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# Public Participation and Managed Areas in the Caribbean

The small islands of the Eastern Caribbean are the products of a foreign history. Exploited since the 16th century by the great European powers, their forests were long ago felled to plant sugarcane, eroding the soils and sapping groundwater supplies. More recently, large scale commercial fishing has depleted marine resources which, though limited, were adequate and sustainable when fished at a subsistence level. Even without this legacy of exploitation, these islands would be plagued by limited resources and fragile terrestrial and marine ecological systems.

In recent years most of the Eastern Caribbean islands have gained independence, and those that remain territories have become increasingly politically autonomous. But the paucity of natural resources seriously limits economic options and contributes to continuing poverty and dependency. In this densely populated region, total protection of large tracts of land and valuable natural resources for species preservation is neither practical nor possible. Most rural people rely to varying degrees on natural resources for their livelihoods, and there are not enough decent wage jobs available to completely replace the subsistence lifestyle. It is especially important therefore, both for conservation and socio-economic reasons, to assure that natural resource use is carefully managed at a sustainable level.

The Eastern Caribbean governments are increasingly aware of the importance of conserving their remaining natural resources, but most have extremely limited budgets and staffs and few technically trained resource managers to carry out the work. With funding from the Rockefeller Brothers Management Programme (ECNAMP), a cooperative undertaking of the Caribbean Fund, IUCN/World Wildlife Fund and others, the Eastern Caribbean Natural Area Conservation Association and the University of Michigan's Wildland Management Center, has been collaborating with the governments and non-governmental organizations of the region since 1977 on resource management and development projects, especially for natural areas and resource-dependent rural production systems.



SCUBA-divers come from all over the world to dive the famous Wreck of the Rhone in the British Virgin Islands. Photo by Henry Tomnemacher.

## Why Public Participation?

Local small-scale resource users and entrepreneurs generally understand that resource supplies are finite and must be harvested with care. It is generally not long-standing use patterns that threaten the natural resources of this region, but disruptions of those patterns, such as the introduction of industrial fishing or logging or times of economic hardship. For example, devastating recent hurricanes which wiped out agricultural crops put a strain on fisheries as rural people turned to the sea for food. As long as sustained

multiple resource use is one of the goals of management, subsistence resource users are natural allies of conservation action. ECNAMP's projects focus on critical natural resources and local needs, and public participation in every stage and at every level is a key project component.

Sound resource management requires good understanding of ecological and human use systems. The depth and quality of local knowledge, often underestimated, can be very great. Fishermen, for example, must understand life cycles of the species they fish as

well as the species on which those species feed. They also monitor the sea regularly, note changes, and make often astute conjectures about why changes occur. Their temporal knowledge goes back at least to their childhoods and often beyond that into their fathers' and grandfathers' time (Koester, 1984). It is not unusual for a fisherman to say something like, "Whelks were so abundant when my father was a child, they fed them to the pigs." In contrast, scientific research in the region has been limited, patchy, sporadic, and often esoteric.

In order to tap local sources of information, however, it is necessary to give equally in return. Projects that are based on people's priorities and fulfill their needs create trust and cooperation, but those needs and priorities can only be learned from the people themselves. Projects designed elsewhere and imported without modification for local conditions get nowhere. All of ECNAMP's projects are fleshed out over time in the field, based on local input.

The final goal of ECNAMP's projects is improved conservation and management of critical natural resources, and it can only be achieved with public cooperation and support. Intensive regulation and enforcement, nowhere desirable because of the adversary relationship they create, are financially impossible in the Eastern Caribbean. Conservation depends entirely on the public will, and on perceived benefits—another powerful reason for local participation.

## Constraints

Creating strong and dynamic links between resource users and project activities is unfortunately not as easy as it might seem. What might look like and be treated as a united "community" by outsiders is often actually a disparate congregation of interest groups playing a constant game of musical chairs with the available resources. It can be a serious mistake to assume that the priorities of some are the same for all. But it also takes a long time to understand the inter-relationships of those who make up a so-called "community," to develop constructive dialogue and build consensus on what needs to be done.

Another constraint facing ECNAMP project leaders is that those whose needs, as well as dependence on natural resources, are greatest are usually the most "marginalized" from the local society and so the hardest to reach. They rarely belong to those organized groups, such as Chambers of Commerce or fisherman's cooperatives, with whom it is most easy for project personnel to collaborate. For these people especially, the need for confidence building, and to be able to demonstrate tangible benefits that can come from projects, is very great.

