

- The coastal plains of the Mediterranean
- The Civil Protection Forum, Brussels
- Coastal vulnerability and impact analysis
- SAVEMEDCOASTS' WebGIS
- The 3rd Technical meeting

Project Partners



Istituto Nazionale di Geofisica e Vulcanologia (INGV)
Italy



Laboratory of Photogrammetry and Remote Sensing, Aristotle University of Thessaloniki
Greece



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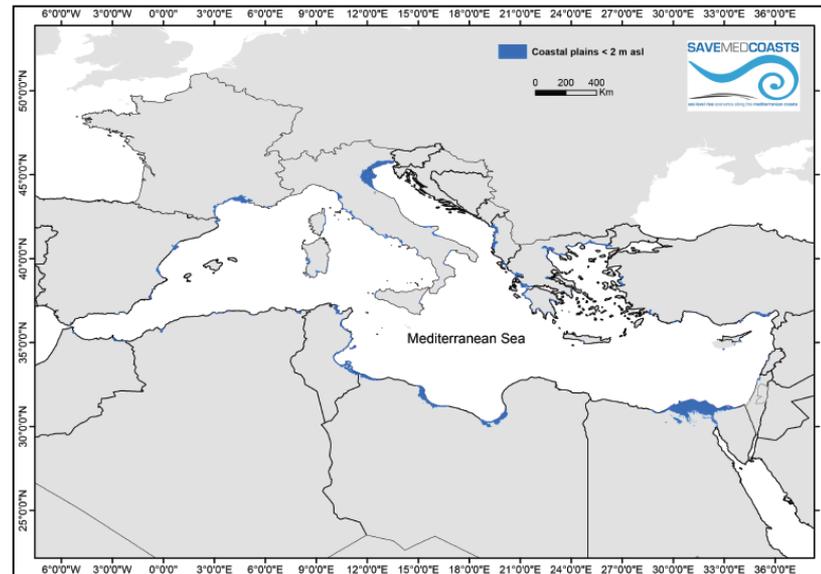
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THE COASTAL PLAINS OF THE MEDITERRANEAN REGION

Article I



This map shows the 163 coastal plains of the Mediterranean region with elevation <2 m above sea level potentially prone to marine flooding due to sea level rise by 2100, storm surges and tsunamis. It was created for the SAVEMEDCOASTS project using free available global datasets from spatial and bathymetric data.

The map is represented in the widely used World Geodetic Reference System (WGS 84; EPSG: 4326), using the GeoTIFF format for raster data and the ESRI © Shapefile format for vector data. The Coastline #4326 is provided by NOAA. The following data were used for map creation:

- **DTM** from the EUEM (25 x 25 m grid) provided by Copernicus for the European section of the MED region, and the SRTM 1 Arc (30 x 30 m grid) provided by USGS for the remaining part of the MED region.
- **Bathymetry** from the EMODnet project (250 x 250 m grid).

Topographic data, were analysed by ArcMap and Global Mapper software packages to highlight the coasts of the Mediterranean most prone to coastal hazards. The total exposed area of the coastal plains is about 38.529 km², corresponding to about 5.5 million soccer fields.

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Article II

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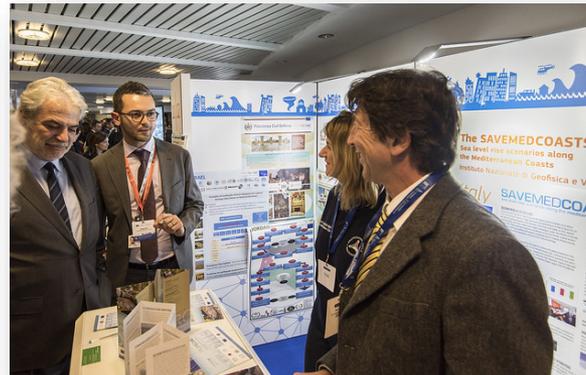
SAVEMEDCOASTS AT THE EUROPEAN CIVIL PROTECTION FORUM

On 5-6 March 2018 in Brussels, the SAVEMEDCOASTS project has been presented at the European Commission during the 6th edition of the European Civil Protection Forum. The central theme of the 2018 Forum has been "Civil Protection in a Changing Risk Landscape", that fits the goals of SAVEMEDCOASTS.

The event has been organized by the DG ECHO and gathered about 900 representatives from the European civil protection community, EU Member State governments, civil protection authorities in Europe and nearby countries, academia and research centers, international organizations and European institutions, to speak about the Union Civil Protection Mechanism and present new ideas for common challenges.

