

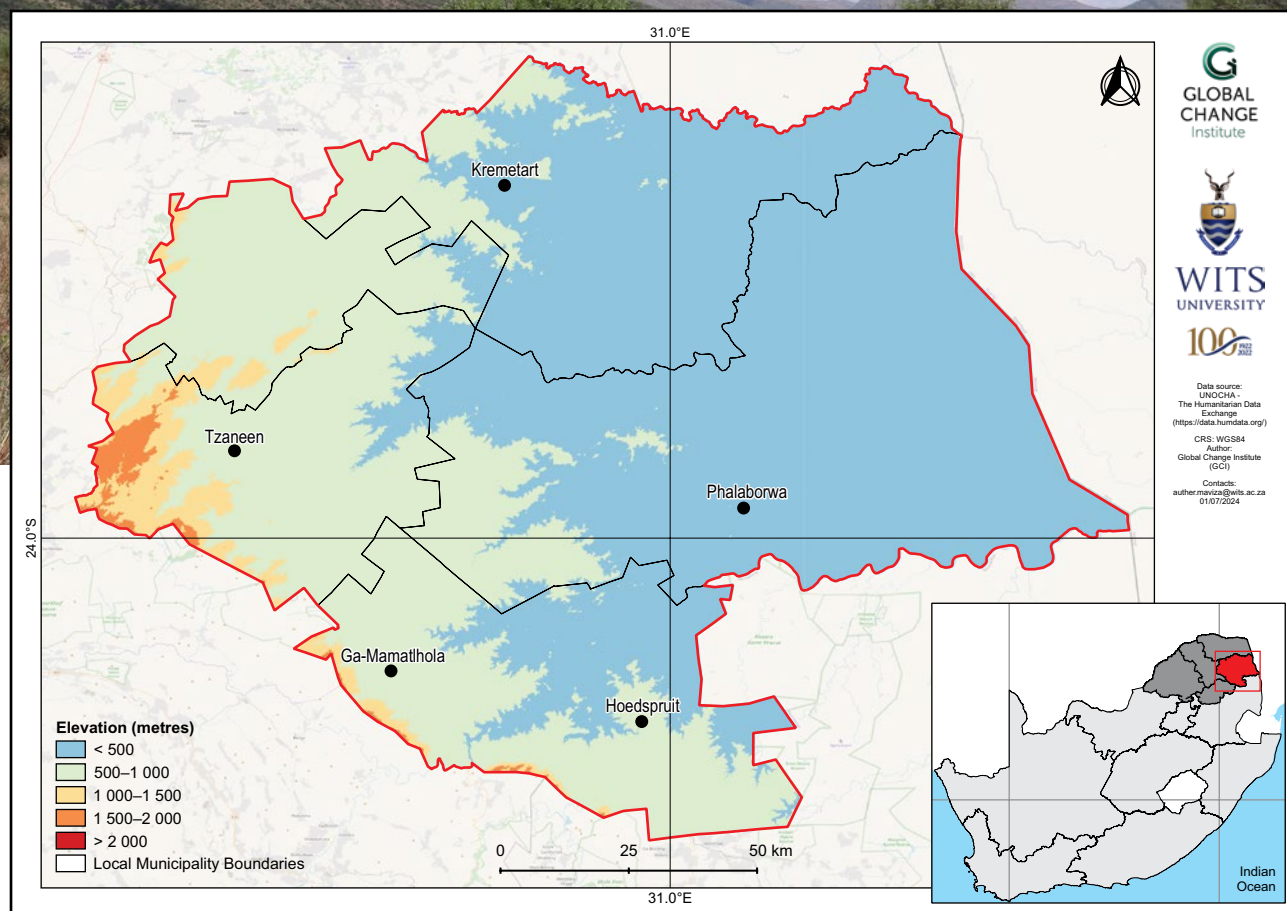
Mopani District Municipality climate change fact sheet

Limpopo, South Africa

MUNICIPAL

Introduction

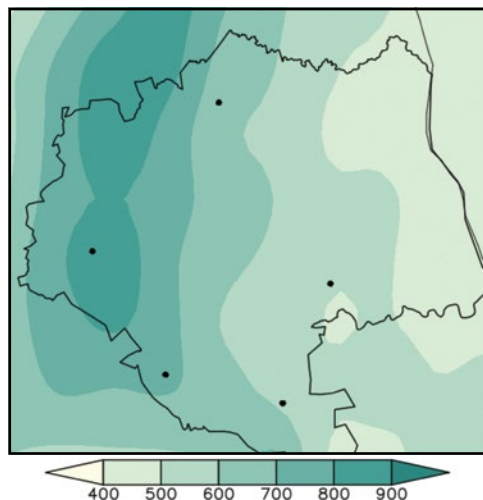
- This fact sheet is part of a series of district municipality fact sheets developed by the Wits GCI and SANBI. The fact sheets present a summary of observed and projected changes in climate over district municipalities in South Africa. They should be used together with the guidelines presented in the cover page.
- Mopani District Municipality covers an area of approximately 20 011 km², with elevation ranging from less than 500 m above sea level in the eastern and southern lowlands of the Olifants River valley, to over 1 600 m above sea level in the western escarpment areas.
- The district experiences a semi-arid to subtropical climate, characterised by warm to hot and wet summers, while winters are mild and dry. The eastern lowveld area is relatively dry compared to the western area.



