

Table S1 General circulation models used as the basis for historical simulations and projections.

Model	Origin	Comments from VCP19 ^a
ACCESS 1-0	CSIRO-BOM, Australia	A hot, dry model in the south of Victoria. Representative of the consensus of GCM projections in northern Victoria.
CNRM-CM5	CNRM-CERFACS, France	Representative of the consensus of GCM projections over Victoria, particularly in the north.
GFDL-ESM2M	NOAA, GFDL, USA	Often a hot, dry model for Victoria.
HadGEM2-CC	MOHC, UK	Often a hot, dry model for Victoria.
MIROC5	JAMSTEC, Japan	Often a low warming, wet model for Australia and Victoria.
NorESM1-M	NCC, Norway	Often a low warming, wet model for Victoria, especially in the south.

^aModel descriptions from (Clarke JM et al, 2019, pg. 14).

Table S2 Meteorological variables extracted from the historical simulations and projections.

Variable	Measurement height	Units
Air temperature	2m	K
Relative humidity	2m	%
Wind speed	10m	ms^{-1}
Downwelling solar radiation	0m	Wm^{-2}

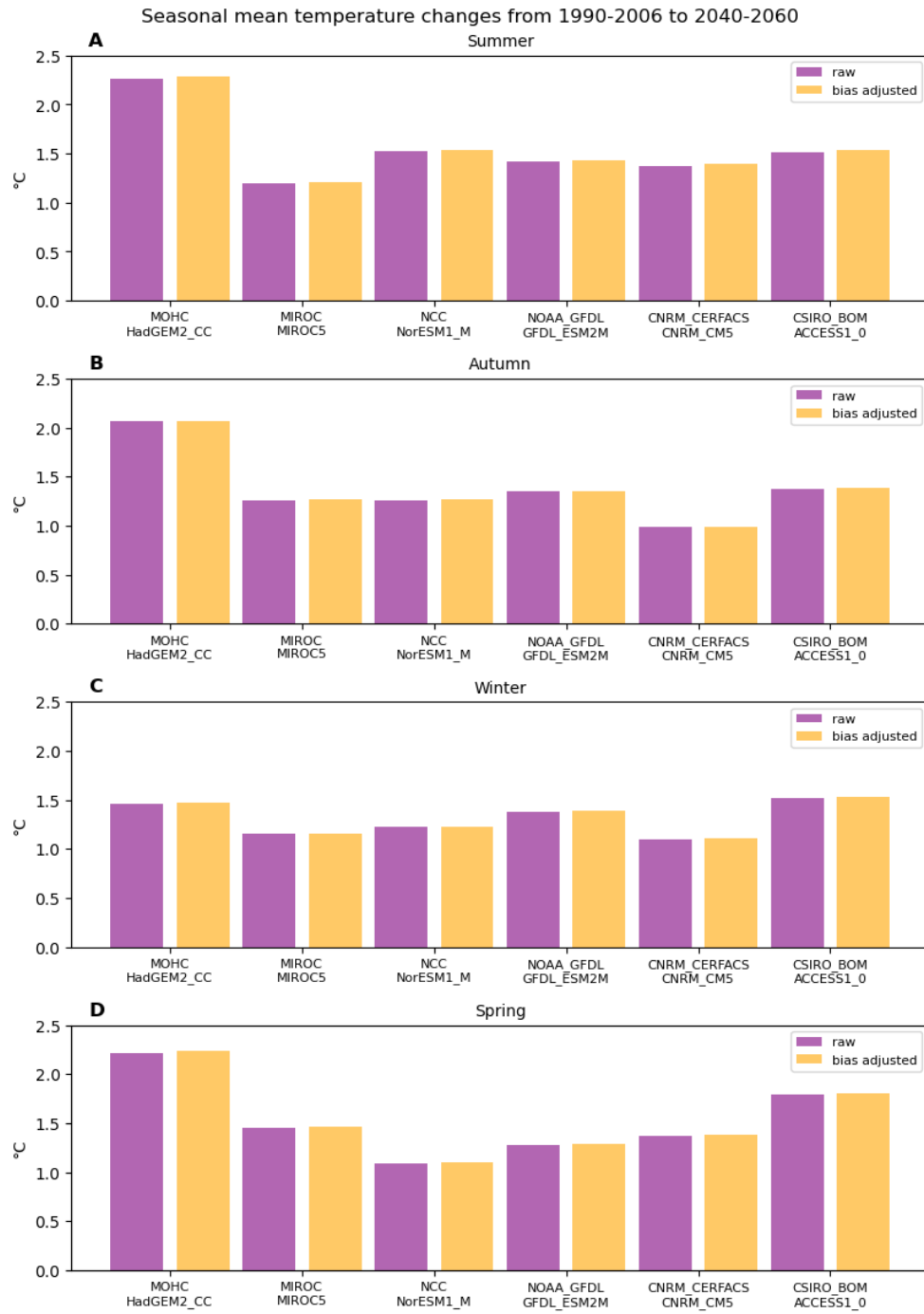


Figure S1 Raw and bias corrected differences between seasonal mean air temperatures from 1990–2005 to 2040–2059 plotted by season and model.

Table S3 UTCI ranges, categories, and protective responses adapted from [Di Napoli et al \(2019\)](#)

UTCI range (°C)	Stress category	Protection measures
>46	Extreme heat stress	Temporary body cooling and drinking $>0.5 \text{ L h}^{-1}$ necessary No physical activity
38 to 46	Very strong heat stress	Temporary use of air conditioning or shaded places necessary Drinking $>0.5 \text{ L h}^{-1}$ Reduce physical activity
32 to 38	Strong heat stress	Use shaded places and temporarily reduce physical activity Drinking $>0.25 \text{ L h}^{-1}$
26 to 32	Moderate heat stress	Drinking $>0.25 \text{ L h}^{-1}$
9 to 26	No thermal stress	Human thermoregulation sufficient to keep thermal comfort
0 to 9	Slight cold stress	Use gloves and hat
-13 to 0	Moderate cold stress	Intensify activity and protect face and extremities against cooling
-27 to -13	Strong cold stress	Intensify activity and protect face and extremities against cooling Use warmer clothing
-40 to -27	Very strong cold stress	Intensify activity and protect face and extremities against cooling Use warmer clothing Reduce outdoor exposure time
<-40	Extreme cold stress	Stay at home If outdoor exposure is necessary use heavy and wind protected clothing

References

- Clarke JM, M G, M T, et al (2019) Victorian Climate Projections 2019 Technical Report. URL https://www.climatechangeinaustralia.gov.au/media/ccia/2.2/cms_page_media/508/Vic%20Climate%20Projections%202019%20Technical%20Report_1.pdf
- Di Napoli C, Pappenberger F, Cloke HL (2019) Verification of Heat Stress Thresholds for a Health-Based Heat-Wave Definition. *Journal of Applied Meteorology and Climatology* 58(6):1177–1194. <https://doi.org/10.1175/JAMC-D-18-0246.1>, URL <https://journals.ametsoc.org/view/journals/apme/58/6/jamc-d-18-0246.1.xml>, publisher: American Meteorological Society Section: *Journal of Applied Meteorology and Climatology*