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Figure S1. Spatial distribution of averaged HWA (°C) based on all heatwave events calculated from ERA5-Land during the period 1950–2020.

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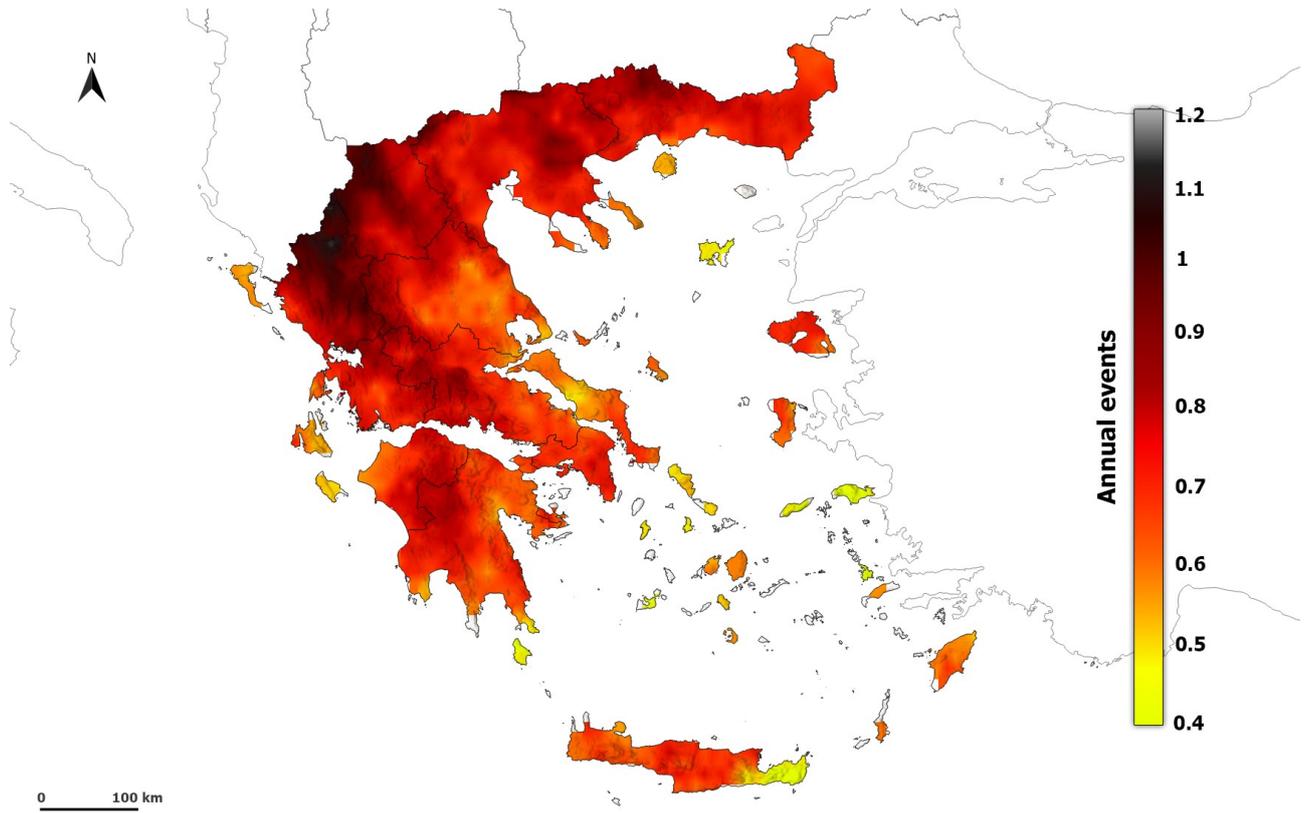


Figure S2. Spatial distribution of averaged HWN (heatwaves) based on all heatwave events calculated from ERA5-Land during the period 1950–2020.