Observed climate: rainfall (1981–2000)

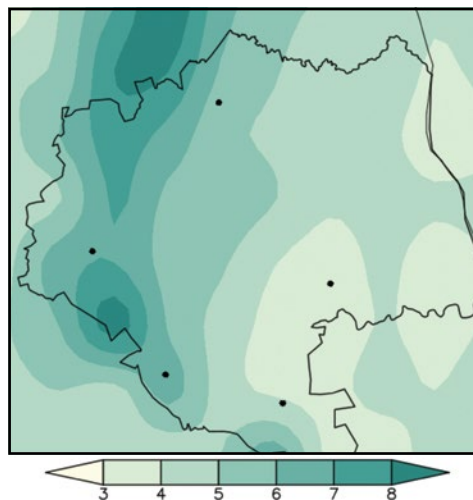
Mean annual rainfall

Mean annual rainfall increases from 400 mm in the eastern lowlands to over 800 mm over the western escarpment areas.



Extreme rainfall days

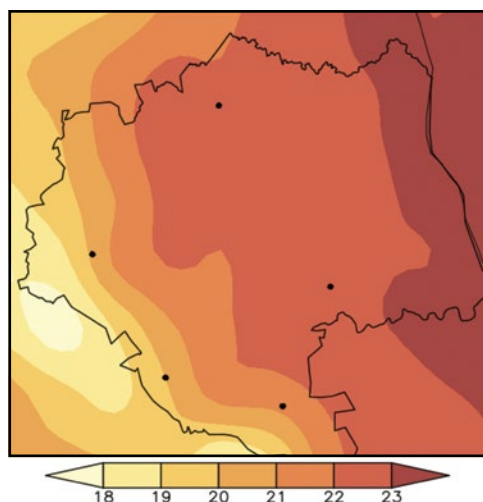
Observed mean annual number of extreme rainfall days range from 3 days in the eastern lowlands to 8 days over the mountainous western region.



Observed climate: temperature (1981–2000)

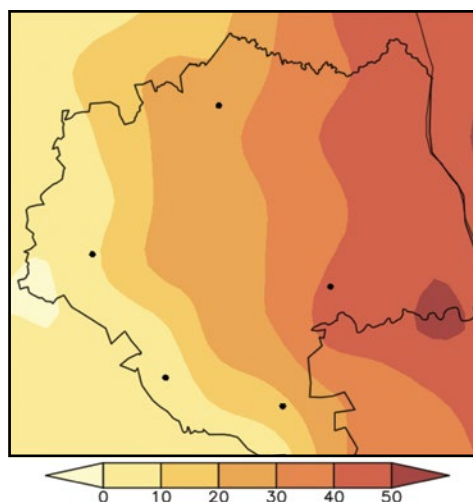
Mean annual temperature

Mean annual temperature ranges from 18 °C over the western escarpment areas to 23 °C over the eastern lowland areas.



Very hot days

Mean annual number of very hot days range from less than 10 days over the western highlands to 50 days over the eastern lowland areas.

