

Erosione costiera e cambiamento climatico

Capire il passato > guardare al futuro

Conferenza Finale del Progetto MAREGOT
Martedì 26 e Venerdì 29 Maggio 2020

Cambiamenti climatici e moto ondoso
all'interno del Mediterraneo: proiezioni
e avvisaglie
Giovanni Besio

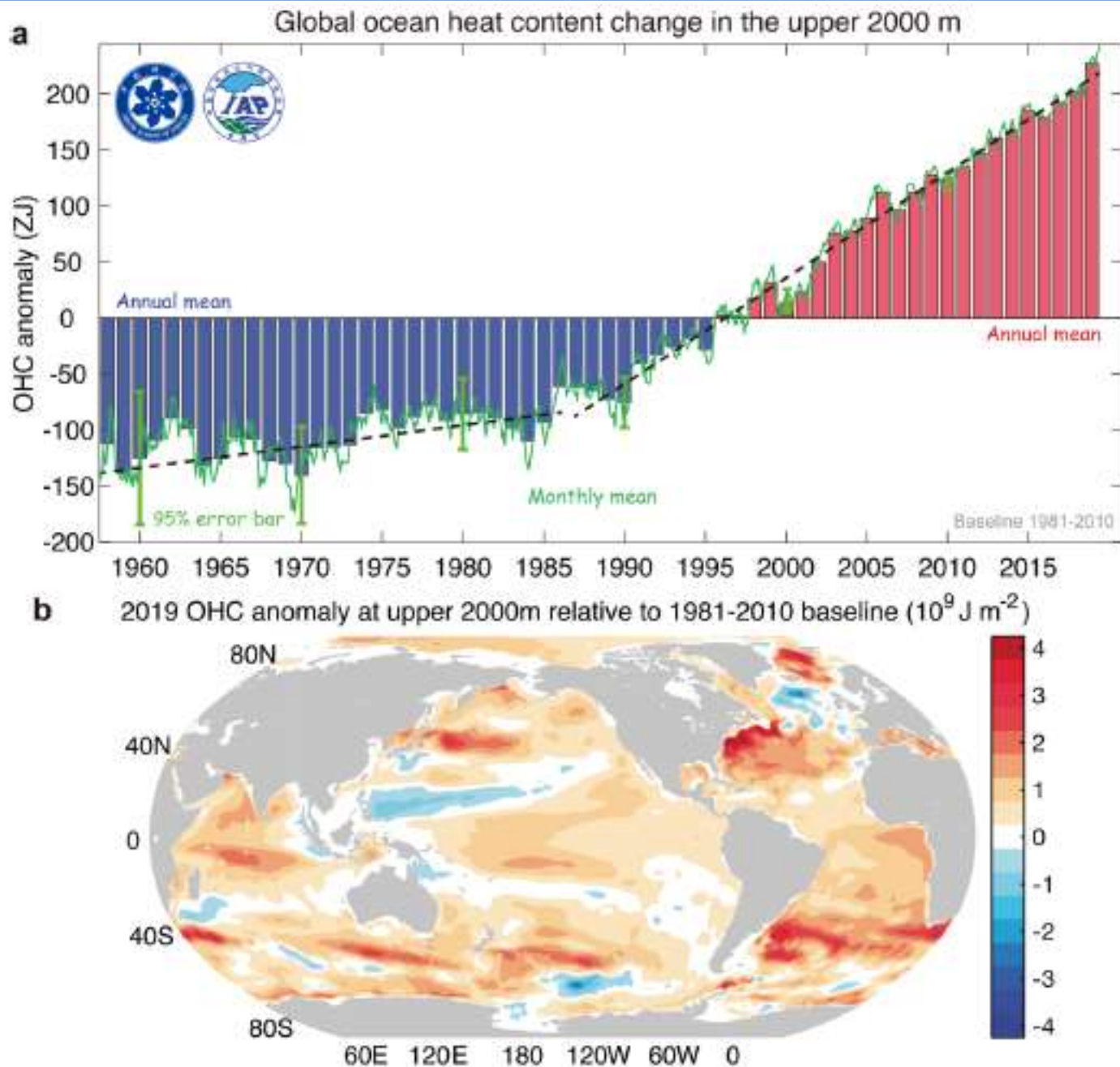
La progettazione delle opere marittime e il rischio costiero dipendono dalle condizioni ambientali della località in cui devono essere realizzate



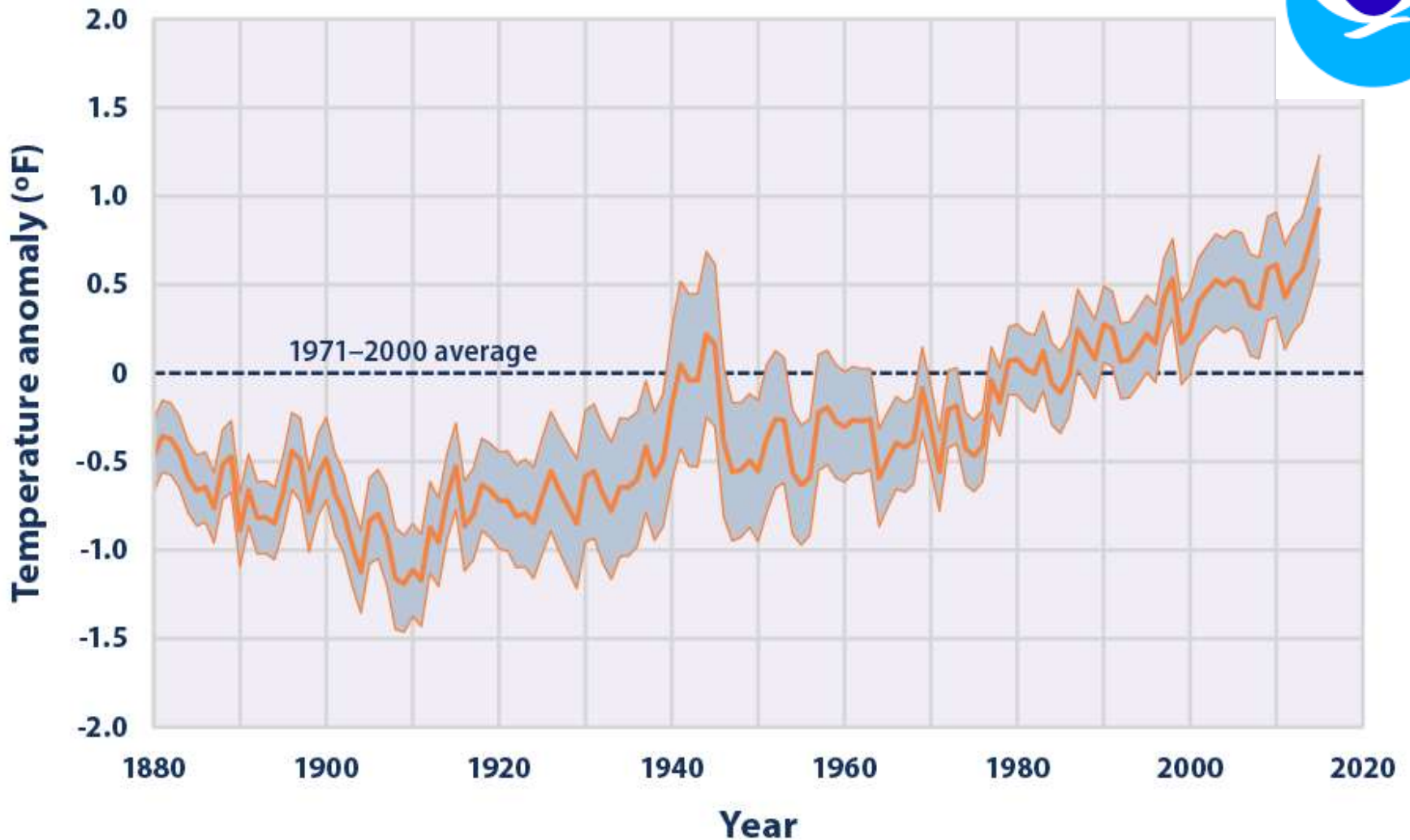
Record-Setting Ocean Warmth Continued in 2019

Lijing CHENG^{1,2,11}, John ABRAHAM³, Jiang ZHU^{1,2}, Kevin E. TRENBERTH⁴, John FASULLO⁴,
 Tim BOYER⁵, Ricardo LOCARNINI⁵, Bin ZHANG^{2,6}, Fujiang YU⁷, Liying WAN⁷,
 Xingrong CHEN⁷, Xiangzhou SONG⁸, Yulong LIU⁹, and Michael E. MANN¹⁰

• News & Views •



Average Global Sea Surface Temperature, 1880–2015



Data source: NOAA (National Oceanic and Atmospheric Administration), 2016. Extended reconstructed sea surface temperature (ERSST.v4). National Centers for Environmental Information. Accessed March 2016.

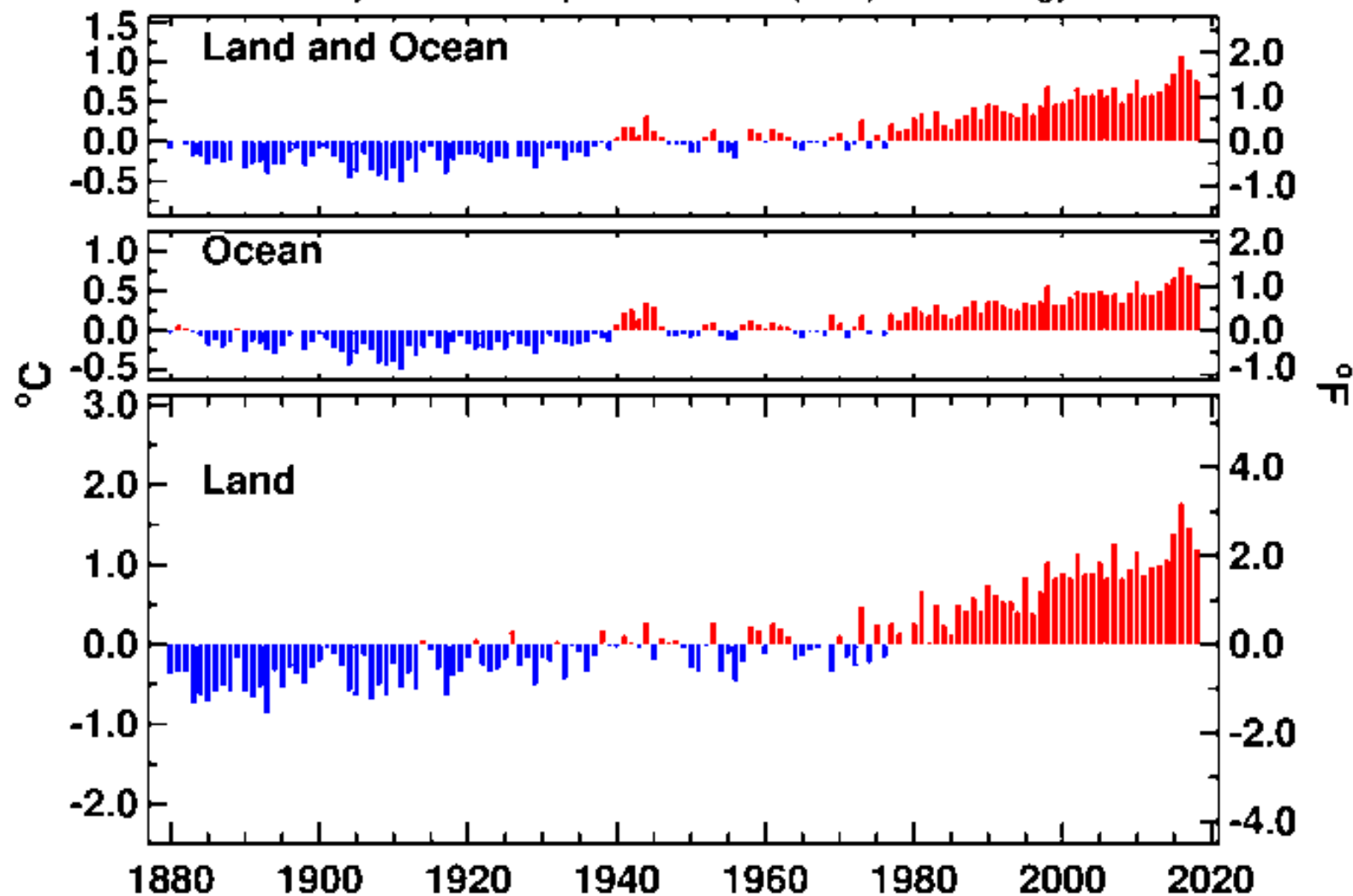
www.ncdc.noaa.gov/data-access/marineocean-data/extended-reconstructed-sea-surface-temperature-ersst.



