



## Market Based Approaches to Marine Conservation

### A Frenchman Bay Partner Primer

Background: In October 2013, Tundi Agardy from Forest Trends visited Mt. Desert Island and facilitated a discussion about Market Based Approaches to Marine Conservation. In attendance were: **Jane Disney**, staff scientist at Mount Desert Island Biological Laboratory (MDIBL) and president of Frenchman Bay Partners (FBP), **Antonio Blasi** County Commissioner, **Richard Barton**, board member of the Frenchman Bay Conservancy, **Roger Bowen**, elected official from Gouldsboro and the municipal liaison to FBP, **Jordan Bailey**, education and outreach coordinator at the Community Environmental Health Lab at MDIBL, and the webmaster of FBP, **Stephanie Clement** Conservation Director at Friends of Acadia and member of the board of directors at the Bar Harbor Chamber of Commerce, **Abby Barrows** Coastal Monitoring Coordinator at Marine Environmental Research Institute, **Bob DeForrest** executive committee member of FBP, Project Manager at Maine Coast Heritage Trust, **Mike Kersula** grad student studying marine biology and policy at University of Maine, **Myrna Coffin** member of the select board in Hancock and the municipal liaison to FBP, **Larry Libby** chair of the Lamoine Conservation Commission, **Anne Labossiere**, member of the Lamoine Conservation Commission and the Communication Committee of FBP, **Bob Pulver**, member of the Lamoine Conservation Commission, **Shannon White**, a marine specialist at MDIBL, **Chris Petersen**, vice president of the FBP, chair of the Bar Harbor Marine Resources Committee, and board member of Somes-Meynell Sanctuary, **Fiona de Koning**, executive committee of the FBP and has a mussel aquaculture business in the bay, **Brian Reilly**, an environmental consultant with Entrix, **Natalie Springuel**, University of Maine Sea Grant extension team, **Jennifer Fortier**, grad student at University of Maine's Aquaculture Research Institute and interim municipal liaison to the town of Ellsworth.

### Introduction to Market-based Approaches

Prioritizing conservation targets, identifying threats to targets, and developing strategies to address threats are important steps in marine conservation work. Only then, can realistic goals be established. Clarity about conservation goals helps to determine the best approaches to making improvements in marine systems, both from an ecologic and economic standpoint. Some approaches to accomplishing conservation goals may include market based approaches. There are four **reasons to pursue market-based approaches to conservation**:

- 1- Enable generation of new revenue streams for monitoring, conducting research on eelgrass loss, and communications and to be able to fund things that come up that you don't plan.



- 2- Engage stakeholder sectors that wouldn't be engaged otherwise. Typically, the state is in charge of conservation and engages NGOs but the private sector is left out. This is a good way to engage those who benefit from the natural systems' ecosystem services.
- 3- Accomplish marine conservation at a local scale, which is best supported by local scale investment (of time or money).
- 4- Help people recognize the intrinsic value of the ecosystem services that are benefitting all sectors of society.

### **Market Based Approaches Toolbox**

Seven tools have been identified that may be useful in marine conservation work. Some examples of how these tools have been applied are provided below:

- 1- **Setting up a trust fund.** This is the most common tool. It is a public-private partnership that generates set revenue that people can rely on. Usually a grant is obtained for funding conservation and an account established which covers conservation costs. At other times, a philanthropic gift is made that funds conservation projects. This is an old-fashioned method. Most recent analyses have questioned how effective this method is in accomplishing long term conservation goals. This approach can be ineffective. These funds are generated because someone has goodwill. There isn't a lot of buy-in by the people who are executing what is happening or the people affected by the conservation measures. Often, those affected by conservation measures are not thinking about replenishing or expanding funds. Trust funds are good for generating money, not for empowering parts of society who have not taken part in the planning or generating the good will. Most conservation groups are looking for more innovative approaches.
- 2- **Certification schemes.** About five years after the sustainable forestry movement, the Marine Stewardship Council (MSC) developed a fisheries label. Usually certification schemes have to do with marketed resources or commodities. Many certification schemes exist today and that is diminishing the power of the certification system and confusing consumers. What does it mean to have a seal of approval, or that something was "sustainably harvested"?

**Example:** There is a small-scale, artisanal spiny-lobster fishery in the Gulf of California. Money was needed to figure out priority areas and quota levels in order to keep the fishery sustainable. Money was needed to answer scientific questions about the fishery. Harvesters paid for the certification. With certification, harvesters were able to get a significant premium



on their product which incentivized people to participate and follow the standards for conservation.

Certification schemes can have a negative effect on the producer if grocery stores advertise the standards but don't sell for premium. So oversight is necessary.

