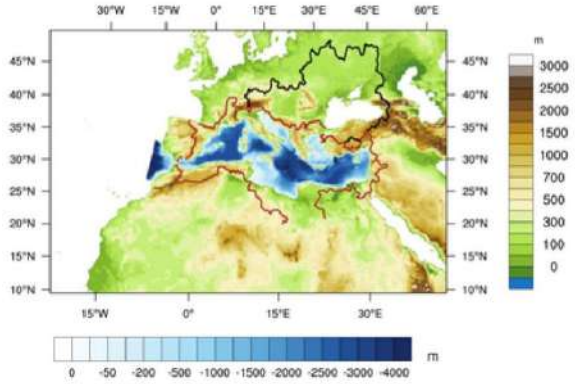
# WP5 Model Eco3MS Partner CNRS-LEGOS

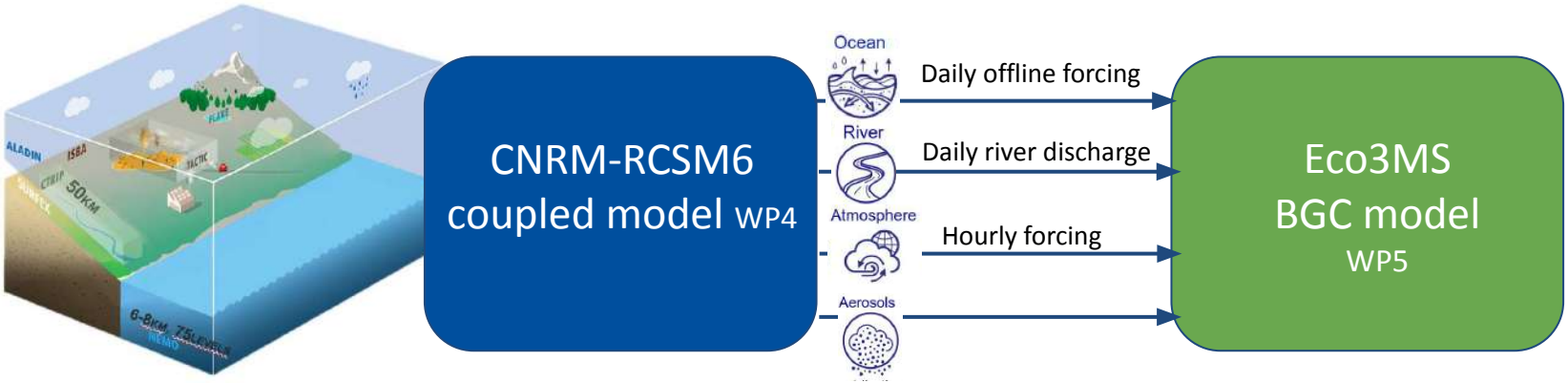
**Target basin -** Mediterranean Sea

**Coupled physical system -** CNRM-RCSM6 : Ocean: NEMOMED; Atmospheric: ALADIN; River: CTRIP models

**Model spatial resolution - NEMO:** 6 km, 75 z-coordinate vert. levels

Hindcast (1993-2025), historical and projections (1993-2100) runs



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- Plankton Functional Types (PFT) model

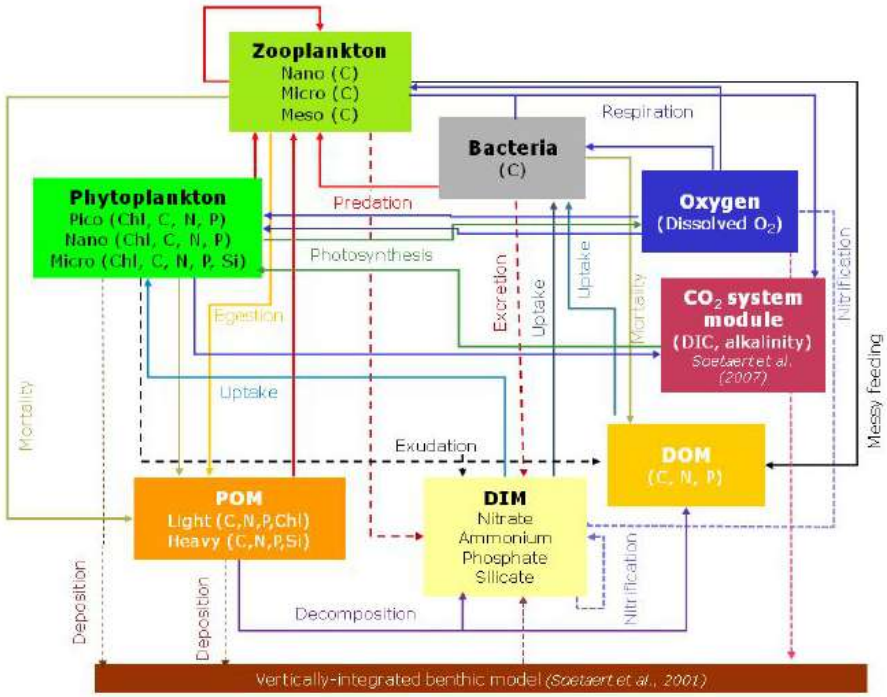
- 37 state variables; C, N, P, $O_2$ cycles

- Variable C/N/P ratios

- Variable C/Chl ratios

- Main biogeochemical processes represented : photosynthesis, respiration, trophic interactions, oxygen and carbon air-sea exchanges, exchanges at the sediment/water interface

- External inputs: ocean (u,v,w,T,S,η) and atmospheric (solar flux, wind, humidity) forcing, river concentrations, dust (DIP) and DIN deposition, atmospheric $xCO_2$




*Ulses et al., 2023*

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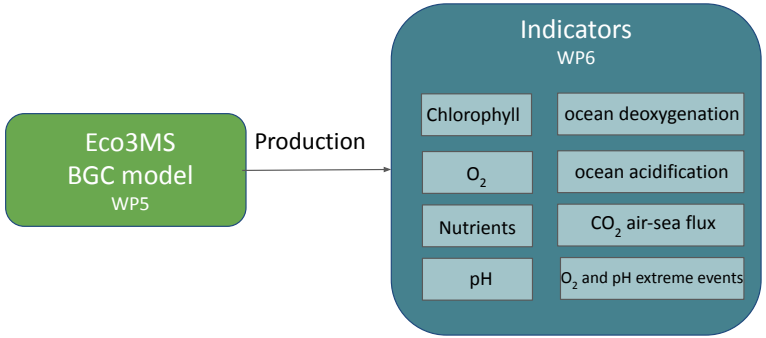
- Proposed key variables/indicators for the climate services:

*Chlorophyll, Dissolved oxygen, Nutrients, Inorganic Carbon, Ocean acidification, Ocean deoxygenation, Air-sea $CO_2$ flux, Extreme events (oxygen, acidification)*




- Planned development in RIVIERADE:

*Improvement of the pelagic benthic coupling in Eco3MS*