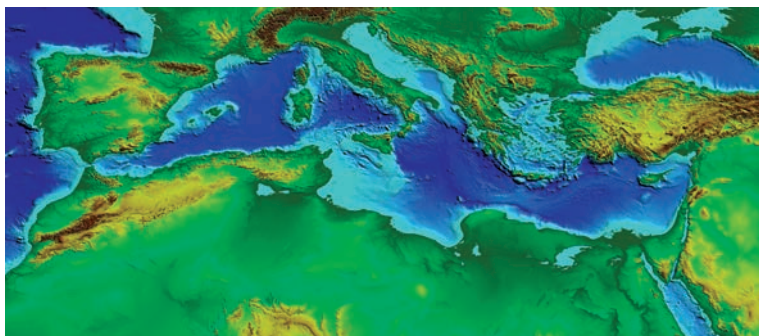


## SCIENTIFIC BACKGROUND

Global sea levels started to rise during the 19<sup>th</sup> century and increased up to about 17 cm during the 20<sup>th</sup> century. Today, sea-level is accelerating at a rate of about 30 cm per century under the effects of climate change. If greenhouse gas emissions will not be mitigated, global sea levels could rise even more than one meter by 2100 and several meters in the coming centuries. With these 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. These impacts will therefore result in a potential socio-economic loss to face in the next years.



www.savemedcoasts.eu

## 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 (SLR) due to climate change, coastal land subsidence, tsunamis and storm surges impacts. The focus are the coastal zones prone to sea level rise and to prepare the stakeholders to the effects of these potential impacts. SLR 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.



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graphic design by Laboratorio Grafica e Immagini | INGV



Funded by European Union Humanitarian Aid and Civil Protection

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# SAVEMEDCOASTS

sea level rise scenarios along the mediterranean coasts

## STAKEHOLDER ANALYSIS

Stakeholders from Italy, Greece and Cyprus have been engaged, to highlight gaps and needs and mobilize society and policy making. Interviews, Small Group Meetings and online questionnaires are based on the DeCyDe-4-SLR Decision Support System in the solution oriented process. Our goal is to implement a conscious policy (evidence-based) on coastal management.

### DIRECT IMPACT ON POLICY MAKERS:

**AWARENESS RAISING** "I am surprised to realize through this interview that I did not know much about SLR, although I thought I knew! I am more aware on my need to be aware!", said a stakeholder.

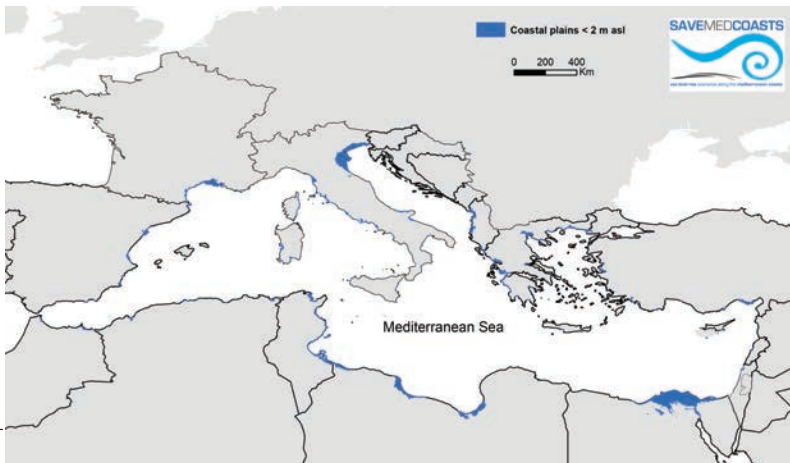
**POLICY ACTIONS** In Cyprus a parliamentary question was submitted by an MP who was interviewed, with regards to the actions planned from the State to address SLR problem.

**IMPLEMENT SOLUTIONS** The Municipality of Venice (Italy) asked SAVEMEDCOASTS to evaluate the SLR projections for this historical coastal city.

## WEBGIS

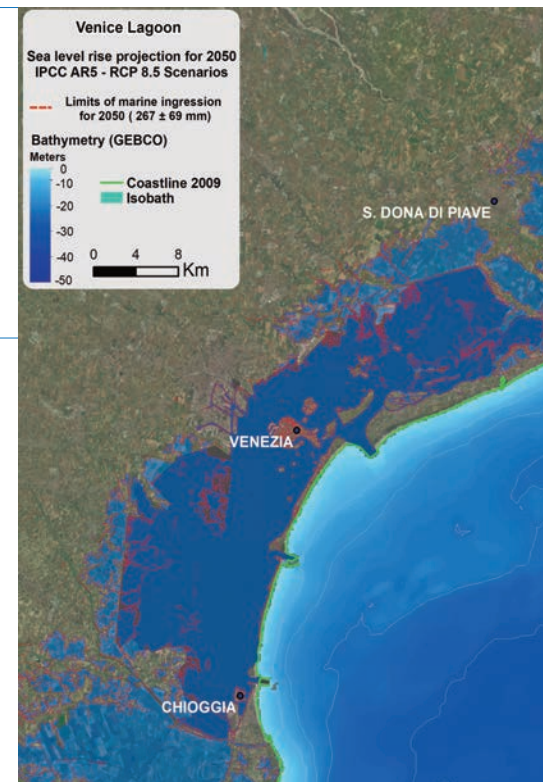
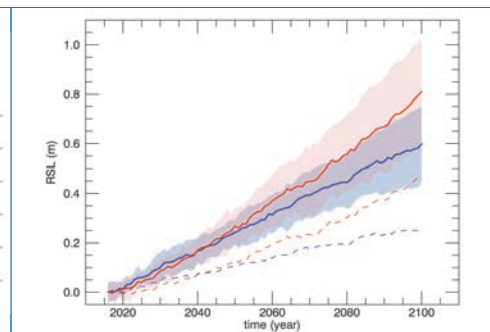
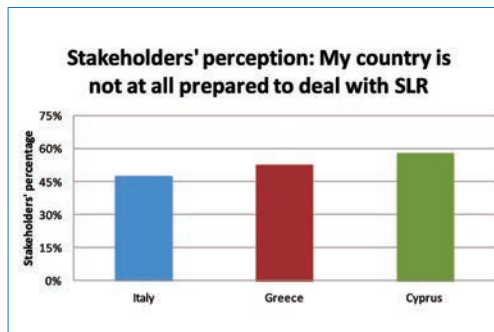
163 main coastal plains face the Mediterranean Sea.

**SAVEMEDCOASTS** geospatial data are shared by a specific Web-GIS accessible at [www.savemedcoasts.eu](http://www.savemedcoasts.eu).



## HIGH RESOLUTION MAPPING

**SAVEMEDCOASTS** uses advanced methods to identify the coastal zones of the Mediterranean Sea prone to be flooded by the SLR, storm surges and tsunamis. The effects are simulated through the creation of multi-temporal scenarios of flooding extension and position of the coastline. Results are based on available and new high-resolution Digital Terrain Models, known rates of land subsidence, SLR projection for 2100 A.D.



## EXPECTED SEA LEVEL RISE SCENARIOS FOR 2100

The SLR projections for the Venice lagoon are shown in the graph. In blue and red are the RCP 2.6 and RCP 8.5 sea level scenarios. The potential inland extension of the coastline for 2050, relative to 2016, is highlighted in red on the map. Land subsidence from geodetic data is included in the analysis (RCP 8.5 scenario).

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