

## SASSCAL Info Map

Land Surface Temperature (LST) from 2000 to 2021 of southern Africa





# SASSCAL Info Map

### Land Surface Temperature (LST) from 2000 to 2021 of southern Africa

LST is the brightness temperature of the and surface, driven by solar radiation and related to air temperature, often used as an indicator for monitoring the state of crops and vegetation and assessing plant stress.

Most of southern Africa had below average or average LST in 2021. In 2019, the LST appears to have been high for most of southern Africa. This can be explained by the culmination of a prolonged drought in 2019, resulting in less grazing and more exposed soil.

The month with the warmest aver age LST is October for Angola, Zambia and Zimbabwe, November for Botswana, Namibia and South Africa, before the summer rains bring ground cover.

#### Angola

The average LST in Angola over the past 20 years shows an increasing trend, with particularly higher LST in the south-western part of Angola, a part of the country also plagued by droughts.

#### Botswana

The LST in Botswana has been below average for the past two years, corresponding to improved rainfall after the prolonged drought. Botswana's average LST over the past 20 years suggests a slightly decreasing trend.

#### Namibia

While Namibia's average LST in 2021 has been below average, Namibia's north-west and coastline has had higher LST than normal. The average LST over the pat 20 years suggests a slightly increasing LST. South Africa

Most of South Africa has had below average LST in 2021, but the overall trend in average LST in South Africa does suggest an increasing trend.

#### Zambia

In overall, Zambia's average LST in 2021 was below average, but areas with higher population densities show above average LST. Notably, the wetlands of Blue Lagoon National Park show an average LST of well below average.

#### Zimbabwe

The average LST in Zimbabwe in 2021 was well below average. The 20 year historic trend does however suggest an increasing LST.















Data Source: MODIS MOD11C3 Monthly Daytime Land Surface Temperature (2000 to 2021) References: NASA. 2021. <u>Land Surface Temperature</u>.