Two posters, leaflets and videos on SAVEMEDCOASTS activities and results were shown in an exhibition space shared with the Italian Civil Protection and made available by the European Commission to showcase innovative solutions and best practices in the field of **disaster risk awareness and communication**.

Risk awareness and risk communication are one of the central topics of SAVEMEDCOASTS being key components of efficient disaster risk management and represent one of the priorities of the EU in the field of civil protection.



The main hall of the European Civil Protection Forum. Stories and lessons learned from critical events were shown to hundreds of participants from the European and nearby Countries, to share experiences and improve actions.

The European Commissioner for Civil Protection And Humanitarian Aid Christos Stylianides visits the SAVEMEDCOASTS project during the Civil Protection Forum.



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COASTAL VULNERABILITY AND IMPACT ANALYSIS IN THE MEDITERRANEAN

Article III

The expeditive assessment of coastal flooding extension under the effects of SLR and ordinary and extreme storm surge events in the pilot sites, has been modeled. The reconstructed climate wave conditions and the methodology applied arise from a heterogeneous wave data availability due to a not uniformly distribution of wave gauges in Mediterranean basin.

The wave data for each pilot area and for each return time have been derived through the omni-directional analysis which generate a general overestimation of the wave height, but it is commonly recognized as suitable and fully operative procedure to be apply for the first order assessment once detailed local wave data are not available. The analyses in terms of omni-directional storm have been performed in each location with respect to the return periods of: 1, 5, 25, 50 and 100 years.

The proposed approach for the rising sea level assessment coupling meteorological/tidal components and land subsidence has been applied to pilot areas. The latter can be assumed as representative test cases for the whole Mediterranean basin for their typical coastal morphology. Such an expeditive methodology can be extended to other Mediterranean coasts to forecast potential current and future flooding scenarios when local topo-bathymetric information, VLM, RSLR trends projections and wave climate data are available.

In the following figures are reported some results for the Italian test site Cinque Terre (Monterosso and Vernazza).

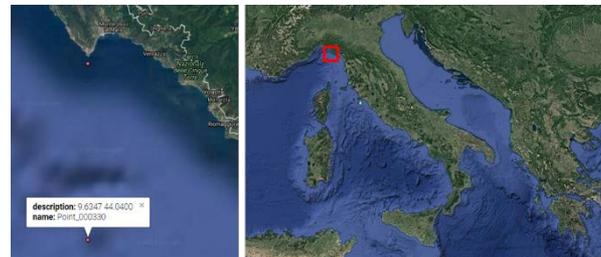


Figure 1 – Left: Point 000330 on the available web grid map. Right: Investigated area localization.

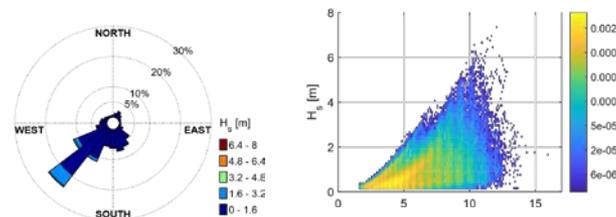


Figure 2 – Left: Point 000330 Significant wave height polar and 2D histograms for significant wave height, H_s , and peak period, T_p .

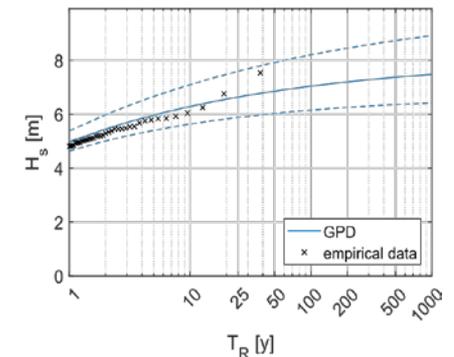


Figure 3 - Point 000330. H_s return curves

T_r [y]	1	5	25	50	100
H_s [m]	4.98	5.97	6.64	6.86	7.05
T_p [s]	10.2	10.7	11.1	11.2	11.3

