

NATIONAL CENTERS FOR COASTAL OCEAN SCIENCE

Science To Sustain Thriving Coastal Communities and Economies

Social Science to Support Vibrant Coastal Communities: Assessing Human Use of Marine and Coastal Resources

The National Centers for Coastal Ocean Science (NCCOS) conduct research and provide information to help sustain thriving coastal communities and economies. Coastal communities use NCCOS tools, maps, and products to sustainably manage their natural resources and protected areas, and to better understand and respond to coastal hazards, such as flooding, storms, harmful algal blooms, and contaminated coastal waters.

The NCCOS social science team is made up of sociologists, economists, geographers, and coastal specialists who focus their research on the connections between people and the environment. Assessing human use of marine and coastal resources is one of the ways in which we study these connections.

Why Assess Human Use?

Resource managers and community planners need to understand how people use, value, and impact natural resources to effectively manage coastal and marine areas. Managers who consider patterns of human use are better equipped to address conflicts between competing stakeholders. They are also able to understand the potential impacts of human activities on sensitive natural resources and endangered species. NCCOS identifies and characterizes patterns of social, cultural, and economic behaviors that influence how coastal spaces are used and valued, and information on these patterns can be used to better manage these spaces.

Managers can better address user conflicts and understand human impacts



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NCCOS Approaches

Identify Patterns of Human Activities

People use coastal and marine spaces, and the natural resources they contain, in a variety of ways, from recreational use to sustaining livelihoods. In addition to direct usage, like boating or picnicking, people also use coastal places and resources indirectly, such as benefiting from clean water that is filtered by a coastal wetland, or experiencing increased protection from coastal storms due to a healthy mangrove forest. NCCOS identifies, documents, and characterizes patterns of ecosystem use within our coastal and marine places, and develops user profiles. These profiles contain information on peoples' activity preferences, expenditure patterns, and value preferences. With this information, managers know who is using coastal spaces and resources, as well as when, where, how, and for what purpose.

Assess Reliance on Coastal Places and Resources

Coastal communities rely on special coastal places, natural resources, and features. Reliance upon a special place or natural resource can define a community, socially and economically, but substantial or exclusive reliance can also increase community vulnerability if the ecosystem changes. For example, reliance upon a specific fishery creates strong cultural attachment to the coast, but it can also reduce the community's potential to thrive if the fishery declines. NCCOS can assess a community's reliance on a certain area, resource, or feature to help community planners better understand their vulnerabilities and prepare for future changes.

Link Patterns of Human Activities to Valuation

The places most important to communities are often those that also provide important ecosystem services, products, and functions. To effectively manage these important coastal areas, managers need know which places are most valued by people. The intersection of human use and valuation research provides managers with the information required to make informed choices between different management alternatives. At NCCOS, we identify patterns of human use, and couple that information with valuation data to highlight the range of values that exists for coastal and marine environments.



For More Information

Theresa Goedeke

Marine Spatial Ecology Division
NOAA | NOS | NCCOS

✉ theresa.goedeke@noaa.gov
📞 240.533.0383

John Christensen

Marine Spatial Ecology Division
NOAA | NOS | NCCOS

✉ john.christensen@noaa.gov
📞 240.533.0378



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