Jan-Jun Global Surface Mean Temp Anomalies

NCEI/NESDIS/NOAA

Analysis is based upon Smith et al. (2008) methodology.





nature
COMMUNICATIONS

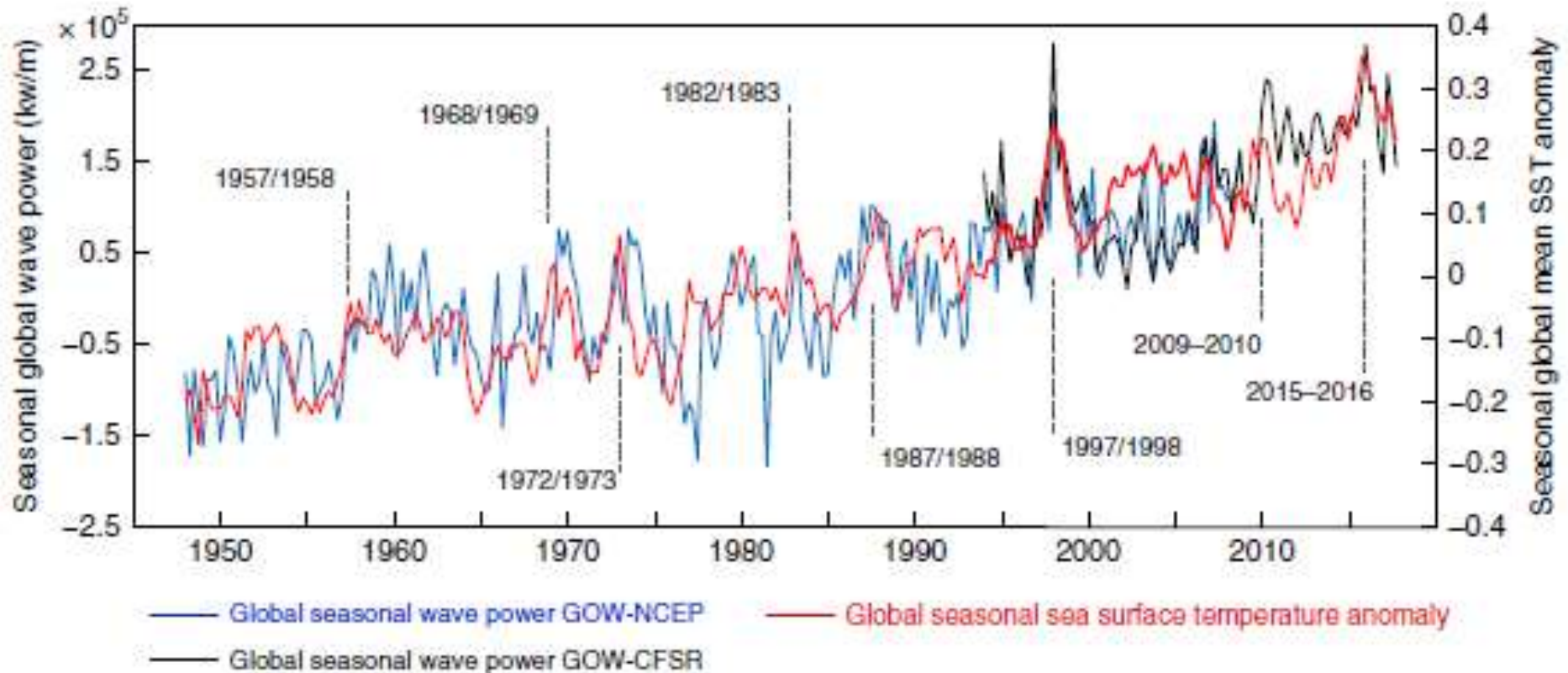
ARTICLE

<https://doi.org/10.1038/s41467-018-08066-0>

OPEN

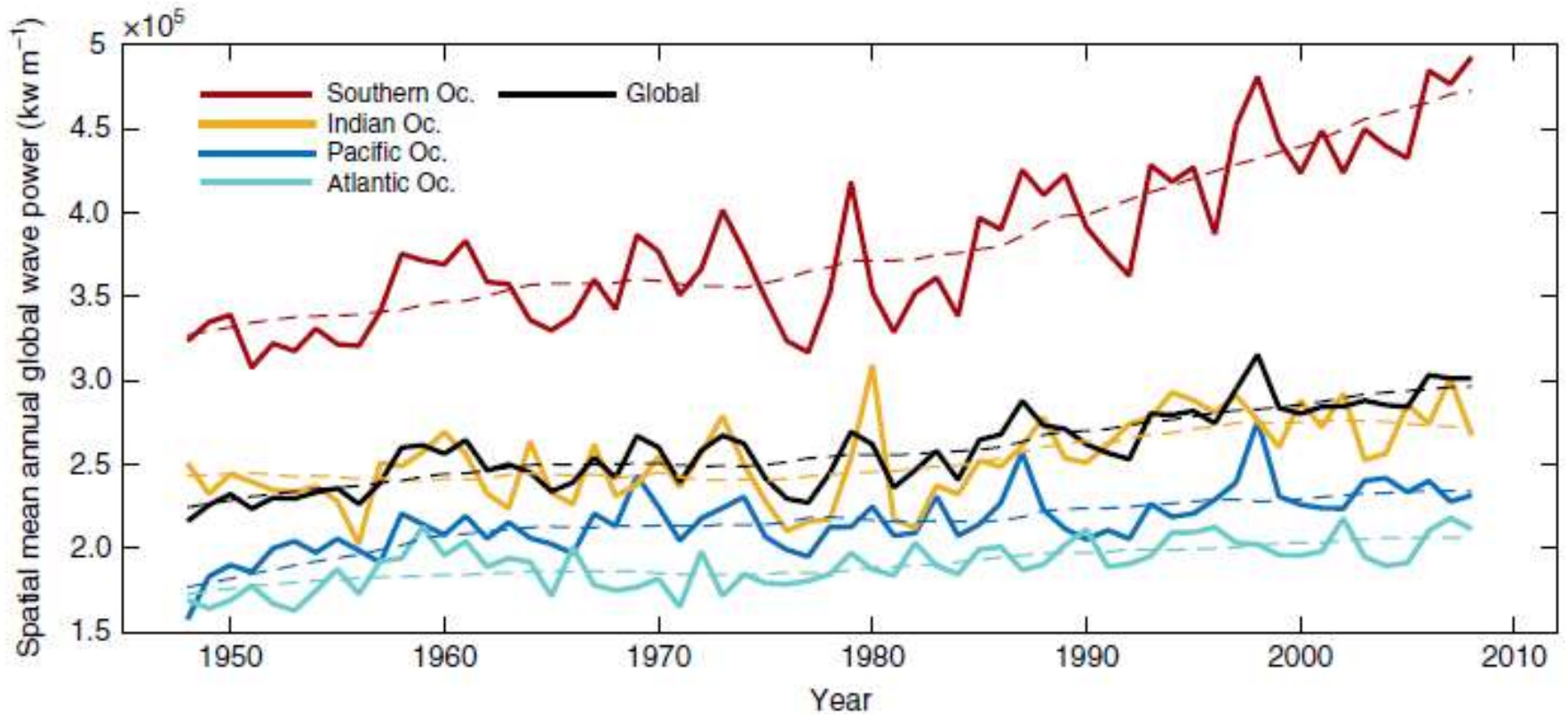
A recent increase in global wave power as a consequence of oceanic warming

