasses the DRC. This was also noted over patchy areas of the western part of Madagascar.
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1. REGIONAL RAINFALL PERFORMANCE

The rainfall during the month of June 2024 was well below the monthly long-term average over most of the western parts of the SADC region, except over patchy parts of the of the southern DRC and central Namibia, where above normal rainfall was observed. Most of the eastern parts of SADC, located in South Africa, Zimbabwe, parts of Mozambique, Tanzania and central Madagascar, received precipitation above normal, [Figure 1]. This pattern matches very well with the winter conditions, a season known to be dry in most parts of the subcontinent.

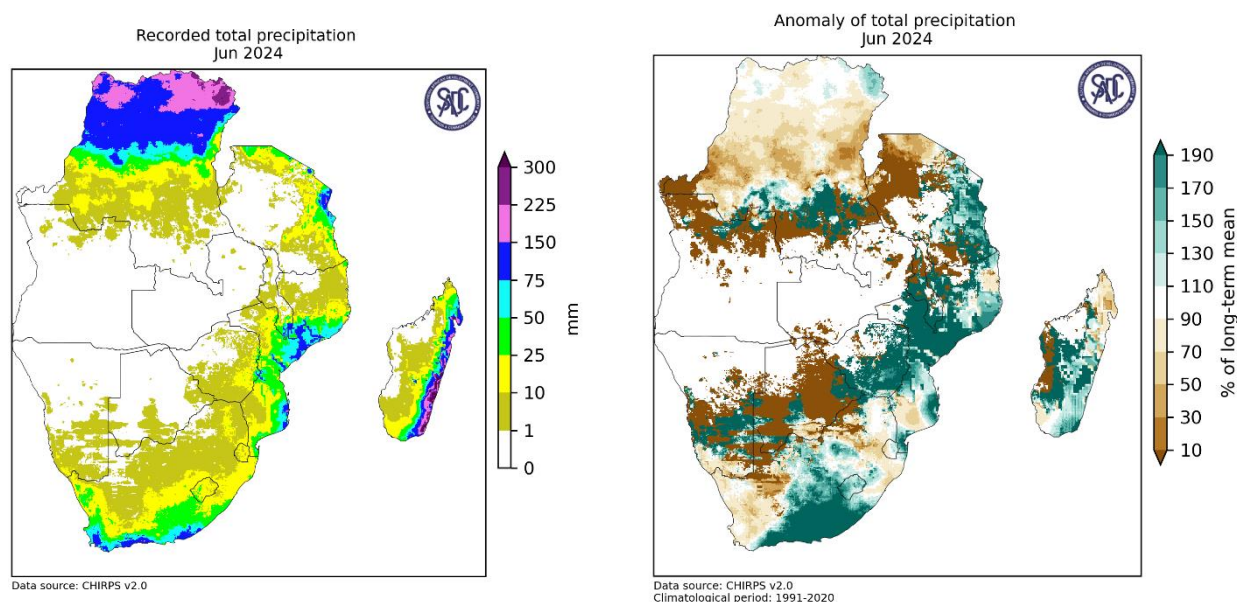


Figure 1: Observed rainfall (left) and rainfall anomaly (right) for the month of June 2024

1.1 Drought Monitoring

1.1.1 Seasonal and Annual Drought Assessment

Persistent drought conditions, defined by 12-month SPI (SPI-12) were prevalent over much of the region, with extremely dry conditions over the western fringes of Namibia, central parts of Angola and DRC and the northeaster parts of Mozambique, as well as the Island of Madagascar. Moderate to very wet conditions were observed in parts northern Zambia and most of Tanzania. Overall, the subcontinent experienced moderately dry conditions with exception of central Angola and DRC, western Namibia and parts of northern Mozambique, [Figure 2 left].