Despite these constraints, after several years of work, ECNAMP is beginning to achieve excellent results through public involvement. Two examples are from a coastal area management project in southeast St. Lucia and a parks and protected areas project in the British Virgin Islands.

## Mangroves and Charcoal Makers

In St. Lucia, the Government and ECNAMP are working to manage properly the valuable resources of a relatively large and undeveloped area. Within the project site are some of the most extensive mangroves in the country. These mangroves are undoubtedly valuable to the local fishery in that they provide nursery and feeding areas and introduce nutrients to the near-shore waters. They are also important seabird nesting areas. The largest of these mangroves, Man Kote, is and has been for many years a major woodcutting site for charcoal production, providing income for about ten local families. There are obvious signs of stress from

overcutting (due to economic hardship, which has forced many St. Lucians to give up costly bottled gas and cook with charcoal, as well as to the closing off of other alternatives and of available land for cutting), and rechanneling of water for mosquito eradication. Since management of the mangrove required understanding the charcoal production system and the needs and problems of the producers, and providing them with alternatives if necessary, teachers at the local secondary school arranged for students to do a survey of the charcoal production. Students interviewed the charcoal producers and gathered enough information to put together a short report. They learned how the trees were cut; how long they took to grow back to cutting size; what types of wood were used and why; how much was produced; how the charcoal was made; and how the producers felt about the condition of the mangrove. This survey provided enough information to make preliminary decisions on management and also motivated the Ministry of Health to halt the mosquito eradication.

The charcoal producers know they are overcutting in the mangrove, which they feel can only be restored to health by a two year suspension of all cutting. But they have no alternative, since virtually all the traditional charcoal sites in the area are also being overcut.

Based on the needs of these charcoal makers, a Government Forestry Division reforestation project has been started in a nearby area outside of the mangrove. Charcoal producers have been hired to fence the 25-acre plot of government land and plant seedlings of fast-growing *Leucaena*. The project's objectives were carefully explained so that people understood that they were to benefit from the work. In the first year of the project, a total of 14 acres have been planted, and the largest trees are over 6 feet tall. Harvest time is four to five years. Forestry aims to plant at least five more acres each year. When harvesting begins, Forestry intends to issue wood permits, with preference given to those who have assisted with the planting and maintenance of the plot. The charcoal producers have welcomed the *Leucaena* project as a way out of the otherwise inevitable depletion of their wood supply. The fence line is being respected, and cutting and grazing within the plot have stopped.

In order to understand better the ecology of the mangrove (there is very little scientific information about small isolated mangrove systems such as this one), a mangrove expert has been hired to help conduct a research project. What is learned will make it possible to undertake an active program of management of Man Kote, perhaps with regulation of wood cutting, planting of seedlings, and/or control of water flow. An important aim to the research project will be to convey scientific information about the mangrove ecosystem to the charcoal producers so that they will have a greater control over their wood supply and also be able to make and enforce any necessary regulations themselves (ECNAMP, 1983; Geoghegan, 1984).

## Protected Areas and the Private Sector

The British Virgin Islands (BVI) are well endowed with marine resources such as coral reefs, seagrass beds, mangroves, and offshore cays (small islands) where seabirds nest in large numbers. Unsurpassed sailing conditions, a perfect climate, beautiful scenery, and spectacular dive sites make the BVI one of the most popular marine-based tourist destinations in the world. In order to protect and enhance these valuable resources, the BVI Government, with technical assistance from ECNAMP and funding from Jackson Hole Preserve, Inc., is working towards establishing an ambitious parks and protected areas system, to include a number of marine as well as terrestrial parks. The Wreck of the RMS Rhone is the first of several proposed sites to be declared a marine park. The park takes its name from a sunken 19th century mail steamer that is

one of the most popular dive sites in the Caribbean and the BVI's most famous attraction. The park also includes numerous living coral reefs, seagrass beds, and seabird nesting sites. The major human impacts on the park occur around the wreck. As many as seven charter dive boats and twenty charter and private yachts visit the site daily in season, carrying up to 100 divers and snorkelers. Such intensive use can damage fragile coral reefs and frighten fish, and boat anchors are especially destructive. Divers have noticed considerable deterioration of both the wreck and surrounding marine communities in the last several years, and seagrass beds near the wreck are scarred with anchor marks (Clarke, 1984b).

