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TITLE: Combining geographic information systems and ethnography to better understand and plan ocean space use

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ABSTRACT:

Agencies in the US with oversight for marine renewable energy development idealistically have sought space where this new use might proceed unhindered by other uses. Despite experiential evidence of spatial overlap among existing ocean uses, a lack of documentation made the identification of potential space-use conflicts, communication between existing and potential ocean users, and the design of mitigation exceedingly challenging. We conducted a study along the US Atlantic and Pacific coasts to gather and document available spatial information on existing use through a compilation and organization of geographic information system (GIS) data. Stakeholder group meetings were used to vet the collected spatial data, and ethnographic interviews were conducted to gather knowledge and cultural perspectives. Results show extensive coverage and overlap of existing ocean space uses and provide a visualization of the social and cultural landscape of the ocean that managers can use to determine which stakeholders to engage. Marine resource managers are encouraged to recognize that marine space use is dynamic and multi-dimensional and as such research thereof requires a balance between the efficiency of GIS and the stories captured and told by ethnographic research. There are important linkages within and across fisheries and other uses, communities and interests, and across the land?sea interface. Therefore, it is important to use techniques demonstrated in this research that (1) integrate ethnographic and geospatial data collection and analysis; (2) engage stakeholders throughout the process; and (3) recognize the unique qualities of each geographic location and user group to support sound decision-making.

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