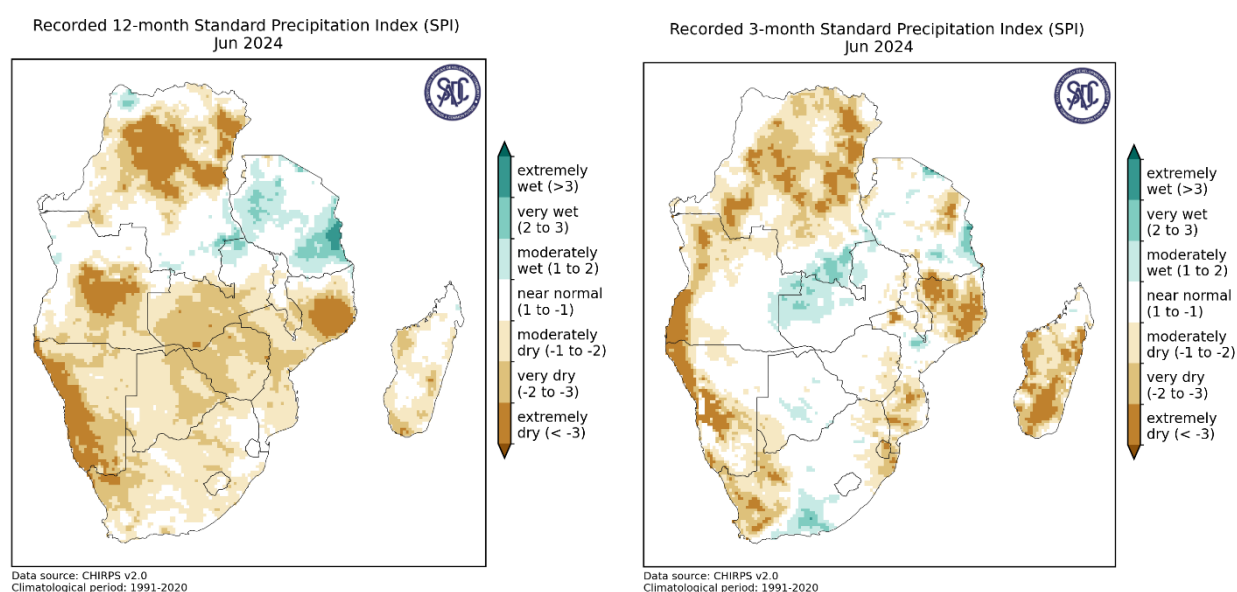


Figure 2: Drought assessment: SPI for 12-months (left) and 3-months SPI (right)

The 3-month Standardized Precipitation Index (SPI-3) is a meteorological drought indicator to monitor precipitation anomalies over 3-month accumulation periods and is a proxy indicator for immediate impacts of droughts including reduced soil moisture. Near normal to moderately dry condition dominated the whole region according to the (SPI-3) Index, with very dry to extremely dry conditions observed over the westernmost fringes of Namibia and Angola, parts of central DRC and the northern Mozambique, and almost the whole of Madagascar. By contrast, moderately wet to very wet conditions were observed south of South Africa, tiny areas of Central Botswana, west Zambia, southeast DRC and within patchy areas in Tanzania.

1.1.2 Short term drought (dry spells)

Figure 3, shows that consecutive number of dry days ranging from 25 to 30 were recorded over most of the subcontinent in June, highlighting the winter patterns within the region, which is known to be dry in this season. The northern part of the region covering minor areas of northern Angola, the northern half of DRC, the north and eastern parts of Tanzania, South Africa and Mozambique recorded dry days less than 21 days with prevalence of less than 15 days in most of the eastern side of the SADC region. In Madagascar the number of dry days increased also from the east towards the west, from around zero on the east to close to 30 on the west, [Figure 3].

