



**A Case Study
developed for
TIDE Belize**

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TIDE COMMUNITY STEWARDS PROGRAM

**Promoting Community Stewardship of Natural Resources in
and around Port Honduras Marine Reserve**

Case Study of TIDE's Community Stewards Program

Background of the Program

Following extensive ecological studies in the area and the drafting of management plans by Belize Center for Environmental Studies (BCES) in the early 1990s, and continued by TIDE in late 1990s, Port Honduras Marine Reserve was declared a protected area in January 2000. The reserve was established to ensure the preservation of a critical marine and coastal ecosystem while, at the same time, ensuring meaningful participation and sustainable economic use by the communities and stakeholders in the area.

Situated in the Toledo District of Belize, just north of Punta Gorda, the district's administrative capital, PHMR covers 40,470 hectares (100,000 acres) of mangrove and coastal ecosystems. With its wide array of vital habitats including mangrove coast, clear rivers, over a hundred small mangrove-fringed islands, benthic habitats comprising soft-bottom sea grass beds and fringing reefs, PHMR forms one of the most important fish nurseries in the Caribbean. Given its close proximity to the Mesoamerican Reef Complex, the second longest contiguous reef in the world, PHMR plays a vital role in protecting the biodiversity and integrity of this complex.

PHMR is also home to numerous species of marine life that are threatened with extinction in other parts of the world. These include the West Indian manatee, great hammerhead shark, hawksbill, green and loggerhead turtles, and goliath grouper. Another distinctive feature of the reserve is that part of its coastal mangroves are thought to be one of only three nursery grounds for goliath grouper remaining in the world.

Historically, the area now known as PHMR has been an important fishing ground for local traditional fishers from the buffer coastal communities of Monkey River Village, Punta Negra, and Punta Gorda. These fishers use the area to commercially harvest fish, conch and lobster primarily for the local market. The harvesting of sea cucumber for export to the Asian market, has recently gained new interests.

Concurrent to its use by local fishers, PHMR has also faced increasing stress by illegal immigrant fishers and poachers from neighboring Guatemala and Honduras, countries which are by far bigger and more populous than Belize, and which increasingly demand the resources found in PHMR. For example, the high demand for manatee, consumed as a delicacy in these countries, continues to fuel threats to this endangered species by determined poachers. Illegal immigrant fishers not only indiscriminately harvest any size of fish, conch and lobster but are also oblivious to and fail to comply with Belize's fisheries regulations regarding open and closed season. Neither do they observe the ban on gillnets or other legally required fishing practices.

Given these threats, TIDE has embarked on a multi-pronged management strategy to continuously ensure the protection and integrity of this reserve. The strategy includes building public awareness; rigorous

patrols on land and water by rangers, trained in law enforcement, to prevent illegal fishing, poaching, logging and mangrove clearance and scientific research to monitor the quality and health of the resources. It also includes engaging the communities to participate in on-going monitoring activities thus developing a sense of ownership to keep the area protected. It is out of this approach that the Community Stewards Program was conceptualized.

History of the Program

The Community Stewards Program was established by TIDE to build the capacity of community members to play a major role in the protection and sustainable management of the resources of PHMR. The program is one of TIDE's strategy for fulfilling its mission: "To foster community participation in resource management and sustainable use of ecosystems within the Maya Mountain Marine Corridor of southern Belize for the benefit of present and future generations."

The program was funded by COMPACT, through two consecutive projects, both being congruent with COMPACT's objective: "to develop and/or enhance the management capacities of community groups who use and impact the resources of the Belize Barrier Reef Reserve system – World Heritage Site, as well as those who participate in the co-management of the protected areas".

The first project, implemented in 2010, was entitled "Capacity Building to Enhance and Increase Sense of Ownership in the Port Honduras Marine Reserve through a Community Stewards Programme". The second, implemented in 2011, entitled "Community Stewards Programme: Next Steps Initiative" was designed to build on the knowledge and skills learned during the first training while focusing mainly on the managed access program.

Objectives

TIDE's Community Stewards Program is based on the premise that providing the training, resources and assistance necessary to build environmental awareness and stewardship among local people are important ways to improve and sustain ecological systems.

