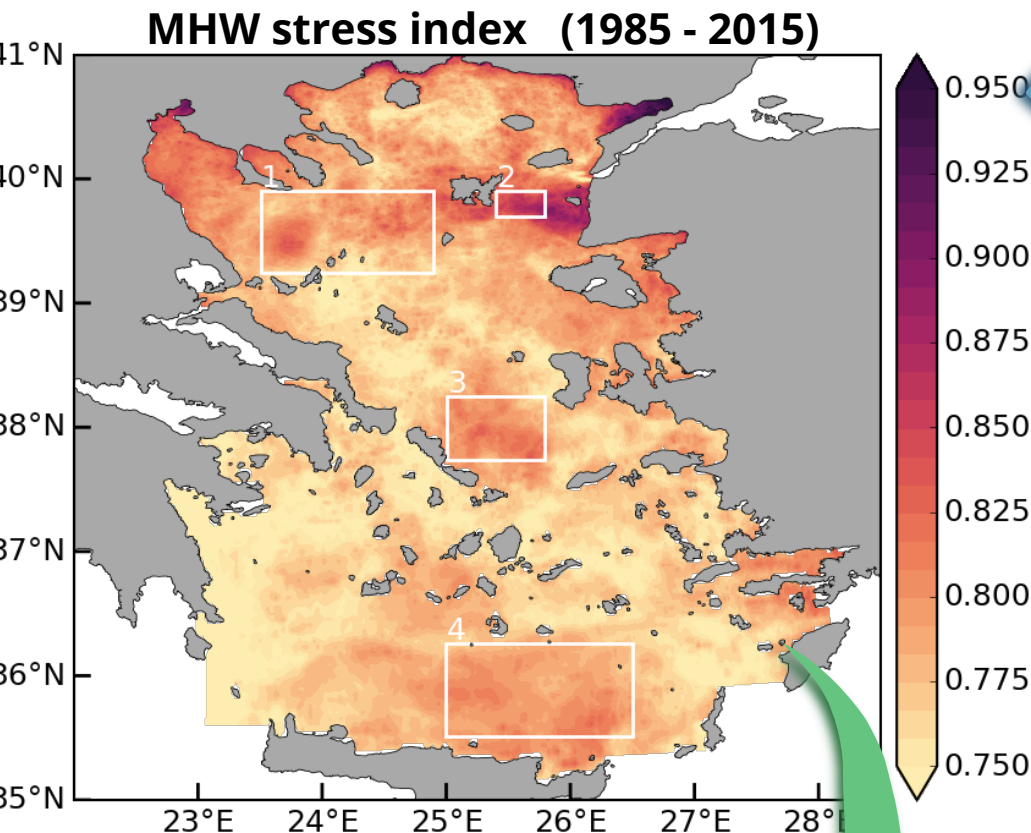
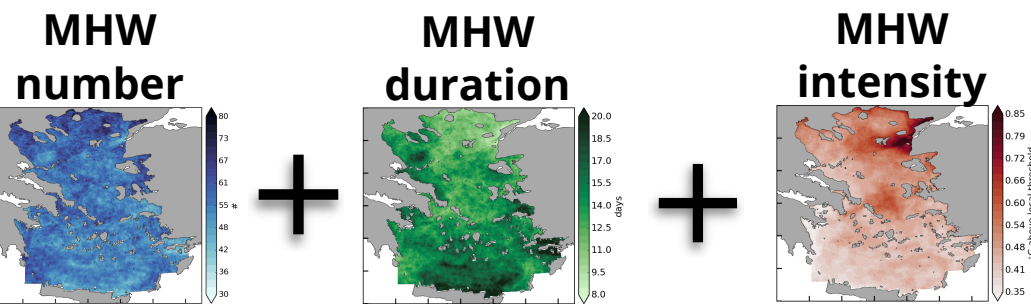


