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Coastal Environmental Change
During Sea-Level Highstands:
A Global Synthesis with implications
for management of future coastal change

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Quaternary coastal morphology and sea level changes



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Underwater geoarchaeological data for the reconstruction of ancient coastline along the Ionian area of central-eastern Calabria (Italy). Preliminary results

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Abstract

Recent researches directed to the compiling of an “archaeological map” having for object the underwater evidences located in the stretch of Ionian Sea included between Soverato and Cirò Marina (middle-east Calabria), allowed to acquire unexpected and useful information for the study and the understanding of the coastal phenomena of erosion and subsidence.

In the least years these events have suffered a worrying acceleration that put seriously at risk the conservation of the cultural

and landscapist assets present along the Calabrian coasts. The geological danger of the area under examination and the necessity to carry out protection's policies contributed recently to the accomplishment of several geo-morphologic studies.

The monitoring operations generated, both from the presence of three offshore installations for the natural-gas extraction in the marine quadrant in front Crotone and Capo Colonna (Luna, Hera Lacinia, Linda), and from the institution of the “Capo Rizzuto” Natural Marine Reserve (in the southern area of the Marchesato), have had a decisive role to polarize the geologist's attention about the coastal withdrawal dynamics.

In this short communication we want point out the data coming from the underwater and archaeological investigations because we are sure that we have to analyze a complex object, like the coastal holocene landscape evolution, with the help of the historical sciences.

Objective of the present work is to realize an archaeological map of the backdrops in order to rebuild a possible course of the shore's paleo-lines, based on submerged evidences dated approximately from 5000 B.C. to VIII sec. A.C.

In this perspective, was done a careful selection of the archaeological emergencies, including exclusively those able to constitute valid indicators.

Obviously the choice is fallen on the “not movable” evidences; any of these are quarries, harbour structures, home-building etc. In this sense each manufactured object, when chronologically identified, provides a sure “terminus post quem” to place in the time the tectonics changes, that caused his submersion.

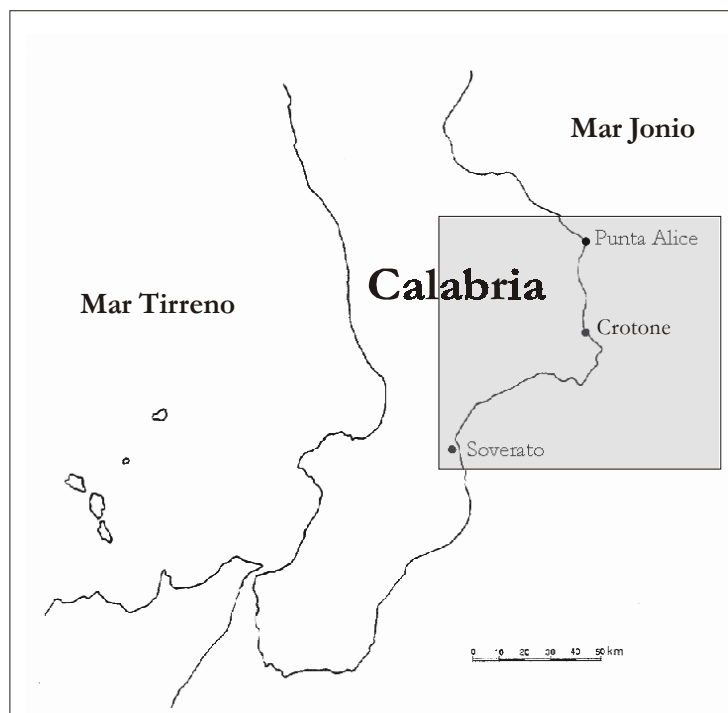


Figure 1. Area interested to research

The tracks of the old coastal lines were founded in different points of the coast, on backdrops included between 1 and 10 meter of depth and to a distance of about 200 meter.

Finally the archaeological data are treated in a perspective, comparing these with those of geo-technical order, contributing to the accomplishment of significant results for the general progress of our knowledge about the Jonical Calabrian coastal modifications happened from the Neolithic era until the high medieval period.

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