

SAVEMEDCOASTS

sea level rise scenarios along the mediterranean coasts



SCIENTIFIC BACKGROUND

Global sea levels started to rise during the 19th century and increased up to about 17 cm during the 20th century. Today, sea-level is accelerating at a rate of about 30 cm per century. Global sea levels could rise even more than one meter by 2100, several meters by 2300, and many meters over longer timescales, under the effects of climate change. With these potential scenarios, the effects of storms, floods, coastal erosion and tsunamis will be amplified with severe consequences on coastal infrastructures, buildings, safety of the population, economy and cultural heritage.

THE PROJECT

SAVEMEDCOASTS aims to respond to the need for people and assets prevention from natural disasters in the coastal zones of the Mediterranean Sea, undergoing to increasing sea level rise due to climate change, coastal land subsidence, tsunamis and storm surges impacts. Sea level rise projections for 2100 and high resolution maps of sea level scenarios are realized for selected areas of the Mediterranean region that includes several UNESCO sites.

STAKEHOLDER ANALYSIS

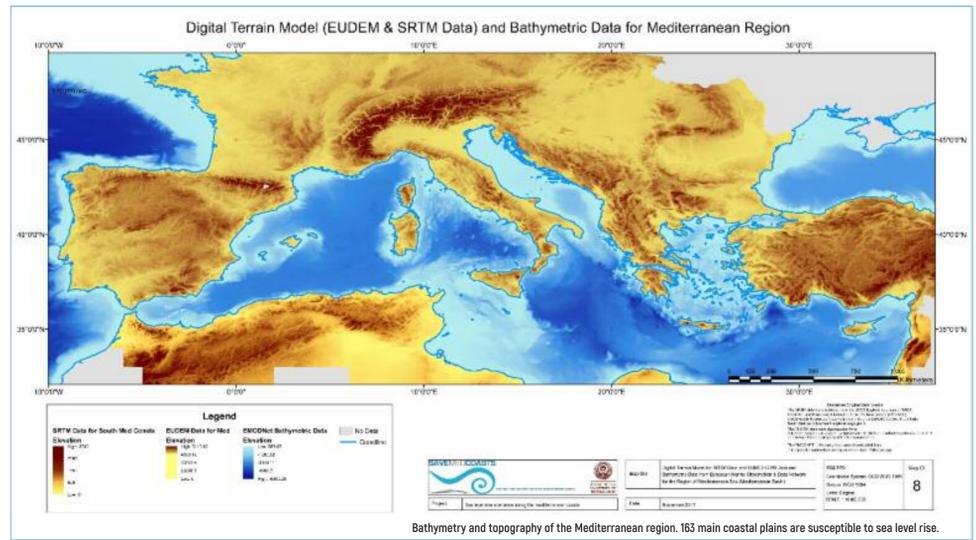
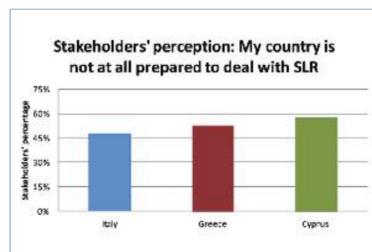
Stakeholders from Italy, Greece and Cyprus have been engaged, to highlight gaps and needs and mobilize society and policy making. Our goal is to implement a conscious policy (evidence-based) on coastal management. "I am surprised to realize through this interview that I did not know much about sea level rise, although I thought I knew! I am more aware on my need to be aware!", said a stakeholder.

Stakeholders' focus during Small Group Meetings :

ITALY: Risks of coastal cities, infrastructures and cultural assets.

GREECE: Impacts on agriculture and biodiversity of coastal ecosystems

CYPRUS: Impacts on the tourism industry and the economy.



WEBSITE AND COMMUNICATIONS

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www.savemedcoasts.eu



WEBGIS

The Savemedcoasts' Web GIS platform is based on a user friendly information suitable for stakeholders and interested users. By data integration can be aggregated and combined different data sets of the database into one visualization, processing and/or catalogue interface. Go to www.savemedcoasts.eu to access the Web GIS



HIGH RESOLUTION MAPPING

New technologies, like aerial digital photogrammetry from UAVs, multibeam bathymetry and spatial analysis of remote sensing data, are used to realize very high resolution orthophotos and maps of the pilot sites, to simulate the marine ingress scenarios. Detailed maps are realized for the UNESCO pilot sites of Lipari and Monterosso (Italy) and at Lefkada Island (Greece).



REGIONAL AND LOCAL SEA LEVEL RISE SCENARIOS FOR 2100

Below: National level analysis of the coastal zones placed at <2m above sea level (in blue), prone to be flooded.

The RCP 2.6 (blue) and RCP 8.5 (red) sea level rise projections for the Venice lagoon.

Right: The potential inland extension of the coastline for 2100, relative to 2016 in the Venice lagoon.

Land subsidence from geodetic data is included in the analysis.