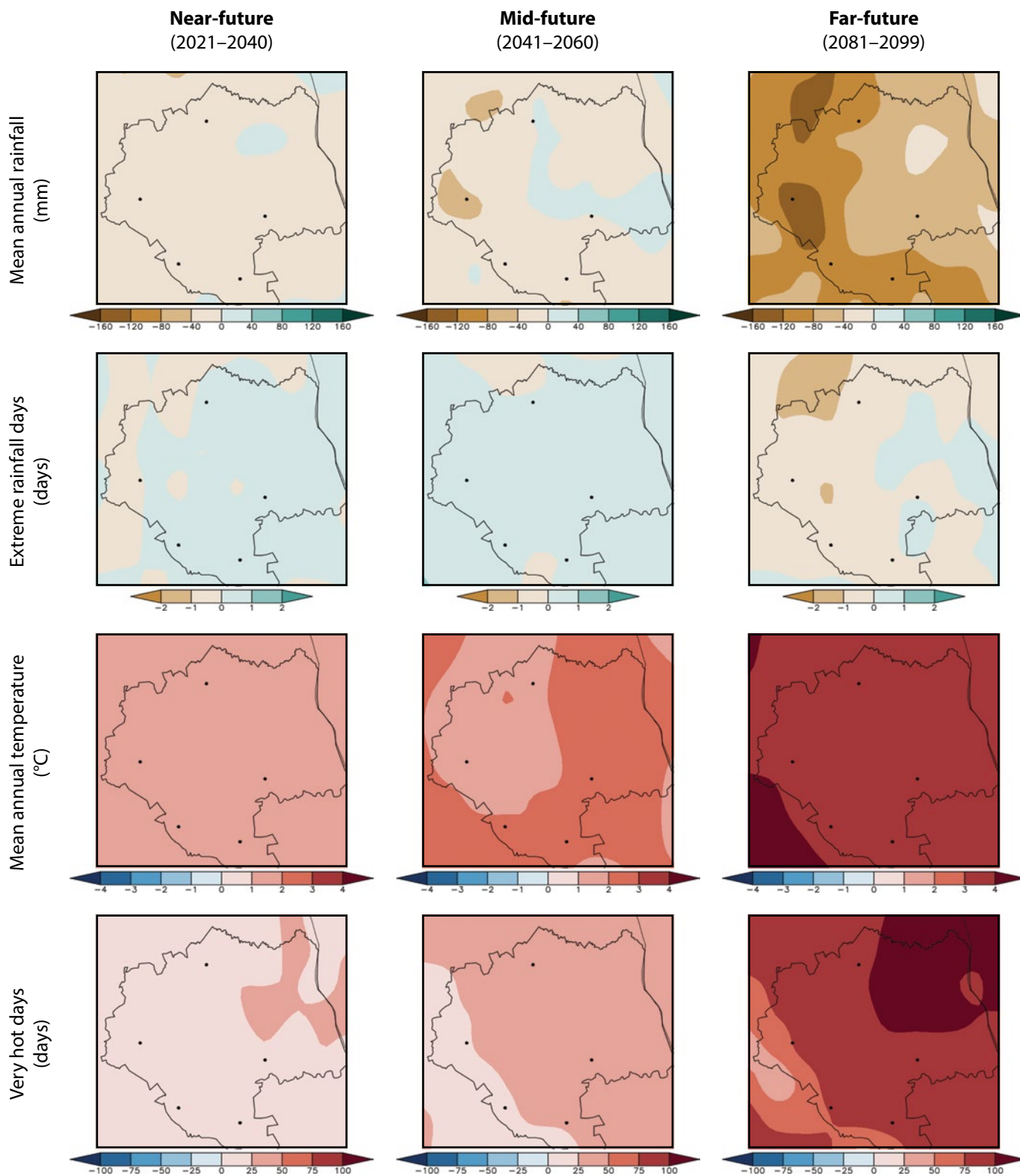


Observed climate trends (overview)

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

Projected future climate change (overview)

- Projected decrease in mean annual rainfall into the future (*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)

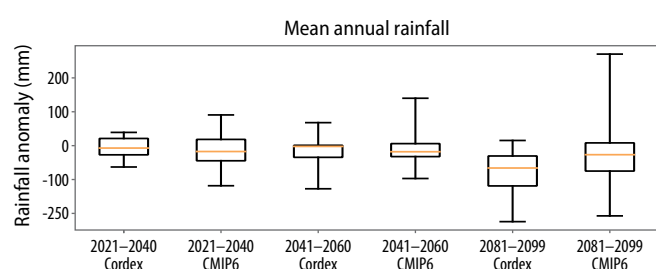
Near- and mid-future

- Projected decrease in mean annual 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

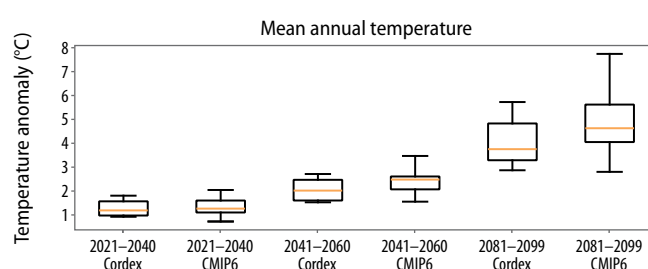
- Projected decrease in mean annual rainfall (*very likely*).
- Projected general increase in extreme rainfall events (*likely*).
- Projected increase in temperature and warm extremes (*virtually certain*), with drastic increases over the north-eastern parts.
- Projected increase in agricultural and 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 3.0 °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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