Sometimes, there are deals or contracts between retailers and individual operators with good practices. "Sustainable Fish Partnership" is one NGO that connects suppliers and retailers. They have their own set of criteria and they do constant monitoring and spot checks. Wal-Mart and Costco are huge retailers which are using this particular NGO to identify good providers and they do get a premium price for their products.

- 3- **ECO-Labeling or Seals of approval** (for hotels restaurants, resorts, cruise operations, etc that have sustainable practices). This idea is gaining traction where there is a community desire to get everyone up to speed on using resources sustainably and keep mega-corporations out.

**Example:** On the other side of Mexico where Cancun development is threatening to expand down the coast, the small town of Tulum is anxious to keep things smaller in scale with local ownership of businesses. The people there are trying to do things in a small-scale way, there are local seals of approval for business that are preserving shoreline, doing beach clean-ups, composting, etc. The certification allows for use of resources but encourages sustainable use. FBP could similarly provide seals of approval to businesses that are working sustainably.

- 4- **Biodiversity offsets.** Wherever there is development, there is an environmental impact statement, and regulators must assure that development does not cause too much damage. Inevitably there will be an impact on biodiversity. This inevitable impact can be countered by a biodiversity offset.

**Example:** If some eelgrass is lost due to development, that developer can offset it by restoring eelgrass (and more of it) somewhere else. There is a set of rules of determining equivalencies, so it does not necessarily have to be the same species. There are no marine biodiversity offsets established yet but may be coming in the future.

- 5- **Species banking.** This is a way for investors to get ahead of the game by buying up lands or marine areas, in order to be able to sell them in the future for the offset credit. A conservation banker can be sitting on land tracks, which investors can buy to offset for impacts of their development. These investors are conservation speculators, adding



value to pristine land. The developer invests in the credits from the property, and cannot develop it. There has to be a regulatory framework for this to work. Sometimes the process *creates* a regulatory framework. Upon recognizing the value of these systems, people might impose local regulations that enable the offsets to take place.

**Example:** A development which included the destruction of mudflats and eelgrass was offset by the creation of a marine protected area (MPA) with coral, which has much more biodiversity. The company provided the money to the government to set up, monitor and patrol the MPA. So, in this case there was no speculator, but the offset funds went to setting up the MPA.

6- **Payments for ecosystem services.** Ecosystem services are the things nature does for us for free. There are provisioning services, nature giving us materials and food, and there are regulatory services such as nutrient cycling, hydrological balance and pollination. What are these services worth? It is a burgeoning field. You can start to engage the beneficiaries in the protection of the habitats that are providing those services.

**Example:** The first example of this ever was in Costa Rica. There was a problem with the water supply. Sediment was getting into it. A community was going to have to build a plant to get sediment out. Conservationist suggested that farmers plant vegetative buffers, and paid out to the farmers annually for those services. It saved a lot of money, because the community didn't have to build a plant. This is value people understand.

**Another Example:** There was payment for marine ecosystem services in a marine park in the San Andreas archipelago in the middle of the Columbian Biosphere Reserve. They had very limited capacity to manage that area due to the set up of the local government, which was partly private and partly public. It hadn't been able to do enough to regulate land use. The beach in front of a resort area began to erode. Resort owners wanted to build jetties to keep sand there. The resort owners invested in an economic study which showed how important the beach is for their business, and the final report revealed that it is very important. A huge number answered a survey, and the results showed that people come for seven days, spend nine hours a day on the beach and don't do anything else. Agardy's team suggested to the resort owners that they let them look into why the sand is disappearing. The resorts owners funded a quick engineering study. The study found that an opening had been blasted into reef to allow access to the marina, created a change in currents. There were setbacks that were mysteriously breached; structures were built too close to beach. The biggest problem was that there wasn't sand being generated. What generates sand are grazing fish, particularly the parrot fish. It eats calcareous algae, and then it excretes sand. One parrot fish excretes a ton of sand per year. Parrot fish happened to be a newly targeted fishery. The solution they came up



with was for resort owners to invest in compensating fishermen for not harvesting these particular fish. They are also looking into aquaculture. Resort owners make an annual payment to support fishermen and the management of the park.

7- **Reciprocal Arrangements**-a type of payment for ecosystem services that is not really a market approach, but it is like bartering. Both parties benefit.

**Example:** A downstream community was suffering from water pollution due to human sewage coming down river and contaminating fish and their environment. The people at the top of watershed were upset because people on coast were catching the anadromous fish that they had depended upon. They came up with agreement: the people upstream would treat their water and the people downstream would allow the anadromous fish to go upstream.