Supplementary Material

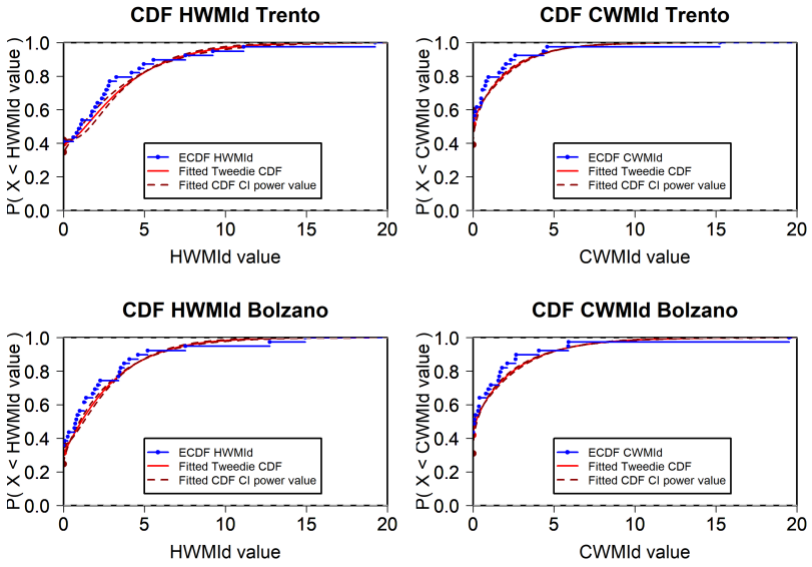

Figure S - 1: Cumulative distribution functions for both HWMId / CWMId at the location of the cities of Bolzano and Trento

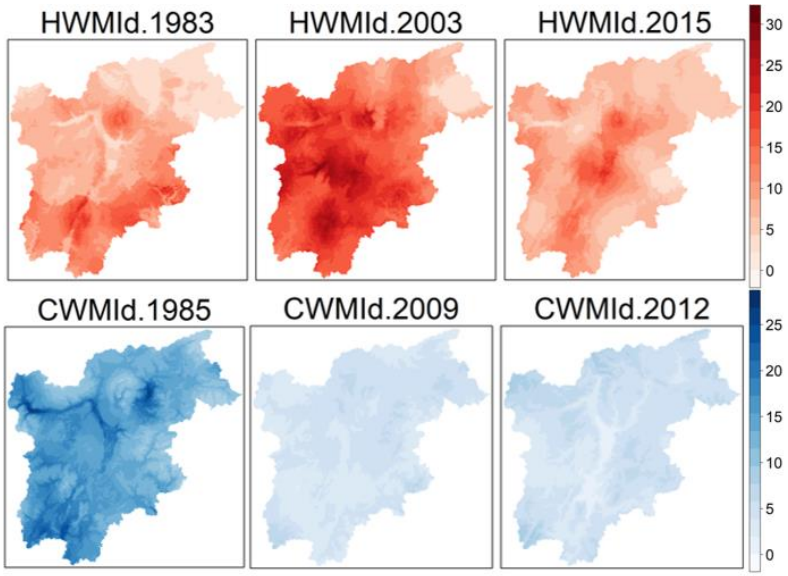

Figure S - 2: Regional Heat wave Magnitude Index daily and Cold Wave Magnitude index daily maps for single years among the highest regional average on record (1980-2018)

