



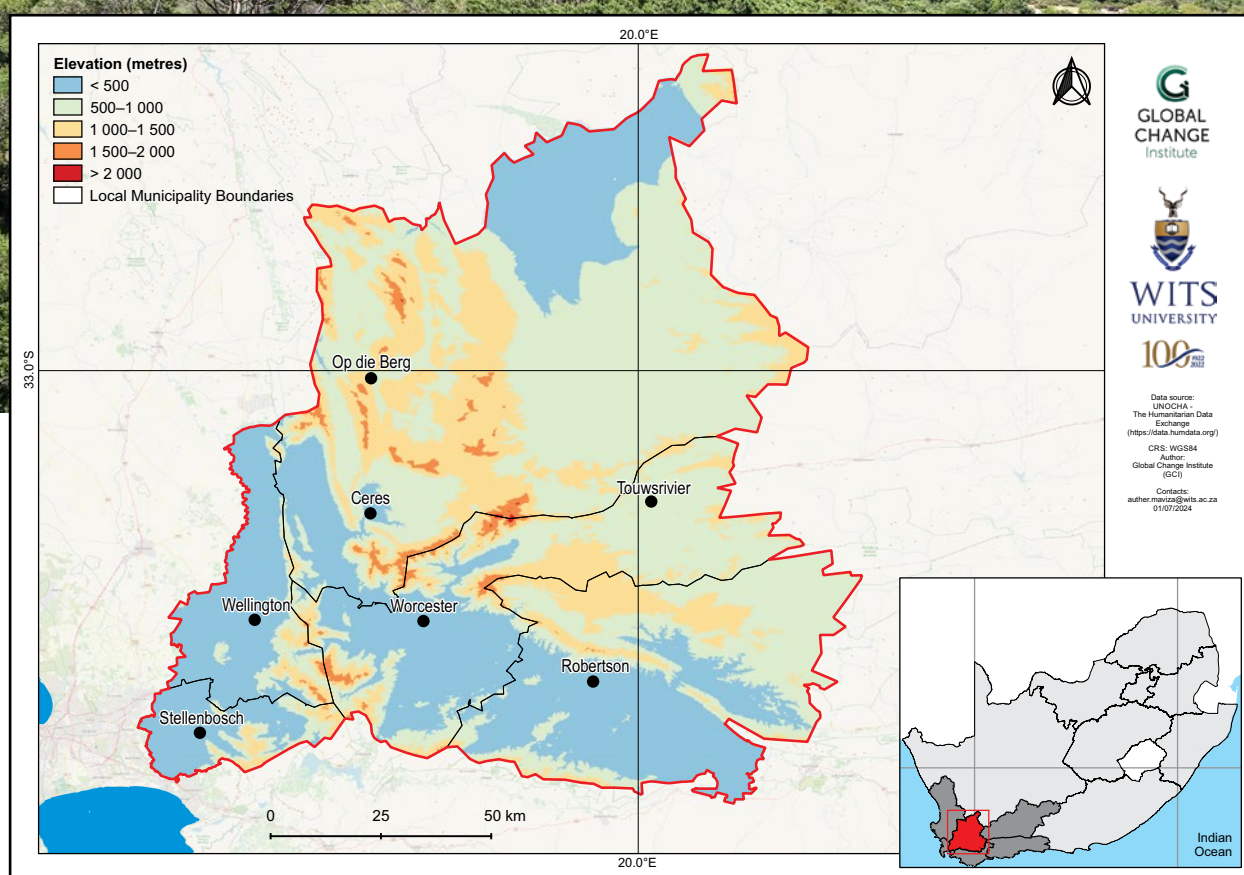
Cape Winelands District Municipality climate change fact sheet

Western Cape, South Africa

MUNICIPAL

Introduction

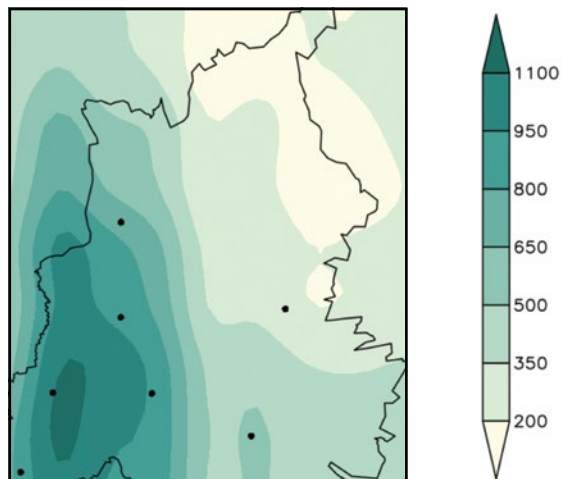
- This fact sheet is part of a series of district municipality fact sheets developed by the Wits GCI and SANBI. The fact sheets present a summary of observed and projected changes in climate over district municipalities in South Africa. They should be used together with the guidelines presented in the cover page.
- Cape Winelands District Municipality covers an area of 21 473 km², with elevation ranging from 20 m to 300 m above sea level in the lowlands, increasing to 2 000 m above sea level in the peaks of the Cape Fold Mountains.
- The district experiences a Mediterranean climate characterised by hot, dry summers and cool, wet winters. Mountainous areas receive most of the rainfall with occasional winter snowfall on their peaks.



