



WILL THE NORTH ATLANTIC OCEAN MARINE HEAT WAVE EVENTS INCREASE IN THE FUTURE?

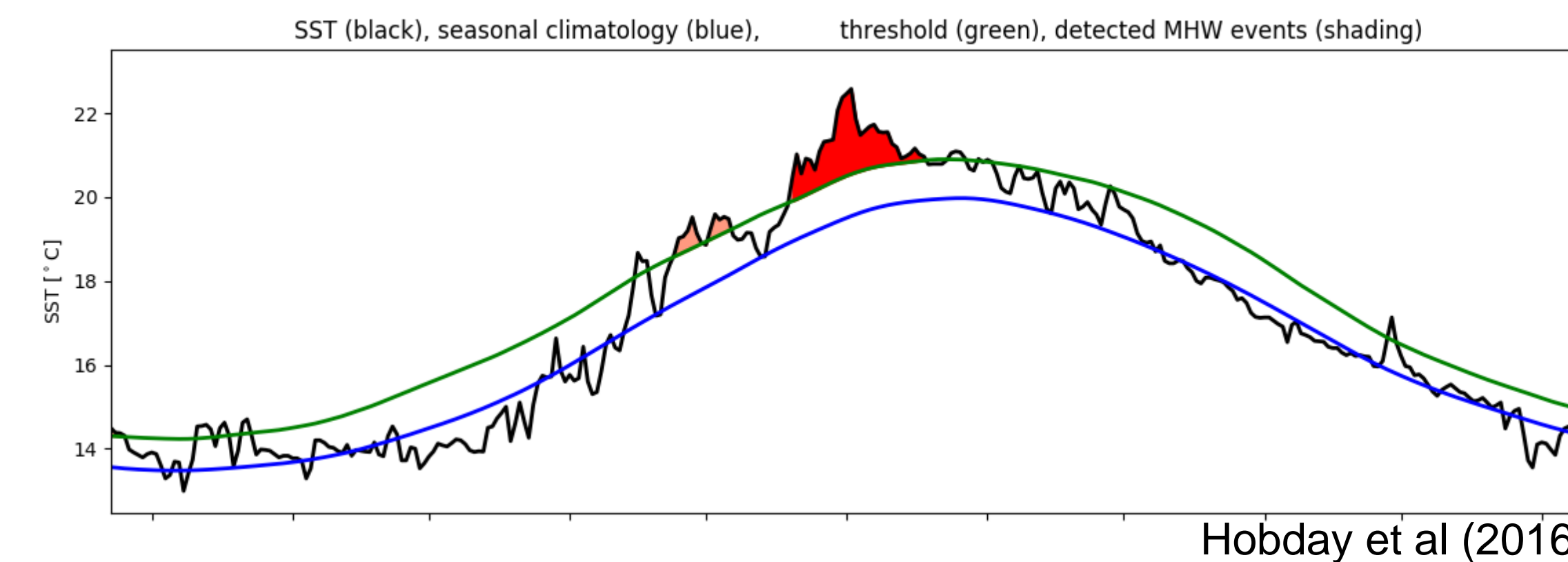
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METHODOLOGY

SST data for a period of 30 years
↓
baseline climatology
↓
percentile threshold $P90_{hist}$
↓
SST above $P90_{hist}$ for at least five days



Hobday et al (2016)