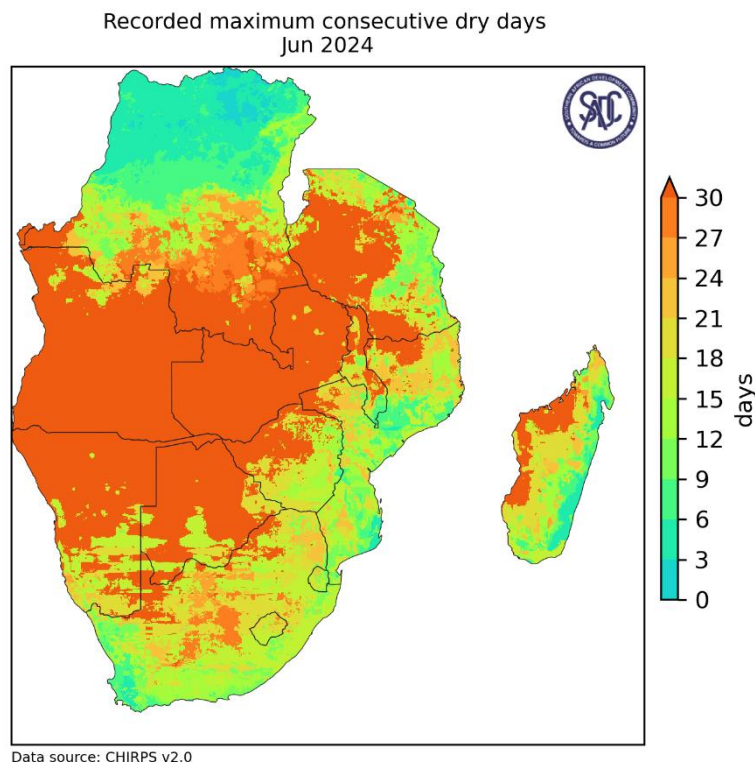


Figure 3: Dry spells prevalence during the month of June 2024

1.2 Extreme Rainfall

The extreme northern part of DRC, parts of Central Mozambique, east Madagascar, east Tanzania, and the southern and northern Tanzania and patchy area within the northern DRC, precipitation above 25mm was recorded, in a single day, [Figure 4].

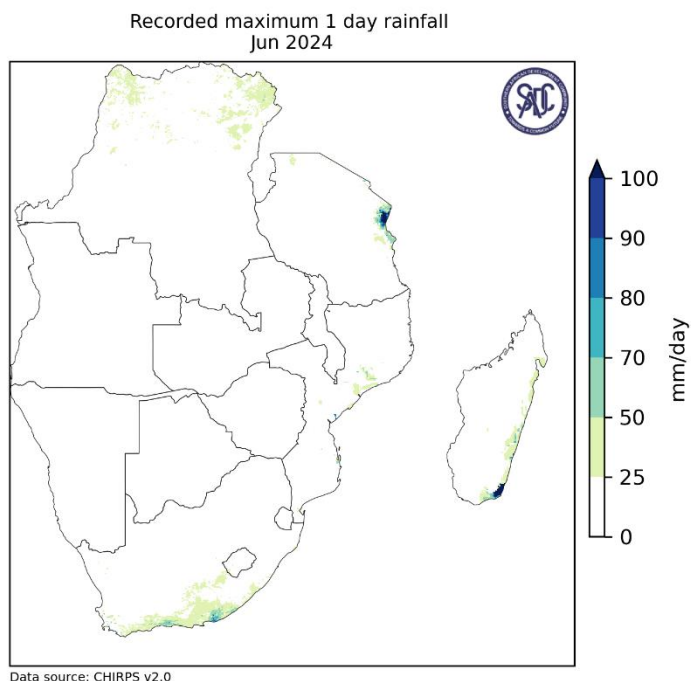


Figure 4: Maximum rainfall recorded over a one-day period during the month of June 2024

2. REGIONAL TEMPERATURE

2.1 Minimum Temperature

The average maximum daily temperatures of 35 °C were recorded within most of DRC, and parts of Mozambique, Namibia, west Zambia, Angola, Tanzania and west Madagascar. The southernmost parts of the region that covers Botswana, east Namibia, South Africa, Zimbabwe, and East of Madagascar recorded temperature average maximums close to 15 °C, [Figure 5 left].

The mean maximum temperature for the month of June 2024 was below -3 °C and was recorded over central DRC. Parts of central South Africa, Zimbabwe and Zambia, Tanzania and west Madagascar recorded minimums of maximums above -2°C, [Figure 5 right].

