

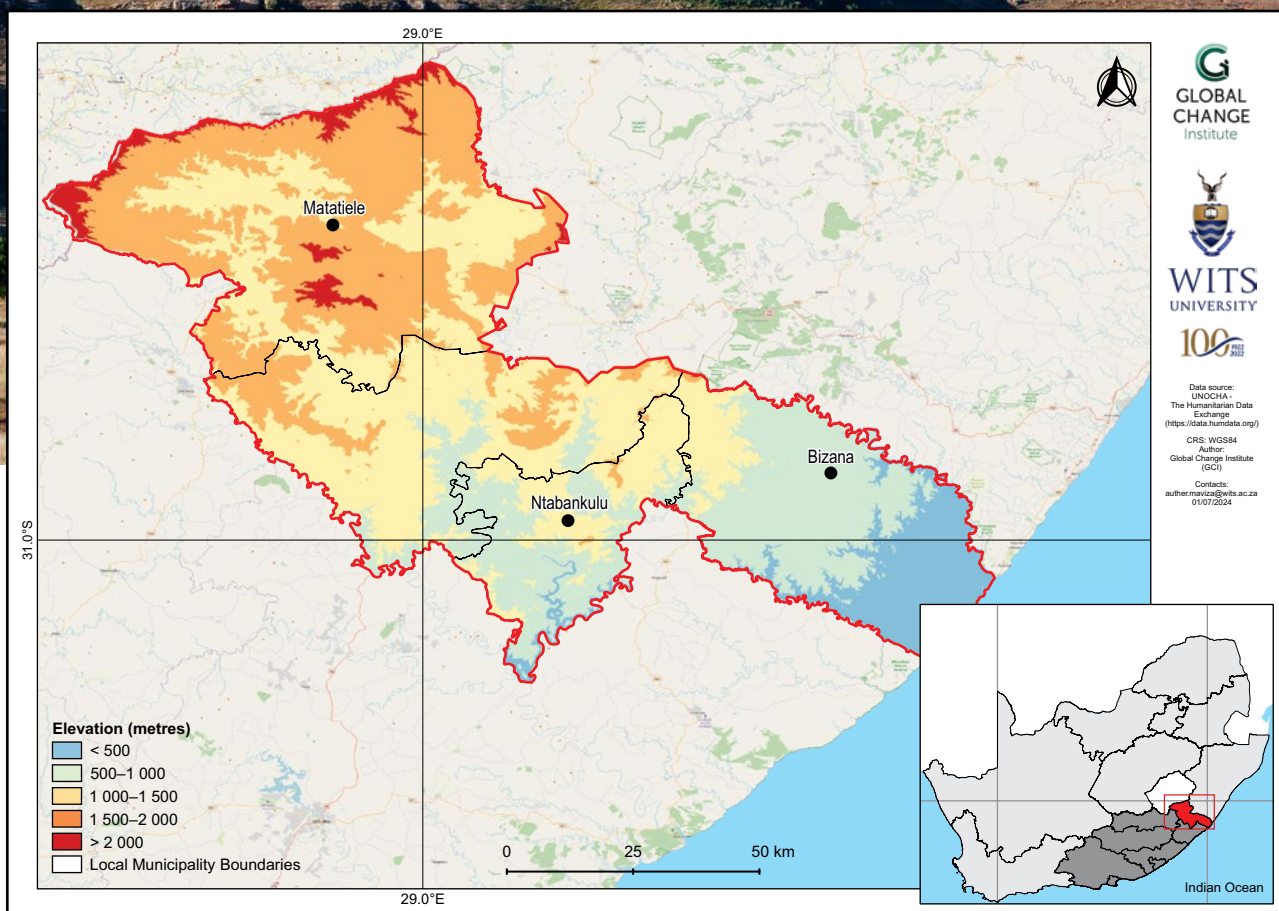
Alfred Nzo District Municipality climate change fact sheet

Eastern Cape, South Africa

MUNICIPAL

Introduction

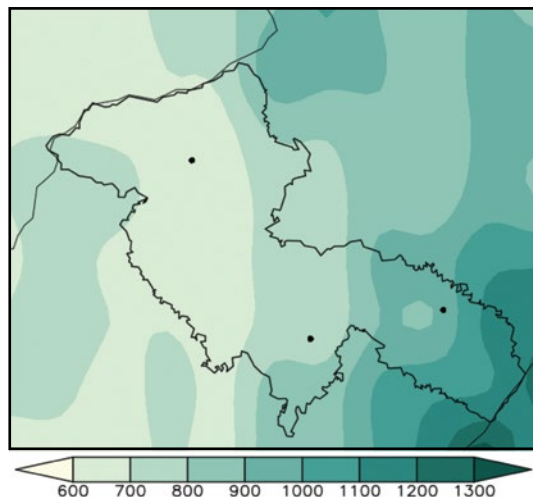
- This fact sheet is part of a series of district municipality fact sheets developed by the Wits GCI and SANBI. The fact sheets present a summary of observed and projected changes in climate over district municipalities in South Africa. They should be used together with the guidelines presented in the cover page.
- Alfred Nzo District Municipality covers an area of approximately 7 976 km², with elevation ranging from sea level along the Indian Ocean coastline to over 2 500 m above sea level in the Drakensberg in the northwest.
- The district falls in the summer-rainfall region of South Africa and rainfall gradually increases from the mountainous northwest to the coastal southeast of the district. Occasional snowfall occurs over the Drakensberg in the northwest.



