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Paying for EBM: Insights on Building Sustainable Financing for EBM over the Long Term

Management requires funding. Likewise, sustainable management requires sustainable funding. A cornerstone of EBM is that it ensures ecosystems will continue over time to provide the services that people require and want (e.g., food, clean water, biodiversity). Without dependable ways of financing management over the long term, EBM projects are at risk of failure.

Unfortunately, in these economically austere times the traditional stream of government funding for resource management is weakening. So practicing integrated, science-based management at the scales required by EBM means it is in managers' interest to develop new and diverse streams of support. EBM may have to rely on innovative financing mechanisms to sustain planning, research, monitoring, enforcement, and other management activities over long time frames.

Fortunately, there is a growing body of knowledge on developing alternative funding strategies - from user fees, to lotteries, to endowments and trusts, and more. Several projects and publications have emerged in recent years to inform planners and managers about new financing methods for management (see box "[Resources on alternative funding mechanisms](#)", following this article). In addition, the science of measuring the societal and financial value of ecosystem services - such as clean water - is informing how charges can be applied to ecosystem use that reflect actual value (see "[The EBM Toolbox: Quantifying, mapping, and valuing ecosystem services](#)", this issue).

Despite these advances, the field of alternative financing for ocean management is still new, and securing dependable long-term funding remains a significant and central challenge for EBM practice. In this issue, MEAM asked three practitioners - an EBM funder, a project director, and a fisheries manager - for their insights on making EBM financing sustainable. Notably, even with their different backgrounds, they each pointed out the importance of aligning EBM goals with the interests of management and stakeholders.

A. Turning EBM into "business as usual" can help lead to financial sustainability

By Bernd Cordes

[Editor's note: Bernd Cordes is a program officer at the David and Lucile Packard Foundation. The foundation's Conservation and Science Program provided funding for several site-based marine EBM projects in the Western Pacific. Some of the projects were funded previously by the foundation's Ecosystem-Based Management Initiative for Sustainable Coastal and Marine Systems, which was active from 2004-2009. A report with lessons from that initiative is available at www.packard.org/wp-content/uploads/2011/03/Synthesis-Report-for-the-EBM-Initiative.pdf.]

On EBM sustainability in general

EBM is big, multi-sectoral, multi-stakeholder, etc. A sustained EBM effort would require, at a minimum:

- A well-defined spatial area or linked habitats;
- A distillation of a limited, relevant set of ecosystem- or habitat-level indicators that point to ongoing environmental health (or lack thereof);
- A core set of scientists and citizen scientists (read: trained and skilled volunteers and observers);
- A very clear mechanism by which information and analyses are linked to decision-makers who can use the information to change resource use (if not, why do it?); and
- A funding source to continue the data collection and analysis. That funding source would have to be a combination of consistent and committed government allocations (state, provincial, national) to cover that basic, core level of monitoring over time (the "must know"; and to do this, you probably need legislation), along with grants from a combination of corporate and other private sector stakeholders (e.g., foundations, individual donations, and the industries utilizing resources in the area). The grants could fund the "above and beyond" minimum set - the information that would be "important to know" and not just the "must know".

Six years ago in the Conservation and Science Program's original request for proposals for site-based EBM initiatives, we asked each group of implementers to describe how - after the EBM initiative began - they were going to communicate the results and analyses to the people who could use the information to make decisions on a large scale. How was the information going to get into their hands and what would the mechanism be by which behaviors would change and resource use would alter over time? I don't remember any of the proponents - including the ones we funded - ever really giving a good answer to that question, because it is one of the hardest to answer. It is the key to longevity, for both financing and governance (which are tied, of course). Most of the groups we funded made it up as they went along - and a couple actually did pretty well in the end.

But even that explanation of sustainability is incomplete. I find it hard enough to describe financial sustainability for a marine protected area, and EBM is so much more amorphous. It borders on "everyone is involved and responsible, so no one is ultimately accountable." That is a bit of an overstatement, perhaps, but not by much, especially when a large spatial area starts to overlap political lines and jurisdictions.

On making EBM financially sustainable

To make EBM financially sustainable, you need, of course, a long-term vision. It is not a sprint: it takes a long time to put the many pieces into place. There will never be just one or two sources of funding. First some entity or consortium funds EBM design at a particular place or, say, in a particular fishery. Then you establish baselines, observe use patterns, and monitor for many years, allowing enough time to establish the work being done as "the norm". You need the EBM (the way people actually utilize the resources and the way that use is measured and adapted to changing conditions) to become ingrained and ultimately seen as "business as usual" or best practice - by

management and by stakeholders. It should, over time, become almost routine.

