

Case Study: Merging Traditional Conservation With Modern Techniques in Yemen

Home to hundreds of terrestrial and marine species found nowhere else in the world, the small Yemeni archipelago of Socotra has a new zoning plan that integrates the protection of its land and sea environments. Developed through the cooperative efforts of international experts and local stakeholders, the plan aims to ensure the health of Socotra's biologically significant ecosystems while allowing residents to preserve their traditional resource rights against outsiders.

The plan features new protected areas, on land and in coastal waters. Although the concept of "protected area" is still relatively new to residents of the isolated archipelago, the idea of resource protection is not, said Ed Zandri, director of the project. "What we have done is to merge traditional conservation practices with modern concepts and techniques," said Zandri. "The main objective has been to preserve and strengthen the existing balance between people and nature."

Isolation

The Socotra Archipelago lies 400 km off the southern coast of the Arabian Peninsula and consists of four islands, the largest of which is Socotra. Governed by the Republic of Yemen, the archipelago receives some tourism business but is largely removed from the rest of the world. For five months a year (June-October), heavy seas and strong winds make travel to and from the islands difficult.

Socotra's geologic and climatic isolation have made it what it is today: an archipelago with high biodiversity and a local population that has adapted to its unique environment. Most families engage in livestock herding, date palm growing, and fishing, depending on the season. Fishing villages on the coast may be inhabited for just half the year, during good weather when fishing is possible. As few as 40,000 people live in the archipelago.

Socotra's limited resources have bred a conservation-oriented culture, said Zandri. "All Socotrans know that cutting trees is bad for them, because they know they have nowhere else to go when the trees are finished; hence, strong traditional rules exist to protect trees and regulate firewood collection," he said. "The same is true for fishing: Socotrans know well the advantages of preserving their fishing grounds with rest periods and using only lines -- not nets -- in some areas."

International conservationists approached the Yemeni government about Socotra in 1997 when it appeared that other outsiders, including developers from mainland Yemen and foreign fishermen, had begun to show interest in the abundant resources of the archipelago. "[Some outsiders] see Socotra as a virgin land, scarcely populated, to be rapidly exploited at land and sea," said Zandri. The establishment of protected areas, especially if supported by the national government, would limit such exploitation, he said.

The planning project

The planning project ultimately brought together some of the biggest international planning organizations in the world, including the United Nations Development Programme (<http://www.undp.org>) and the United Nations Office for Project Services (<http://www.unops.org>). Funded by the Global Environment Facility (<http://www.gefweb.org>), a World Bank-affiliated institution, the project aimed to develop an integrated resource management strategy, driven by local communities, and create a comprehensive zoning system for Socotra's terrestrial and marine ecosystems.

The socio-economic structure of the Socotran community, with three main subsistence activities, presented a unique challenge to the project's comprehensive aspect. Although the project team was split into three working groups -- "terrestrial", "marine", and "environmental education and awareness (EEA)" -- each working group found itself often overlapping with the others. "For six months a year, you'll find 'fishermen' grazing their livestock up the mountain 1,200 meters," said Zandri. "When we held meetings with the community, which was one of our principal activities, all of our working groups would be there."

As with projects elsewhere involving international organizations and local stakeholders, the establishment and maintenance of reciprocal trust between the project team and community leaders was key. Project leaders recruited more than 60 Socotrans

to be on the project team; the Socotrans brought the conservation message to local communities from a Socotran perspective, and also facilitated field work necessary for identifying important conservation areas.

Training of the local team members by three full-time experts was an important part of the project, said Catherine Cheung, director of the project's marine zoning efforts. "The training was diverse, covering topics like marine ecology, plant taxonomy, bird surveys, scuba diving, computing, GIS, filing, and accounting," she said. In addition, English-language training early in the project made subsequent training more effective. "All courses were tailor-made on the island to suit specific needs and inadequate formal education training," she said. "Daily hands-on training and advice proved to be effective."

The local involvement was essential, said Cheung. "The 'gap' between the foreign trainers and the local villagers was huge," she said. "The [local team members] served as crucial bridges."

