



1st NATIONAL WORKSHOP ON CLIMATE CHANGE AND SEA LEVEL RISE IN THE MEDITERRANEAN SEA

Rome, 5-6 July 2018 - ENEA, Lungotevere Thaon di Revel, 76

COMPENDIUM OF ABSTRACTS

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ITALIAN NATIONAL AGENCY FOR NEW TECHNOLOGIES, ENERGY AND SUSTAINABLE ECONOMIC DEVELOPMENT

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Climate-KIC is supported by the
EIT, a body of the European Union 

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Sea level rise, coastal hazard and people awareness in the Mediterranean: new insights from the SAVEMEDCOASTS project

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Sea level rise is one of the main global threats caused by climate change. Recent independent studies and the IPCC reports show that global sea levels could rise even more than 0.8-1.0 m by 2100. When in combination with vertical land movements for natural or anthropogenic causes, changes in relative sea levels are particularly crucial in subsiding coasts, accelerating land flooding.

Here we show results from the SAVEMEDCOASTS Project (Sea Level Rise Scenarios along the Mediterranean Coasts – www.savemedcoasts.eu), funded by the European Commission ECHO A.5. The project aims to respond to the need for people and assets prevention from natural disasters in Mediterranean coastal zones placed at less than 2 m above sea level, which are vulnerable to the expected sea level rise. We use available high resolution DTM and bathymetric data, rates of vertical land motion and the IPCC projections RCP4.5 and RCP8.5 of climate change scenarios for sea level rise, to identify the areas of the Mediterranean region most prone to marine flooding for 2100 AD. We provide a focus on the main coastal plains, the deltas of the Nile and Po rivers, the coasts of SW Turkey, part of Greece and the north Adriatic Sea, besides other densely inhabited coastal areas. Detailed scenarios are given for the three Italian UNESCO sites of the Venice lagoon, Lipari island and Cinque Terre and the Island of Lefkada (Greece), which are highly exposed to relative sea level rise, storm surges and tsunamis, that all represent critical issues for the local population and coastal infrastructures. Through the implementation of a dedicated and structured method, local key actors become aware both of the extent and of the different aspects of the problem and are engaged in a process to identify solutions. Based on gaps/needs and perceptions analysis, policy tools targeting civil protection are produced. The hazard implications for the population living along the shore are considered to push land planners and decision makers to take into account scenarios similar to that here reported for cognizant coastal management. SAVEMEDCOASTS is contributing to improve governance and raising community awareness towards coastal hazard, fostering the cooperation amongst science, affected communities and civil protection organizations for some high economic and environmental value zones of the Mediterranean coasts.

Keywords: sea level rise, coastal hazard, Mediterranean