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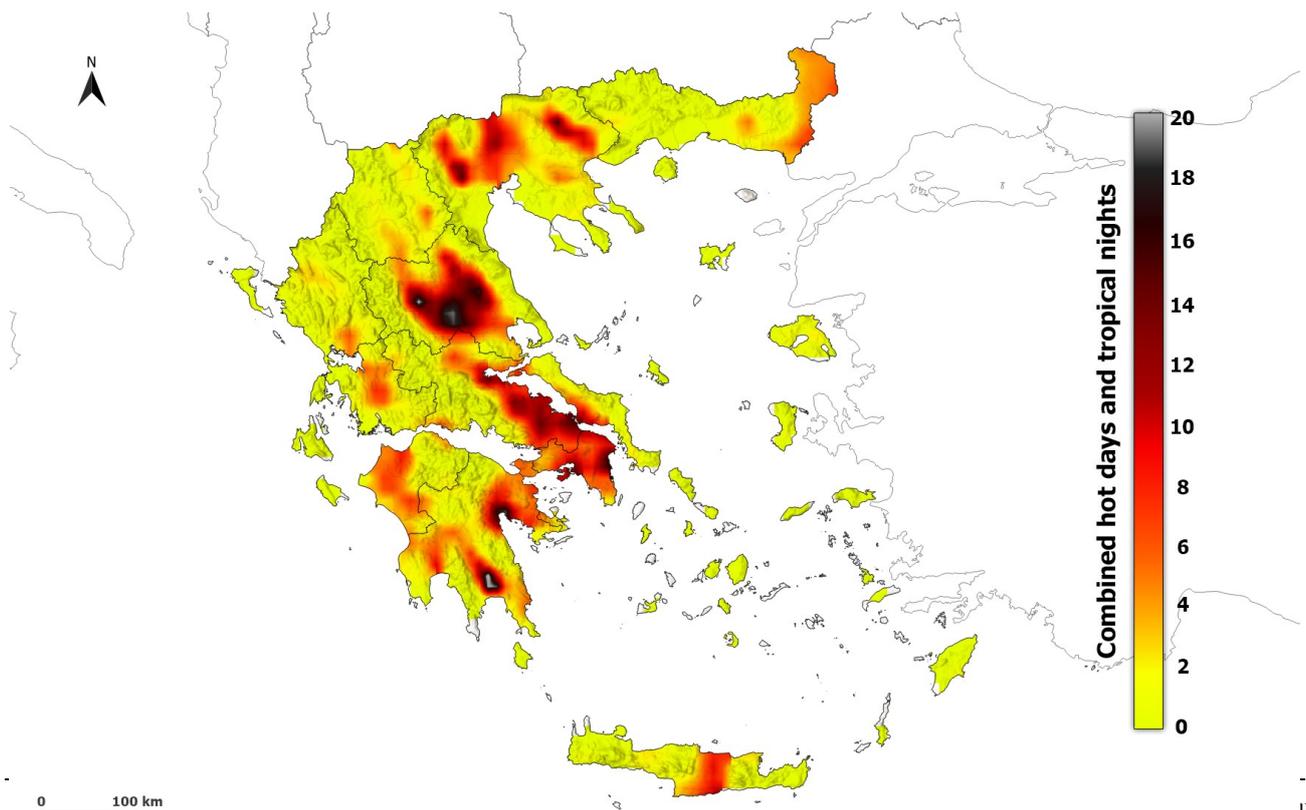
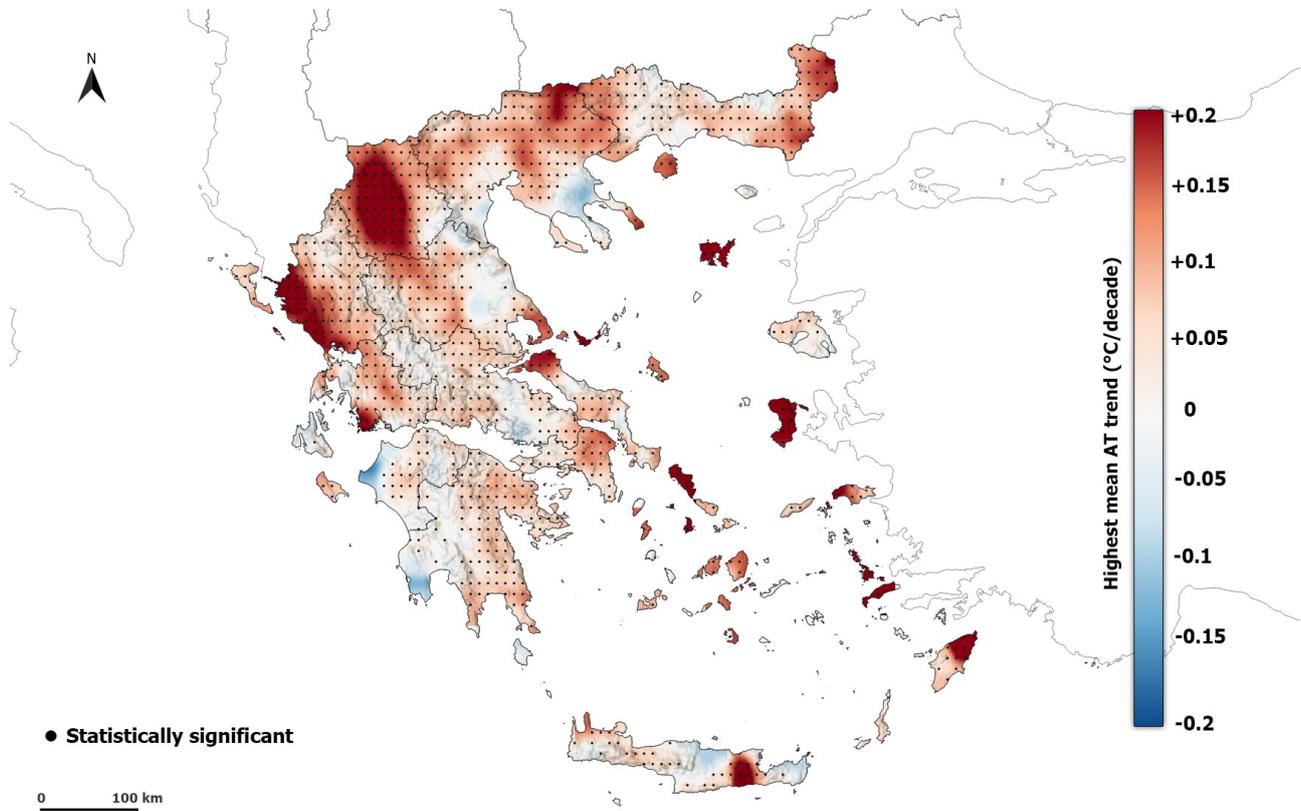