Table 1 - Point 000330

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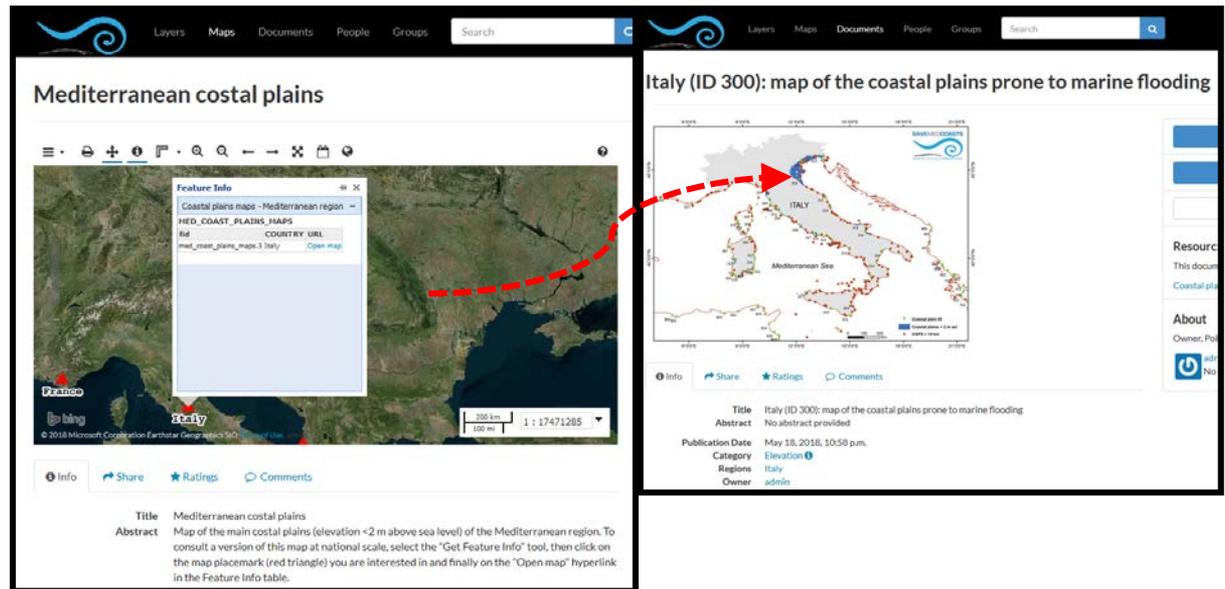


THE SAVEMEDCOASTS WEBGIS: IMPROVEMENTS AND MAP VISUALIZATION

Article IV

The SAVEMEDCOASTS' WebGIS platform supports data integration and data sharing hub for the project partners.

The following windows of the SAVEMEDCOASTS WebGIS show an example on how maps of selected coastal plains of the Mediterranean region at national scale can be consulted in PNG format. By selecting the "Get Feature Info" tool and clicking on the map placemark (red triangle) of interest you access to the "Open map" hyperlink in the "Feature Info" table.



In the perspective of data dissemination, contact information and service metadata have been configured in GeoServer to fit the most used OGC web services (WMS, WMTS, WFS and WCS). They can be used in the widely used desktop GIS software (e.g. QGIS, ArcGIS, etc.) or webGIS applications (e.g. GeoNode) or libraries (e.g. OpenLayers, Leaflet, etc.) that support OGC web services.

The platform tools is operational with regional and local scales data and metadata. The access to high resolution maps from the pilot sites at Lipari island, Monterosso (Italy) and Lefkada island (Greece) are still limited to project partners until validation and project activities will be completed.

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THE 3ND SAVEMEDCOASTS TECHNICAL MEETING – ROME, INGV

Article V

The 3rd Technical Meeting was held on June 11, 2018 at the INGV headquarter in Rome. During the meeting the project partners presented the state of the art of their activities, discussed the achieved results and prepared the forthcoming actions for the next 6 months of the project, according to the following key points:

- Assessment of milestones and deliverables,
- Reporting and communication to the DG-ECHO,
- The coastal plains of the Mediterranean region,
- Relative sea level projections for targeted coastal plains,
- Coastal risk, vulnerability and impact analysis in the Mediterranean region,
- Development of an integrated flood damage model for climate risk assessment,
- The SAVEMEDCOASTS WebGIS: implementation and visualization,
- Advancements in stakeholders engagement,
- How to show and disseminate results,
- Dissemination: statistics, social media and next actions,
- What's fine and what's wrong: problems and solutions,
- Next activities,
- Workshop organization in Lefkada, Kefalonia and Rome.



Video interview on ISOTECH's role regarding stakeholders engagement and participation as part of the SAVEMEDCOAST dissemination activities.