Atmosphere-Ocean compound heat wave events in the Eastern Mediterranean

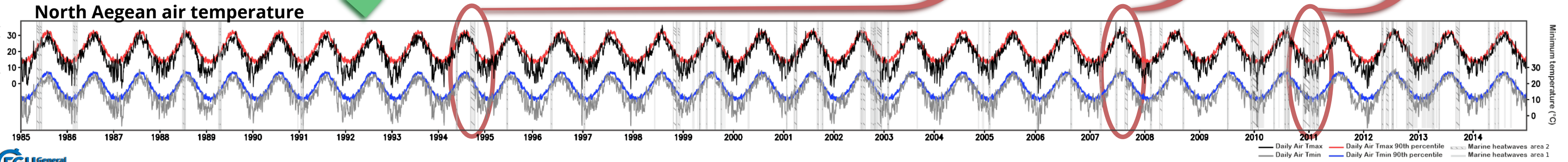
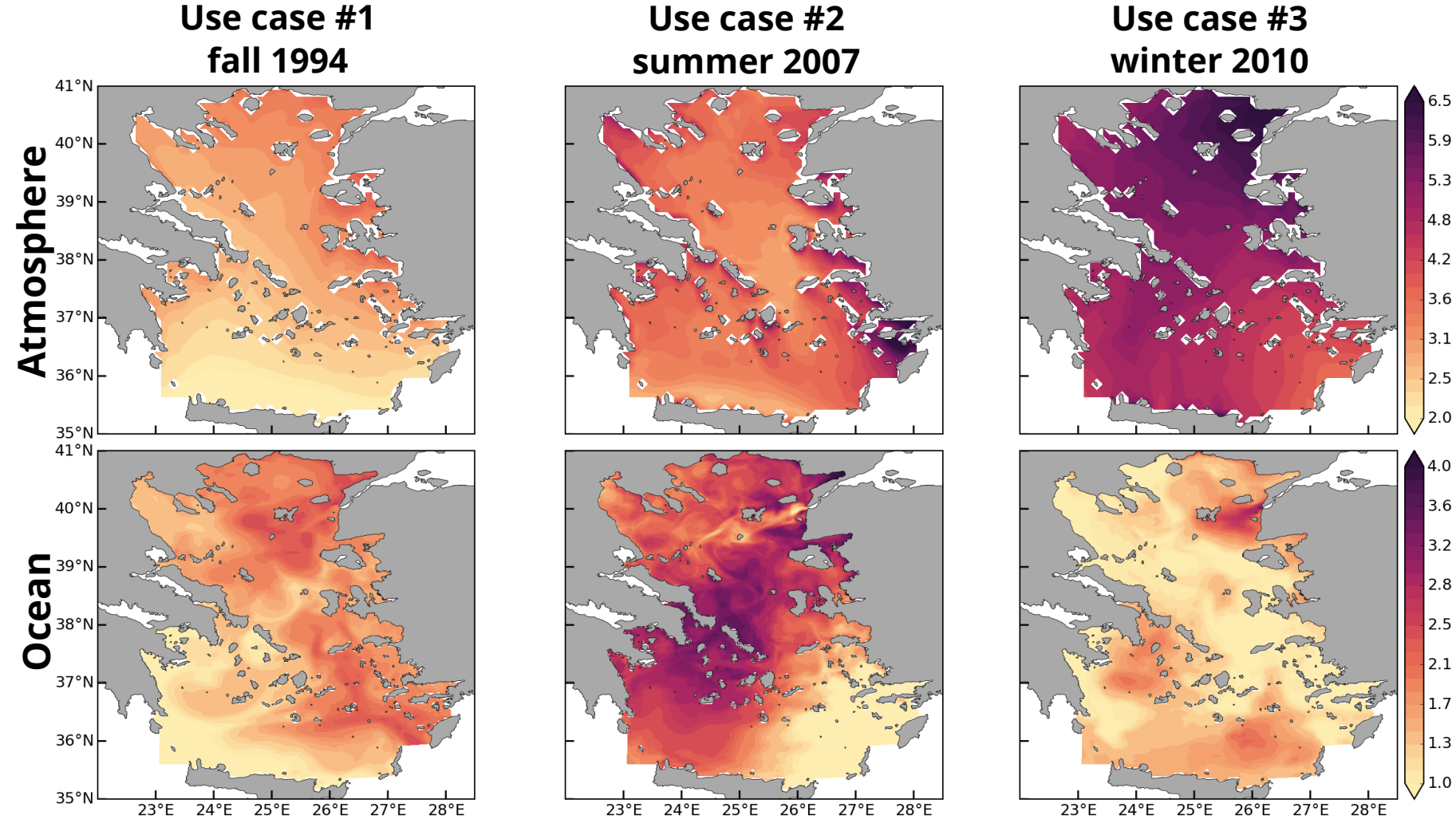
Behr, L.^[1], Petalas, S.^[2], Luther, N.^[3], Jaeger, M.^[3], Xoplaki, E.^{[1],[3]}, Tragou, E.^[2], Gogou, A.^[4], and Zervakis, V.^[2] | April 2021 | email: s.petalas@marine.aegean.gr



Data
Atmospheric temperature data stem from the COSMO-CLM simulation at 0.11° resolution forced by ERA-Interim over the period 1979-2019.
Oceanic SST data come from the Eastern-Mediterranean Black Sea (EMBS) simulation, using the ROMS modelling system, at variable resolution, forced by ERA-interim for the period 1985-2015.

Methodology
1) Detection of atmosphere and marine heat waves by the Hobday et al. (2016) definition.
2) Calculate Marine Heat wave (MHW) number of events, duration and intensity.
3) Use linear combination to introduce a MHW stress index to identify areas of interest.
4) Examine the Atmospheric realm for common events.
5) Assess use cases through composite analysis in the atmosphere and ocean.

Outlook
- Standardize the use case categories
- Look for lagged relationships between realms.



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