

Trends of extreme temperature events over the Iberian Peninsula during 21st century

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Proyecto IBI6063

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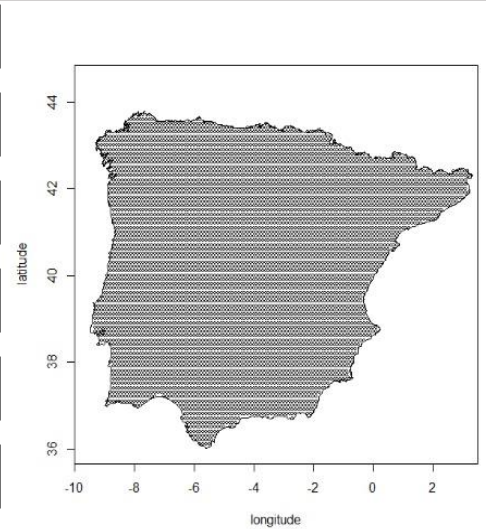
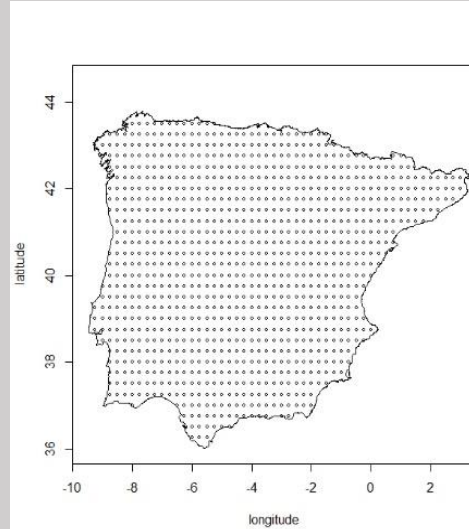
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Dataset

Maximum daily temperatures / Summer months / Iberian Peninsula

Dynamic projections

- Dynamic downscaling
- ENSEMBLES project
- SRESA1B scenario
- Grid width: 0.25°



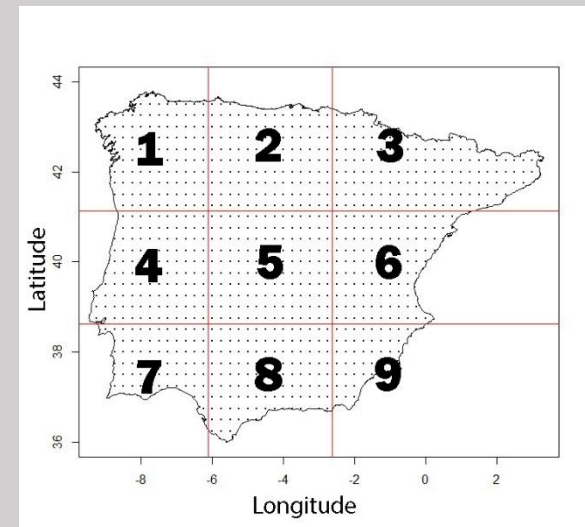
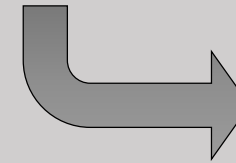
C4I-RCA3.0-HadCM3Q16	HC-HadRM3Q16-HadCM3Q16
CNRM-RM5.1-ARPEGE	ICTP-REGCM3-ECHAM5-r3
DMI-HIRHAM5-ARPEGE	KNMI-RACMO2.1-ECHAM5-r3
DMI-HIRHAM5-ECHAM5-r3	MPI-REM05.7-ECHAM5-r3
ETHZ-CLM2.4.6-HadCM3Q0	SMHI-RCA3.0-BCM
HC-HadRM3Q0-HadCM3Q0	SMHI-RCA3.0-ECHAM5-r3
HC-HadRM3Q3-HadCM3Q3	SMHI-RCA3.0-HadCM3Q3