But to become routine, it has to have direct value to the relevant government agencies and the private sector actors and communities that most often interact with or live in that spatial area. Otherwise the EBM just maintains its status as a project - an addendum rather than core to the way people live and interact with their environment. You have to make it matter environmentally, socially, and financially to the actors that have the most vested interest in upsetting the ecosystem or maintaining it. Otherwise it will be much more expensive (and less financially sustainable) to implement over the long term.

This is true for MPAs, too, of course. It is one reason why we are devoting more time and energy in our grants toward financial sustainability and long-term governance in the Western Pacific program for which I am responsible. To make financial sustainability more likely, we are investing more in trust mechanisms that are closer to the places where the MPAs are being established. The Micronesian Conservation Trust, which supports biodiversity conservation and related sustainable development for the people of Micronesia, is an example (<http://mctconservation.org>). We are experimenting with marine conservation agreements, and investing in the conservation and organizational management skills of people who are going to be the next generation of environmental leaders. In addition, we are doing more to help local environmental law groups in, for example, Papua New Guinea and Fiji, to help set the policy framework for government allocations of their budgets or for enforcement or, as in Palau, for the creation of "green fees" that are charged to tourists and help fund MPA networks. We are also investing in the design of specific tools to determine the costs of MPA management at specific places.

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B. Sustainability without government revenue

By Sibylle Riedmiller and Eleanor Carter

[Editor's note: Sibylle Riedmiller is project director of Chumbe Island Coral Park in Zanzibar, Tanzania; she is also the park's founder and main investor. Eleanor Carter is a former manager and ongoing adviser to the project. The park, a no-take MPA officially recognized by the Zanzibar Government, is run by a private company - Chumbe Island Coral Park Ltd. - that also manages the island's terrestrial environment, which includes a forest reserve and an ecotourism operation (www.chumbeisland.com). The company's goal is to create a model of sustainable management where ecotourism revenue provides full support for conservation and environmental education. It amounts to a small-scale EBM initiative: integrating land and water management, protecting ecosystem services, and providing alternative livelihoods to locals who work as rangers, ecotourism staff, administrative staff, and in other capacities.]

On financial sustainability through tourism

Since the year 2000, 100% of our park management operations - including all surveillance, enforcement, and monitoring and our core environmental education program for local schools - has been funded by tourism. This has even been the case when the occupancy rate was rather low: for example in 2000-2001, amid election turmoil in Zanzibar, the rate was only 37%. Notably, despite the current worldwide economic downturn, occupancy has been 70% these past two years. In other years it has been as high as 86%.

With our heavy dependence on tourism, there is a degree of vulnerability to global economic factors and this is certainly something we monitor closely. [Editor's note: a large share of Chumbe tourists are drawn from Europe.] However, being privately managed means that operations are maximized for efficiency and cost-effectiveness. We also ensure there are always sufficient funds available to "tide-over" any difficult periods. So far we have managed to remain operational despite fluctuations in tourism numbers. Should ever the global economic situation (or massive local problems that affect tourism) mean a more prolonged lack of income to the program, we would consider exploring temporary support from donors to get through such a period.

On creating efficient management

In government-run sites, costs can often be inflated due to a range of factors. A significant one is that staff who are not performing well in civil servant positions often still retain job security. This may result in higher-than-necessary staff numbers, and has the knock-on effect of demotivating other staff who are prepared to work hard. This reduces the efficiency of all park operations.

In donor-funded operations there is often little incentive to explore ways to maximize cost-effectiveness and keep expenditures efficient. This is especially the case in areas where funds "must be spent" by certain periods, and/or when yearly budgets consider gross expenditure from previous years (creating incentives for over-spending on occasion to ensure a healthy budget is maintained for subsequent periods).

Where funds come directly from either government or donor sources, there may be little link in park staff's minds to the root source of these funds (i.e., taxpayers' money, monies earned by an individual and given through a philanthropic gift, etc.) since staff throughout the vertical chain of management are removed from having to consider such issues. This can lead to a lack of cost/benefit assessment or deeper consideration of sustainability of "expenditure processes", and tends to focus on sustainability of incoming revenue (getting more funds from somewhere the following year[s]).

In contrast, in a situation like Chumbe where the staff is on the frontline of both ensuring funds are earned (through ecotourism operations) and spent (on management), the connection between the two is clear. There is strong motivation for all concerned to ensure both sides of the equation are effective and sustainable.