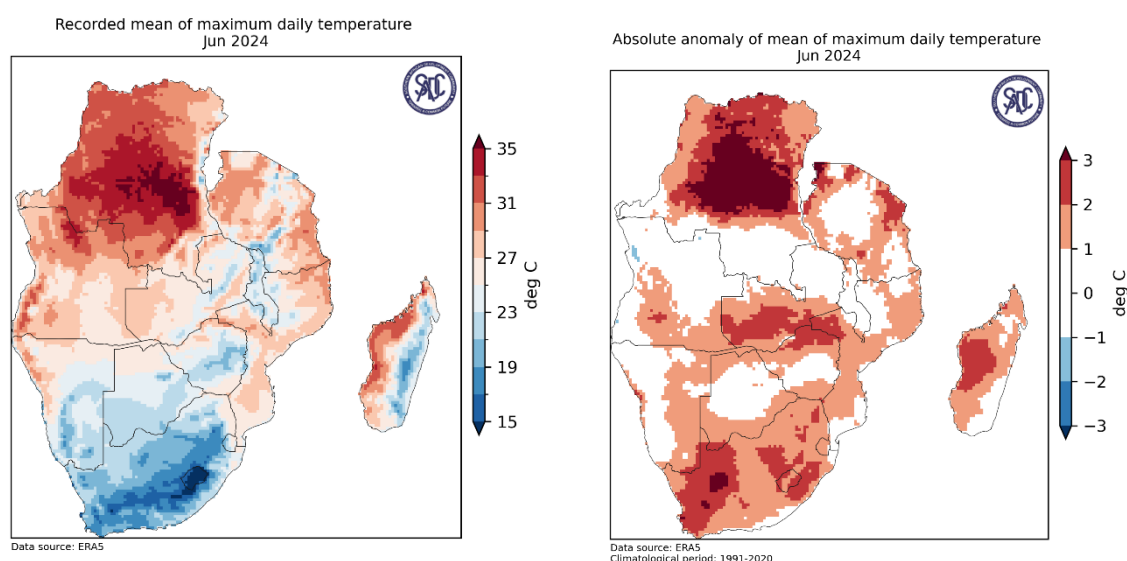


Figure 5: Observed average minimum temperature (left) and anomalies (right) for June 2024

2.2 Maximum Temperature

The average maximum temperatures in May, peaked to above 35°C over the central DRC, the western parts of Angola and Namibia and the western Madagascar. Parts of the southernmost tip of the subcontinent, the high area of Lesotho, Malawi and Tanzania recorded maximums of 15°C, [Figure 6 left].

Positive absolute maximum of minimum temperatures anomalies above 2-4°C were recorded over southwest Namibia and western South Africa, most of DRC, west of Madagascar and north of Mozambique. The central part of the domain and all eastern parts of Madagascar recorded temperatures close to the climatology, hence the anomaly is close to 0°C, except in east Angola and western and northern Zambia, [Figure 6 right].