1961-2000: Comparison period
2011-2099: Future period

Observed data

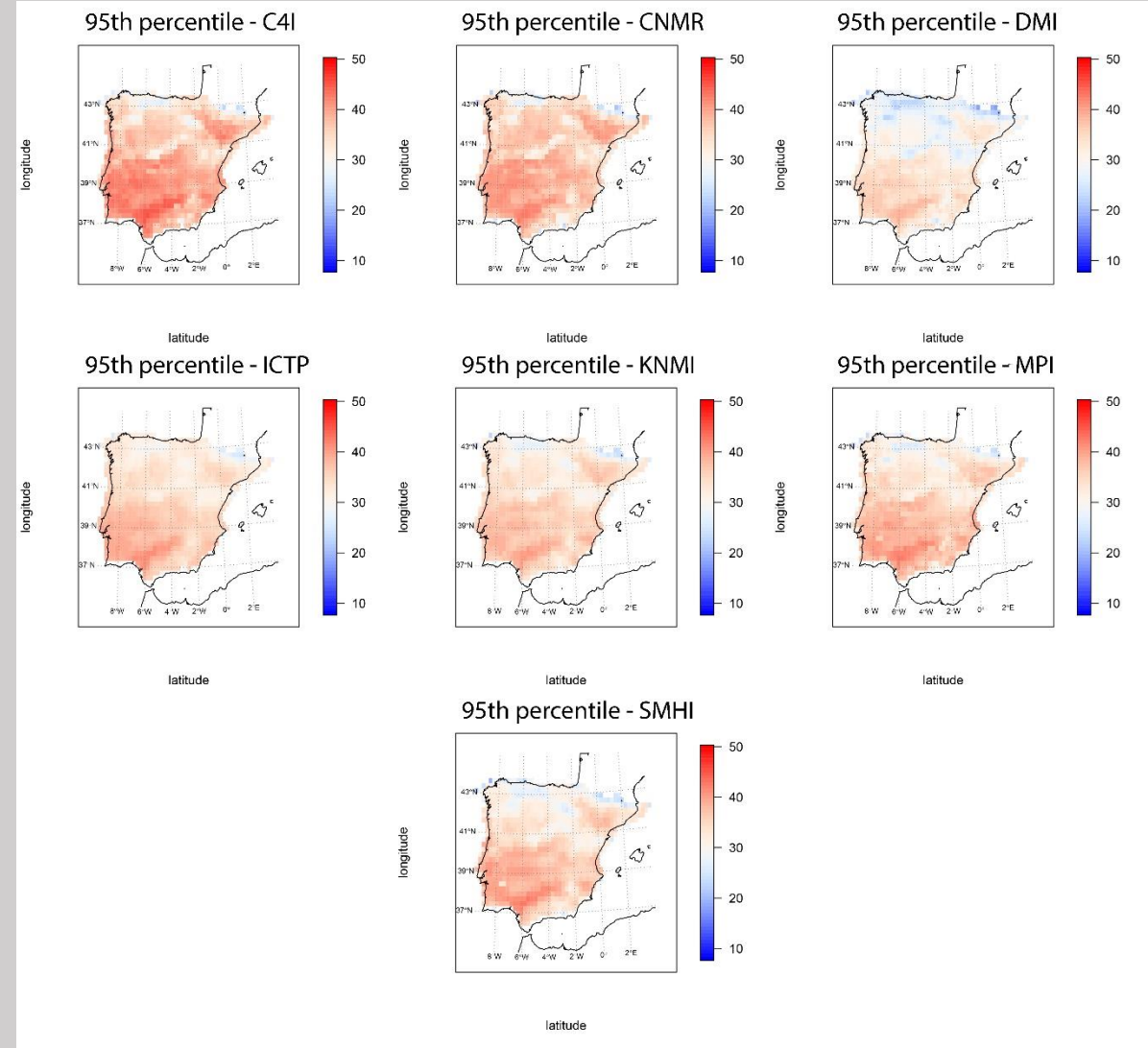
- SPAIN02 grid
- Interpolated from 250 observatories
- Grid width: 0.10°
- To compare both data sets during the comparison period

