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Tundi's Take: Ecosystem Assessments - Telling it like it is

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Nothing could be more dull than an ecosystem assessment. By its very nature, assessment is meant to be comprehensive, systematic, rational - not the stuff of colorful sound bites or emotive calls to action. But what is really more important to effective communication about marine ecosystems and the urgent need to conserve them than thorough knowledge about how these ecosystems function, how we use and value them, and what pressures they face? After all, we cannot love what we do not know, and without being informed and invested in marine ecosystems, we cannot hope to generate the resources and will to conserve them.

Basing communication strategies on sound assessments allows us to tell the ocean story with confidence. It also allows us to communicate priorities, and chart our progress in EBM over time, keeping both the public and important decision-makers informed and aware. Constituencies built on sound strategic assessment cannot be criticized as representing special interests, or pandering to environmental hype or hysteria.

I may be biased, but I do strongly believe that it was the Millennium Ecosystem Assessment of 2005 that changed much of the global conversation about the importance of marine and coastal systems for human well-being, and the risks to that human well-being brought about by coastal degradation. When the early planning for the MEA began, there was decided disinterest (nothing new to any of us in the marine field) - a sense that marine and coastal systems were a) of limited importance to humans, and b) in pretty good shape overall. The findings released in 2005 really grabbed people's attention in that the links between seas and all life on the planet were myriad, and highly significant. The MEA also showed that coastal and marine services were being lost at rates much greater than what was assumed. This comprehensive assessment, involving over 1200 scientists from 80 countries, highlighted the conditions of virtually all marine ecosystems and presented evidence that the ability of these systems to deliver important ecosystem services was being severely impaired by human activity.

Global scale assessments can only go so far as tools of strategizing and communicating, however. At smaller scales, assessments can actually guide how EBM can take place, to achieve specified goals. In the Mediterranean, the 22 parties to the regional seas (Barcelona) convention have agreed on what they are striving for through very specific objectives, indicators, and targets. The agreed Ecological Objectives span all the interconnected coastal/marine ecosystems (coastal lands, transitional or estuarine areas, nearshore habitats, pelagic waters, deep sea) and consider all the impacts that these ecosystems face. By setting objectives regarding optimal conditions for biodiversity, food webs, hydrography, sea floor integrity, commercially exploited fish and shellfish, eutrophication, noise and chemical pollution, the countries have agreed on what they should strive for through EBM. Representatives are now deciding what the targets for indicators of these 12 Ecological Objectives will be, and from that will flow specific management plans to achieve EBM.

Strategically designing management to address priority needs is only possible once an assessment of conditions is made. In the Mediterranean, the recently completed comprehensive assessment of biodiversity, ecosystem services, and regionally important pressures such as pollution, shipping, and over-fishing, essentially serves as a baseline. However, the initial integrated assessment is not a good source document for communications - it is too dense for that. Instead, its findings have been captured in the most recent *State of the Mediterranean Marine and Coastal Environment Report* (see [Notes & News](#), this issue), which explains in clear language, with excellent infographics, the current condition of the sea. As a reference document, it will serve to present easily comprehensible comparisons with future conditions as well.

At an even finer scale, environmental assessments can help decision-makers evaluate tradeoffs to make informed choices. These assessments can also help raise awareness about why such choices are made, and why investing in EBM will result in positive outcomes. One example is the multi-institutional assessment of coastal ecosystem services in Abu Dhabi, involving my Marine Ecosystem Services (MARES) Program at Forest Trends, GRID-Arendal, WCMC, and UNEP, as well as several academic and research institutions. We are currently working to evaluate the potential for mangroves, seagrasses, saltmarshes, and other coastal habitats to capture carbon (in what is now known in the trade as "blue carbon"). But the project looks beyond carbon sequestration to other ecosystem services that these blue carbon habitats provide. By assessing the value of these services, decision-makers will be able to weigh the costs of protection/restoration against the benefits provided by carbon sequestration, fisheries production, biodiversity to support tourism, shoreline stabilization, and waste management, among others. This relatively small-scale project seems a clear example of how assessment allows prioritization, and also lays the groundwork for clear communications about the value of marine ecosystems and the need for effective management.

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