

Project

MORPHO-DYNAMIC DESCRIPTION OF THE BEACHES OF THE BALEARIC ISLANDS



Axis
Bloc 1.1
Thematic area

Disciplinary research
Environment
Coastal variability and global change



Summary

The morpho-dynamic study of beaches is based in the interaction between their topography and marine hydrodynamics. These factors condition the transportation of sediments in a particular area, as well as the state of a beach at a given time.

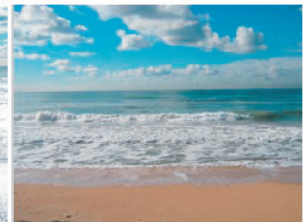
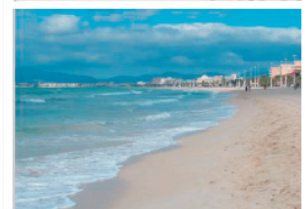
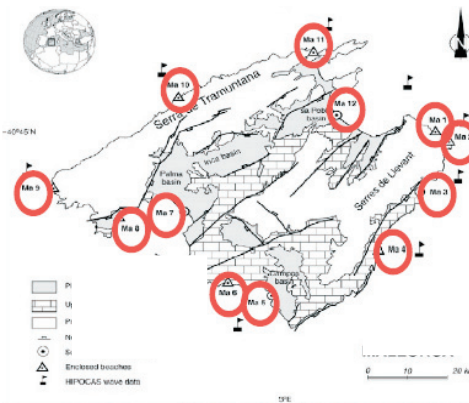
Starting from a six-year morpho-dynamic database, Wright and Short (1984) proposed a three-dimensional model incorporating quantitative parameters (height of breaker, speed of falling of sediment, wave period and slope of beach) and nominal variables relating to the associations of process and form (presence or absence of mud and its type), developing a classification of beaches in three states: dissipative, intermediate and reflective. Thanks to this classification, there are various applications both in the management of safety on beaches, planning health resources, and the dynamic behaviour, response and effectiveness of regeneration projects, etc.

Actions

-Describe waves and their effects on the beaches of Majorca.

-Describe the texture and composition of beach sediment.

-Classify the modal morpho-dynamic state of beaches on Majorca.



Map of the study areas

Applications

Research

From a scientific perspective, the classification of beaches on Majorca is a validation and exploitation of Short's model. There are no applications of the dimensionless parameter of falling in less energetic and micro-tidal environments such as the Western Mediterranean, and even more so in situations of relatively unexposed beaches such as those on Majorca.

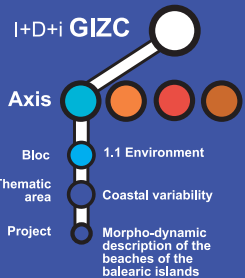
Administration

The classification of the modal morpho-dynamic state of the beaches on Majorca will allow us to design and adapt, to specific timeframes and environmental conditions, policy and safety services for users of a main tourism resource in the Balearic Islands. There will also be solid criteria for projects to regenerate beaches.

Contact

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