Observed climate: rainfall (1981–2000)

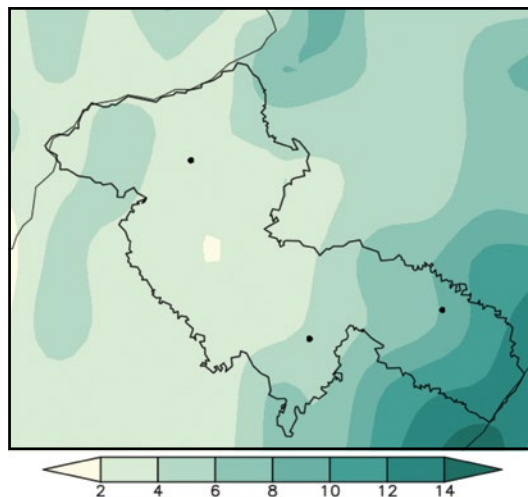
Mean annual rainfall

Mean annual rainfall ranges from 600 mm over the mountains in the northwest to more than 1 200 mm over the southeastern coastal region.



Extreme rainfall days

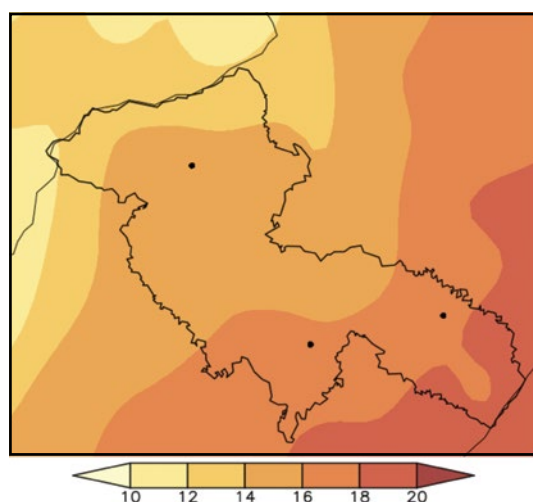
Mean annual number of extreme rainfall days range from 2 days over the northern and central interior to as many as 14 days over the southeastern coastal region.



Observed climate: temperature (1981–2000)

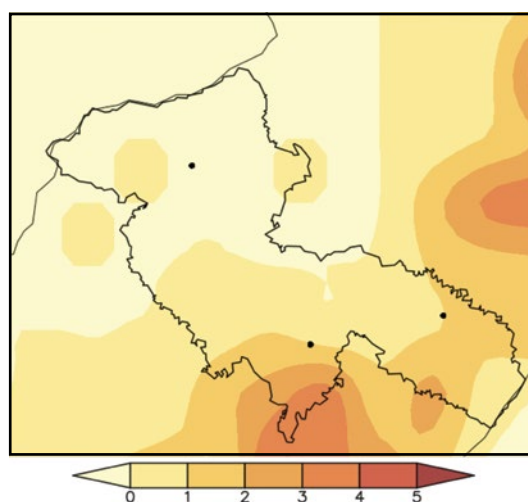
Mean annual temperature

Mean annual temperature ranges from 12 °C over the Drakensberg in the northwest to 20 °C along the coastal strip.



Very hot days

The mean annual number of very hot days ranges from 0 days over the high-altitude northwestern interior to 4 days in the southwestern coastal plain.