Figure S3. Spatial distribution of averaged CHT (days) based on all heatwave events calculated from ERA5-Land during the period 1950–2020.

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Figure S4. Spatial distribution of summer HWA trend (°C per decade) calculated from ERA5-Land during the period 1950–2020. Dots indicate significant trends at the 95% level.

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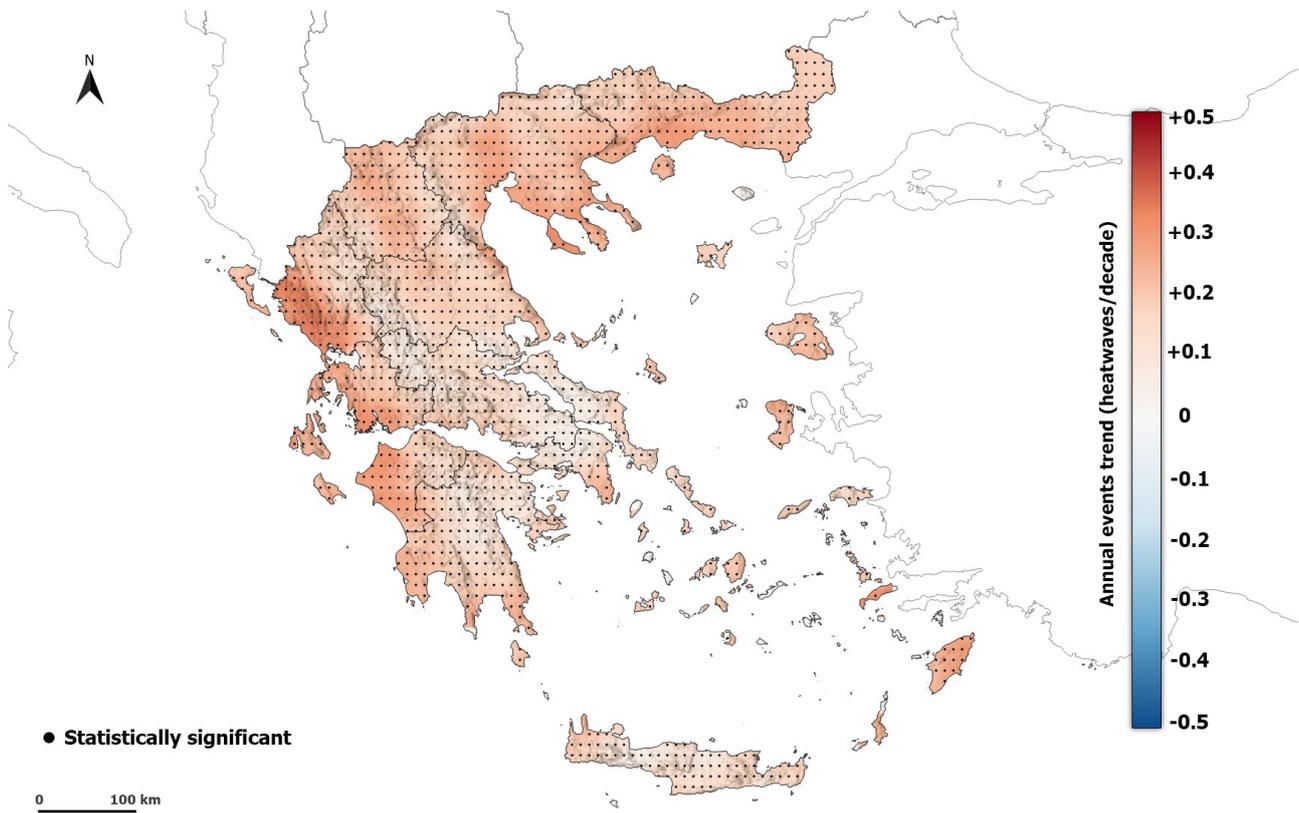