NOAA OISST

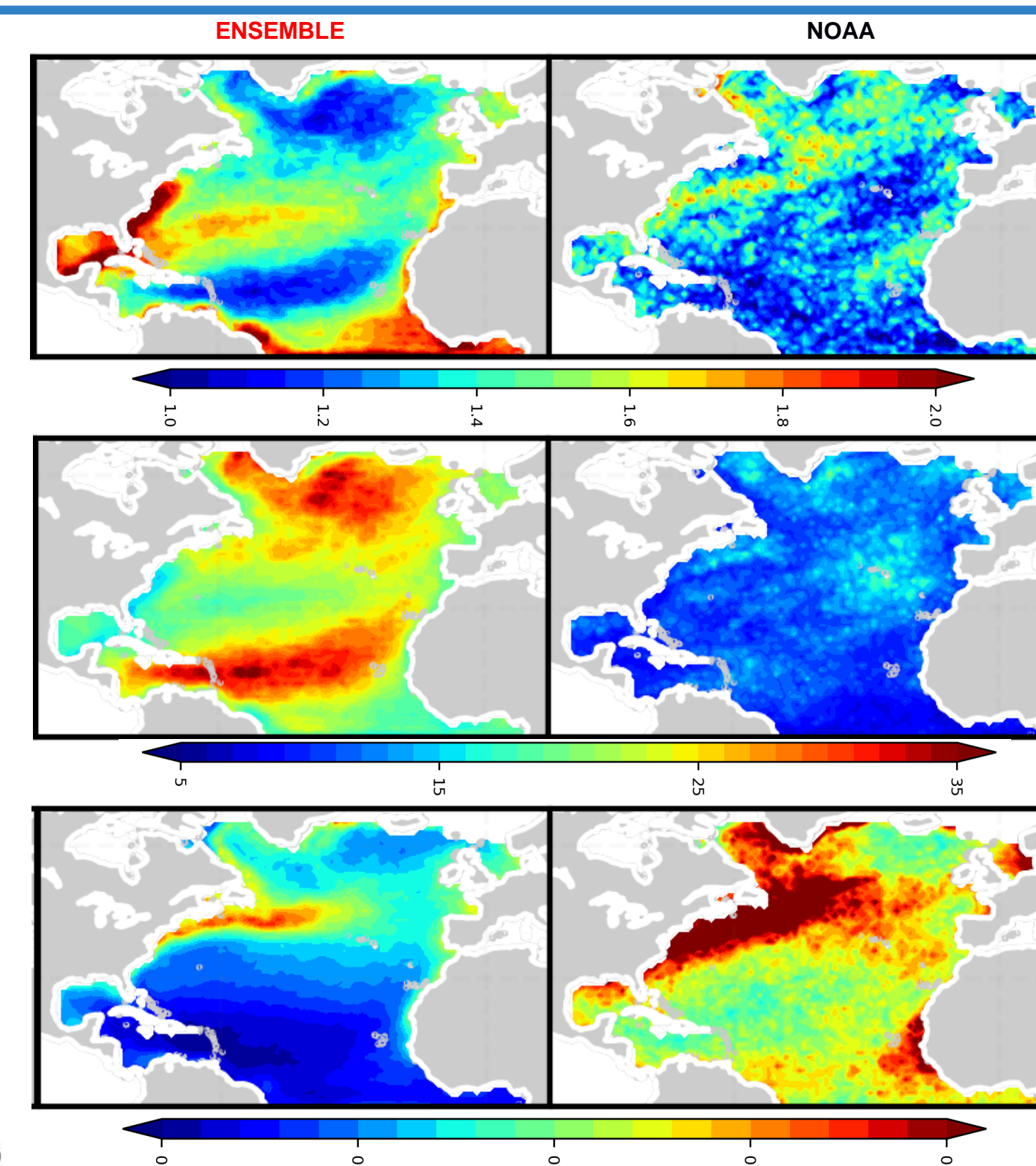
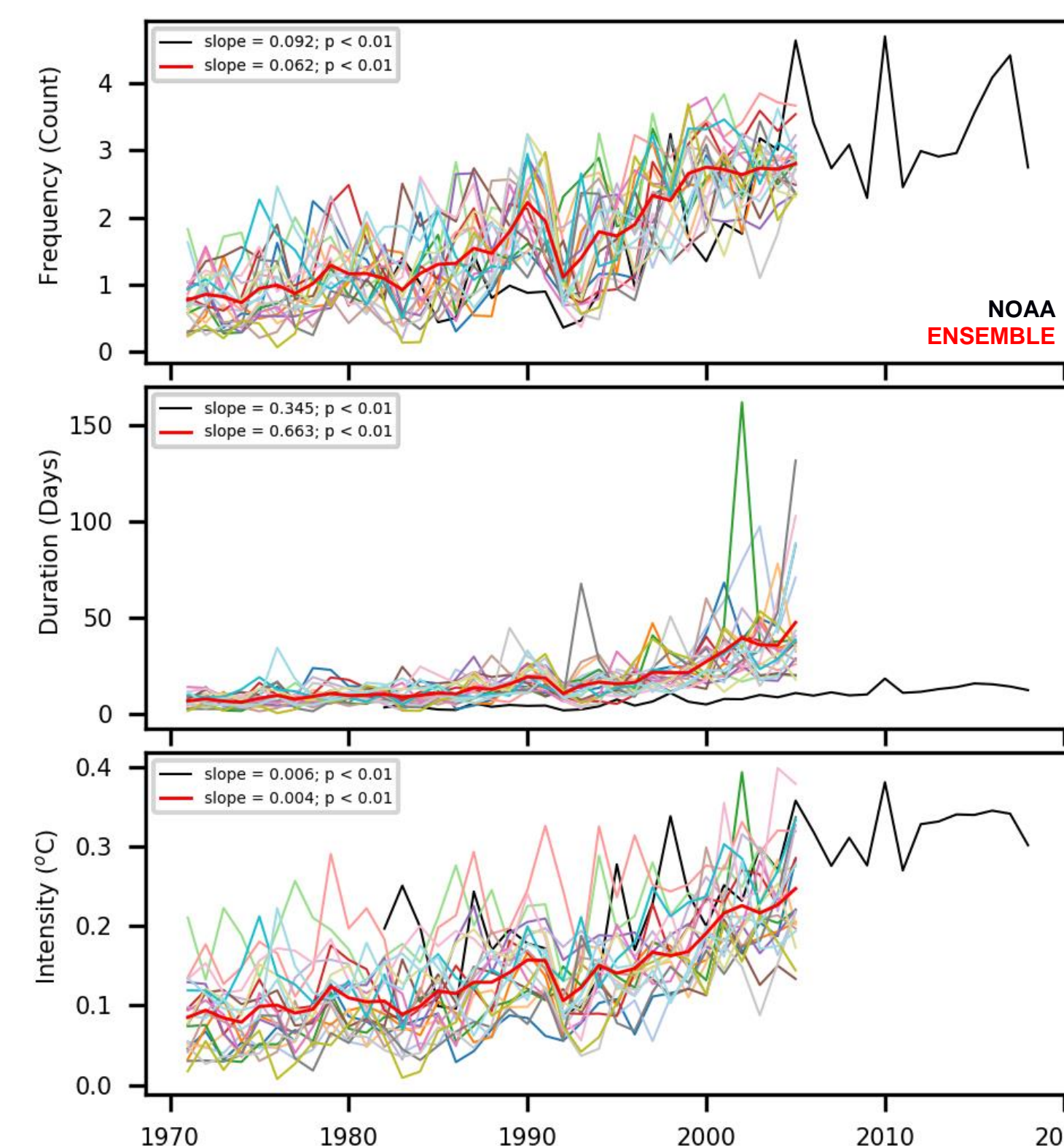
National Oceanic and
Atmospheric Administration
Optimum Interpolation Sea
Surface Temperature V2
daily over 1982-2018

