

A self-organized lecture prepared amid the COVID-19 pandemic
School of Civil Engineering, National Technical University of Athens
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A voyage in climate, hydrology and life on a 4.5-billion-years old planet: Annex on the Mediterranean Sea

Demetris Koutsoyiannis
Department of Water Resources and Environmental Engineering
School of Civil Engineering, National Technical University of Athens

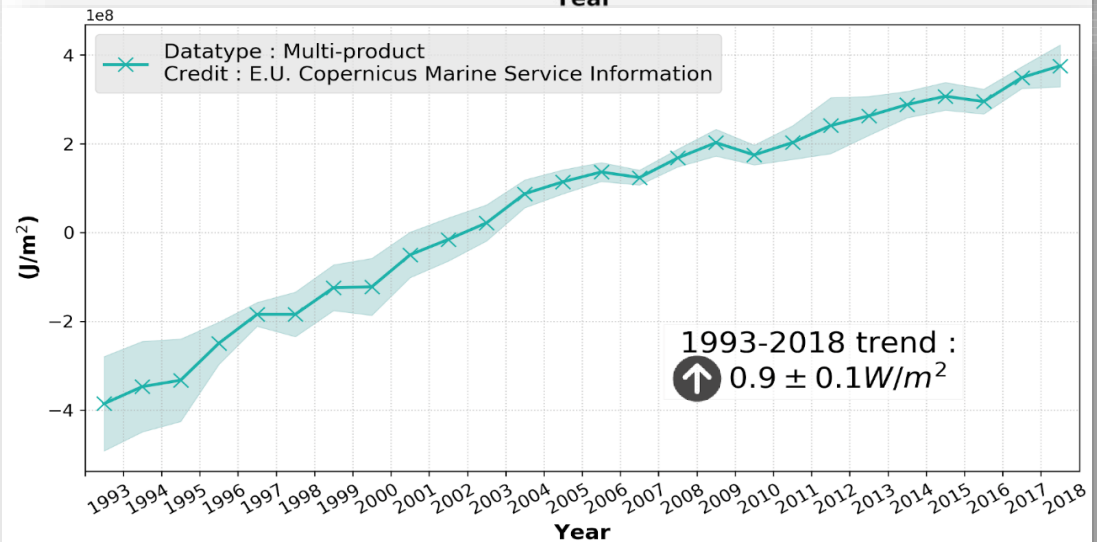
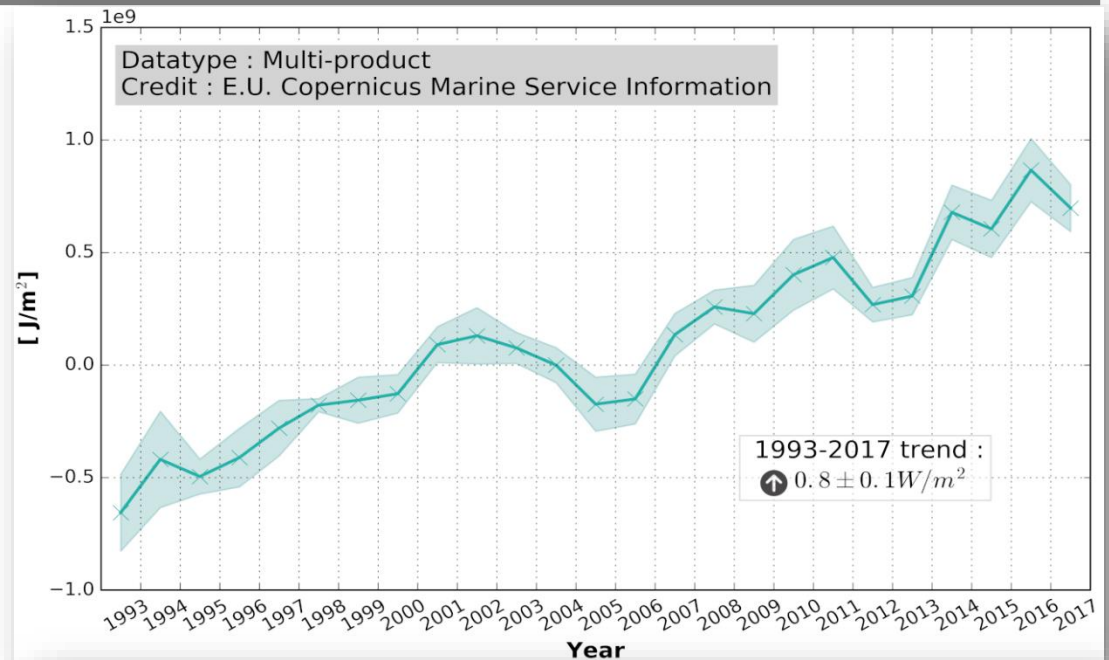
This Annex has been compiled after the lecture, as a follow-up to the discussion, in order to provide information on the Mediterranean Sea based on observational data.

