

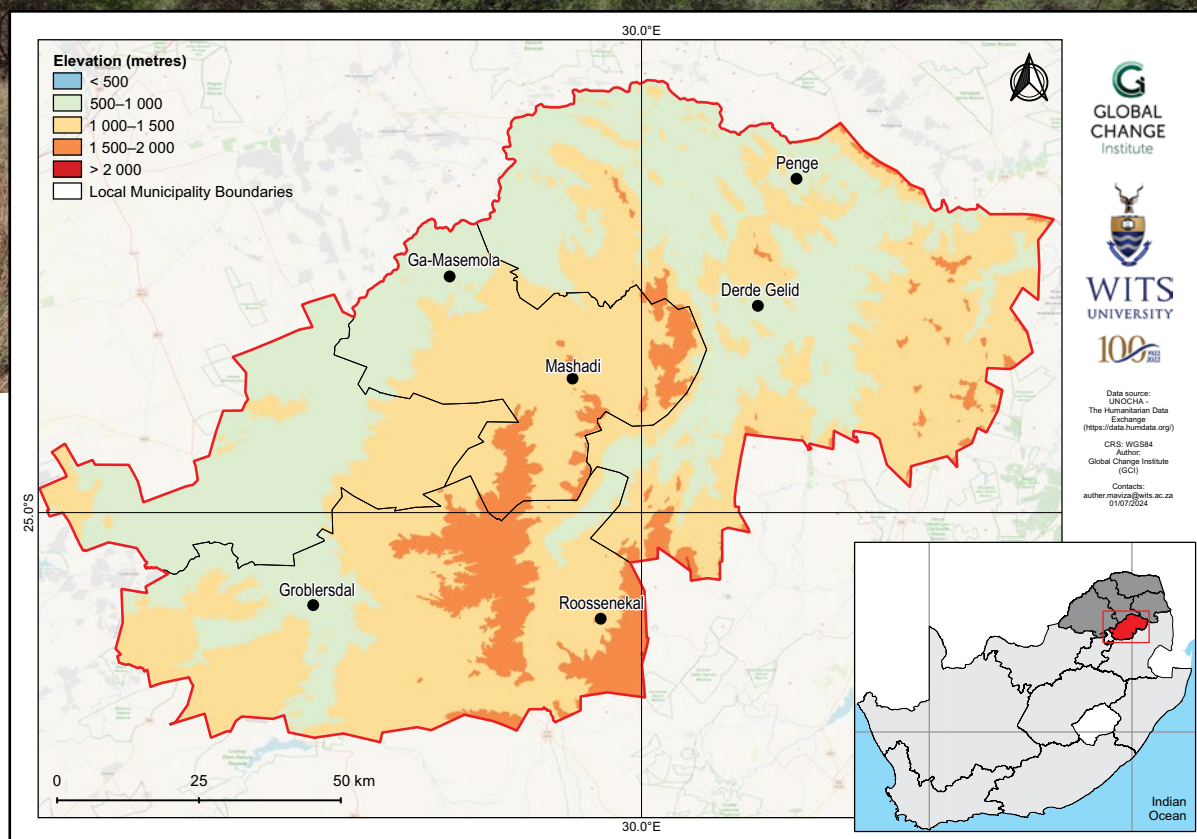
Sekhukhune District Municipality climate change fact sheet