CMIP5

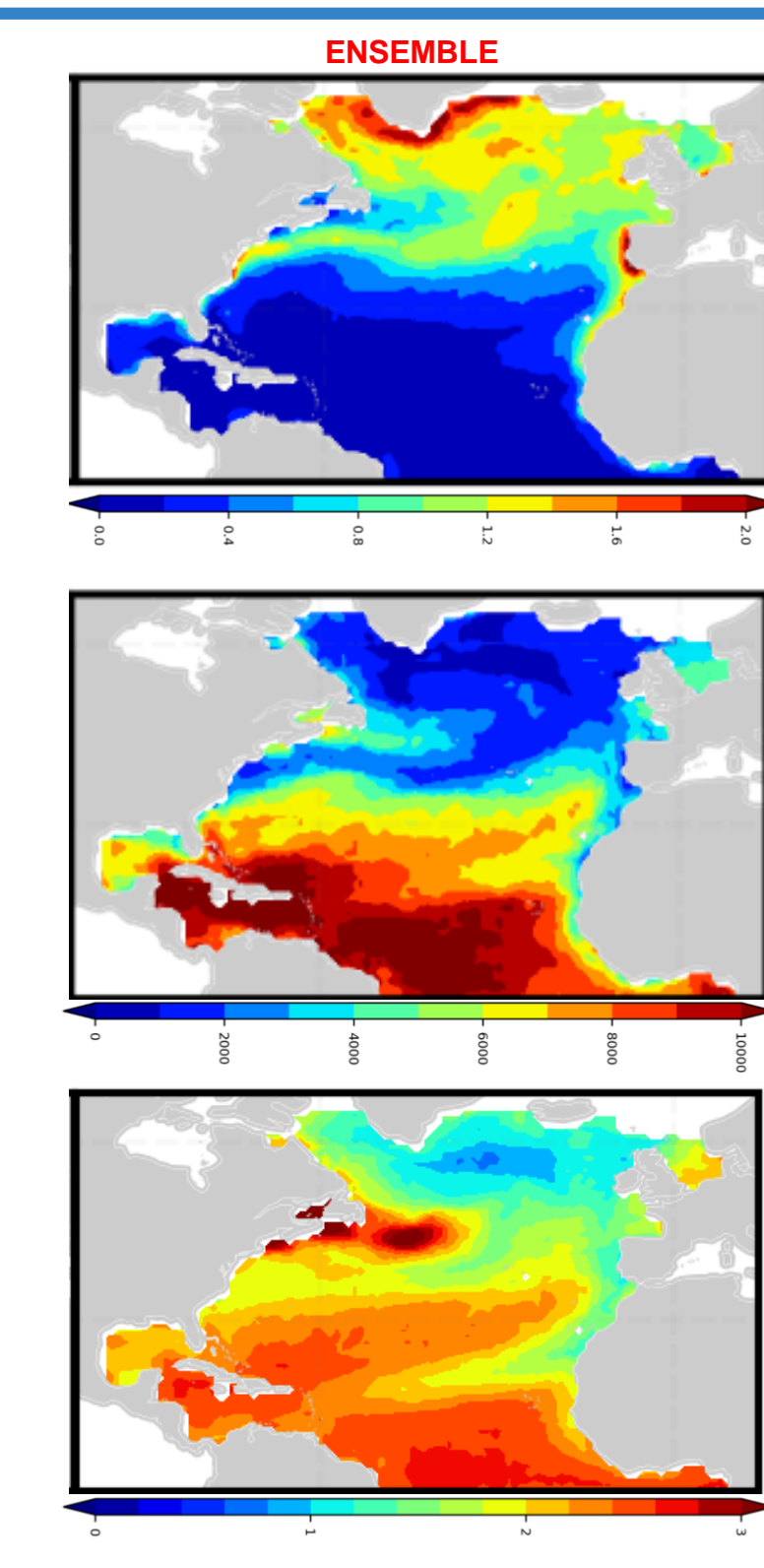
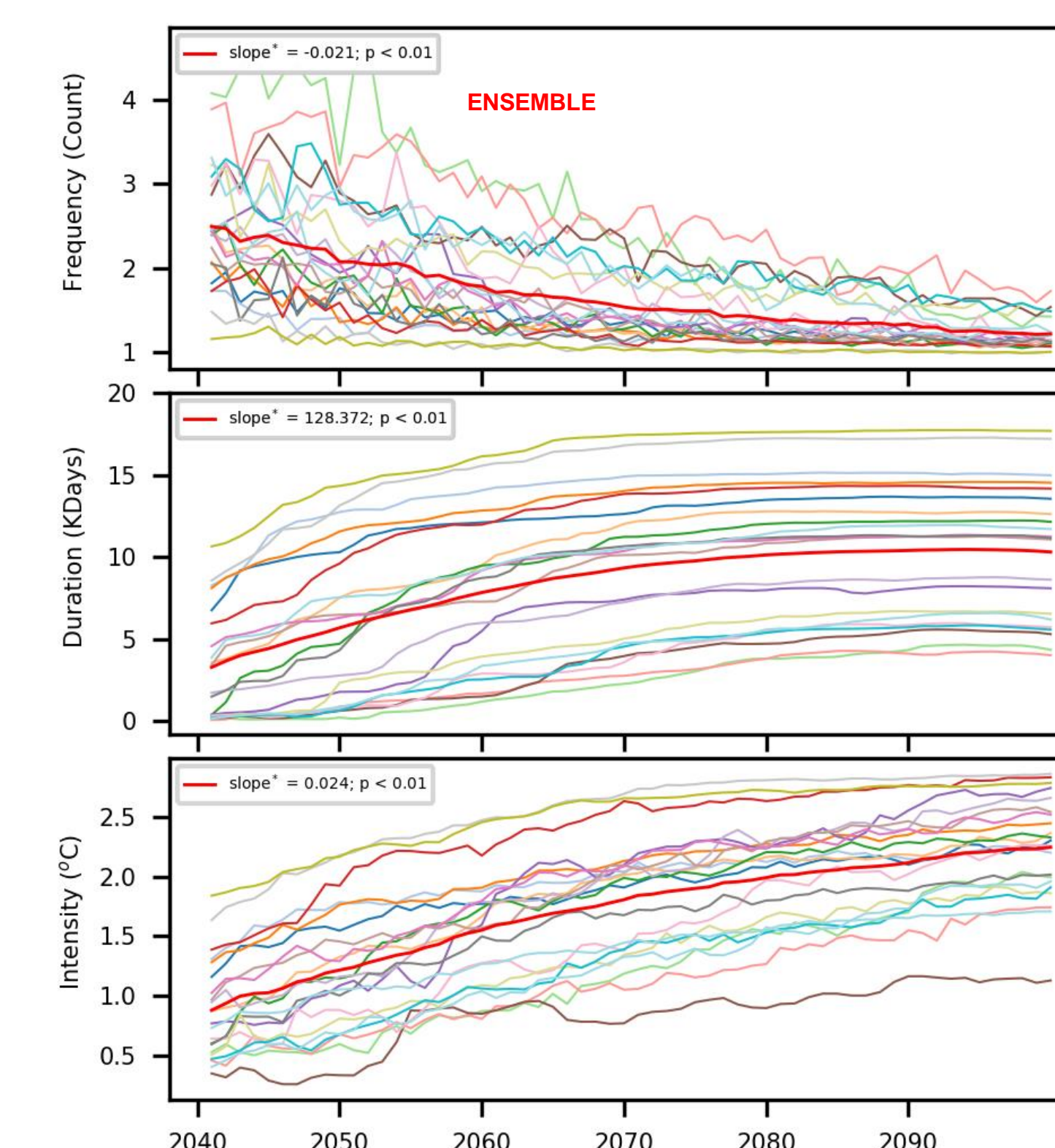
Daily SST data from 21
Global Coupled Model
Intercomparison Project Phase 5
1970-2000 ;
2041-2070 ; 2071-2100

RESULTS

HISTORICAL



RCP8.5



1970 - 2000

Increase in frequency, duration and intensity
Mean frequency of 1.3 events per year
Mean intensity of 0.4 °C above $P90_{hist}$
Mean duration around 11 days

2041 - 2100

Decrease in frequency and increase in intensity and duration
Increase in mean intensity of around 1 °C to 2 °C above $P90_{hist}$
Achieving a quasi-permanent state of MHW by the end-century

SUMMARY