Bridging the gap between human culture and conservation

Culture—that totality of beliefs that humans use to shape their daily lives, relationships, behaviors, and activities, and ultimately their laws and policies—shapes not only human communities but, through the effects of human behavior, the non-human communities of the environment around them as well. Humans can and do affect the environment around them in ways that are sometimes shortsighted and unfortunate, but also sometimes forward-thinking, well planned and aimed towards conservation and sustainability.

SCIENCETOACTION

Human well-being depends on a sustainable relationship with the ocean.

Human cultures and societies are defined by the biological and physical environments in which they live. People who live near or on the ocean, or use its environments and resources for sustenance or recreation, develop cultures, economies, and lifestyles that reflect proximity to and dependence on those environments and resources. The human use and governance systems which we develop—such as marine managed areas—should be constructed to provide for the sustainable use of these environments and resources, and thus for sustainable human cultures, economies, and communities.

Wealth and resources

Wealth is measured not only by money, but also by: the availability to derive one's own subsistence; good physical and mental health in safe, non-polluted environments; food security; and other items that go into the total 'well-being' of people and their communities. For coastal communities, these measurements of wealth come from their relationship with the ocean.

Religion and spirituality

Human belief systems in the form of organized religion or other forms of spirituality are often the most powerful drivers of human behavior. In coastal communities and with those who use or depend on the ocean for their livelihoods, these beliefs and their accompanying rituals and artifacts display the powerful ideas and symbols that guide behavior towards the coast and ocean.

Identity

Human identity, both as an individual and as a member of a society or community, is a critical part of human existence. People who live with and use the ocean develop identities that are inextricably linked to the ocean. This identity, as a fisher, sailor, diver, fish merchant, fishing guide—whether it is a man or woman, adult or child—or as a member of a group where these characteristics and skills are respected, is indispensible to human well-being.

Tradition

Continuity over time of the things we value most is an important part of the stability—and adaptability and resilience—of society. Cultural traditions are evidence of significant investments in people, places, and ideas over time. For coastal communities, such cultural traditions form out of belief systems and behaviors that adapt to the biological, physical, economic, and social circumstances of living with the ocean.

Regionality and connectivity

When considering a 'region', natural scientists think of biophysical resources such as plants and animals and their habitats—coral reef, barrier island or mangrove forest. But social scientists tend to think more of a group of people, their characteristics, and behaviors. These differing thoughts yield very different 'maps' of the world, which then guide scientific research and marine resource management policies. Since all marine conservation involves, first and foremost, human behavior, we need to begin to draw our 'maps' based on the characteristics of people and their behaviors together with the biophysical resources.
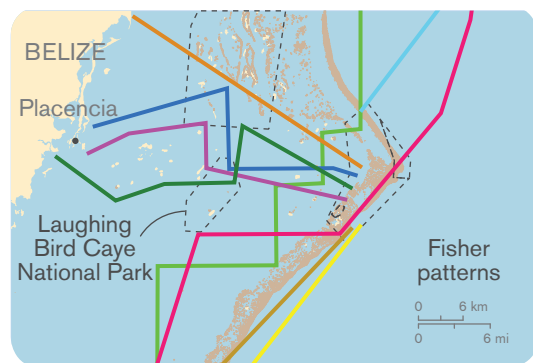
Currently existing indigenous peoples, often overlooked in socioeconomic research, from four countries with marine managed areas (MMAs)—Belize, Brazil, Fiji, and Panama—were selected as case studies. Three points in the cross-country analyses present themselves: 1) there is a wealth of traditional knowledge that guides customary practices which needs to be identified and integrated into the formal regime of MMAs; 2) there is an overlap between indigenous peoples and others who have lived close by for generations and shared extensively in marine resource use, thus creating an amalgam of traditional cultures; and 3) there is a growing awareness by nation-states to integrate into their own emerging national cultures the beliefs and practices found among indigenous peoples and others who share traditional cultures.

• Focused study sites

Of the four countries with MMAs, 6 study sites were in Belize, 3 study sites were in Brazil, 9 study sites were in Fiji, and 1 study site was in Panama.

Development controversies

Coiba National Park, Panama
Communities adjacent to Coiba National Park are grappling with difficult decisions regarding development. Some families are selling their properties to large developers and leaving the region, while others are working with local nongovernmental organizations to develop their own tourism businesses. The result is a mix of large- and small-scale developments with varying dependencies and impacts on the marine resources—a challenge faced by many coastal communities worldwide.

Subsistence fishing

Locally managed marine areas, Fiji
In Fiji, a customary marine tenure system built on local autonomy and self-reliance controls the use of local marine space and resources. These customary fishing grounds (*qoliqolis*) support subsistence fishers as well as some commercial interests. Not only do these livelihoods support traditional fishing practices, they also support a value system where wealth is related to such nonquantifiable benefits as being able to provide sufficient food for guests at functions within the community.

An example of a customary fishing ground

Buy-in from fishers

Laughing Bird Caye National Park, Belize
Because the area was well-suited for both fishing and tourism, it was primarily tour operators and guides who pushed for the protection of Laughing Bird Caye, leading to the declaration of the Laughing Bird Caye National Park in 1996. Fishers worried they would lose access to fishing grounds. However, they became increasingly positive about the park once they realized fish stocks were increasing and resulting in a 'spillover effect' that was beneficial to them.

Community empowerment

Corumbau Marine Extractive Reserve, Brazil
Six villages worked together to establish the Corumbau Marine Extractive Reserve. One of the major concerns was that all community members benefit equally from tourism activities. Community discussions determined that the boat ride activity should be community-based and equitable. As a result, there is one common ticketing office and the community boats take turns serving the tourists.

Emerging themes to sustain human culture and conservation

The cultural beliefs that we as humans share about appropriate behavior shape the environment in which we live and, in turn, the characteristics and the nature of the benefits we derive from that environment. Throughout history, examples such as marine managed areas (MMAs) show that humans have the ability to conserve and protect resources that are important to them. This is a relationship of mutual dependence: humans on their surrounding environment, and that environment on them. Human cultural beliefs and behaviors are the mediating force between the two.

- **Recognize** that building on traditional management structures is essential in developing and maintaining MMAs.
- **Accept** that coastal communities, globally, are undergoing rapid development and social change.
- **BINGOs** can provide scientific, political, and financial support, as well as assisting with coordination and organization of MMAs.
- **Support** by regional government is needed to legislate and enforce MMA regulations.
- **MMAs** can be locally effective, but also need to be considered collectively in a regional context.
- **Involve** local communities in the establishment of MMAs, maintaining strong interactions and effective communication.

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For further reading:
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