Long-term and high-resolution wind/wave reanalysis over the Mediterranean area

LaMMA

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Motivation of the work:

- shifts in wind/wave regime are known to cause beach erosion and rotation
- in the northern Med Sea, observed data suggest a relative increase in the frequency of 'Sirocco' (SE) wind and a relative decrease of 'Maestrale' (NW) wind

Goal of the work:

- primary goal: to assess the role of past atmospheric variability on long-term shoreline change
- secondary goal: to help the design of scenarios linked to the impact of climate change along the coast (besides the effect of sea level rise)



Final product: create a climatic database of wind/wave regimes over the last 30-35 years (ie hindcast), at very high-resolution along the coasts of the Mediterranean Sea by using cutting-edge ERA5 reanalysis (vert/horiz resolution, observations used, data assimilation method, etc...)

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- enable the implementation of coastal morphodynamic services:

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- assess the uncertainty of the hindcast (ERA5 members)