We divide the region into 9 sectors

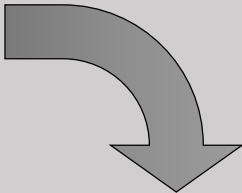


Comparasion Period

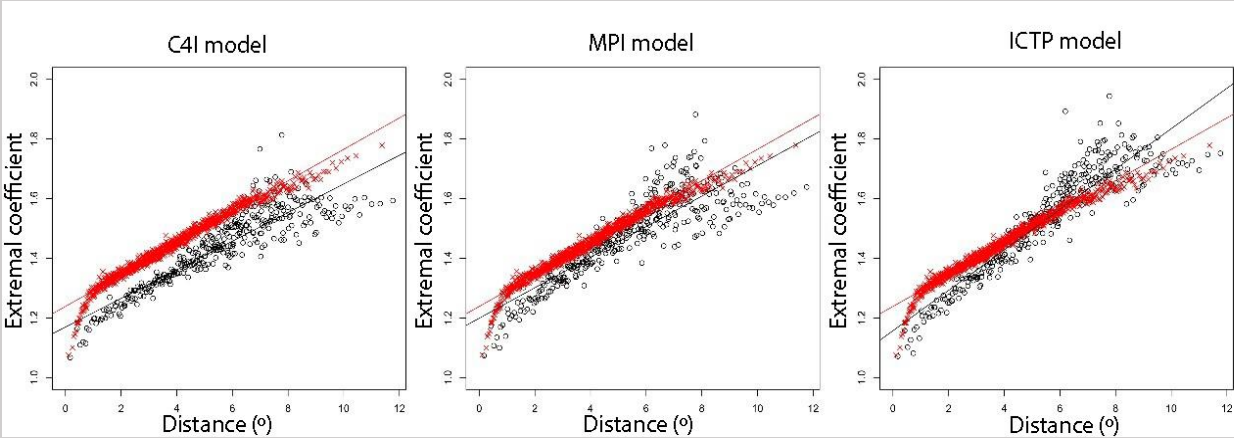
7 of the 14 projections have a similar distribution to the observed data



Spatial dependence calculated from fitting the models to max-stable processes



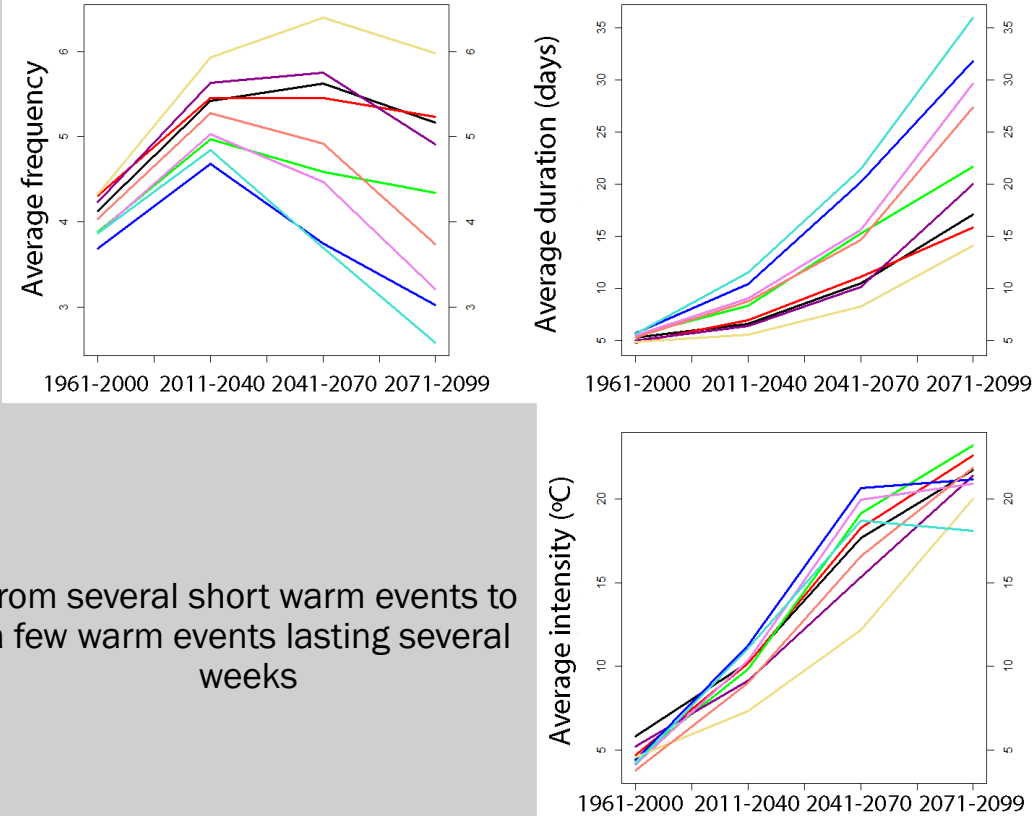
Only the C4I and MPI models (black dots) show a spatial dependence proportional to the observed data (red dots)



These two models are used to calculate the trends of the 21st century

Future Period

Warm events



Heat waves