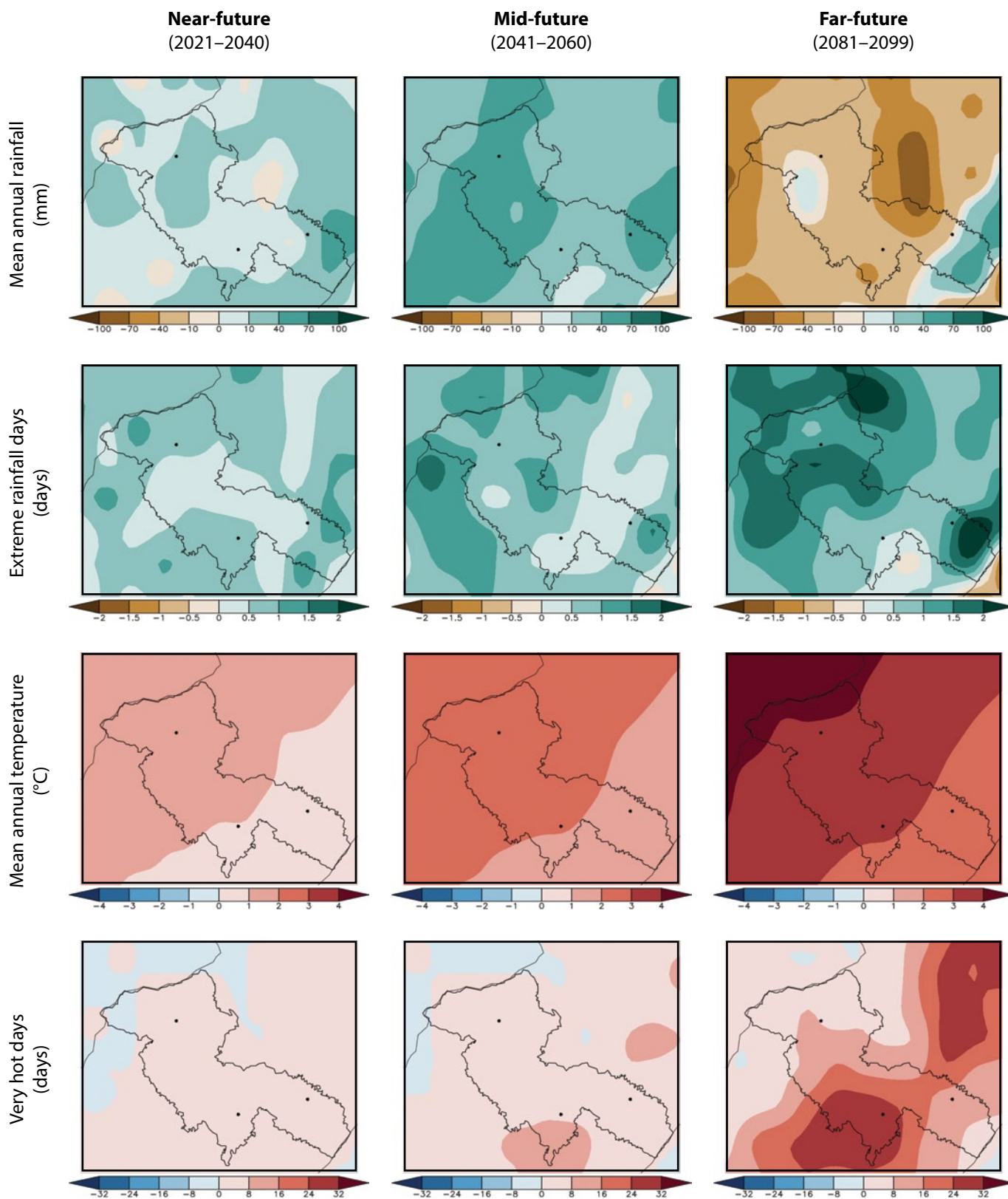


Observed climate trends (overview)

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

Projected future climate change (overview)

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



Projected future climate change (detailed)

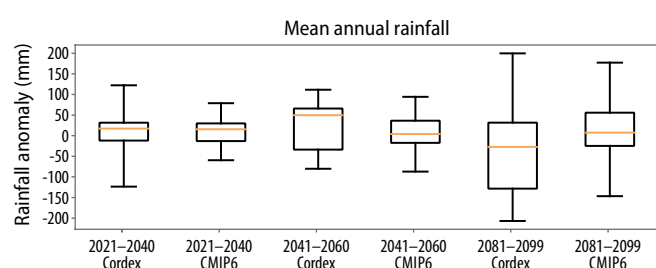
Near- and mid-future

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

Far-future

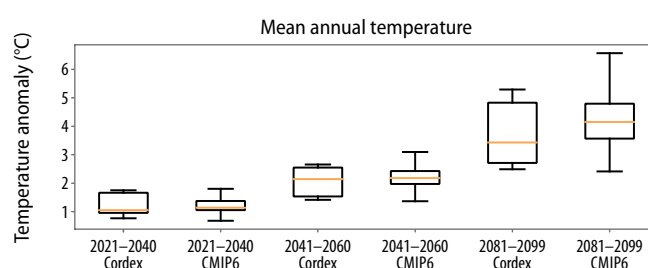
- Projected general decrease in rainfall (*low confidence*).
- Projected increase in extreme rainfall events (*very likely*), particularly over the Drakensberg.
- Projected increase in temperature and warm extremes (*virtually certain*); decrease in cold extremes (*very likely*).
- Projected increase in agricultural and meteorological drought (*low confidence*).

Climate model projections: model agreement and uncertainties



Mean annual rainfall

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



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 5.0 °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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