

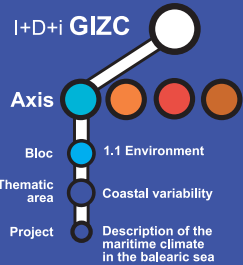
Project

DESCRIPTION OF THE MARITIME CLIMATE IN THE BALEARIC SEA

I+D+i
GIZC
GESTIÓ INTEGRADA
DE LA ZONA COSTANERA

Axis
Bloc 1.1
Thematic area

Disciplinary research
Environment
Coastal variability and global change



Summary

The socio-economic importance of coastal areas, such as beaches and ports, means that we need a description of tidal activity to know about, and as far as possible, foresee and mitigate possible negative effects of this activity on the coast.

The study of the maritime climate comprises both the description of normal tidal activity (defined as the statistical distribution of the various states of the sea) and the description of those extreme events which only happen a few times every year but, because of their magnitude and consequences, are of great importance given that they produce structural damage and abnormal rates of erosion on beaches.

To achieve this, a first approach will analyse nine years of data corresponding to WANA points from the oceanographic database of the Spanish State Ports Authority. These data will be valid for a study of average conditions, but not for a reliable analysis of extreme conditions. Thanks to new HIPOCAS data (EPPE, 2003), obtained from a repeat analysis of forty-four years (1/1/1958 to 31/12/2001) of atmospheric data, there will be high-resolution homogenous data on tides. HIPOCAS data will allow us to describe extreme conditions through the application of diverse statistical models capable of providing repeat periods for various significant high tides associated with events considered 'of risk' for maritime routes, coastal structures and beaches and ports.

Actions

-Describe tidal conditions, both in terms of averages and extremes, for the Balearic coast.



Storm out at sea



View of outer wall of a port structure



Sea storm



Rising tides at the outer wall of a marina



Storm, November 2001, Cala Estancia (Palma, Majorca)

Applications

Research

Currently there is no description of the maritime climate in the Balearic Sea. From the data of the HIPOCAS repeat analysis, it will be possible to apply various statistical models allowing a correct definition of the maritime climate in the Balearic Sea.

Administration

Currently there is no description of the maritime climate in the Balearic Sea. From the data of the HIPOCAS repeat analysis, it will be possible to apply various statistical models allowing a correct definition of the maritime climate in the Balearic Sea.

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