

## Coastal Adaptation to Climate Change: A Review of EU Tools, Legislation, National Strategies and Projects in the Mediterranean Basin

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**Abstract :** In the last three decades, climate change has been studied extensively from scientific community, and its consequences are more than clear all around the world. Most countries have carried out a great effort to reduce global warming rates with the ratification and implementation of several international treaties. Moreover, many of them have already adopted national plans in order to adapt to climate change effects and mitigate human and economic losses. Coastal environments, with their inherent physical sensitivity, will face important challenges as a result of projected changes in climate conditions and hundreds of millions of people will be affected. Coastal zones are of high social and economic value and this research focuses on the Mediterranean basin, which is a densely populated and highly urbanized area. With 40% of its land used for human activity and the inevitability of the impacts of the climate change, it is obvious that some form of adaptation measures will be necessary. In this regard, the EU tools, policies and legislation concerning adaptation to climate change are presented. Additionally, the National Adaptation Strategies of State members of the Mediterranean basin are compared and analyzed concerning the coastal areas, along with an overview of projects and programs results focused on coastal issues at different spatial scales. The purpose of this research is to stress the differences between Mediterranean State members at methodologies implemented, to highlight the possible gaps in co-ordination and to emphasize on research initiatives that EU can build upon moving towards an integrated adaptation planning on a region-wide basis.

**Keywords :** coastal adaptation, Mediterranean Basin, climate change, coastal environments

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