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Advancing marine spatial planning across the Sydney Harbour, NSW, Australia

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Planning a sustainable future for sea-bounded megacities will require rigorous evaluation of coastal management frameworks and how they integrate human activities. The Marine Spatial Planning framework has been supporting integrated management of marine resources; however, prior research shows implementation challenges in accounting for adjoining land-use and catchment plans, and the need to deliver multidisciplinary planning approaches. The Sydney Harbour in New South Wales, Australia, currently lacks an integrated approach environmental resource planning. This affects management of estuarine and coastal resources, as enhanced understanding is needed on how environmental impacts affect social systems. Hence, research into a prototype decision support system is underway to assist coastal councils analysing management alternatives. The prototype builds on an existing support system to include a Bayesian Belief Network to model relationships between planned management scenarios and key social, economic and environmental community values. Initial work included a comprehensive review of six existing coastal management plans and 275 community surveys to gather information on community demographics, environmental and socio-economic values, and perceptions of coastal threats. In-depth interviews with government managers are planned to jointly develop management goals and operational objectives, design management scenarios and to validate an initial model. Community-based validation will take place through local workshops. Research outcomes are expected to support the comparison of alternative coastal management scenarios by assessing their influence on community values. Such multi-criteria approach can anticipate outcomes of marine spatial planning process and provide valuable insights into potential impacts from stakeholder trade-offs and environmental policies.

Biography

Elianny Dominguez Tejo is an AUSAID awardee currently completing her PhD at the University of New South Wales, Australia. She obtained her Master of Science degree with Distinction from Heriot-Watt University (United Kingdom) as a recipient of the Cheevering Scholarship Award. She also holds the degree of Master of Business Administration from PUCAMA/IMA University (Dominican Republic). She worked 8 years as Marine Program Manager for The Nature Conservancy, an international non-governmental organization. She has published several publications on marine conservation issues and two books related to the conservation of Humpback Whales and a proposed Marine Zoning Plan for Samana Bay, Dominican Republic.

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