Figure S5. Spatial distribution of summer HWN trend (heatwaves per decade) calculated from ERA5-Land during the period 1950–2020. Dots indicate significant trends at the 95% level.

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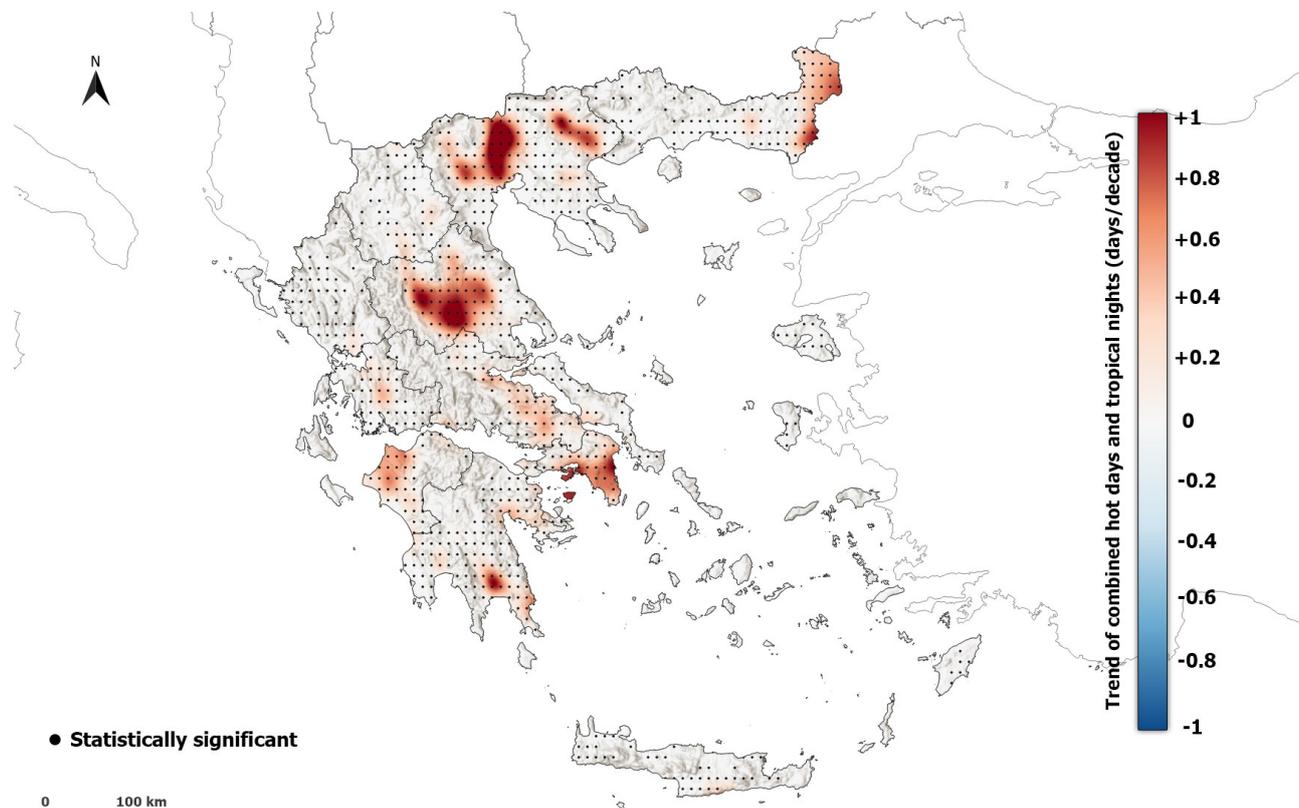
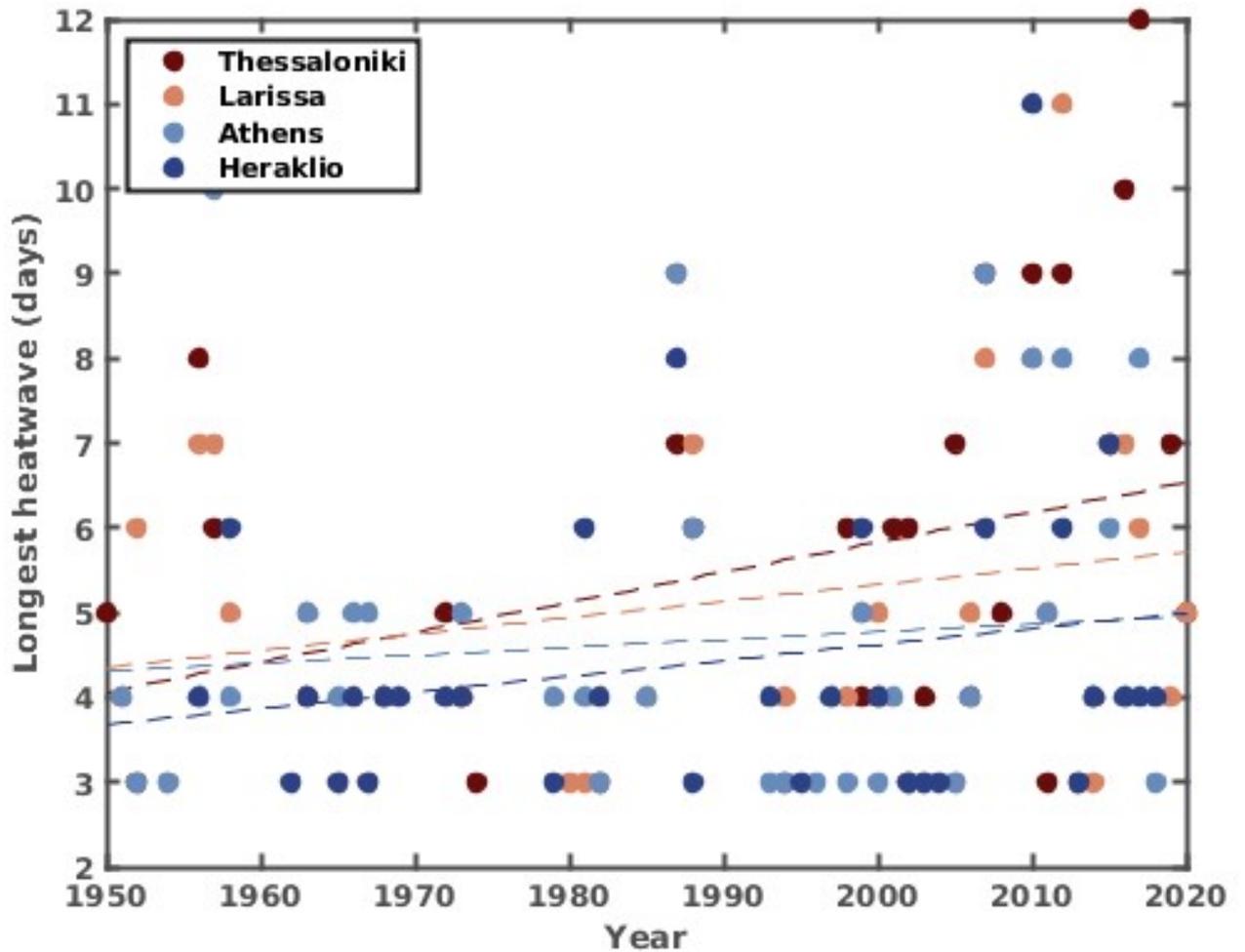
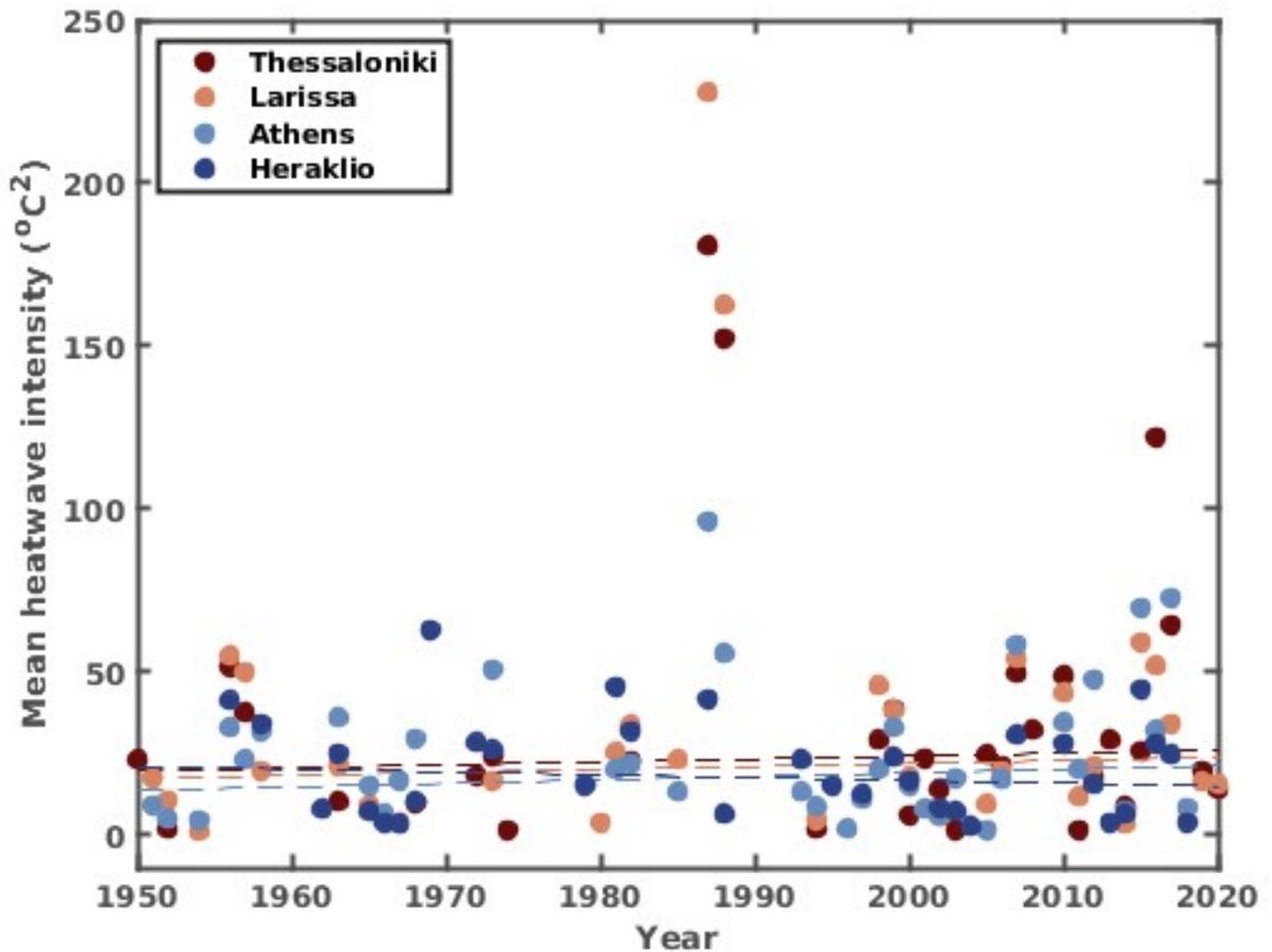


