



Current knowledge, gaps and challenges in the Southern European Seas

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New knowledge advances our current understanding on the selection and application of the appropriate tools for assessing the state of the marine environment in the Southern European Seas (SES). Diminishing the lack of knowledge is a prerequisite for sound policy decisions. Although gaps and knowledge are fewer today, the health of marine and coastal ecosystems in the SES is under pressure and shows, in places, some signs of deterioration and declining quality.

Overall, there is a lack of data accessibility and long time series in the SES, while in many cases poorly constrained processes cannot really support knowledge-based policy making (e.g. ecosystem functioning, climate change, fisheries management, etc.). New knowledge has to be produced and excellence must be promoted to support sustainable economic growth. At the same time, existing and new capacities have to be upgraded and increased in order to support sustainable convergence between SES countries.

There are several gaps that have been identified and processes that have been poorly understood in the SES, mainly from research projects that have been working at basin level. The main research priorities that have been identified from the SeasERA Project for both, the Mediterranean and the Black Sea include: the climate change and its impacts, the hydrological cycle, the ventilation and the inter-basin coupling, the marine biodiversity and the provision of goods and services, the marine protected areas, the deep sea ecosystems, the biological invasions, the marine pollution and the ocean and human health, the renewable energy, the maritime transport, the fisheries and aquaculture activities and the biotechnology and the exploitation of marine resources for industrial application.

More important, however, is the fact that the economic, the social and the scientific and the environmental challenges must be collectively tackled. They should have prioritisation and clear objectives as well as data sharing for wider use. A multi-stakeholder involvement at multidisciplinary level as well as an integrated cross-sectoral approach has to take place to achieve the best results and opportunities.

The emerging new knowledge and new tools from all actions will help the scientific community to create more accurate and dynamic forecasting of possible risk scenarios. Using this input coupled with socio-economic analysis, a substantial science-based advice to policy and decision-makers can be provided, whenever is needed. It is more than certain that this process will help to meet the challenges ahead and increase the potential of the blue growth in the SES, which could, eventually, represent a significant share of the actual countries' growth in the two basins.