Borja G. Reguero^{1,2}, Iñigo J. Losada¹ & Fernando J. Méndez¹



Wave Power

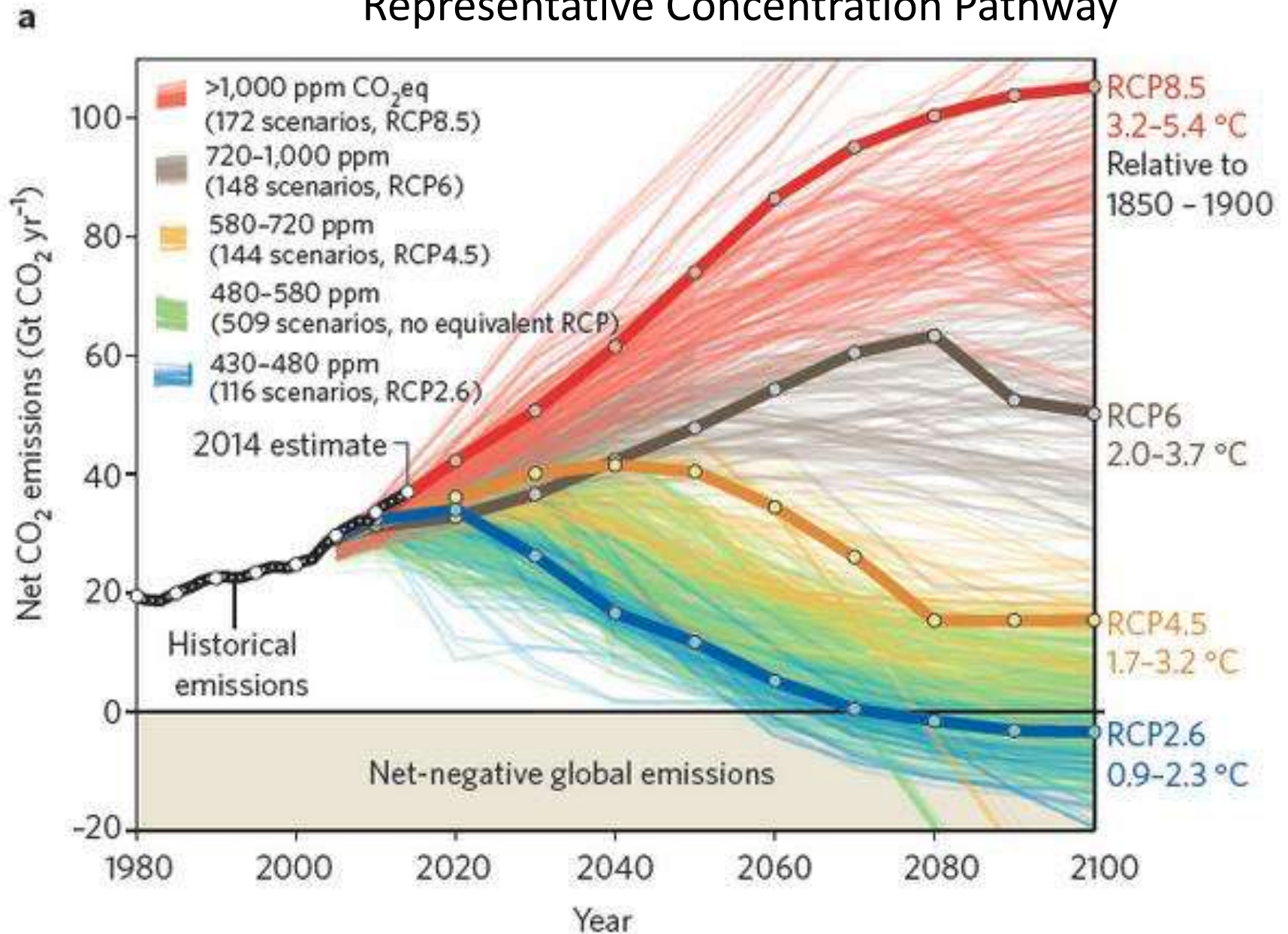
$$P \propto H^2 T$$



Wave Power

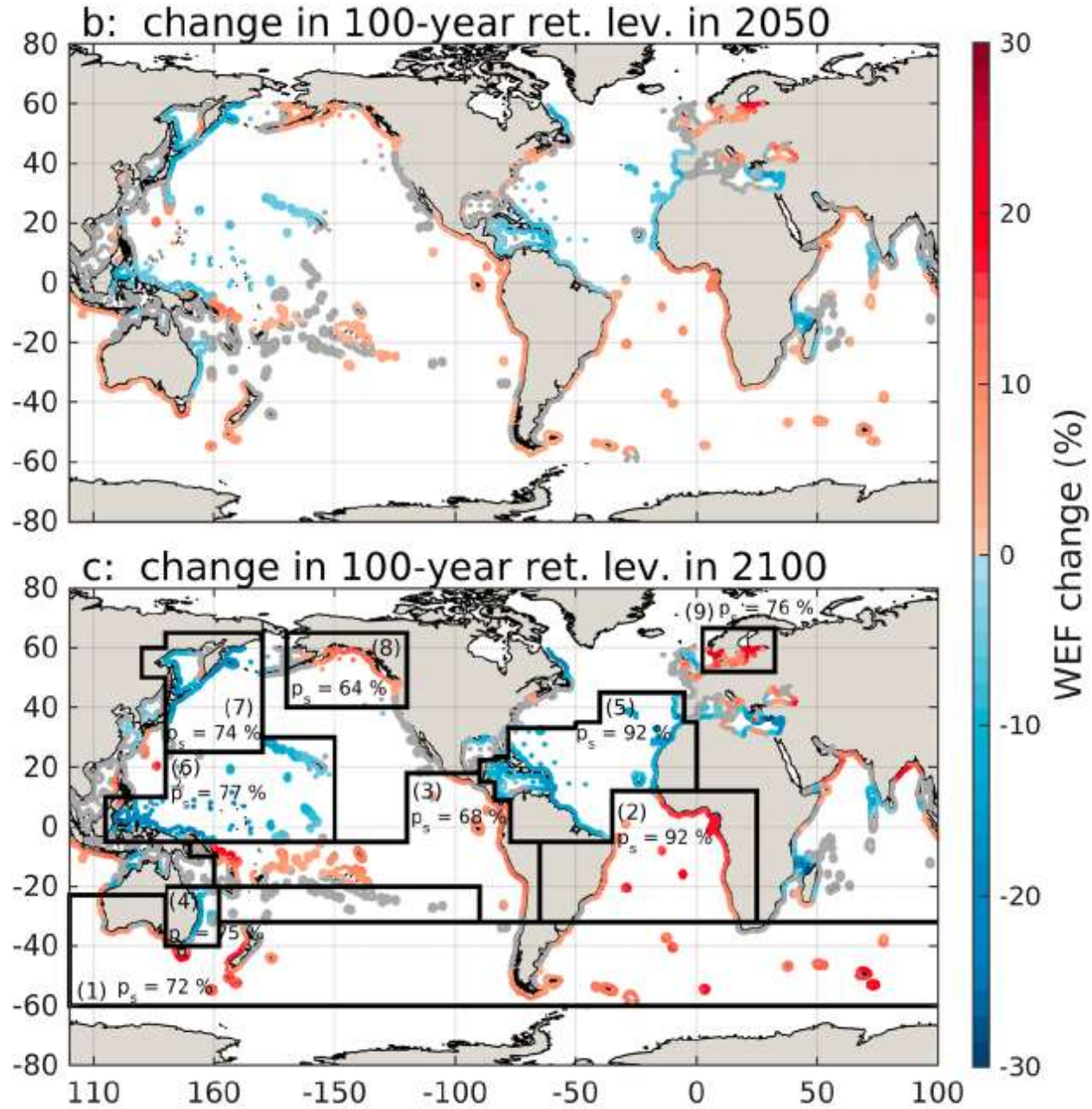
$$P \propto H^2 T$$

Representative Concentration Pathway

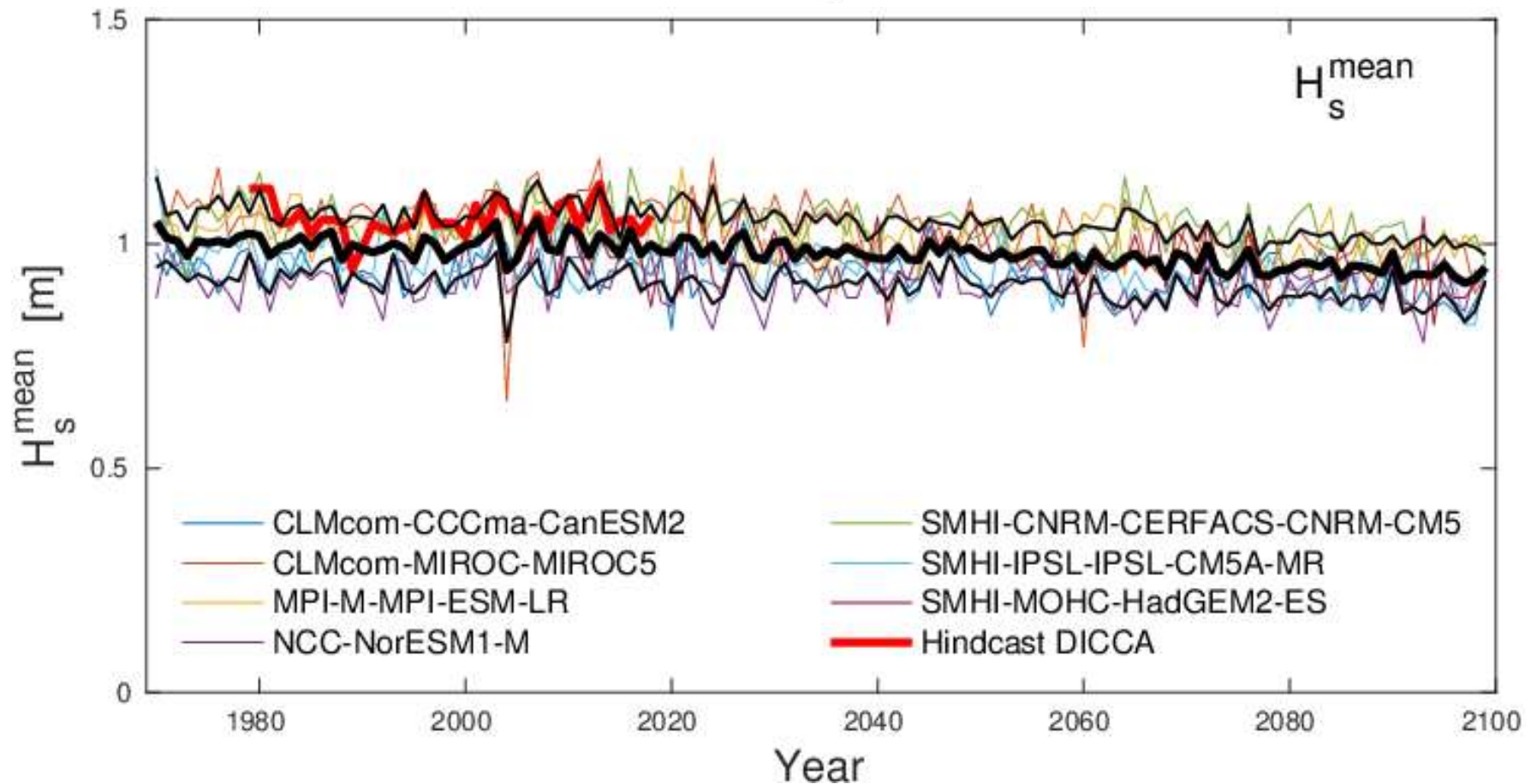


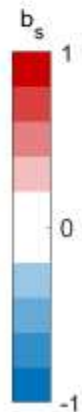
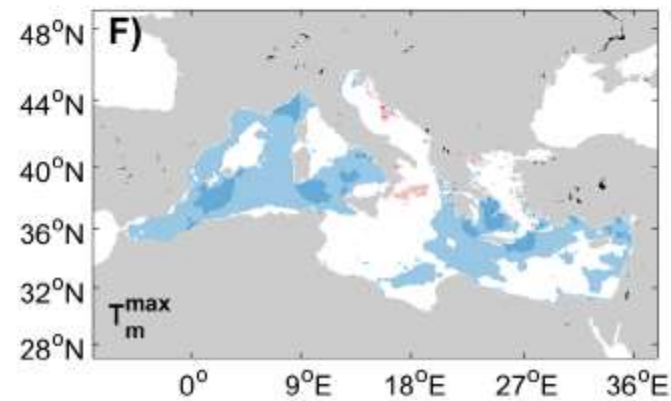
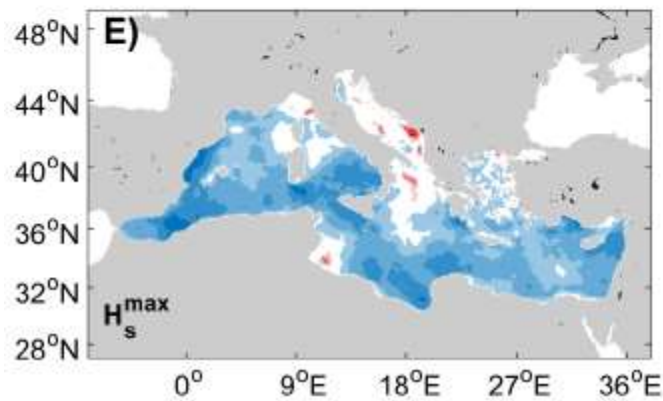
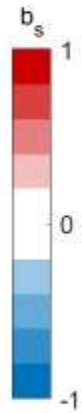
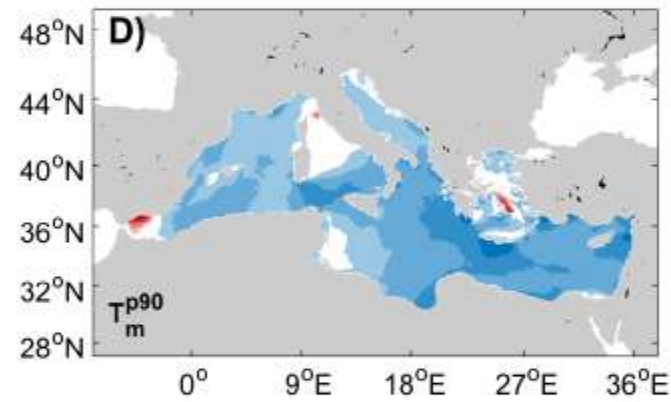
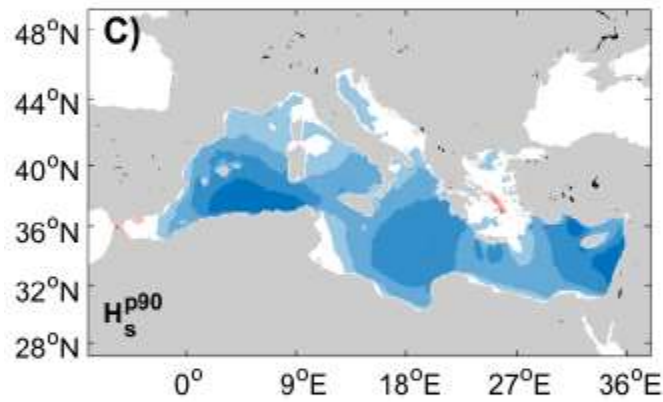
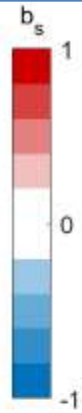
