



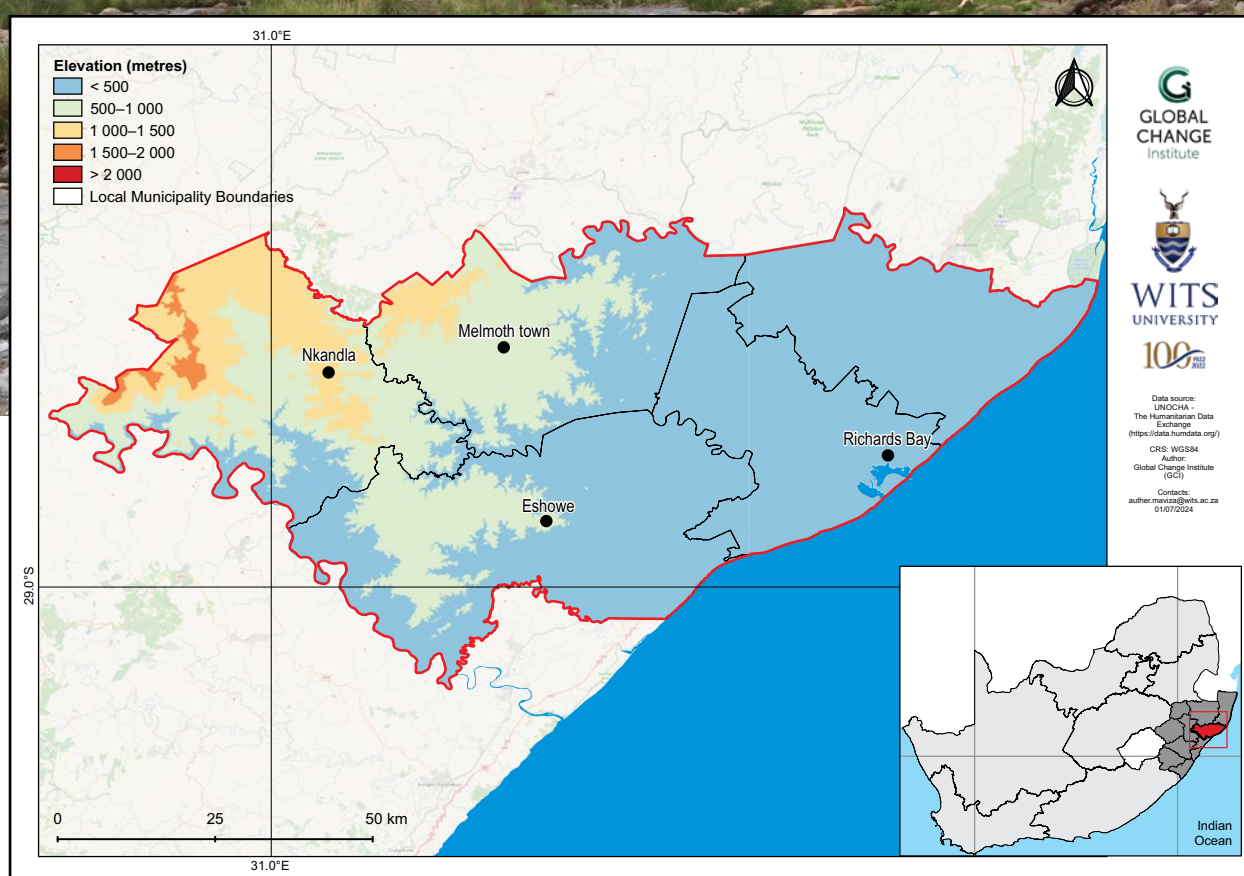
King Cetshwayo District Municipality climate change fact sheet

KwaZulu-Natal, 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.
- King Cetshwayo District Municipality covers an area of 8 213 km², with elevation ranging from sea level along its Indian Ocean coastline, to 1 500 m above sea level in the higher inland regions to the west.
- The district experiences a subtropical climate, characterised by hot, humid and wet summers and mild, drier winters. This district falls within the summer-rainfall region of South Africa.