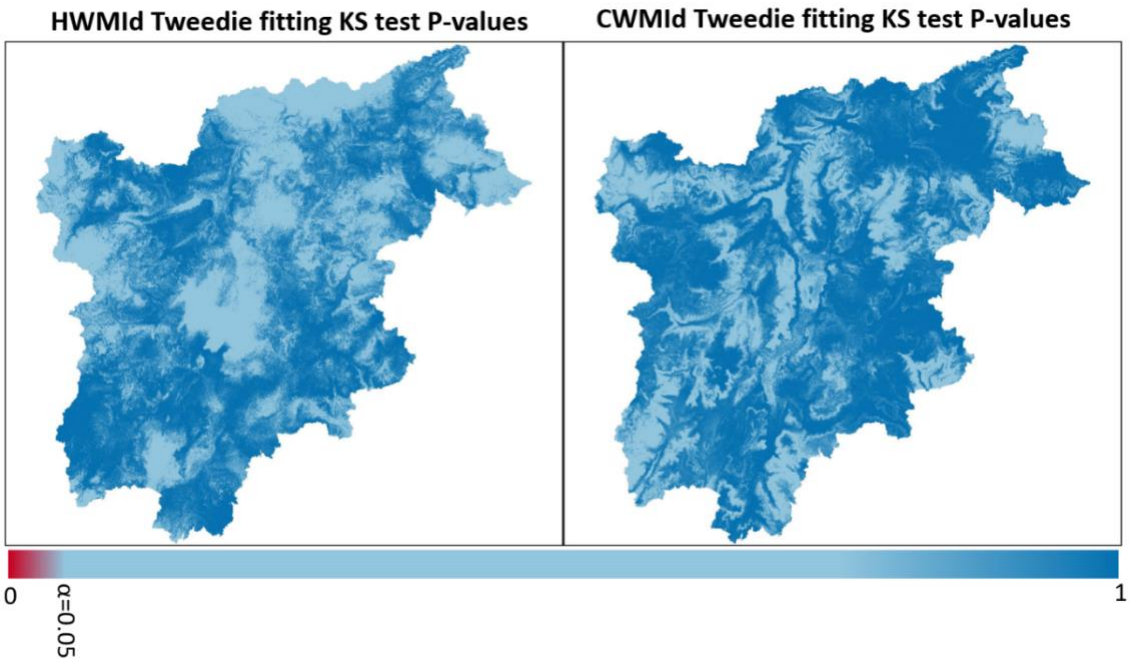

Figure S - 3: KS test P-values for the Tweedie distribution fitting of HWMId and CWMId

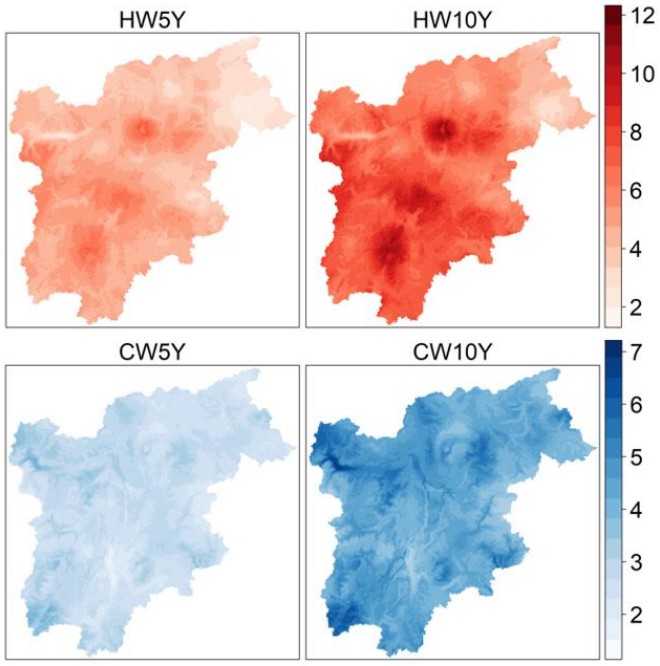

Figure S - 4: Heat wave and cold wave return levels corresponding to T=5years and T=10years