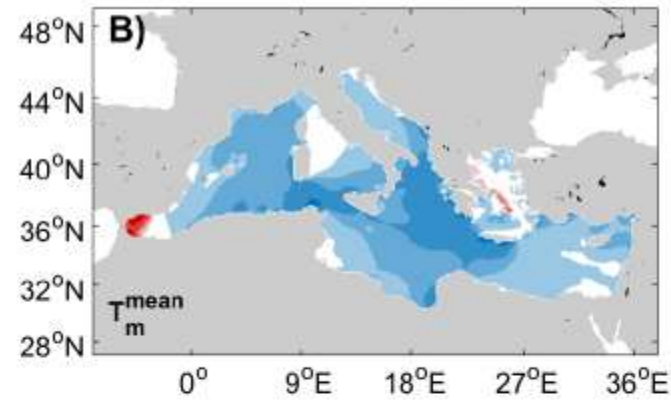
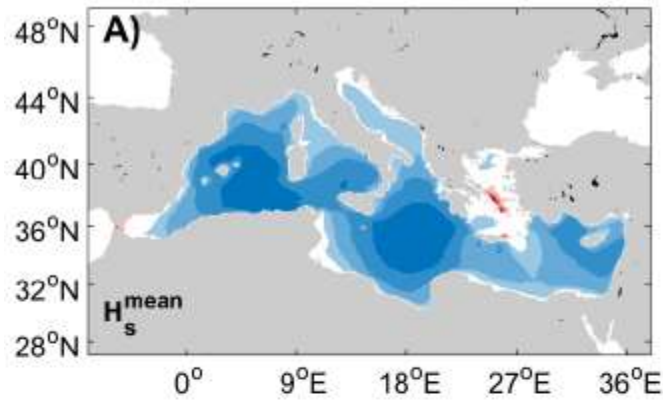
Global changes of extreme coastal wave energy fluxes triggered by intensified teleconnection patterns

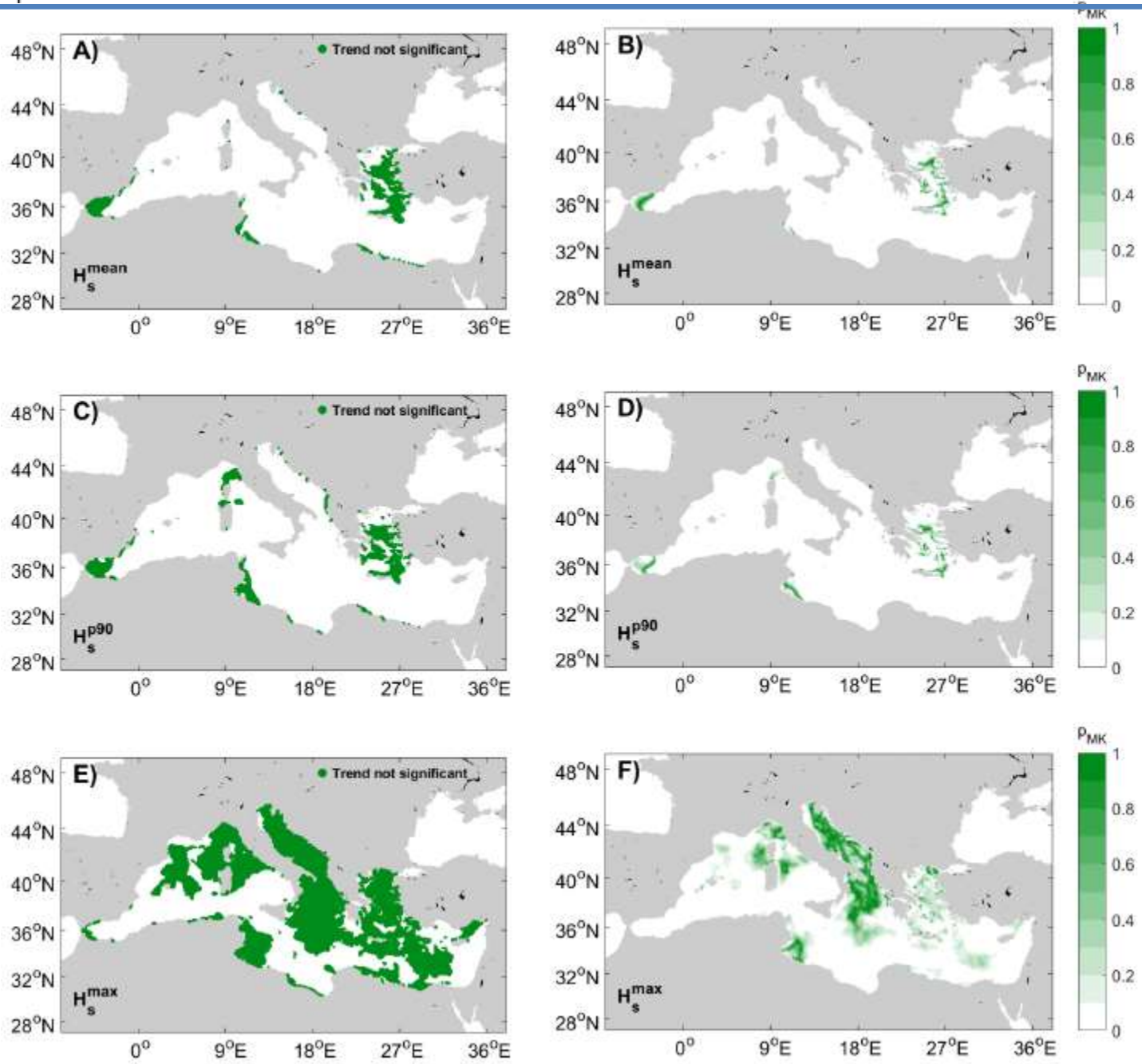
Lorenzo Mentaschi¹, Michalis I. Vouloukas^{1,2}, Evangelos Voukouvalas¹, Alessandro Dosio¹, and Luc Feyen¹

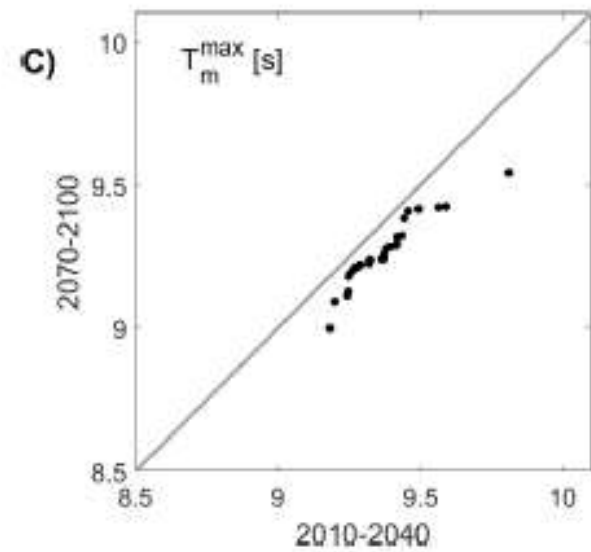
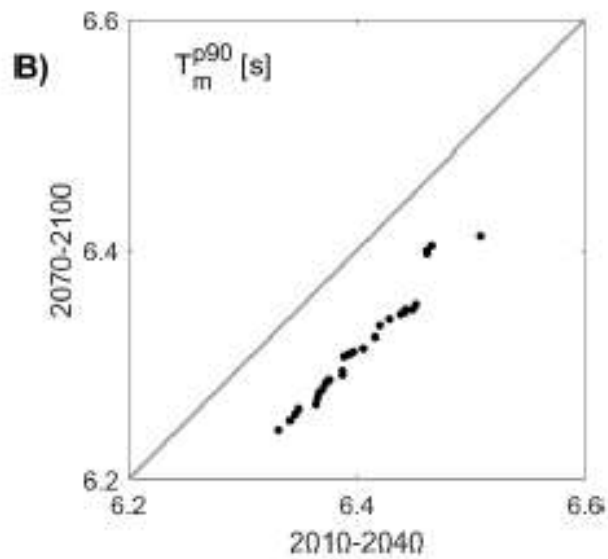
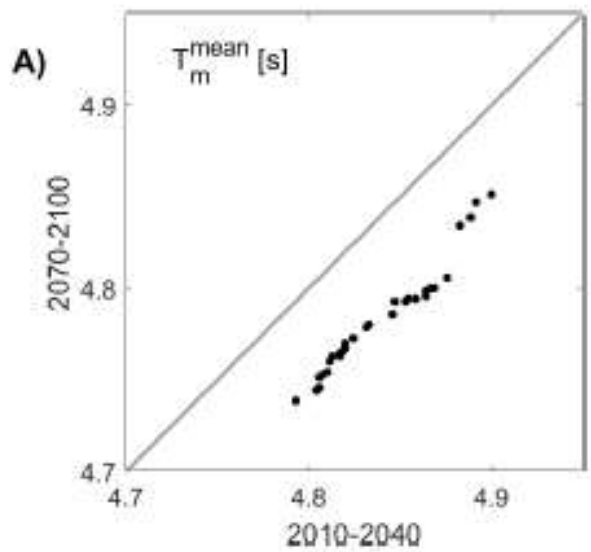
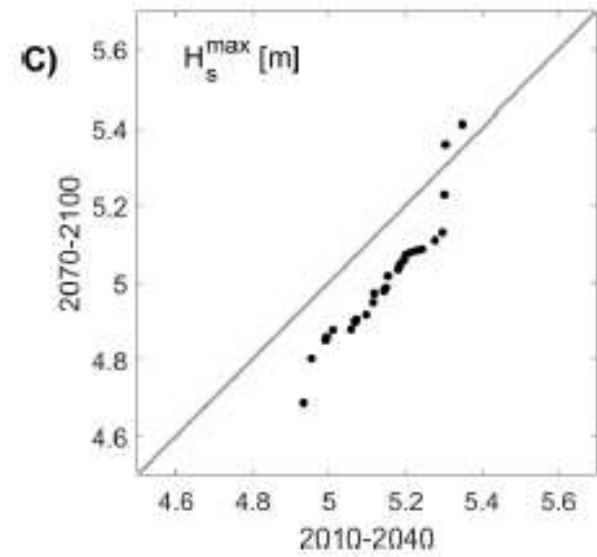
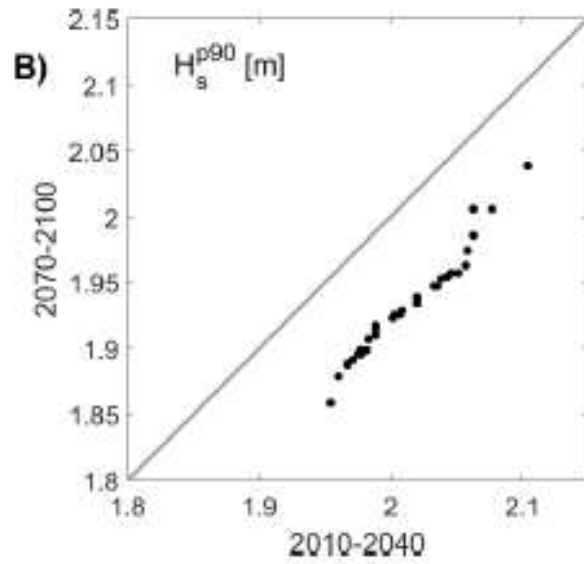
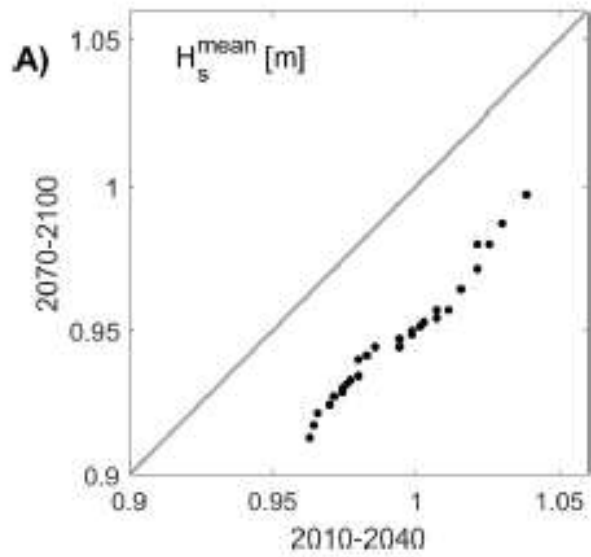


