

Spatially explicit economic assessment of cultural ecosystem services: Non-extractive recreational uses of the coastal environment related to marine biodiversity.

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ABSTRACT

The adoption of comprehensive marine spatial plans (MSP) requires that all aspects of value associated with marine biodiversity are considered in their development. Therefore, a holistic approach to MSP needs to include the ecological, social and economic aspects related to the range of goods and services provided by marine biodiversity. In temperate coastal areas however, extractive uses of marine biodiversity (i.e., fisheries) tend to receive more consideration than other non-extractive uses such as certain forms of recreation. This is primarily due to its economic and social importance and a lack of information on non-extractive uses of marine biodiversity. This study presents an assessment of the economic importance and spatial distribution of non-extractive uses of marine biodiversity (diving, kayaking, wildlife watching from boats and seabird watching) in the coastal temperate area of Wales and its application to MSP. The assessment of the economic importance and spatial distribution of these uses was ascertained through questionnaires with relevant users. Results indicated that the economic importance of non-extractive recreational uses of marine biodiversity in Wales is comparable to that of commercial fisheries for the same region. Spatially there was a significant degree of overlap among areas used by the different recreational groups studied here and the distribution of uses could be linked to different aspects of marine biodiversity, such as the presence of particular habitats in the case of divers. The integration of spatially explicit socioeconomic data for a range of different uses of marine biodiversity enables policy makers to gain useful insight into the potential consequences of implementing a spatial management regime, as certain uses can be sometimes overlooked but are still essential if we are to consider the impact of spatial planning on all economically relevant activities. Such data provide a balanced overview of the value of marine biodiversity to different sectors of society and contributes to the process of developing comprehensive marine spatial plans.

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