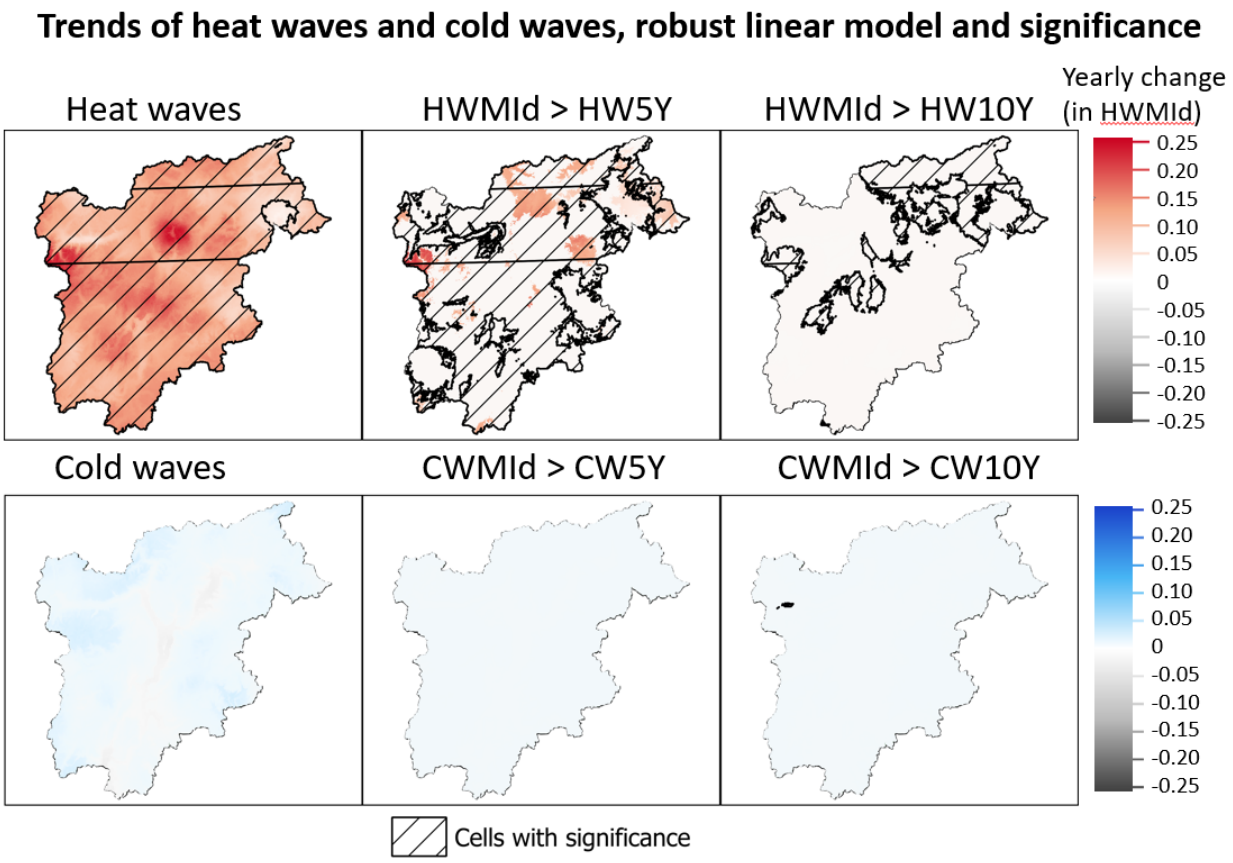

Figure S - 5: Trends in heat waves (HW) and cold waves (CW) using the robust linear model based on yearly HWMId and CWMId magnitudes from 1980 to 2018

Table T - 1: Trends of percentage of population exposed

model	Mann-Kendall significance	Mann-Kendall τ	Sen's slope	linear model significance	linear model slope
HWMId > HW5Y	***	0.35	0.05	***	1.33
HWMId > HW10Y	***	0.31	0	insignificant	0.48
CWMId > CW5Y	insignificant	-0.10	0	insignificant	-0.18
CWMId > CW10Y	insignificant	0.01	0	insignificant	-0.36