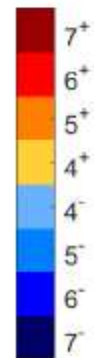
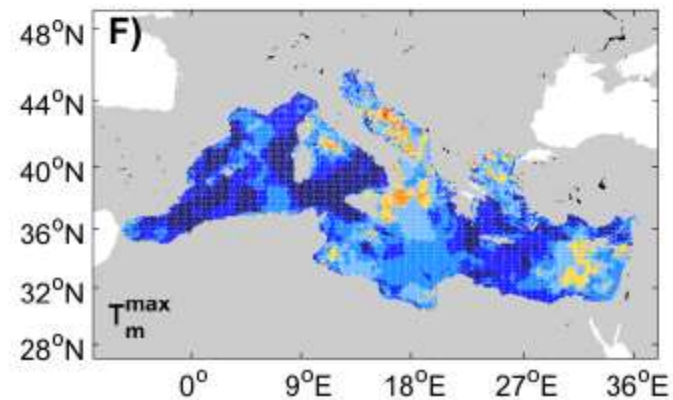
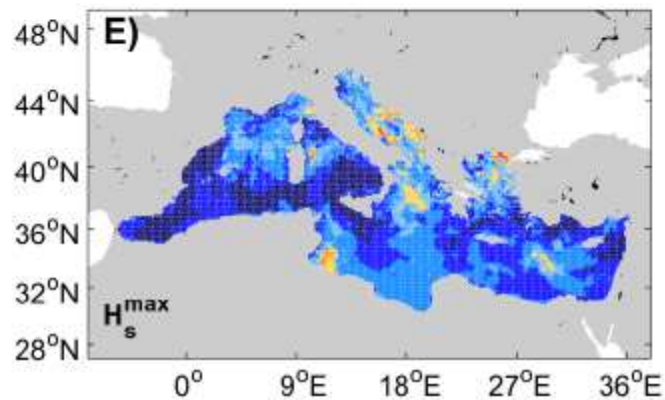
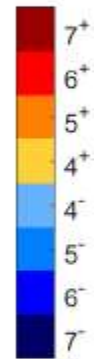
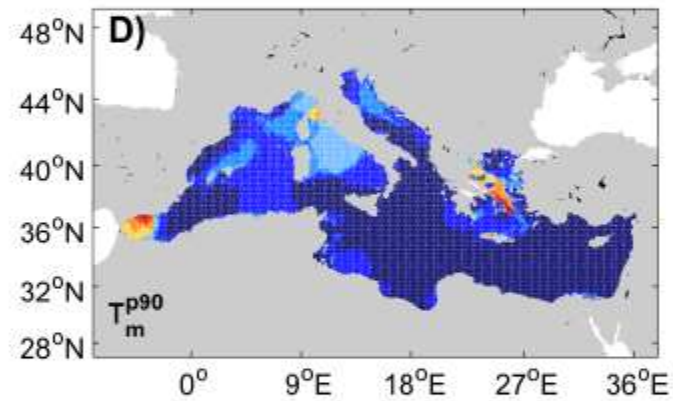
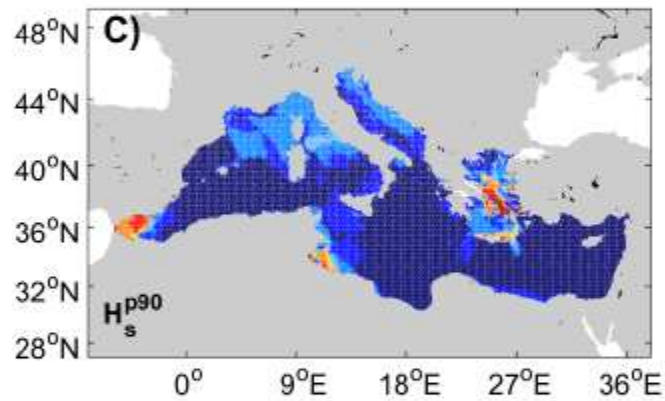
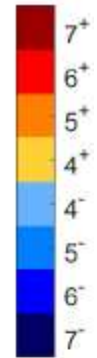
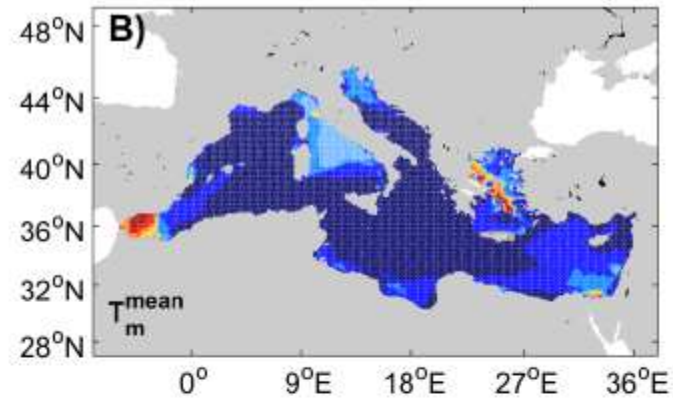
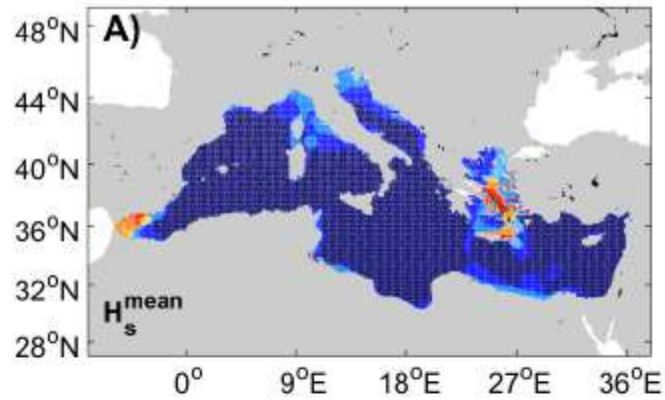
Institute	RCM	Driving Model	Driving ensemble
CLMcom	CCLM4-8-17	CanESM2	r1i1p1
CLMcom	CCLM4-8-17	MIROC5	r1i1p1
SMHI	RCA4	CNRM-CM5	r1i1p1
SMHI	RCA4	IPSL-CM5A-MR	r1i1p1
SMHI	RCA4	HadGEM2-ES	r1i1p1
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SMHI	RCA4	NorESM1-M	r1i1p1