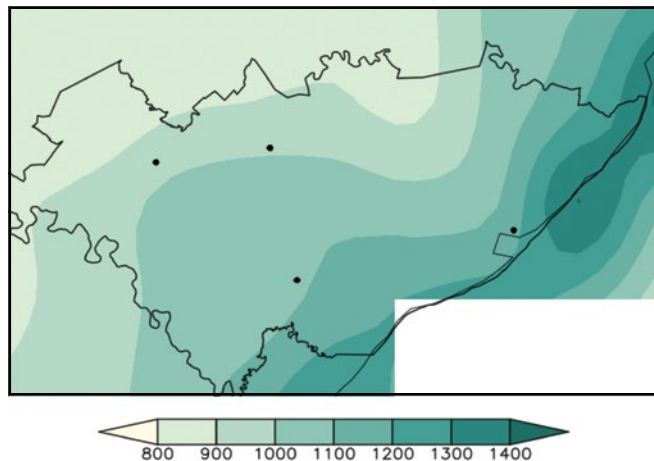


Flanders
State of the Art

Observed climate: rainfall (1981–2000)

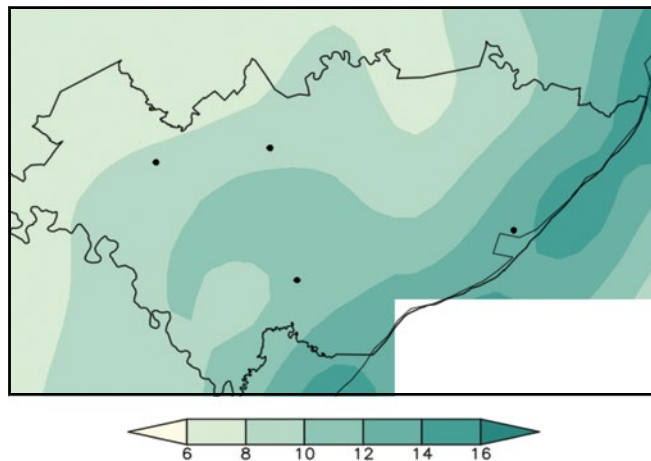
Mean annual rainfall

Mean annual rainfall ranges from 800 mm over the north-western parts to over 1 300 mm over the northeastern coastal parts.



Extreme rainfall days

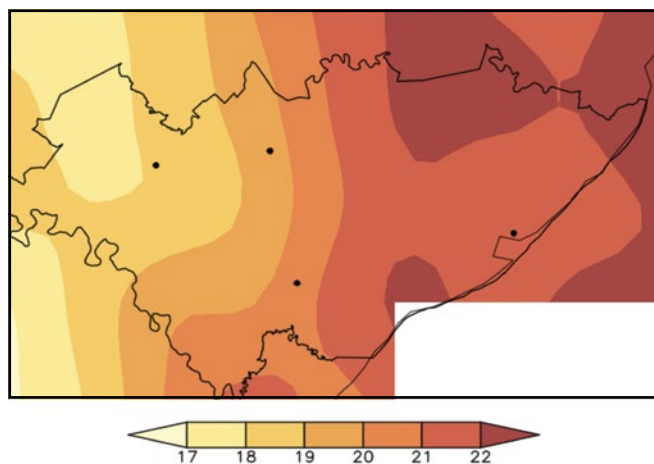
Observed mean annual number of extreme rainfall days range from 6 days in the northwestern parts to as many as 16 days over the northeastern coastal parts.



