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Tundi's Take: The Need for Social Science, with an Emphasis on the Science

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One of the greatest shortcomings in our attempt to manage marine ecosystems is not having enough social science to support ecosystem-based approaches, regulations, and conservation interventions. The motivations, perceptions, and politics of people living on the coast and using the sea do matter – a lot. In trying to steer human behavior toward sustainability, one could argue that social science is even more important than natural science, because EBM is after all about managing people, not nature. But we need to ensure that the social science we harness is appropriate, rigorous, and replicable.

I have had the great fortune of working with brilliant social scientists who ask tough questions — “Where is the empirical evidence for that?”, “What are the assumptions of your conceptual model?”, “Could it be that your survey prompted certain answers from respondents?” There is nothing soft in the approach of these “soft scientists”... They use empirical evidence from well-designed studies to test clearly articulated concepts and increase our understanding of human nature and needs. The methods they employ – household surveys, rapid rural appraisals, governance assessments, cost-benefit analyses, valuations, user questionnaires, industry trend analyses – help us develop effective EBM systems and monitor those systems.

Are we lowering our standards for the social sciences?

But in our rush to gather and incorporate data and perspectives arising from the social sciences, it seems to me – from my perspective as a non-social scientist – that we are not always expecting the same degree of rigor and replicability from the social sciences that we do from ecological science. And this has led us to accept some rather unscientific claims.

Perhaps the worst example of this is in the current vogue for valuation of ecosystem services, where there is a wide array of studies that attribute very high economic values to coastal habitats with little solid evidence for doing so. One can understand why this happens – we are under tremendous pressure to attach value to the remaining natural habitats along our coasts to protect them from degradation, or even destruction. But these spurious claims about economic value are rarely questioned, and once the magical figures appear in the literature, they attain the status of proven facts. Behind the dollar signs are all sorts of assumptions about the drivers of human behavior – perceptions, dependencies, plasticity, strength and role of institutions, markets, and macroeconomic forces – assumptions that in good science would be clearly stated and tested. But in not-so-good, rushed science, these assumptions can be swept under the rug. How can decision-makers have confidence in this sort of social science?

Worse than sloppy science that cannot be tested or replicated is the fact that solid ecological understanding of how those ecosystems are structured, function, and how they are impacted by human activity is sometimes skipped over in the rush to value ecosystem services. As we advance our practice of EBM and acknowledge the need for and role of social sciences, we would be wise also to remember we need a foundation of ecology. Solid social science and solid natural science go hand-in-hand, and ultimately they together are the basis for the changes in human behavior that mark a sustainable society.

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