

Short Term Scientific Mission (STSM)

Scientific Report

Promoting ancillary conservation using marine spatial planning

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Purpose of the STSM

The process of marine spatial planning is gaining recognition as a useful tool for mitigating conflicts between uses in the marine environment. In addition, marine spatial planning is used to mitigate negative impact of uses on the marine environment. However, the ability of marine spatial planning to promote marine conservation goals is still not fully expressed in planning processes. Therefore, we aim for further developing planning approach that will enable marine spatial planning processes to promote marine conservation. Here, we focus on opportunities for conservation which could be explored and established during the marine spatial planning process.

The goal of this study is to make a first attempt to explore establishment process of spatial 'other effective conservation measures' (OECMs) as part of marine spatial planning process. We developed a process framework of decision-making that will allow planners to examine marine conservation opportunities in areas which are not primarily dedicated for marine conservation. OECMs were defined by the International Union for Conservation of Nature (IUCN) based on Aichi Target 11 of the Convention on Biological Diversity (CBD). However, the way in which the OECM concept can be translated and implemented in a planning process is vague.

We examined our suggested approach on two case studies which are regions that are currently promoting marine spatial plan and policy: The ADRIPLAN of the northern Adriatic Sea, and the Israel marine plan for the Israeli Mediterranean coast. We explore possible OECMs within the area of the plans based on our suggested decision process. We focused on areas which limits public access to their territory and which are not primarily designated as protected areas.

Description of the work carried out during the STSM

During the three weeks period of the STSM, we focused on three aspects of the study: developing the decision process approach, exploring possible OECMs along the Italian Northern Adriatic, and collecting data on the proposed areas.

Developing the decision process approach was performed through a daily brain-storming along with literature reviews that inspired us to better define our goals and purposes of the study. At a later stage of the STSM we clarified and sharpened our ideas for the planning approach. This yielded formulation of the decision process that can be used by planners in marine spatial planning process.

During the development of the planning approach, we gathered spatial data of uses along the Italian Northern Adriatic. We formulated a map with all uses which enabled us to explore and discuss uses and areas which can be designated as OECMs. Once we decided on specific areas to focus on, we started collecting data which can be used for the purpose of our study. The data that was collected was of two main types: Environmental data, and management data. Environmental data include information on the marine ecosystem within the areas of the proposed OECM, such as species abundance and diversity, information on sensitive habitats and communities, and environmental stressors. Data on the management of the proposed OECM include daily operation of the area, sector that operates the area, access limitations, and other restrictions.

Description of the main results obtained

The main result of the STSM is the decision-tree process we developed. This summarizes the conceptual approach for planning that aims for promotion of marine conservation goals. Although not completely finished, we believe that this suggested process can be used in marine spatial planning process to explore marine conservation opportunities beyond boundaries of marine protected areas. It may guide planners and decision makers in the process of developing spatial plan that enables marine environmental protection along with sustainable development.

In addition, spatial analysis of the uses in relation to the proposed OECMs along the Italian Northern Adriatic, revealed that the proposed OECMs has an area that is about three times larger than approved marine protected areas today. In addition, the location of the proposed OECMs are adjacent to areas which are known to have biological and ecological importance. Therefore the proposed OECMs may enhance connectivity of marine populations needing protection.

Future Collaborations

Currently, some data is still missing for the Italian case study and we aim to continue and collect the data required. In addition, we will complete the analysis process for the Israeli case study similarly to the analysis performed for the Italian case study. Once we will finish collecting the required data and performing the analysis, we will zoom-out to examine the ability of our suggested planning approach to be used for designation of OECMs as part of marine spatial planning process. Finally, the results of this study and collaboration will be formulated into a scientific article that will be submitted for publication in one of the relevant scientific journals.