Observed climate: rainfall (1981–2000)

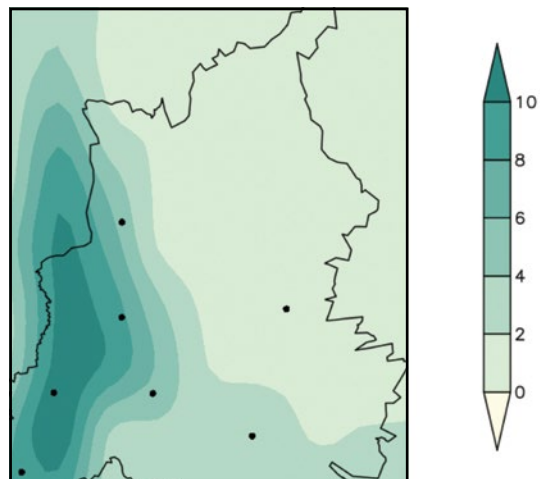
Mean annual rainfall

Mean annual rainfall ranges from 200 mm over the north-eastern region to 1 100 mm over the Cape Fold Mountains.



Extreme rainfall days

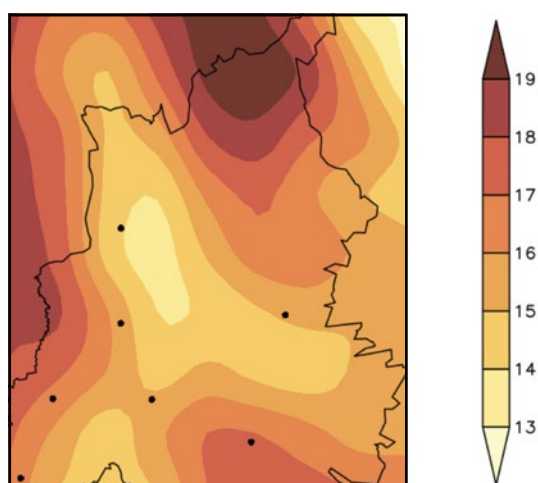
Mean annual number of extreme rainfall days range from less than 2 days over eastern parts to more than 10 days over the Cape Fold Mountains.



Observed climate: temperature (1981–2000)

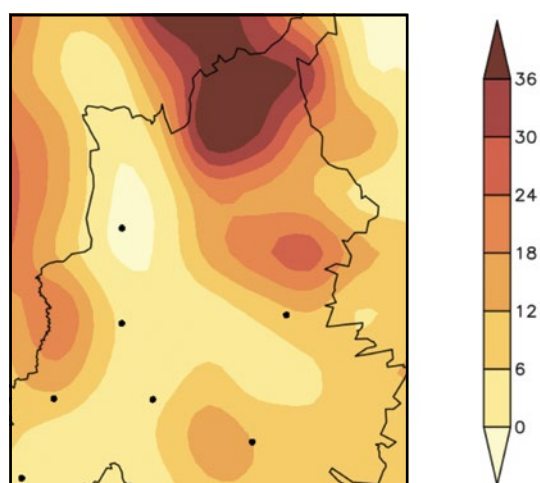
Mean annual temperature

Mean annual temperature ranges from 13 °C over the mountainous regions to 19 °C over the northern low-lying region.



Very hot days

Mean annual number of very hot days range from 0 days over the high-altitude mountains to more than 36 days over the northern lowlands.