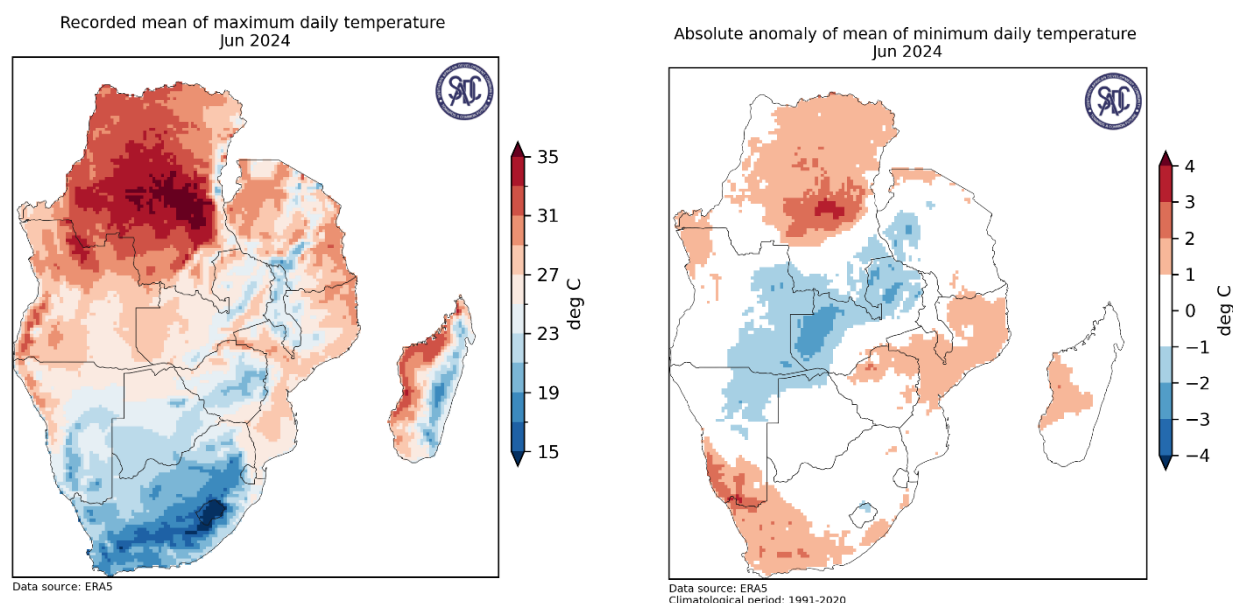


Figure 6: Observed maximum average temperature (left) and anomalies (right) for June 2024

2.3 Heatwaves

We distinguish here two types of heatwaves which differ in economic and human health impacts – daytime defined based on maximum temperature recorded during daytime, and night-time, defined based on minimum temperature recorded during nighttime.

Daytime heat waves of 24-30 days were recorded over most of the DRC and western Madagascar. The rest of the region experienced heat waves lowers than 15 days, [Figure 7 left]. Night-time heatwaves below 27 were recorded within DRC, whereas the rest of the region recorded below 12 days, [Figure 7 right].

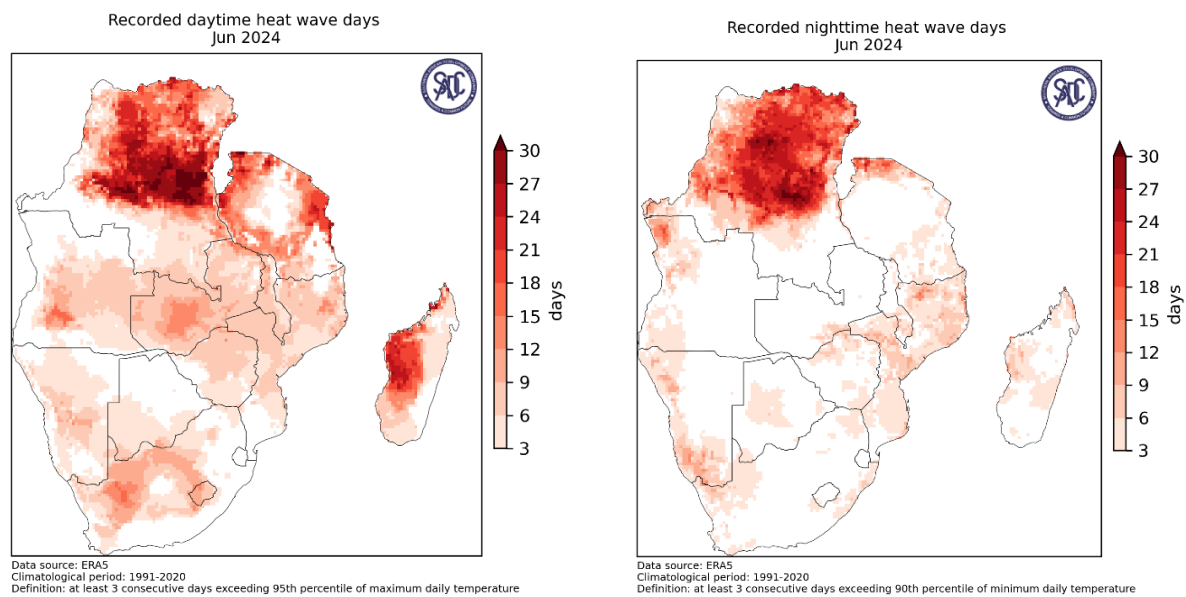


Figure 7: Heatwaves detected during the month of June 2024

NOTE:

This bulletin used CHIRPS and ERA5 data. While these datasets are considered broadly representative to local conditions over the SADC region, the results presented here may differ from those derived using local observations from Member States.

Users are therefore, urged to consult the local National Meteorological and Hydrological Services (NMHSs) for local conditions and detailed interpretation of the contents of this bulletin.