Limpopo, South Africa

MUNICIPAL

Introduction

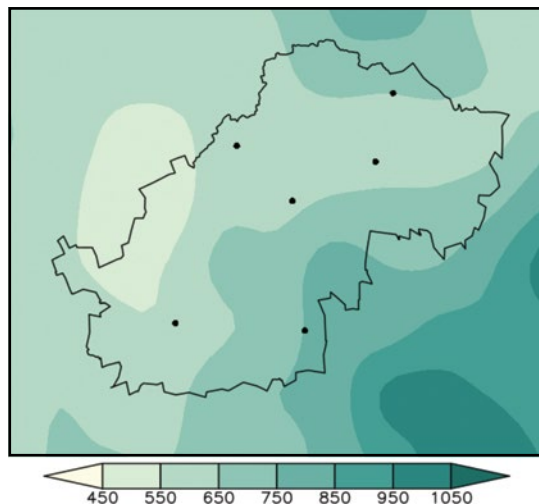
- This fact sheet is part of a series of district municipality fact sheets developed by the Wits GCI and SANBI. The fact sheets present a summary of observed and projected changes in climate over district municipalities in South Africa. They should be used together with the guidelines presented in the cover page.
- Sekhukhune District Municipality covers an area of approximately 13 528 km², with elevation ranging from 500 m above sea level along the low-lying northwestern regions, to over 1 900 m above sea level in central and southern highlands of the Drakensberg.
- The district experiences a semi-arid climate in the northeastern region, but with higher rainfall totals over the southern region. The climate exhibits pronounced wet-dry seasonality with the bulk of rainfall occurring in summer.



Observed climate: rainfall (1981–2000)

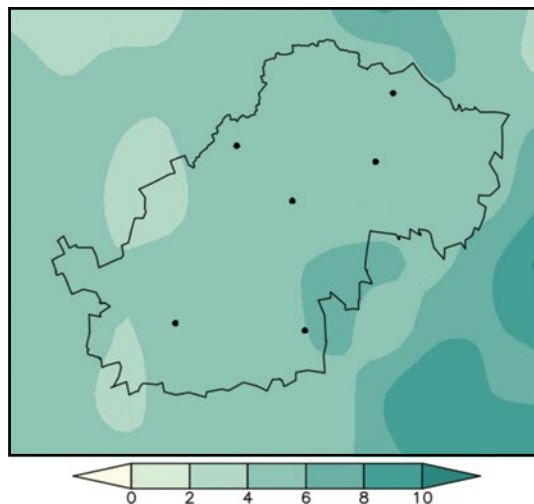
Mean annual rainfall

Mean annual rainfall ranges from 450 mm over the low-lying western areas to 800 mm over the higher southeastern escarpment.



Extreme rainfall days

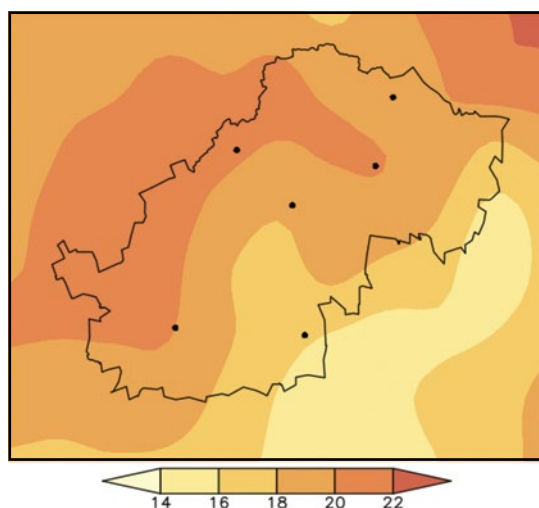
Mean annual number of extreme rainfall days range from 4 to 6 days over most of the district.



Observed climate: temperature (1981–2000)

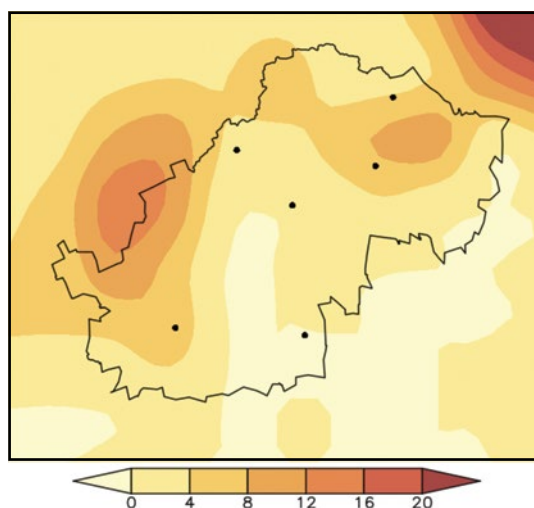
Mean annual temperature

Mean annual temperature ranges from 14 °C in the south-eastern highland areas to 22 °C in the low-lying northwestern areas.



