



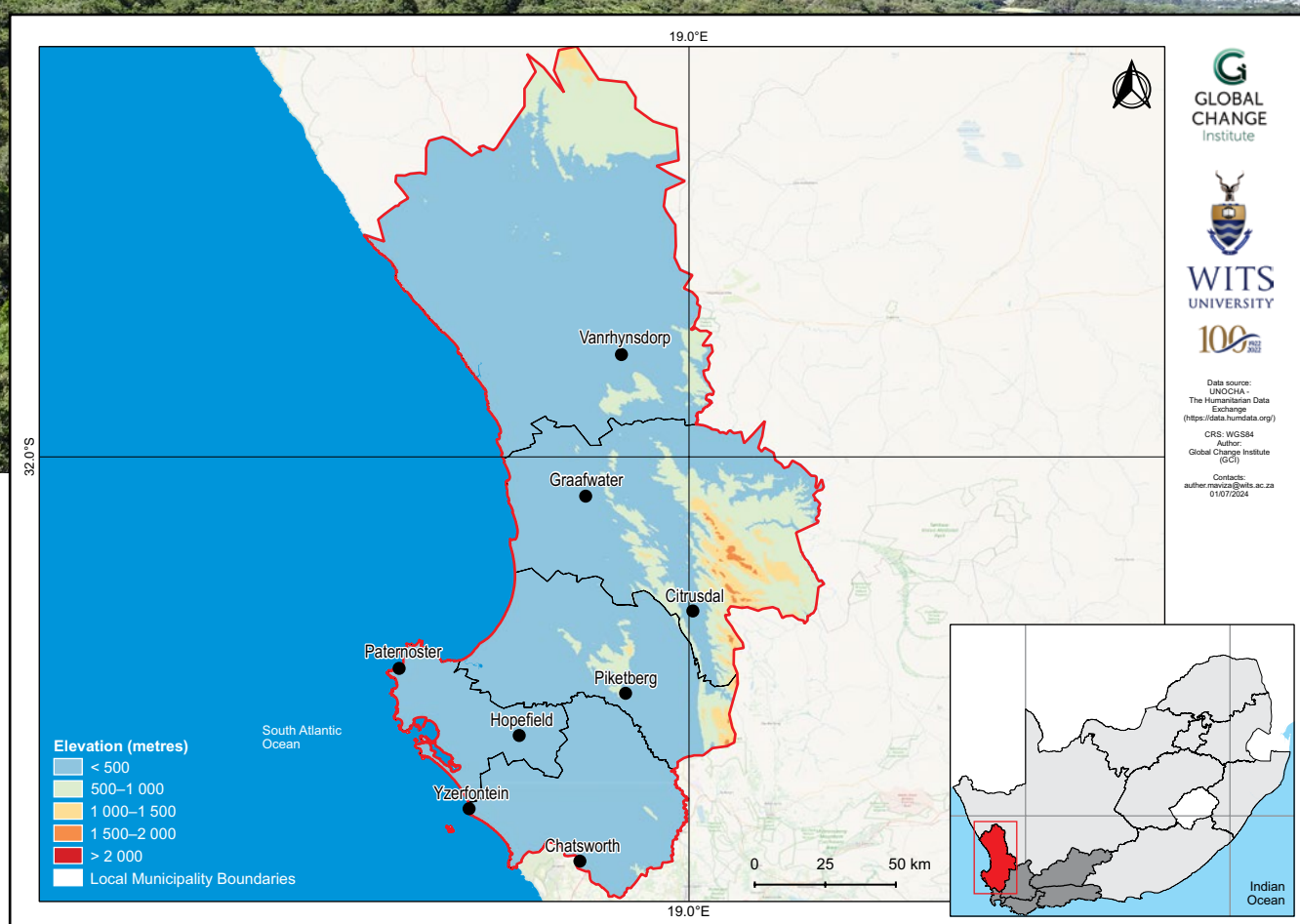
West Coast District Municipality climate change fact sheet

Western Cape, South Africa

MUNICIPAL

Introduction

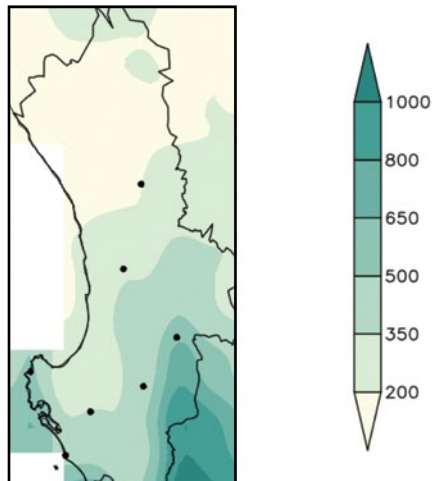
- This fact sheet is part of a series of district municipality fact sheets developed by the Wits GCI and SANBI. The fact sheets present a summary of observed and projected changes in climate over district municipalities in South Africa. They should be used together with the guidelines presented in the cover page.
- West Coast District Municipality covers an area of approximately 31 099 km², with elevation ranging from sea level along the Atlantic Ocean coastline to 2 000 m above sea level in the Cederberg in the east.
- The district experiences a Mediterranean climate, with hot, dry summers and cool, wet winters. Mountainous regions are cooler with higher rainfall and occasional winter snowfall.



