

COASTAL GEOMORPHOLOGY

Coastal dynamics and coastal zone management



The main field of investigation developed by the research group concern the following topics:

Coastal erosion and coastal protection

- Coastal modelling as tool to evaluate changes in coastal setting
- Beach nourishment assessment (nourishment placement, sediments texture and composition, etc.).
- Coastal flooding hazard and risk assessment

Waves storm

- Assessment and understanding of the physical processes (waves propagation) and boundary conditions (coastal morphology) that caused damage and the structural features of the damaged elements.
- Beach resilience: understanding the natural beach recovery processes

Beach safety

- Beach safety assessment based on the geomorphological and hydrodynamic features of the coast.
- Rip currents development and their relation to the sea conditions.

Marine biogeomorphology

- Assessment and understanding of the coastal biocoenosis spreading and distribution processes.
- Interaction between marine biocoenosis and the hydro-morphodynamic processes (forecasting models).
- Coastal changes effects on coastal biocoenosis.
- Impact of the extreme events on coastal biocoenosis.

Keywords: coastal erosion, coastal protection, coastal dynamics, coastal vulnerability and risk, beach safety, rip currents, marine biogeomorphology.

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