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## Climate change adaptation measures on pocket beaches

### Abstract

The proposed Doctoral Thesis aims to study adaptation measures to mitigate future flooding events on sheltered beaches, and therefore the beach erosion, with the challenge of providing solutions based on nature: preserving the natural system and taking advantage of its resources. Future adaptation measures will consider hydrodynamics (sea level rise, wave climate and flooding regime) changes, as well as beach morphology changes.



### Summarized methodology

To this end, historical damage data caused by extreme events will be analyzed, as well as hydrodynamic data from different sources of information (wave buoys, reanalysis data, coastal videometry, HF radar) and morphodynamic data derived from the coastal videometry network of the Spanish and French Basque Coast. The analysis of the hydrodynamic and morphodynamic conditions at the beach, allow the classification of the beaches under study according to the dominant hydrodynamic regime and damage, in the actual situation, and in the future climate change scenarios. Through this understanding of beaches, the best future adaptation measures for each beach will be proposed.