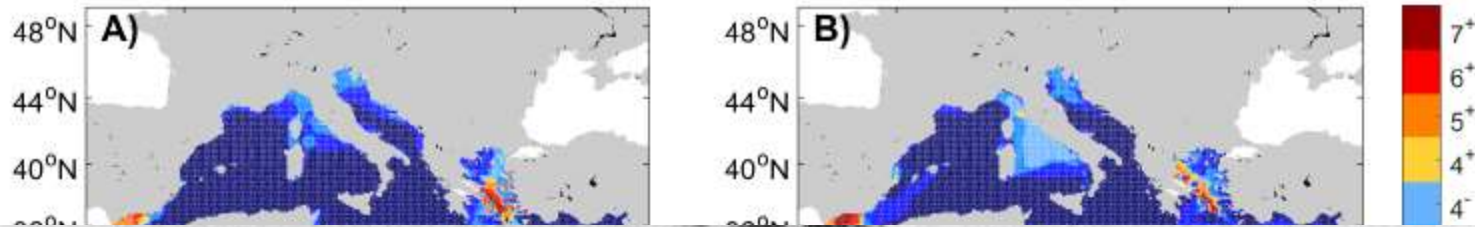




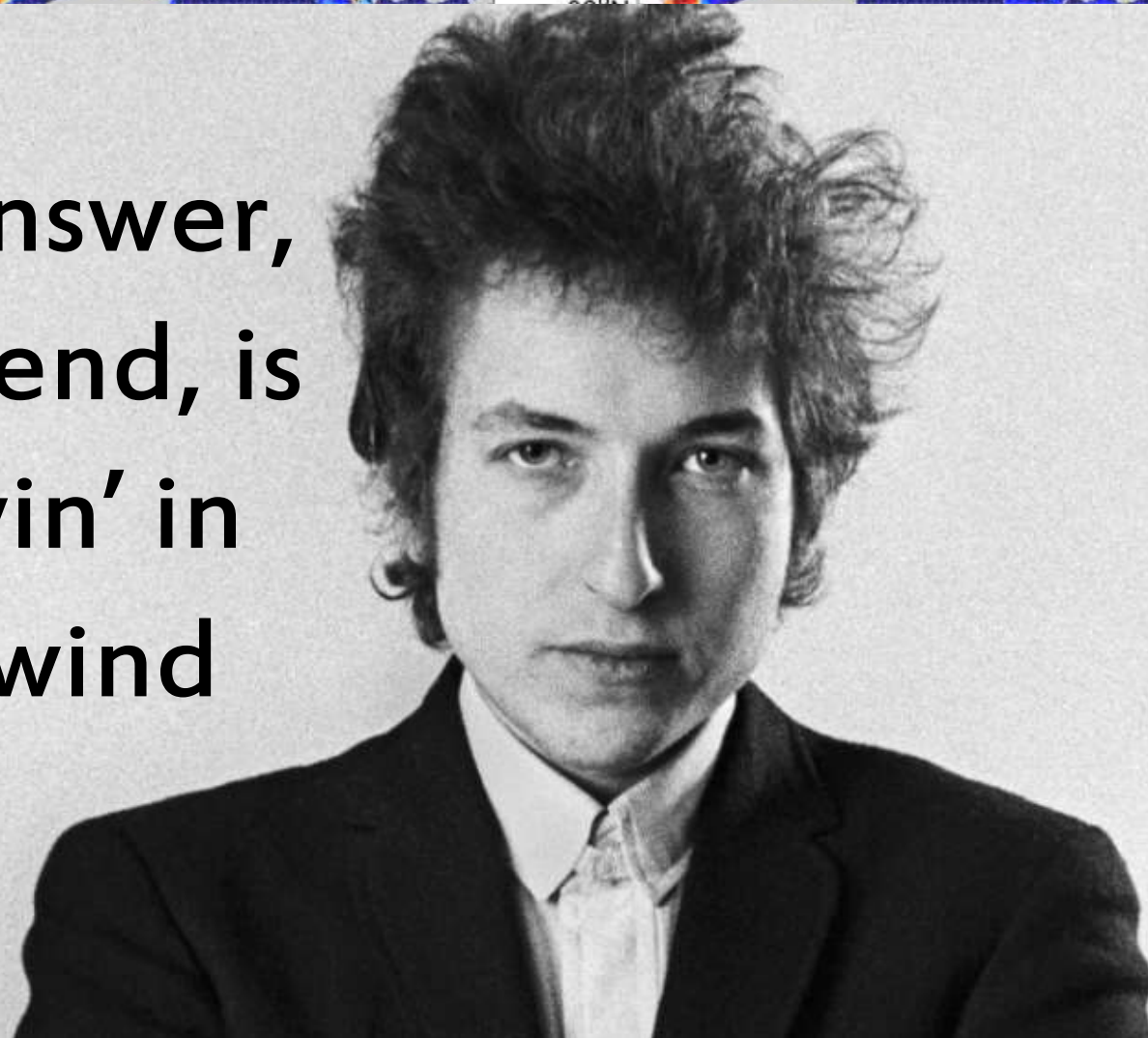


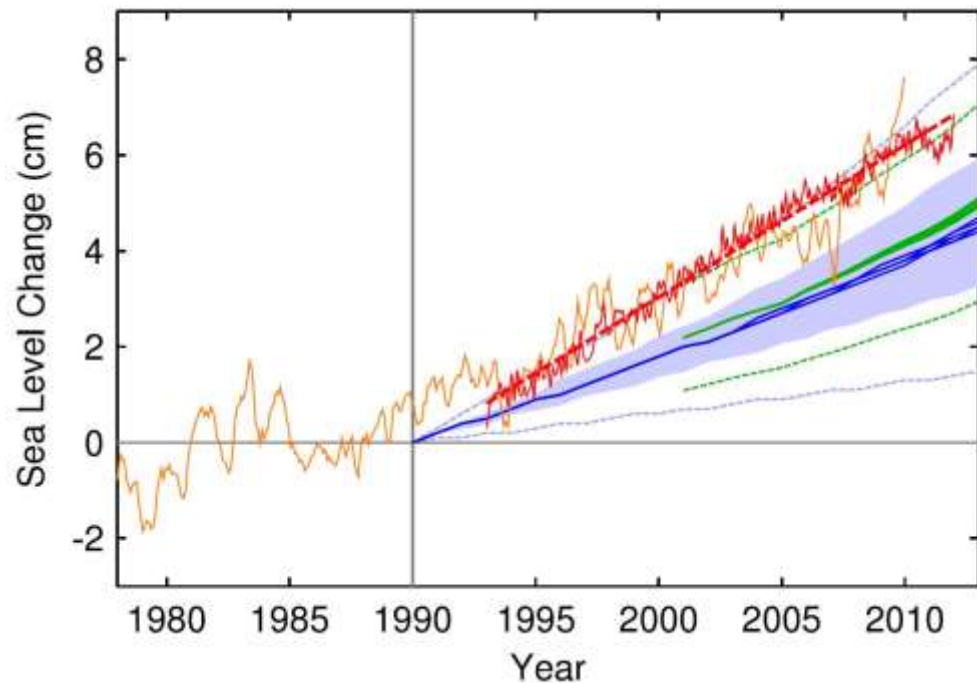
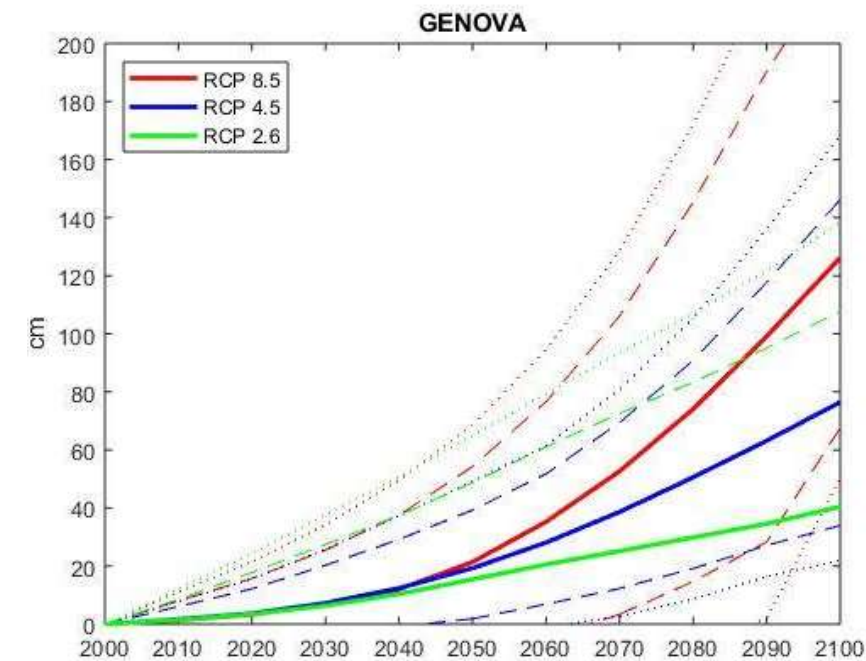
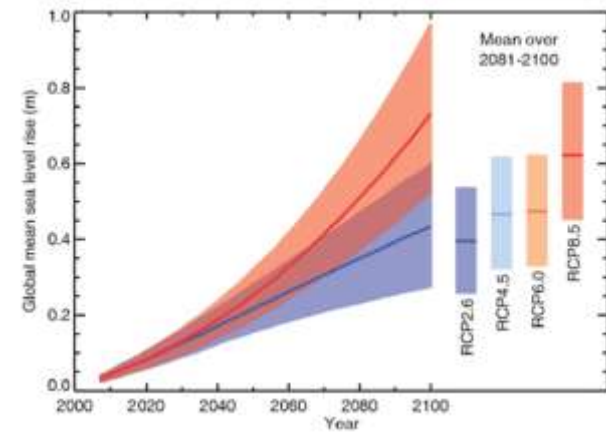
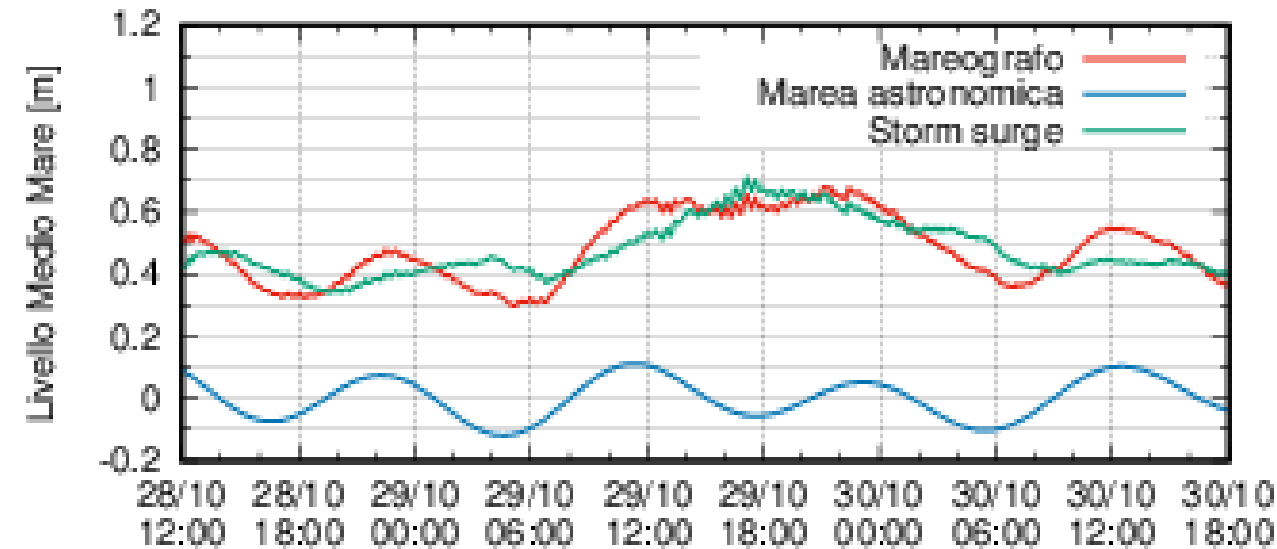