Observed climate: rainfall (1981–2000)

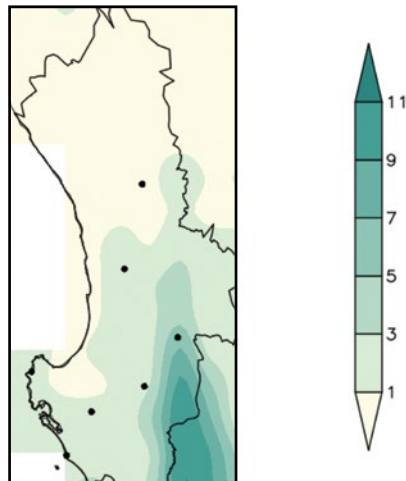
Mean annual rainfall

Mean annual rainfall ranges from less than 200 mm over northern semi-arid parts to 1 000 mm over the Cederberg.



Extreme rainfall days

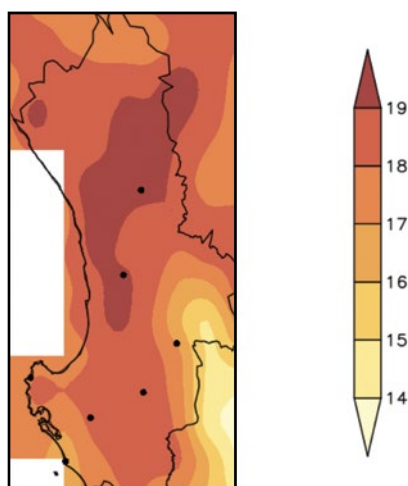
Mean annual number of extreme rainfall days range from less than 1 day over the northern region to 11 days in the Cederberg.



Observed climate: temperature (1981–2000)

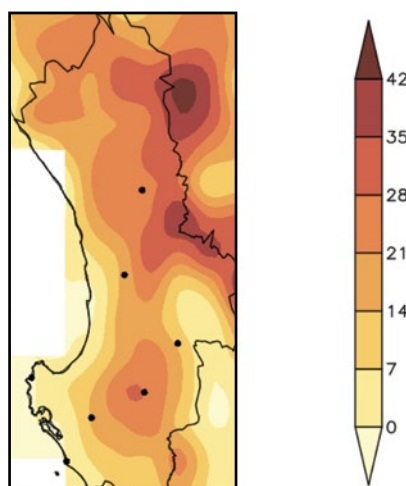
Mean annual temperature

Mean annual temperature ranges from 14 °C over the high-altitude Cederberg to 19 °C over the northern interior.



Very hot days

Mean annual number of very hot days range from less than 7 days along the coastline and in the mountainous parts, to 35 days over the northeastern parts.