On reducing costs and increasing revenue by engaging stakeholders

Managers can reduce costs considerably if they build up good relations with the private sector. In Tanzania, that is namely the tourism industry. Dive operators can help with patrolling, reporting, and monitoring, and hoteliers may be willing to help with education programs for local schools and other support to local communities. They may also collect donations from their guests for small well-designed projects where success is visible. There is often goodwill from the local tourism sector if they see the site is well-managed!

In large management areas where fuel costs for patrolling are a significant expenditure, engaging community members in management activities becomes vital. It ensures buy-in to the management program and compliance with zoning, and thereby reduces fuel costs associated with patrolling large areas.

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C. No simple, quick-fix answers to financial sustainability

By Kevern Cochrane

[Editor's note: Kevern Cochrane is Director of the Resources Use and Conservation Division of the Fisheries and Aquaculture Department of the UN Food and Agriculture Organization (FAO). His responsibilities include oversight of many of FAO's activities on implementation of the FAO Code of Conduct for Responsible Fisheries, including the development and promotion of an ecosystem approach to fisheries and to aquaculture.]

On general principles for sustainable financing of EBM

As with almost all big questions in fisheries and other sustainable uses of aquatic resources, there are no simple or quick-fix answers to achieving financial sustainability. What works for a commercial whitefish fishery in the North Atlantic, for example, will not necessarily work for a beach seine fishery in a tropical ecosystem along the coast of Africa or Asia. Nevertheless, there are some general principles that need to be respected as far as possible. The economic principles identified by the Convention on Biological Diversity provide important pointers that can be adapted to apply to EBM, namely:

- The ecosystem needs to be understood and managed in an economic context; and
- A management program should (a) reduce market distortions that adversely hinder implementation of EBM, (b) align incentives to promote EBM, and (c) internalize costs.

Particular problems arise, of course, when the social importance of ecosystem services is high but the economic returns are low - i.e., it costs more to implement EBM than the direct financial benefits that are returned. In such cases it is important to explore possible means, within EBM, to add value to the services generated and thereby increase financial viability. However, care needs to be taken that this does not lead to undesirable losses in social benefits and equity.

On whether catch shares or other resource privatization can lead to financial sustainability in ecosystem-based fisheries management

There is widespread agreement that some acceptable form of limiting access to a resource and ecosystem to a designated group of users is important to ensure a long-term commitment by them to sustainable use. Catch shares are a common and often-important component of limiting access, and - particularly when the shares are transferable - can provide a vehicle for increasing economic efficiency.

Catch shares therefore provide an important tool for fisheries management in many cases. However, they are neither a panacea nor applicable in all cases. Difficulties that can be encountered include the costs of monitoring and enforcement, which can make them impractical in many cases, and problems in applying them in multi-species fisheries. In addition, unrestricted freedom to transfer rights, including catch shares, can lead to social problems. There are no shortcuts: in selecting strategies in each case, the desired social and economic objectives first need to be identified and then the optimal combination of measures selected to achieve those objectives.

On financial sustainability of resource privatization in other marine sectors

The current global economic crisis has highlighted our very poor grasp of the likely outcomes from different economic models. The debates that are currently raging are frequently driven more by ideology than by careful and rational thought. In the midst of this uncertainty, a careful blend of privatization and approaches providing social safeguards for the smaller players and the most vulnerable seems the sensible way forward, whatever the sector. Again, the form and nature of the blend in each case will depend on its unique characteristics and the pre-identified objectives.

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BOX: Resources on alternative funding mechanisms

Publications

The Little Biodiversity Finance Book
(Global Canopy Programme, 2010)
www.globalcanopy.org/materials/little-biodiversity-finance-book

Sustainable Financing of Protected Areas
(IUCN, 2006)
http://cmsdata.iucn.org/downloads/emerton_et_al_2006.pdf

Payments for Ecosystem Services: Getting Started in Coastal and Marine Ecosystems - A Primer
(Forest Tends and The Katoomba Group, 2010)
http://pdf.usaid.gov/pdf_docs/PNADT322.pdf

Websites

UN Convention on Biological Diversity: Economics, Trade, and Incentive Measures
www.cbd.int/incentives/valuation.shtml

Marine Conservation Agreements: A Practitioner's Toolkit
<http://mcatoolkit.org/>

Ecosystem Marketplace
www.ecosystemmarketplace.com

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