Available online: <http://www.itia.ntua.gr/2036/>

Heat Content change in the Mediterranean

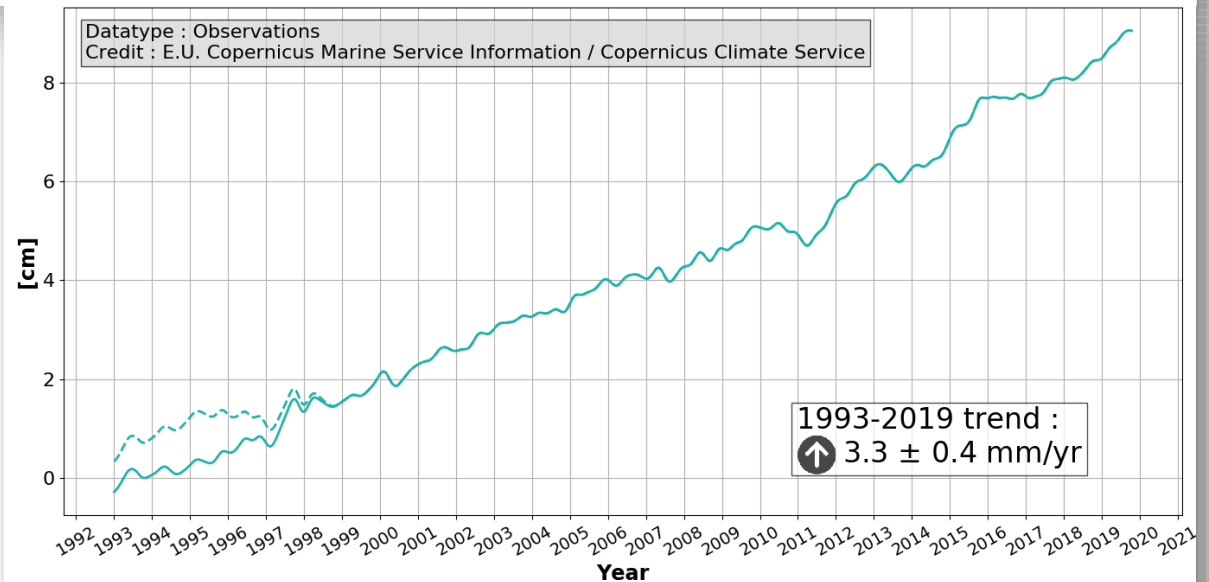
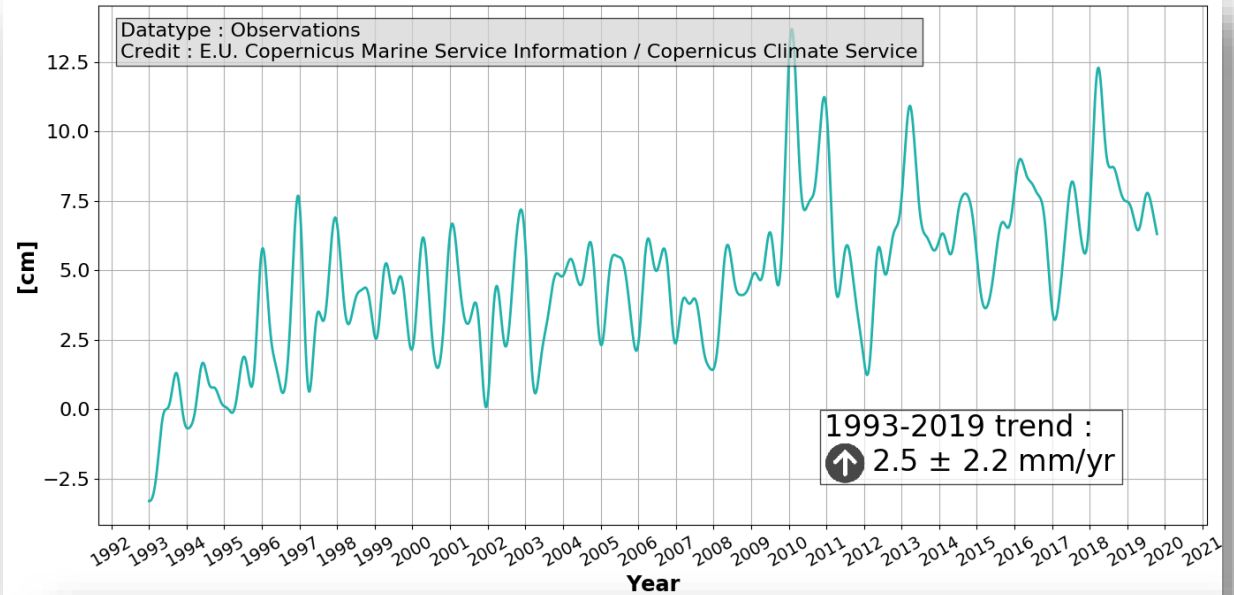
- Upper graph: Mediterranean Sea Heat Content (0-700 m).
- Lower graph: Global Ocean Heat Content (0-700 m).
- Notice that the upper graph is in 10^9 J/m^2 while the lower is in 10^8 J/m^2 .
- The trend in the Mediterranean is $0.8 \pm 0.1 \text{ W/m}^2$, smaller than the global, which is $0.9 \pm 0.1 \text{ W/m}^2$.

Source: Copernicus (European Union's Earth Observation Programme)
<https://marine.copernicus.eu/science-learning/ocean-monitoring-indicators/catalogue/>



Mean Sea Level change in the Mediterranean

- Upper graph: Mean Sea Level in the Mediterranean.
- Lower graph: Global Mean Sea Level.
- The trend in the Mediterranean is 2.5 ± 2.2 mm/year, smaller than the global, which is 3.3 ± 0.4 mm/year.



Source: Copernicus (European Union's Earth Observation Programme)

<https://marine.copernicus.eu/science-learning/ocean-monitoring-indicators/catalogue/>



Conclusion

- Contrary to what is generally broadcast, changes in the Mediterranean, in terms of sea-level rise and heat content, are slower, not faster, than the global ones.
- Once again, scientific statements should be based on observational data and not on model outputs.
- As documented in the main part of the presentation, climatic model outputs are generally irrelevant to reality.