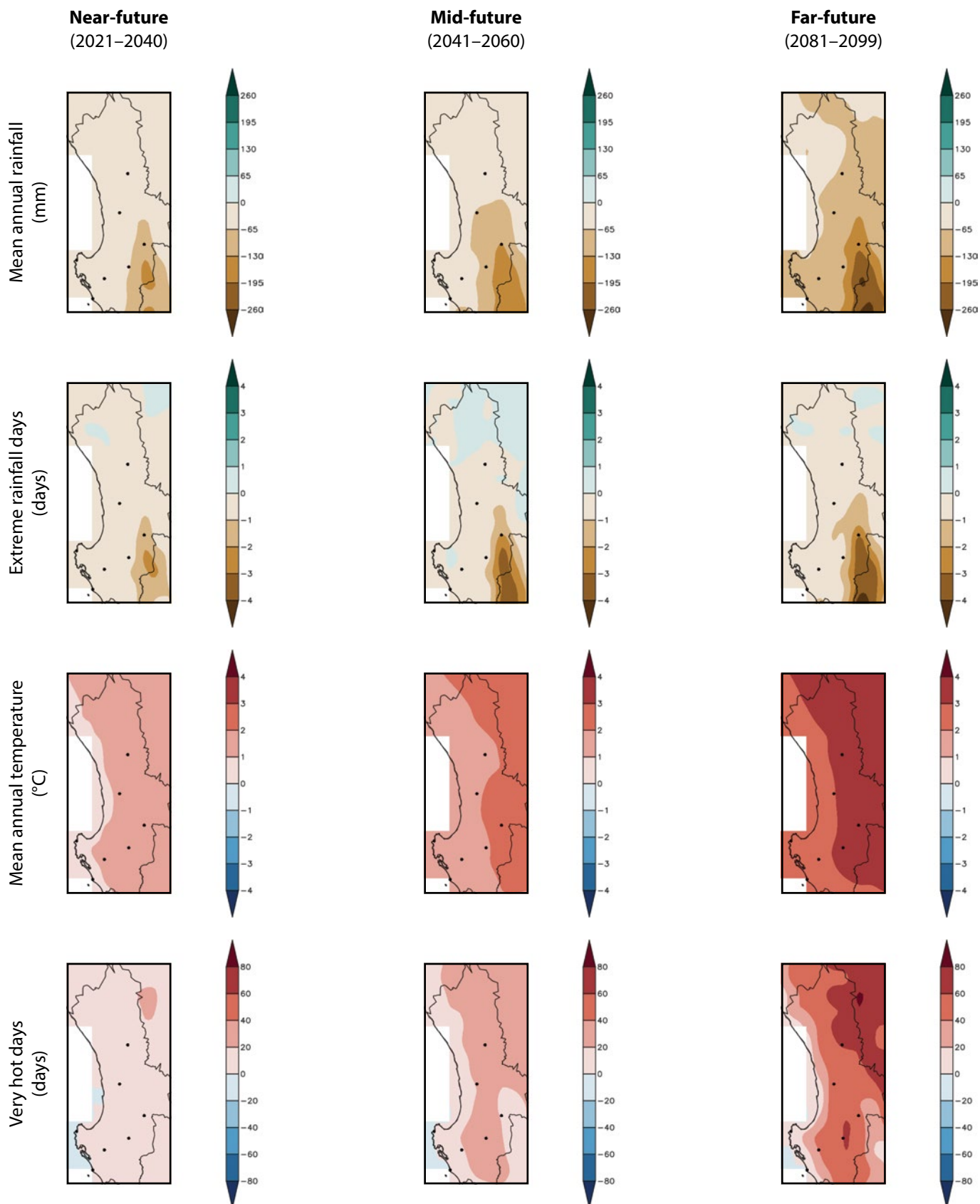


Observed climate trends (overview)

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

Projected future climate change (overview)

- Projected decrease in mean annual rainfall (*high confidence*).
- Projected decrease 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 (*high confidence*).



Projected future climate change (*detailed*)

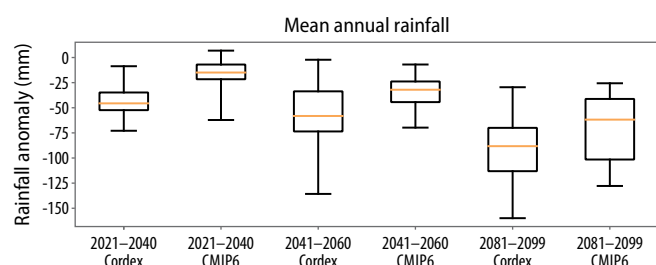
Near- and mid-future

- Projected decrease in rainfall (*virtually certain*), larger decreases over the Cederberg.
- Projected decrease in extreme rainfall events (*likely*), particularly over the Cederberg.
- Projected increase in temperature and warm extremes (*virtually certain*), with an associated decrease in cold extremes (*likely*).
- Projected increase in agricultural and meteorological drought (*very likely*).

Far-future

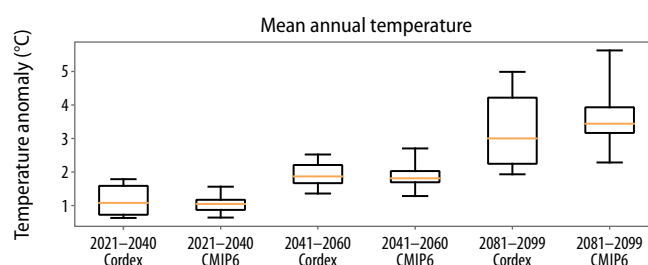
- Projected decrease in rainfall (*virtually certain*), larger decreases over the Cederberg.
- Projected decrease in extreme rainfall events (*likely*), particularly over the Cederberg.
- Projected increase in temperature and warm extremes (*virtually certain*), with an associated decrease in cold extremes (*likely*).
- 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 for 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 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 2.0 °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*) and a decrease in cold extremes (*high confidence*).

Citation:

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