Observed climate: temperature (1981–2000)

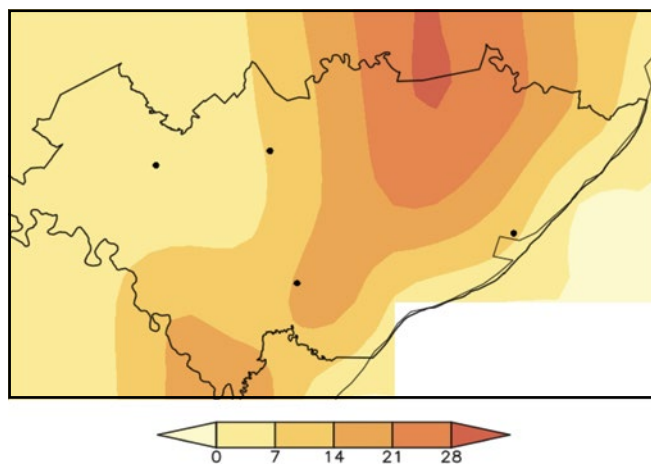
Mean annual temperature

Mean annual temperature ranges from 17 °C over north-western parts, increasing to 22 °C and higher over parts of the northeastern interior.



Very hot days

Observed mean annual number of very hot days range from less than 7 days in the western interior to 28 days over the northeastern interior.

