

S6.9: Mapping cultural marine ecosystem services from space: fact or fiction?

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The increasing availability of high-resolution satellite images is making it possible to measure and observe the different ecosystem components, fact that has improved the way we can monitor biodiversity. But humans are part of nature too and research is also focusing now on understanding the human-nature interactions and the ecosystem changes associated to it. Although methods and techniques to detect that keep advancing in the land, in the ocean we still have room for improvement. In this work, we explore the possibility of using remote sensing to assess and map marine ecosystem services through a case study. Our major questions are two: what remote sensing data is available and what do we still need to improve in terms of data collected from space?

We selected the Pelagos sanctuary of marine mammals as a test case. Pelagos is a large (~90000km²) transboundary Marine Protected Area (MPA) within the Mediterranean Large Marine Ecosystem (LME) between France, Italy and Monaco. It is an area with intense touristic activity where whale-watching tourism and recreational boating take place. Our basic assumption is that marine mammals, like whales and dolphins can be detected from space. Testing this, we want to assess the cultural ES of the Pelagos sanctuary that are related to these marine mammals and map the areas where they mostly occur. This approach is a first of test cases within the Mediterranean basin. This approach will be applied and tested in more areas within the Mediterranean LME, under the framework of ECOPotential H2020 project.