The answer,
my friend, is
blowin' in
the wind







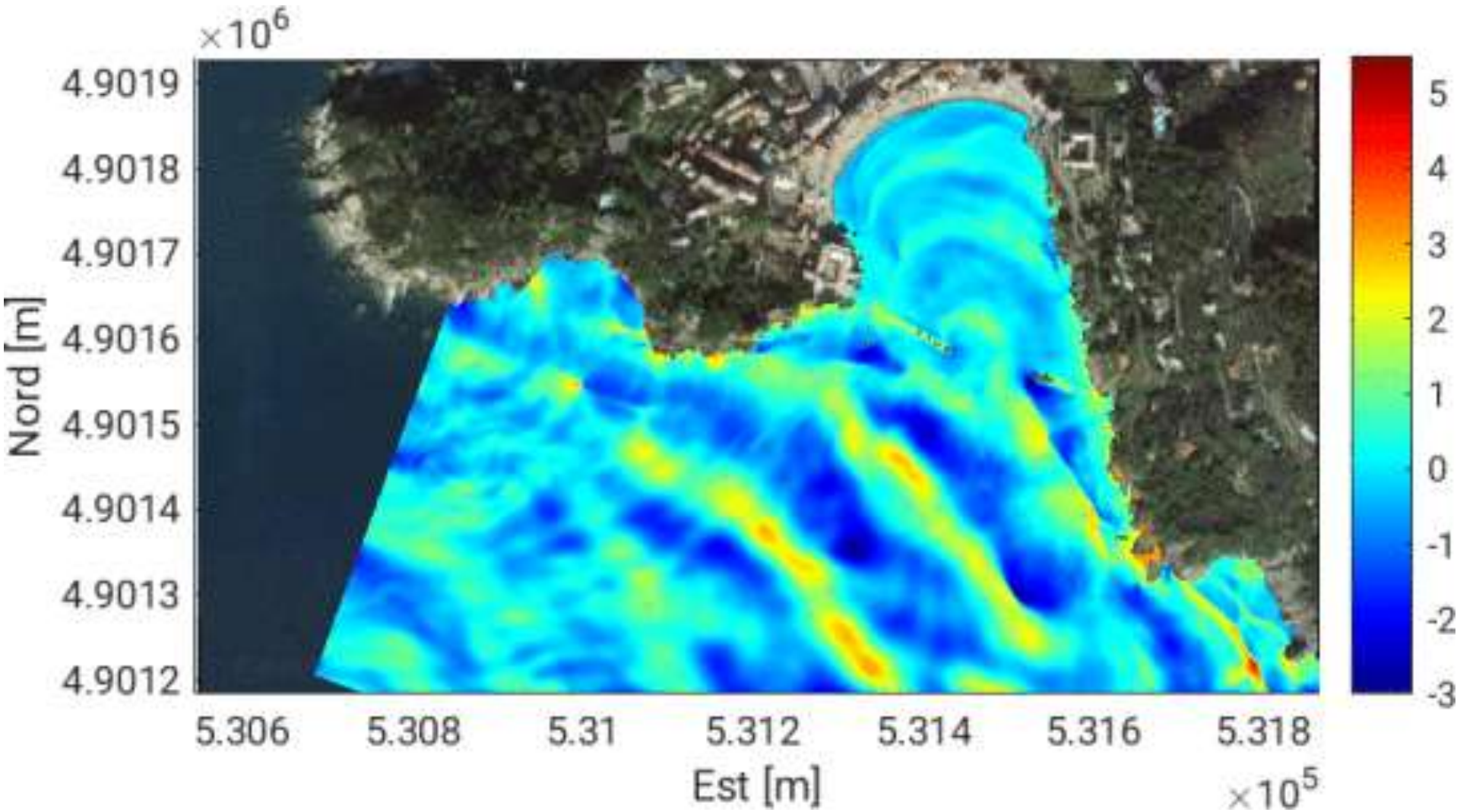
$$T_R = 50\text{anni}$$

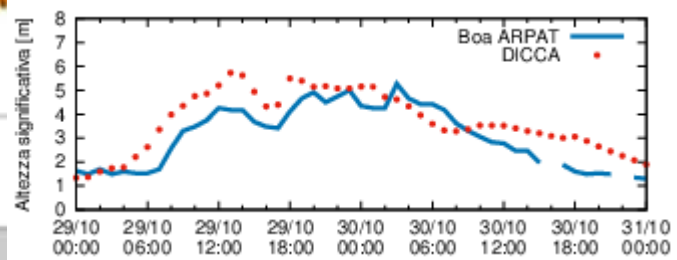
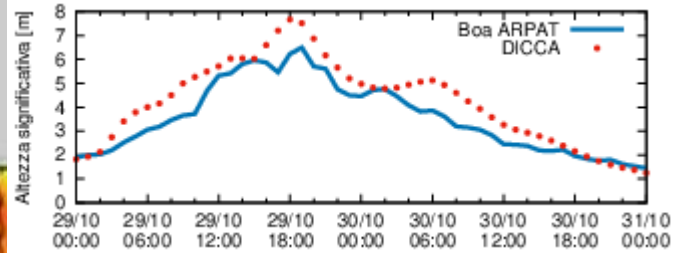
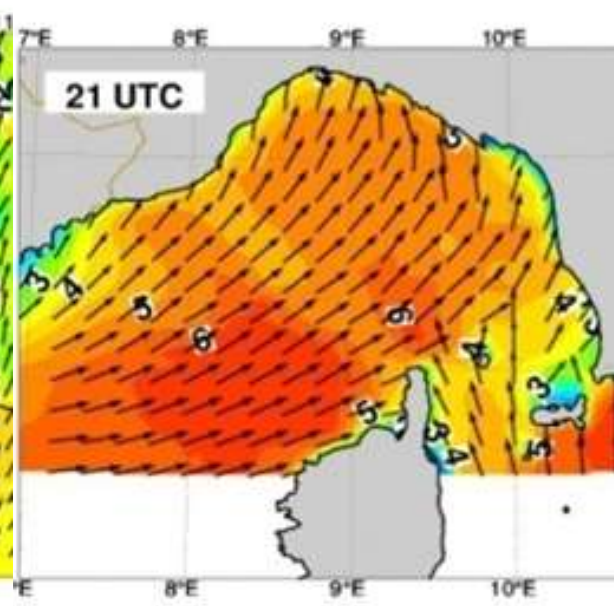
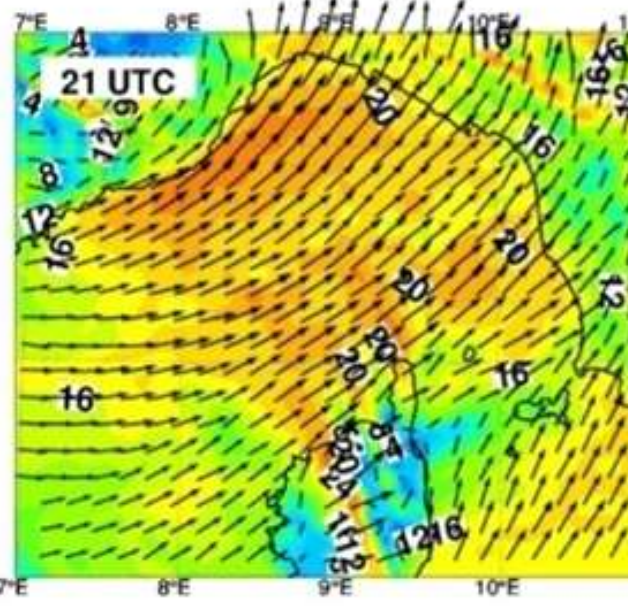
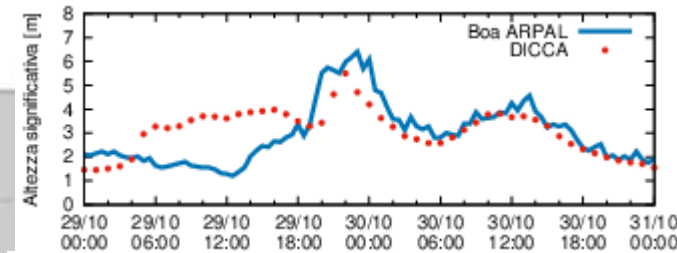
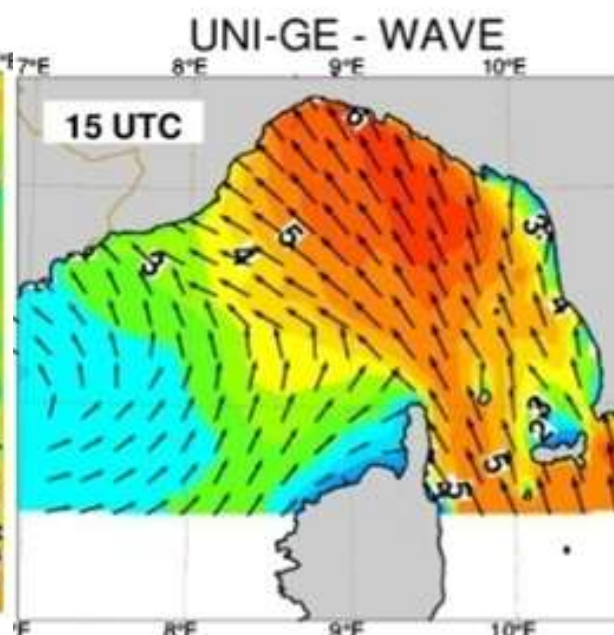
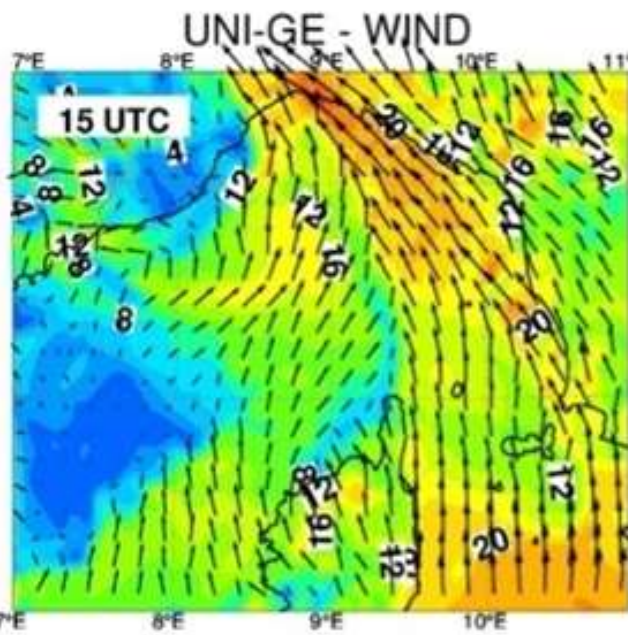


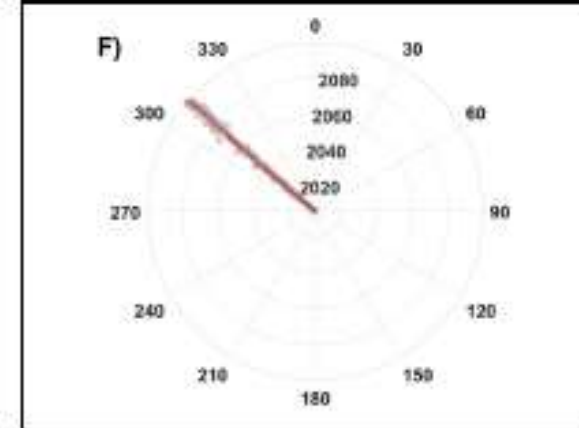
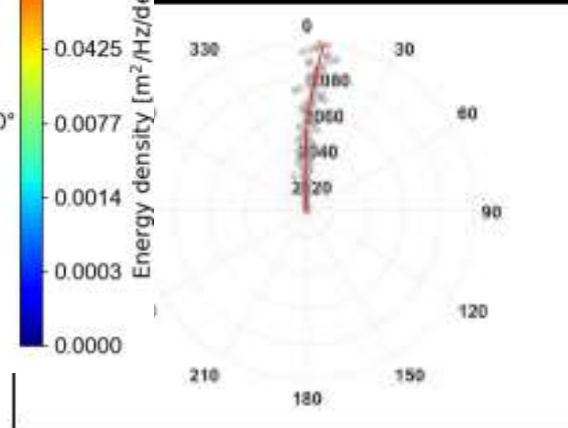
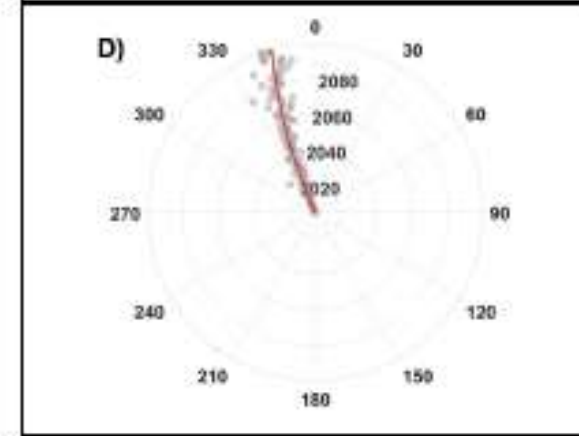
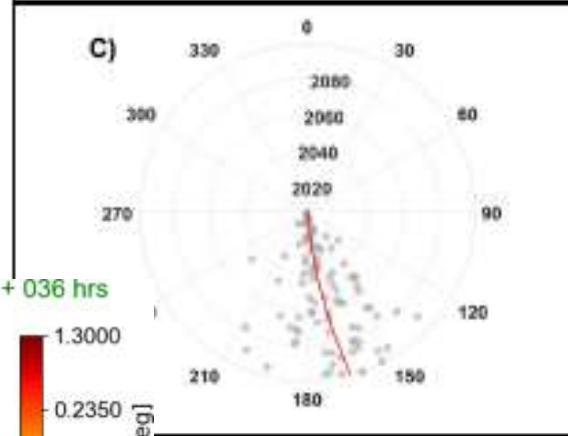
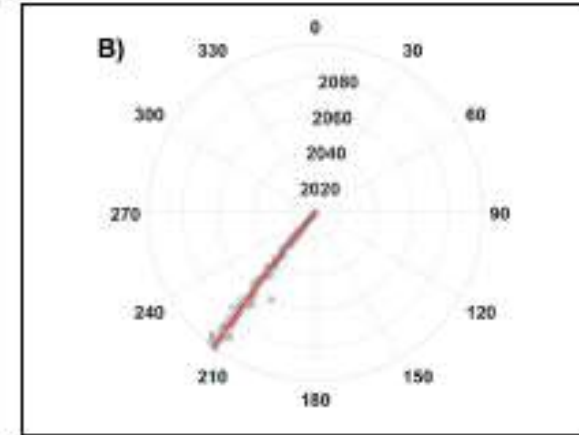
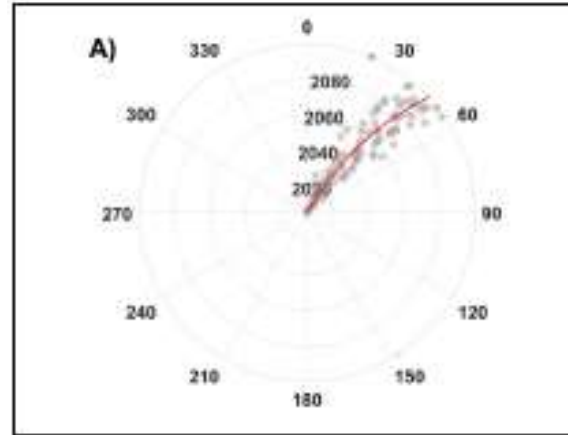
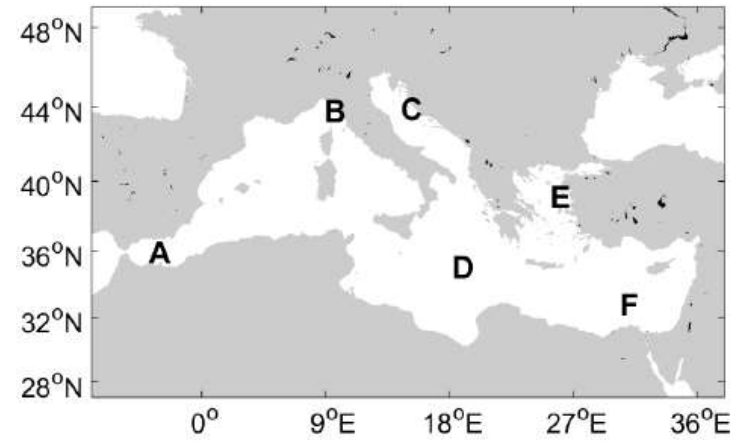
$$T_R = 50\text{anni}$$



