

VALLETTA DECLARATION

Call for a transnational cooperation for implementing the Marine Strategy Framework Directive in the deep Mediterranean Basin

- Seas and oceans are essential for human wellbeing, providing food, energy, raw materials and leisure space, and representing a medium for transport and commerce. But the oceans are neither inexhaustible nor immune to overexploitation and harm. In the context of rapid global change and human population growth, it is imperative to balance economic benefit with safeguarding the natural capital and ecosystem services provided by the ocean. This is particularly evident and challenging in landlocked seas like the Mediterranean Sea.
- The European Marine Strategy Framework Directive (MSFD), and its descriptors of Good Environmental Status (GES), have provided a powerful basis for the improvement of the environmental quality and have stimulated the cooperation among EU Member States to address shared maritime responsibilities from a practical viewpoint.
- The Ecosystem Approach adopted by the Barcelona Convention Contracting Parties sets the achievement of GES by 2020 as collaborative Mediterranean commitment.
- The deep sea (marine systems from the border of the continental shelf to the abyssal depths, roughly deeper than 200 m) is intimately linked to the functions and quality of coastal waters, but implementation of the MSFD in the deep sea remains extremely difficult, due to the lack of adequate data, scattered and jeopardized geographic coverage and sophisticated technologies and high costs associated with data collection.
- Efforts by deep-sea scientists to better define GES for the deep sea can help focus work and determine risk thresholds for Blue Growth.
- The ongoing global change represents a further main stressor and there is evidence of an acceleration of ecosystem shifts and alterations of the Mediterranean biodiversity and ecosystem functioning. The Mediterranean Sea ecosystems are changing rapidly and there is a consolidate evidence that coastal species and habitats typical of the southern Mediterranean are expanding to the northern latitudes.
- Similarly, **the conditions of the southern Mediterranean deep-sea ecosystems could represent a proxy of what will be future of the deep sea in northern part of the Mediterranean Sea.**
- The present declaration made by the research community involved in EU projects supporting the work towards achieving Good Environmental Status aims at **setting a vision for addressing the important scientific challenges in the deep Mediterranean Sea**¹.

We call on the Mediterranean EU Member States and all the Contracting Parties of the Barcelona Convention, the European Commission and Parliament to support the following actions.

A transnational cooperation to build the synergies in research efforts

- Implementing the MSFD in the deep sea is possible and past EU deep-sea research projects provided relevant data, but most of them have been focused on the northern sector of the Mediterranean leaving **almost completely unexplored the southern part of the Mediterranean Basin and especially its high seas and deep-sea regions**. Representatives from various MSFD projects, attending the IDEM project meeting in Malta, collectively

¹ The deep Mediterranean Sea covers about 80% of the total basin area.

expressed the need for strengthening the interface between science and policy and for defining new protocols for the scientific cooperation between EU member states and non-EU Mediterranean countries (particularly southern and middle-east Mediterranean countries) for implementing the MSFD in the deep Mediterranean Sea.

Building capacity and standardisation of future data collected

- The main constrain for the implementation of the MSFD and Ecosystem Approach of Barcelona Convention in the deep sea is the lack of consistent data, as they are often collected using different methodologies and analysed using different techniques, making them in most cases non-comparable. As already requested by the Integrated Monitoring and Assessment Programme (IMAP), data and information should be produced by using harmonized standards and practices. We here stress the **need for developing a wide and standardized monitoring strategy for the deep Mediterranean Sea** to ensure that data are collected in a systematic way, resulting in standardised sampling strategies, tools and protocols, and in long-time series needed for assessing environmental trends and informing policy and actions required to protect, restore and manage Mediterranean deep-sea ecosystems and their resources.

The need for a holistic approach across the entire Mediterranean Sea

- The Mediterranean deep sea has no political boundaries but is a potential target for enormous economic interests. We cannot manage what we do not know. The Protocol to the Barcelona Convention on Integrated Coastal Zone Management promoted the cooperation with non-EU Member States. Here we want to stress the need of **a robust, sustained collaboration with non-EU Member States, especially south and middle east Mediterranean countries** to implement the MSFD, and **to define criteria for high-seas, deep-sea Marine Protected Areas**. More efforts are needed for an improved knowledge of the deep-sea biodiversity and functioning including the already documented invasion of alien species, the impact of fisheries on deep-sea ecosystems and their sustainability, and the impact of marine litter, particularly plastics, on the deep-sea biota and ecosystem services.

The injection and overall impact of alien substances and compounds to the deep Mediterranean environments, as well as the introduction of energies, such as underwater noise derived from anthropic activities, must receive priority as they appear as major drivers of Mediterranean Sea dynamics and will, for sure, determine its future state.

Conclusions

The MSFD represents the best and most advanced approach to define the environmental status, also in deep-sea ecosystems and is needed to develop the strategy proposed by EcAp project. We thus call for the need of initiating a **Southern Mediterranean Targeted Project** enabling the collection of data on the MSFD indicators in the deep sea of the southern Mediterranean region, with the participation of the North African countries. The EU can achieve several crucial objectives, including (but not limited to):

- i) the knowledge of the potential changes in environmental status related to the ongoing global change (including climate) that will increasingly affect the northern Mediterranean regions and ecosystems;
- ii) establishment of high-seas and deep-sea Marine Protected Areas with sound criteria and robust ecological information;
- iii) better manage and protect the deep-sea biotic resources of the Mediterranean Sea;

- iv) transfer knowledge to the southern Mediterranean regions and build the capacity of developing the tools needed to achieve GES in southern Mediterranean deep waters and coastal areas.

The scientists working on the MSFD in the Mediterranean Basin present in Malta recall that this is not only an opportunity to make more efficient the current efforts of the EU-MSFD in the Mediterranean area, but a real and impelling necessity as the Mediterranean marine ecosystems are tightly connected and are experiencing unprecedented changes in their structure and functioning.

The scientists conveyed in Malta on 06 September 2018

Roberto Danovaro

Coordinator of the Project IDEM and the IDEM team, President of Stazione Zoologica Anton Dohrn, National Institute of Marine Biology, Ecology and Biotechnology

The present declaration has been signed by the following scientists, in the name of their projects or institutions.

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