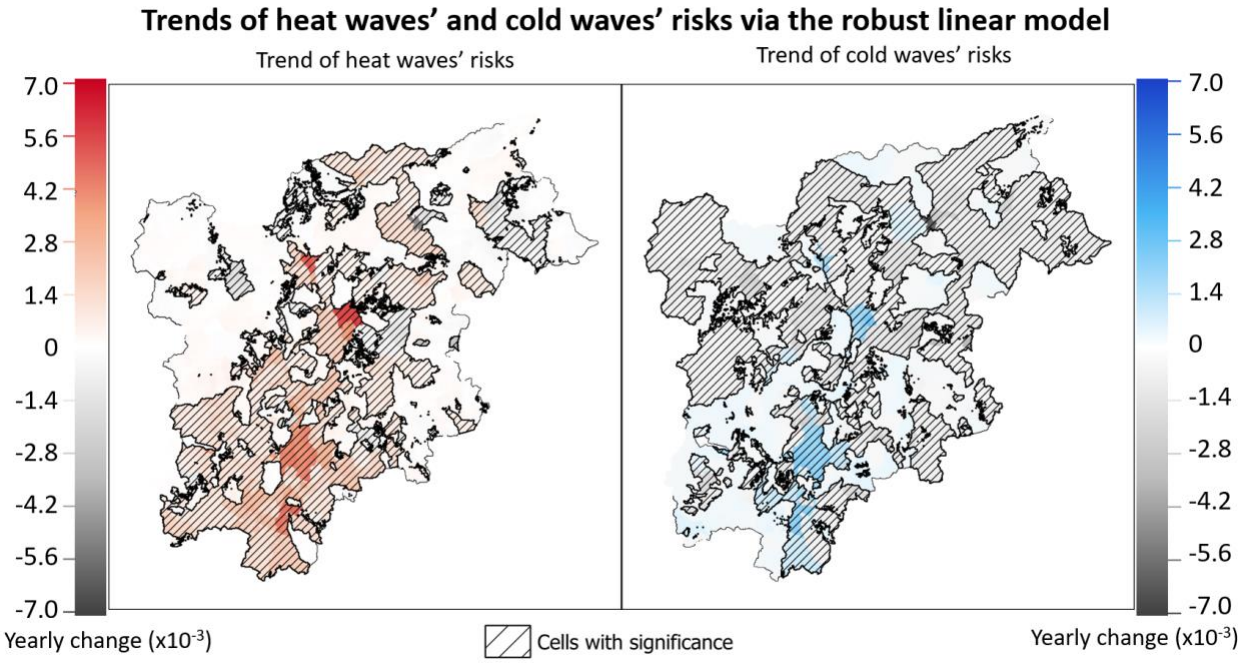

Figure S - 6: Trends of heat waves and cold waves risks via the robust linear model.

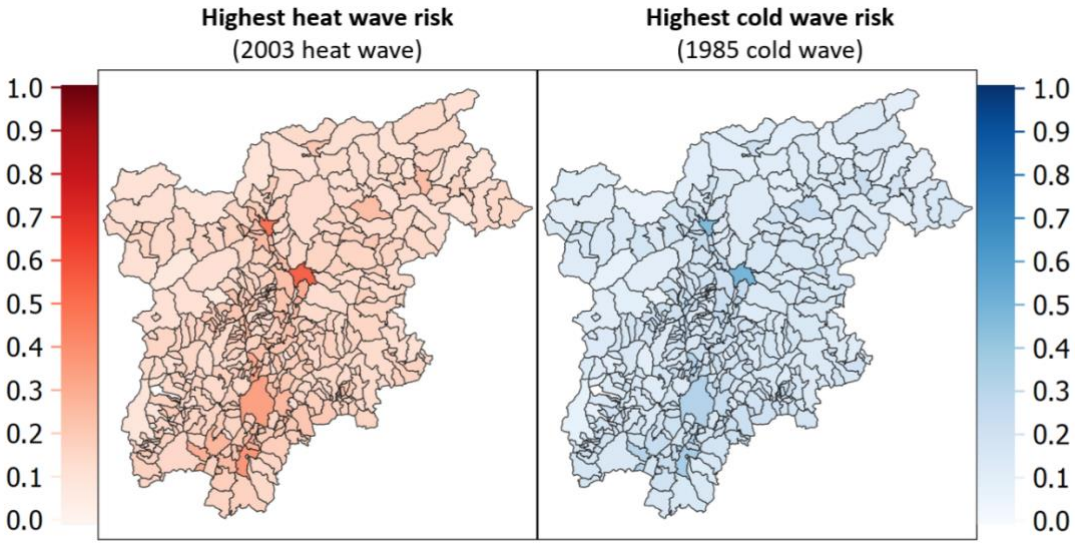

Figure S - 7: highest risks on record for heat waves and cold waves