$$T_R = 50\text{anni}$$





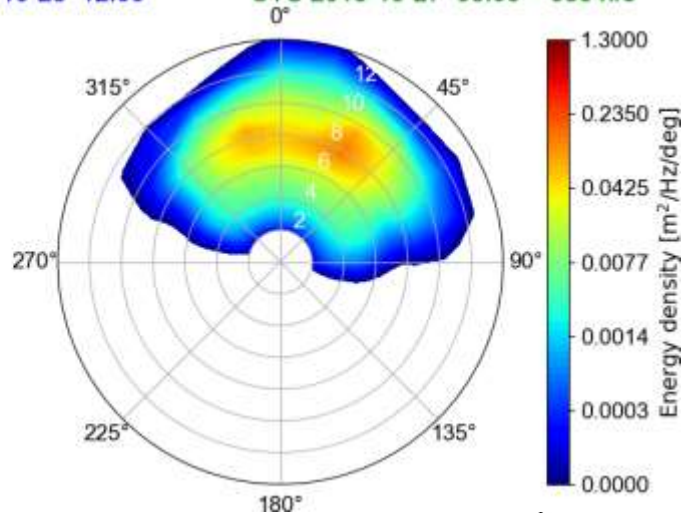


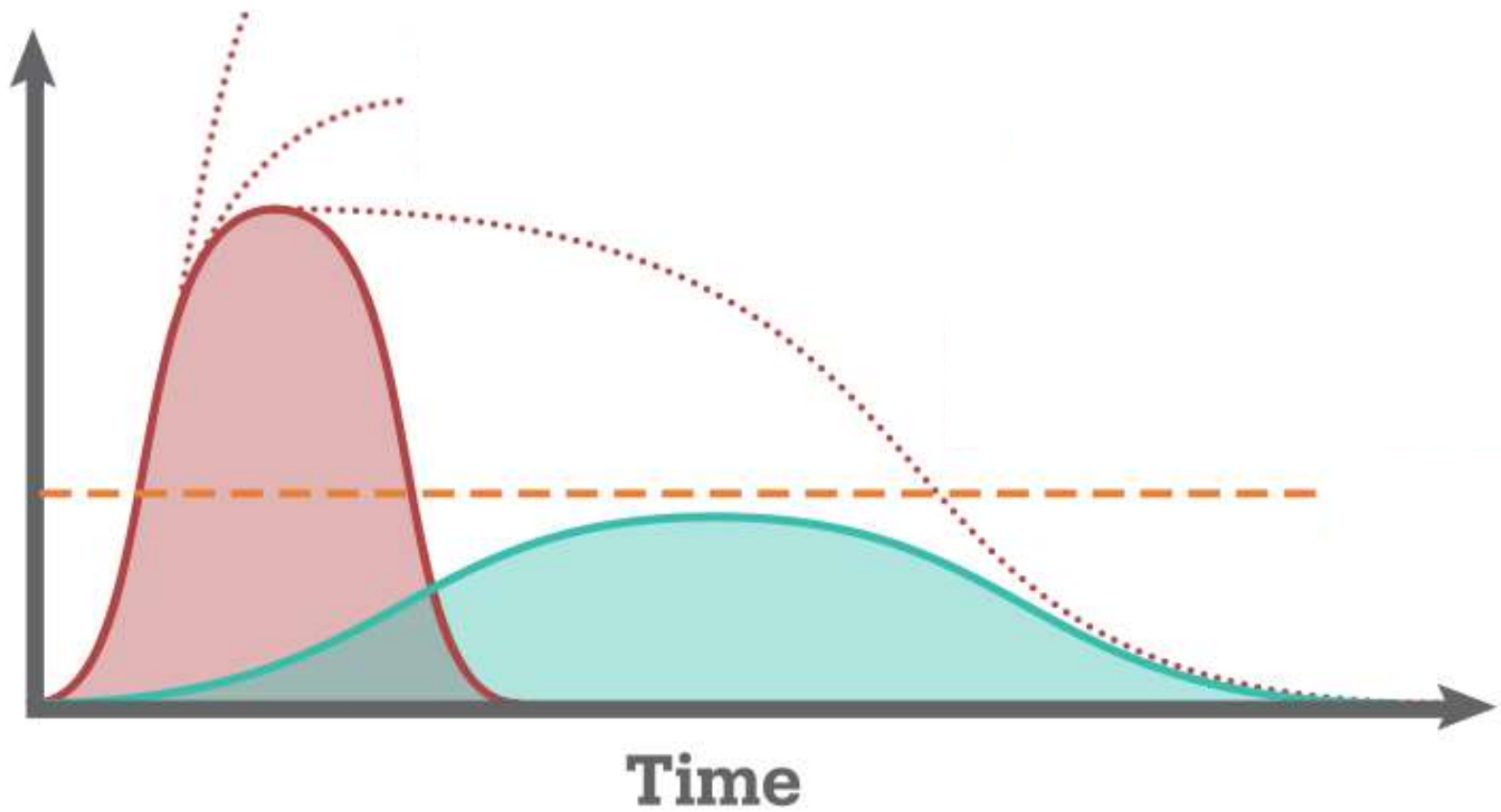
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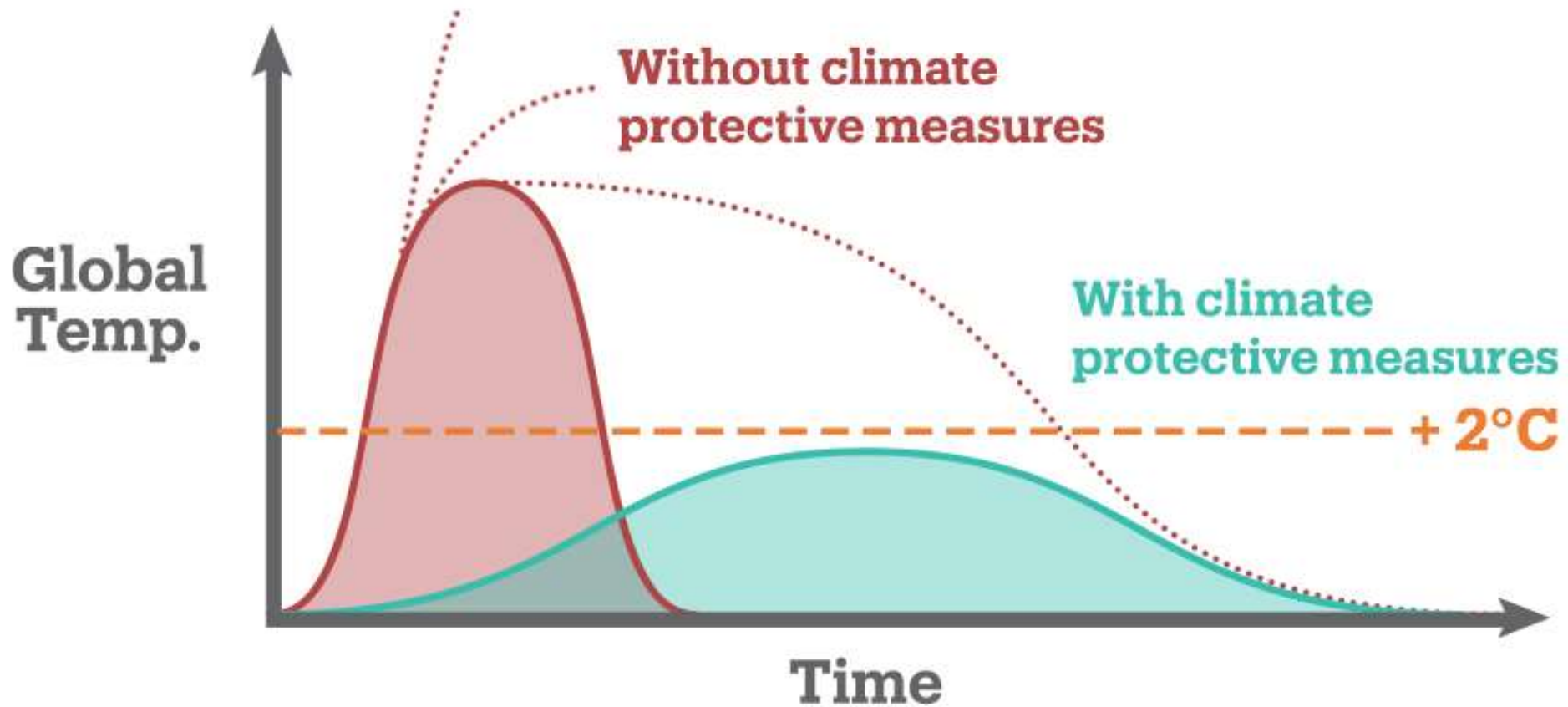
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 $T_{02} = 5.88$ s
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 $Dir_m = 12.98$ °N
 $Spr_{Dir} = 4.63$ °

Lat 44.2866 °N
 Lon 9.2631 °E









**Università
di Genova**

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DI INGEGNERIA CIVILE, CHIMICA
E AMBIENTALE



MeteOcean

www.dicca.unige.it/meteocean meteocean@dicca.unige.it

Cambiamenti climatici e moto ondoso all'interno del Mediterraneo: proiezioni e avvisaglie

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