Figure S6. Spatial distribution of summer CHT trend (days per decade) calculated from ERA5-Land during the period 1950–2020. Dots indicate significant trends at the 95% level.

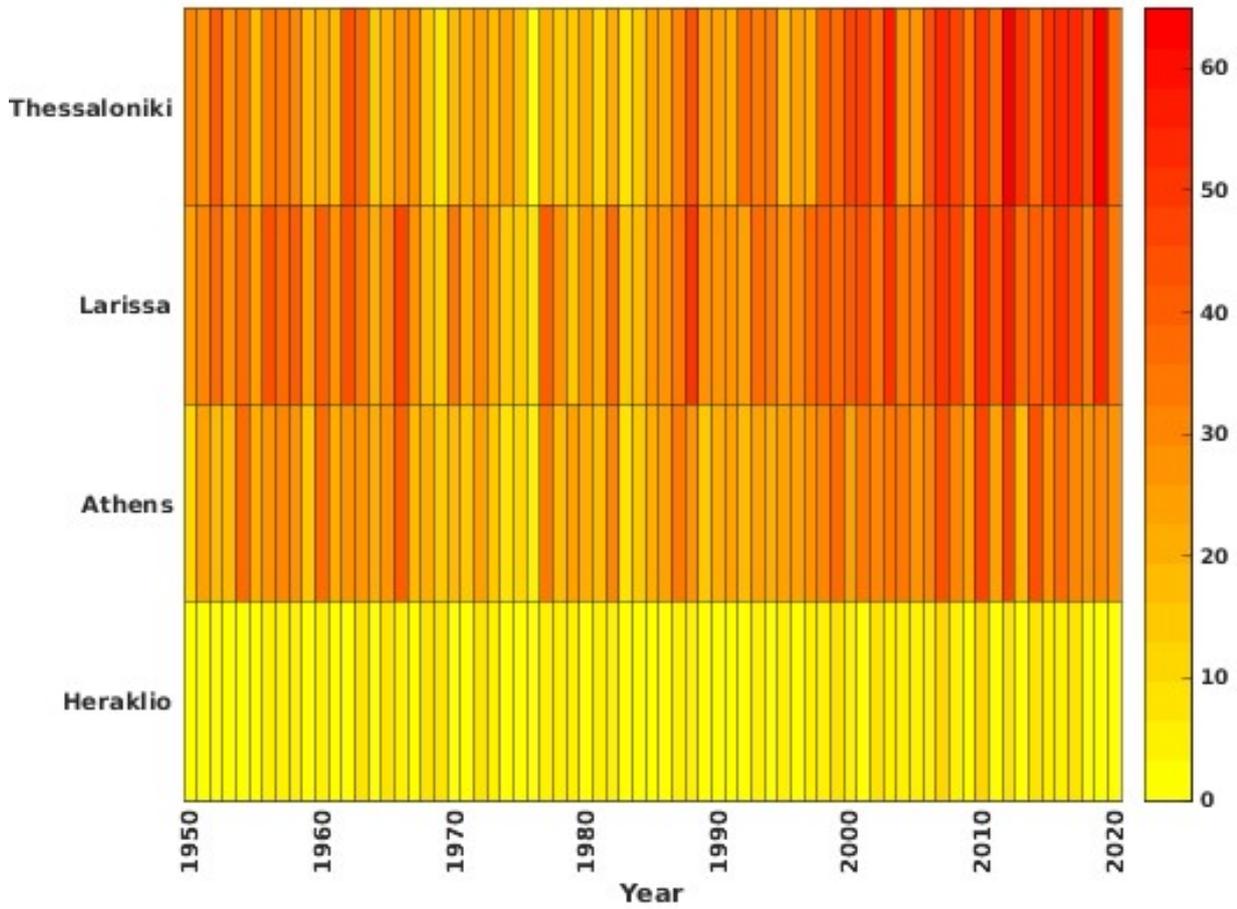
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50 Figure S7. Temporal evolution of HWD (days) for selected cities calculated from ERA5-Land during the period 1950–2020 (circle marker), plotted together trend line (dashed line).



55 **Figure S8.** Temporal evolution of HWI ($^{\circ}\text{C}^2$) for selected cities calculated from ERA5-Land during the period 1950–2020 (circle marker), plotted together trend line (dashed line).



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Figure S9. Heatmap of the temporal evolution of AT41C (days) for selected cities calculated from ERA5-Land during the period 1950–2020.

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