Very hot days

Mean annual number of very hot days range from 0 days over the southern highlands to 12 days over the low-lying northwestern and northeastern areas.

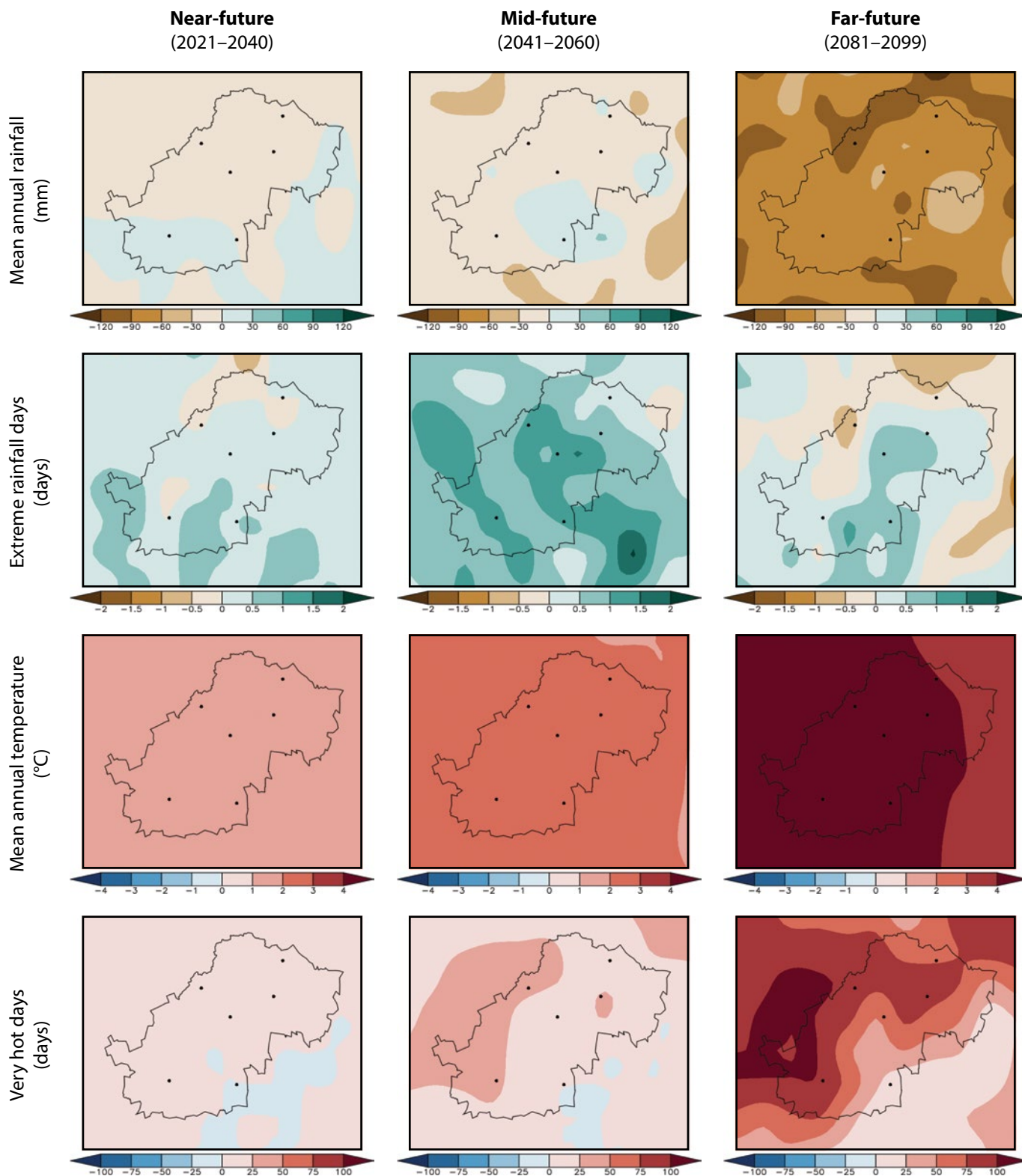


Observed climate trends (overview)

- Observed decrease in mean annual rainfall (*low confidence*).
- Observed increase in the frequency of extreme rainfall events (*high confidence*).
- Observed increase in mean annual temperature and warm extremes (*virtually certain*).
- Observed increases in meteorological and agricultural drought (*low confidence*).

Projected future climate change (overview)

- Projected decrease in mean annual rainfall (*high confidence*).
- Projected increase in the frequency of extreme rainfall events (*high confidence*).
- Projected increase in mean annual temperature and warm extremes (*virtually certain*).
- Projected increase in agricultural and meteorological drought (*high confidence*).



Projected future climate change (detailed)

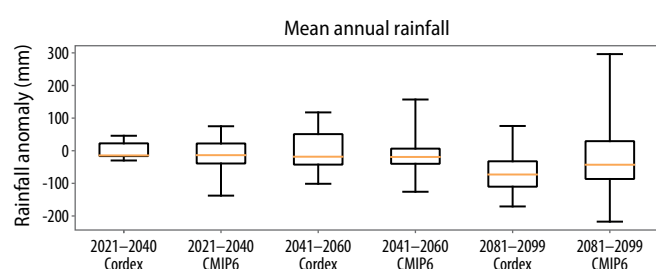
Near- and mid-future

- Projected decrease in rainfall (*likely*).
- Projected increase in extreme rainfall events (*likely*).
- Projected increase in temperature and warm extremes (*virtually certain*).
- Projected increase in agricultural and meteorological drought (*likely*).

Far-future

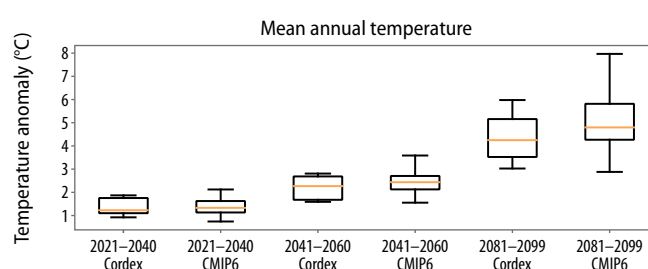
- Projected decrease in mean annual rainfall over the entire district (*very likely*).
- Projected increase in extreme rainfall events (*likely*).
- Projected increase in temperature warm extremes (*virtually certain*), with drastic increases over the western parts.
- Projected increase in agricultural and meteorological drought (*very likely*).

Climate model projections: model agreement and uncertainties



Mean annual rainfall

- Averaged across the district, rainfall is projected to decrease in the near- and mid-future (*likely*).
- Further rainfall decreases are projected in the far-future under low mitigation scenarios (*very likely*).
- Partially in response to *virtually certain* temperature increases, agricultural drought is to occur more frequently in the near- and mid-future (*likely*) and far-future (*very likely*).



Mean annual temperature

- Temperature increases averaged across the district in the near-future are *virtually certain* and may be as high as 1.5 °C.
- Under low mitigation, further temperature increases are *virtually certain* and may approach 2.5 °C in the mid-future and 6.0 °C in the far-future.
- Increases in average temperature will be accompanied by increases in warm temperature extremes such as heatwaves and high fire danger days (*virtually certain*).

Citation:

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