

Systematic conservation planning in marine ecosystems

The need to identify priority conservation areas in land and marine ecosystems in a systematic, spatially explicit way, has led to sophisticated approaches and methodologies over the last decades. These methodologies permit us to identify key areas where conservation effort should primarily be focused, by estimating the relative importance (irreplaceability) of each site to achieve a specific conservation and/or monitoring goal. Yet, there are still a lot of unanswered questions and new methodological needs, mainly because of the challenges coming from human induced uncertainties, like human activities or/and climate change. Indeed, how these factors will affect our capacity of conducting and proposing effective conservation planning scenarios in the future is a major challenge. Also the complexity of some ecosystems, especially in marine environments where life is organized in three dimensions, demands new approaches that may include both horizontal and vertical axes in conservation planning. We will present and discuss about recent approaches developed in marine ecosystems from several case studies in the Mediterranean Sea. We will also discuss their use and further applications in proposing efficient monitoring and conservation plans using concrete data and examples at various spatial scales.