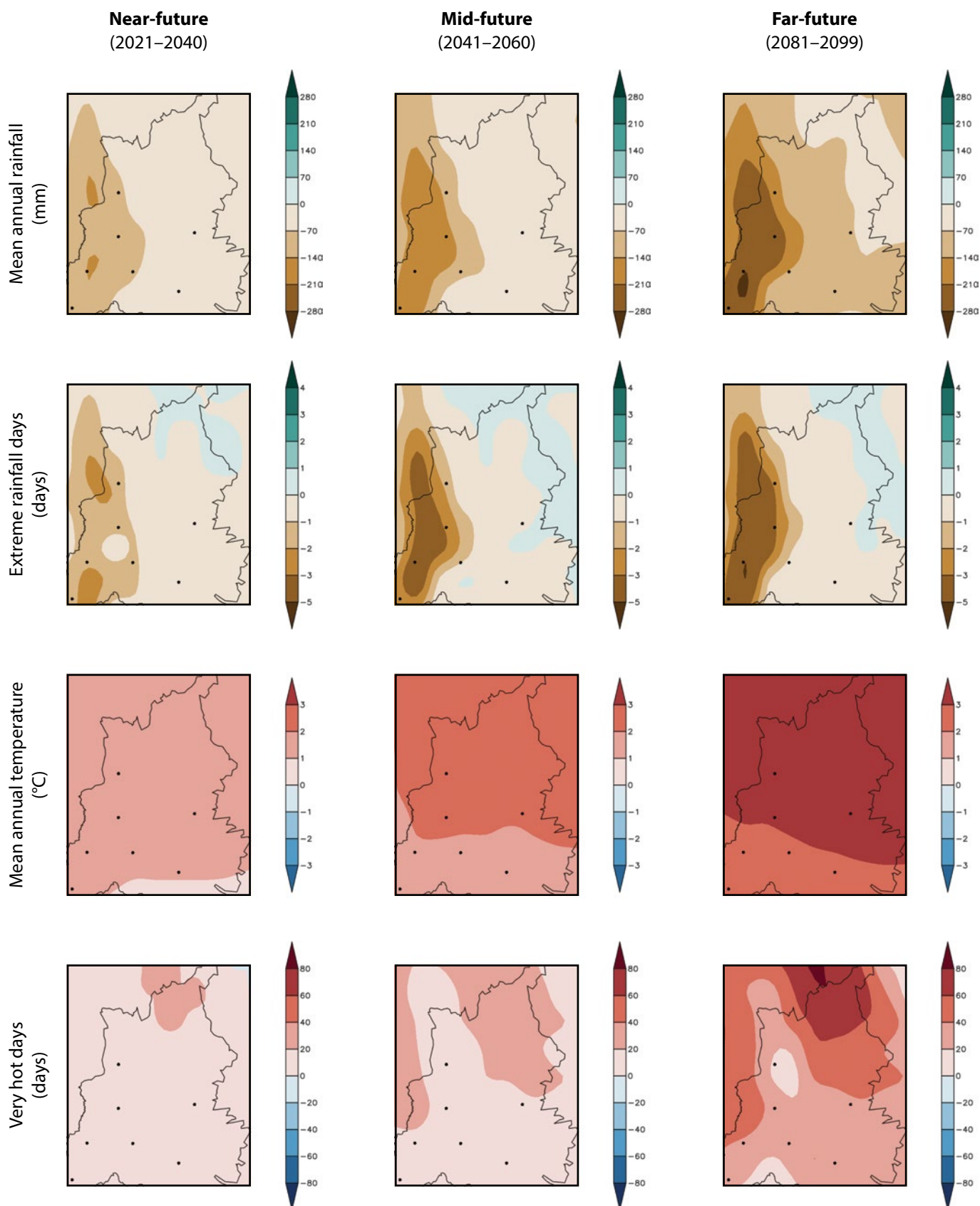


Observed climate trends (overview)

- Observed decreases 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 into the future (*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*)

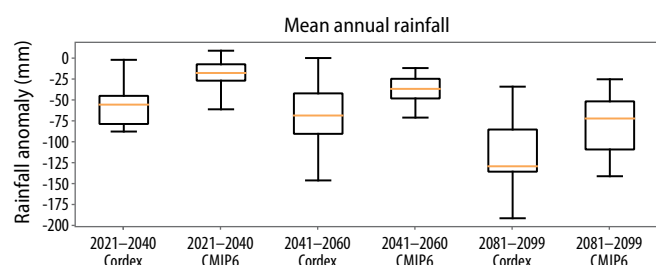
Near- and mid-future

- Projected decrease in rainfall over the entire district (*likely*), larger decreases over the Cape Fold Mountains.
- Projected decrease in extreme rainfall events (*likely*), particularly over the Cape Fold Mountains.
- 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

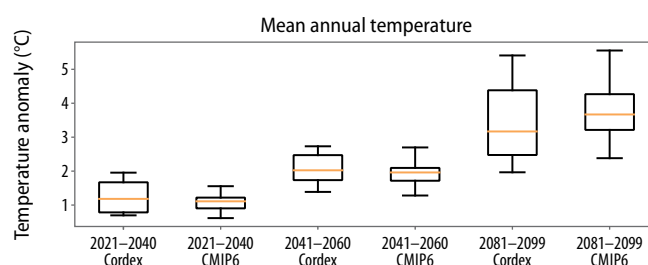
- Projected decrease in rainfall (*very likely*), larger decreases over the Cape Fold Mountains.
- Projected decrease in extreme rainfall events (*likely*), particularly over the Cape Fold Mountains.
- Projected increase in temperature and warm extremes (*virtually certain*), with an associated decrease 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 2.5 °C in the mid-future and 4.5 °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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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