Project outputs

The zoning plan, created through agreement between foreign experts and local communities, protects most of the major riverine and coastal habitats in the archipelago. The entire 500-meter coastal strip of the islands is designated as a national park, highly restricted from development except for two small general-use zones covering the port and town of Socotra.

In addition to the zoning plan, the project has had several other positive impacts, said Cheung, including a substantial increase in the local capacity to understand marine ecosystems and conduct survey work. Team members have also collected abundant information on the archipelago's biodiversity, allowing for continued efforts to protect it.

The receptiveness of locals to the idea of conservation was impressive, said Zandri. "They were much more receptive than any of us would have imagined," he said. "We were lucky to find an ecological and socio-economic situation in Socotra where the strong inter-dependence between people and natural resources was clear to the vast majority of local people."

The Yemeni government has officially designated the new protected areas, setting the necessary legal and political framework for effective protection, said Zandri. The designation serves as a mandate to the government's environmental agency (the Environment Protection Council of Yemen) to protect the islands, and also fosters support from international donors by demonstrating government backing for the initiative.

Continued vigilance and hard work will be necessary, however, said Zandri. The project team's final effort has been to create a Socotra Conservation Fund to support the long-term implementation of the zoning plan (see box at end of article). Fund organizer Curt Fish of Global BioStrategy LLC said he expects the fund to be signed into law by the Prime Minister of Yemen by the end of this year, with seed money arriving soon afterward from individual donor countries and international organizations. Once seeded, the fund will be available to local Socotrans to support sustainable biodiversity use and development, such as for the management of protected areas, development of biodiversity artisans and ecotourism, and support of traditional medicinal uses of biodiversity.

For more information:

Ed Zandri and Catherine Cheung, GEF Socotra Biodiversity Project, UNDP, PO Box 551, Sanaa, Yemen. E-mail: socotrapmu@y.net.ye.

Box: Establishing a conservation fund

Editor's note: Curt Fish, who has led the effort to establish the Socotra Conservation Fund, offered this advice to readers of MPA News on setting up similar funds:

"The first step is to determine just what the financial needs of the conservation plan or area are, and what kind of financial mechanism would best fit the area. This type of analysis basically involves a study of past, current, and future activities and needs. These are then compared to single-project financing, intermittent grants, and the three basic types of funds:

- sinking funds, which spend the fund's capital;
- revolving funds, which spend money at the rate it is acquired; and
- endowment funds, which spend only the interest earned on the capital.

"Notably, funds may begin as sinking or revolving before accumulating enough capital to become an endowment fund. This will likely be the path of the Socotra Conservation Fund.

"Once the type of mechanism is identified, an expert in conservation finance can assist in designing the legal means by which the fund will be organized in the country, how it will be treated for tax purposes, and how it will be recognized by donors. Importantly, this process must take into account local politics, likely donors and their interests, and the control of the monies.

"Conservation funds tend to attract donors because such funds are usually designed in such a way that control over the

monies is given to a Board of Directors composed of government and non-government representatives, leaving the monies beyond the direct and unilateral control of the governments. This is the key to their success in all respects: fundraising, identifying appropriate projects, and critically reviewing their own performance.

"Several organizations that operate internationally have experience in designing and implementing conservation finance mechanisms. The Global Environment Facility has a number of publications listed on its website (<http://www.gefweb.org>) that can be helpful, and a staff of experts that can offer advice on the creation of such funds. The GEF also maintains certain guidelines on trust fund design, which are valuable for areas that might be eligible for GEF or UN funding. Generally speaking, many other donors will evaluate the design and operation of a fund in light of these GEF guidelines.

"Finally, high-level government support as well as local buy-in is critical to the success of a conservation fund. In the case of Socotra, the Prime Minister of Yemen and the Environmental Protection Council have offered their full support to the creation and operation of the Socotra Conservation Fund. Additionally, the local people in Socotra have agreed on the form and function of the fund, and look forward to developing the capacity to assist in the implementation of the fund and projects which receive its support."

For more information:

S. Curtis Fish, Global BioStrategy LLC, 2029 Park Road, NW, Third Floor, Washington, DC 20010, USA. Tel: +1 202 588 8527; E-mail: cfish@globalbiostrategy.com.

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