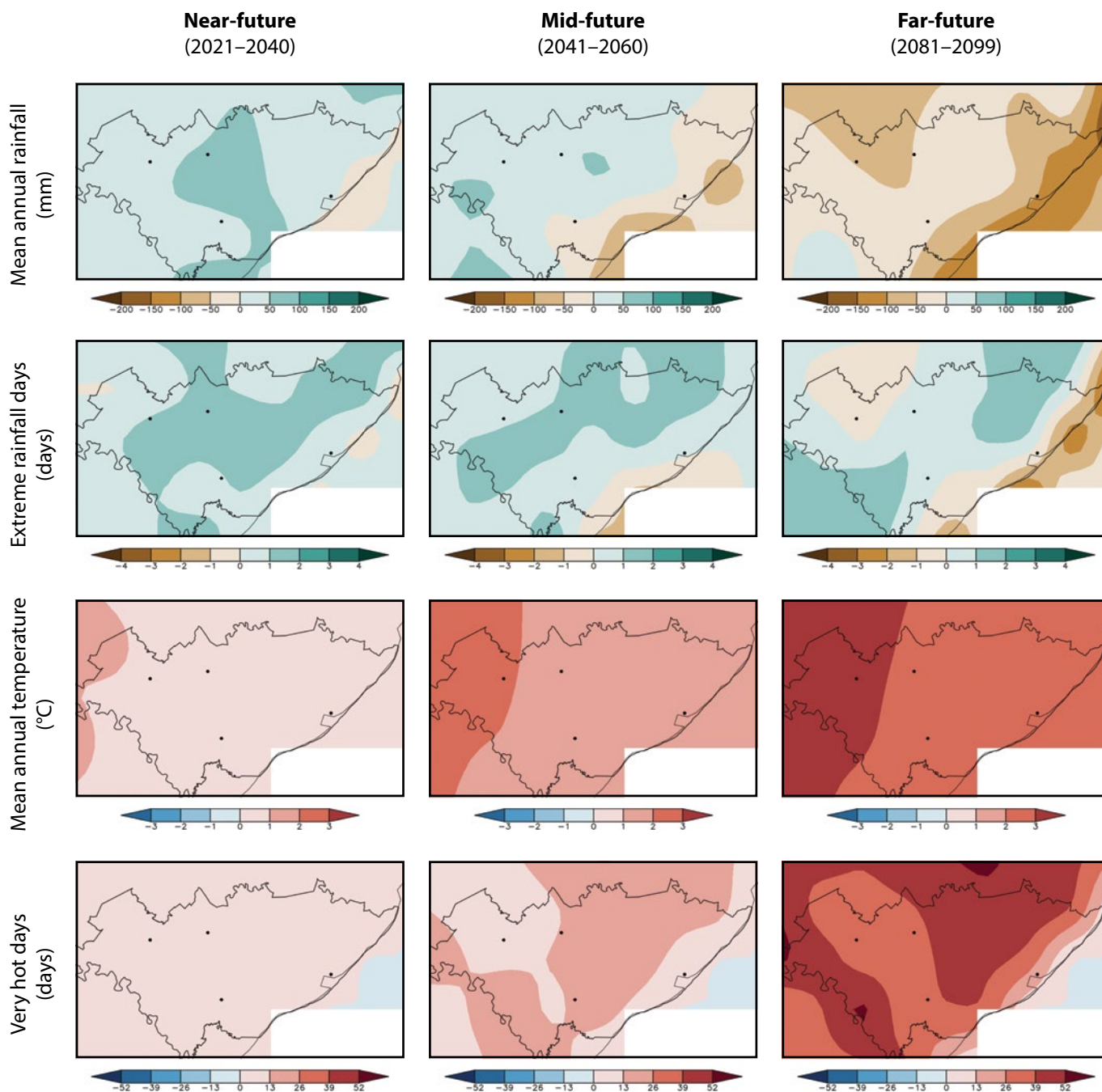


Observed climate trends (overview)

- 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 increase in mean annual rainfall in the near- and mid-future (*low confidence*), but with decreases in the far-future (*low 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 in the near- and mid-future (*low confidence*) and far-future (*medium confidence*).



Projected future climate change (*detailed*)

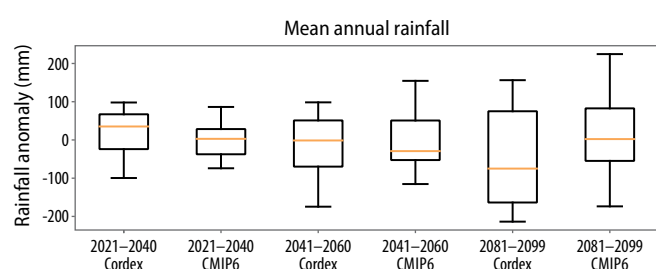
Near- and mid-future

- Projected general increase in rainfall (*more likely than not*).
- Projected increase in extreme rainfall events (*likely*).
- Projected increase in temperature and warm extremes (*virtually certain*).
- Projected increase in agricultural and meteorological drought (*low confidence*).

Far-future

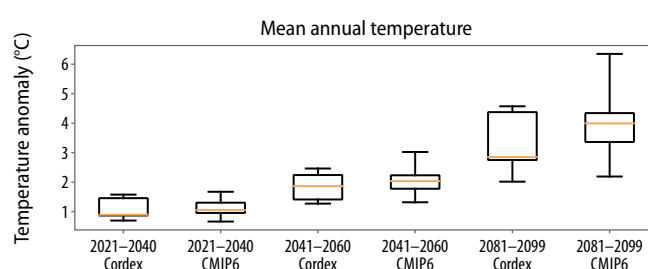
- Projected decrease in rainfall (*more likely than not*).
- Projected general increase in extreme rainfall events (*likely*).
- Projected increase in temperature and warm extremes (*virtually certain*), with higher increases over northeastern and southern parts.
- Projected increase in agricultural and meteorological drought (*medium confidence*).

Climate model projections: model agreement and uncertainties



Mean annual rainfall

- Averaged across the district, rainfall is projected to increase in the near- and mid-future (*low confidence*).
- General rainfall decreases are projected in the district 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 near- and mid-future (*low confidence*) and far-future (*medium 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 4.0 °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:

Engelbrecht, F.A., Maviza, A., Steinkopf, J., Vogel, C., Von Maltitz, G., Yose, P. & Barnett, M. 2025. *Sub-national climate change fact sheets for South Africa*. © South African National Biodiversity Institute (SANBI) and University of the Witwatersrand – Global Change Institute (WITS-GCI). DOI: <https://doi.org/10.5281/zenodo.16962181>.

This work is licensed under CC BY-NC-ND 4.0 (Attribution-NonCommercial-NoDerivatives 4.0 International).

<https://creativecommons.org/licenses/by-nc-nd/4.0/deed.en>.

Contact

- Global Change Institute (GCI), University of the Witwatersrand, Johannesburg, South Africa. Website: www.wits.ac.za/gci
- South African National Biodiversity Institute (SANBI). Website: www.sanbi.org