Both government and the private charterboat and dive tour companies want to save these valuable natural and cultural resources from further degradation. A draft management plan for the park was recently prepared by an ECNAMP consultant. Most of the scientific information needed to write the plan and transportation for the consultant were provided by commercial divers.

Prior to preparing the management plan, ECNAMP staff held a series of meetings with commercial users to discuss management alternatives. Dive tour operators identified anchor damage as one of the most serious threats to the park's resources. All agreed that permanent moorings were urgently needed at the wreck site and the adjacent seagrass area to stop the anchor damage, and a loose federation of local dive companies volunteered to assist with installation. Drawing on local knowledge and expertise, a cooperative project proposal was made to the National Parks Trust by the dive tour operators and park project staff (Clarke, 1984a). The cooperating dive companies will install the moorings, which will be attached with salvaged anchors, some of historic significance. Materials and transportation costs will be borne by the companies. The National Parks Trust staff will supervise the project, and the moorings will become property of the government upon installation.

To generate revenue for park management, a permit system will be instituted, with an annual fee charged to commercial users of the site and a single use fee for private yachts. The dive companies which install the moorings will be excused from paying the fees for the first five years.

The National Parks Trust lacks adequate manpower and transportation to monitor use of the park or enforce regulations. The idea of deputizing dive tour operators as voluntary wardens is being considered. These deputy wardens could conduct use censuses, monitor environmental quality, provide information about the area and its regulations to visitors, and inform authorities of any abuses. In addition, a customs officer would act as part-time Chief Warden and patrol the Park occasionally.

### Lessons Learned

Out of experiences like these, ECNAMP is learning what it takes to make public participation work in resource management projects. There is still much to learn, but in all ECNAMP's projects, the following conditions have been required to achieve results:

1. *A long-term presence* to understand a community's structure, build rapport, and foster mutual respect. ECNAMP had been working in the BVI for four years and St. Lucia for three before the events described above took place. The project leaders agree that the cooperation required for these activities could not have existed earlier.

2. *Local involvement in all aspects of a project* from design to implementation, as well as a respect for local input. Seeking ideas and advice and then ignoring them creates animosity rather than cooperation. In order to get active local involvement, project objectives must coincide with or at least include objectives of local users and groups.

3. *Local participation in concrete activities* from which people



Local fishermen and students are involved in surveying the avifauna of the Maria Islands. Photo by Kaf Smith.

can gain tangible benefits. The reforestation project in St. Lucia and the mooring installation in the BVI are cases in point. This concrete involvement is especially important when working with "marginalized" subsistence resource users, who have learned to distrust development projects, which often promise much but do little.

4. *Education and research activities in which local people are equal partners* with government, project staff, and professionals. When knowledge and information are freely shared, everyone learns and disparate groups gain respect for one another. In the Man Kote mangrove, charcoal producers and mangrove ecologists have equally important roles to play in improving management.

In the Eastern Caribbean, conservationists cannot set themselves apart from the rest of society, trying to exert a moral force for saving nature. The final responsibility for the environment falls on the shoulders of governments and of resource users and the general public. Therefore, to be effective, conservationists must understand local human needs and cooperate with governments and community groups to ensure that valuable natural resources are used wisely. When conservationists and resource users understand that they share the same objectives, they can begin to work together for the good of all.

### References

- Clarke, Nicholas V. 1984. Low-budget solutions to park management. Tortola, British Virgin Islands.
- . 1984. Rhone Marine Park — Draft Management Plan. Report prepared for the Government of the British Virgin Islands and ECNAMP, Tortola, British Virgin Islands.
- Eastern Caribbean Natural Area Management Program (ECNAMP). 1983. A report on a study of conservation and development requirements for the South-East Coast of St. Lucia. Caribbean Conservation Association, Caribbean Environment, ECNAMP Report NO. 1.
- Geoghegan, Tighe. 1984. An experiment in participatory resource management: a case from St. Lucia. Prepared under contract to IUCN/CNPPA, St. Croix, U.S. Virgin Islands.
- Koester, Stephen K. 1984. Socioeconomic and cultural role of fishing and shellfishing in the Virgin Islands Biosphere Reserve area. Draft report to Island Resources Foundation, St. Thomas, U.S. Virgin Islands.

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