Through this program, TIDE envisaged that community stewards would be empowered with the knowledge and skills necessary to become an integral part of management activities in PHMR, including research and monitoring, increasing environmental awareness in their communities, and protection from unsustainable use of resources.

Once trained, the community stewards would act as an important communication link between TIDE and the communities, while also empowered with a stronger sense of ownership to participate in maintaining the integrity of PHMR.

What was done

Through both projects, 12 fishers were selected from various buffer communities. Although their fishing experiences ranged 10 and 25 years, this was the first such training for all of them. Of the 12 fishers 3 were women. The program provided participants a series of training sessions that were designed to increase their knowledge and awareness of the ecological importance of PHMR, as well as to equip them with practical skills for effective monitoring.

The training was conducted in two-day sessions, once a month for six months, and included these topics:

- ✓ Marine and protected area laws
- ✓ Fisheries regulations
- ✓ Fire control of terrestrial areas
- ✓ Marine and terrestrial ecosystems
- ✓ Sustainable harvesting of lobster and seaweed
- ✓ Process and benefits of managed access
- ✓ Fish catch data collection method and procedure, including and importance of recording accurate catch data
- ✓ GPS navigation skills
- ✓ Boat engine maintenance
- ✓ Radio communications

Stewards were also trained to teach other fishers to properly record data on catch log sheets and give basic environmental education presentations to schools and their peers.



Benefits of the Program

Eleven of the twelve trainees fully completed the training program. They reported that new knowledge, awareness and skills that they gained kindled a deep appreciation and sense of ownership of PHMR. As a result of the training, community stewards reported that they gained the following:

Increased knowledge, awareness and skills

- i. Exposure to and deep appreciation of best practices such as those in Punta Allen, Mexico, for the sustainable harvest of fisheries resources
- ii. Greater awareness of legislations relating to fisheries, protected areas management
- iii. Deeper understanding of the ecology of the area and the resources therein
- iv. Knowledge of the methods and techniques of catch data collection
- v. Ability to instruct other fishers to utilize proper catch data collection techniques
- vi. Greater understanding of the Managed Access program.
- vii. Improved communication skills.

Growth in personal confidence and responsibility

- viii. Greater sense of responsibility for ensuring that resources are sustainably harvested within the context of fisheries and protected areas regulations
- ix. Sense of accomplishment as a pacesetter and an example of sustainable management of marine resources to other fishers in neighboring countries
- x. Enhanced leadership skills to represent Belizean fishers in regional and international fisheries forum
- xi. Growth in confidence and respect for being able to effectively communicate and share information with other fishers and the community

Greater sense of ownership and stewardship

- xii. Increased number of participation in catch data collection and submission, and improved quality of data submitted.
- xiii. Increase in local knowledge, awareness and ownership
- xiv. Strong sense of duty to report unusual or suspicious actions that might compromise the integrity of the resources at PHMR.
- xv. Stronger and more enthusiastic support of the Managed Access program
- xvi. Continuity in providing data collection support to fishers after the conclusion of the program

Positive impact on the resources

- xvii. Significantly reduced number of poachers and illegal fishing.
- xviii. Reduced threats to the integrity of the reserve
- xix. With their new skills and team effort, community stewards help to improve the long-term sustainability of PHMR

Improved collaboration and positive relations between TIDE and community

- xx. TIDE's provision of GPS equipment, and phone credits to community stewards enabled them to call rangers to report the location of suspected poachers, thus enabling rangers to respond more effectively.
- xxi. Enhanced relations based on mutual trust and respect between TIDE and fishers



Challenges, lessons and recommendations

Effectively engaging subsistence and commercial fishers throughout an extended training period was not without some challenges. These include maintaining a coordinated training schedule around their own independent fishing schedules as well as sustaining the interest and commitment of the stewards.

Provide adequate support to enable full participation

The voluntary time that was required of fishers from their fishing schedule meant that they had to forgo the daily wages that they would earn for their families during the two day training period each month, a sacrifice that some occasionally found difficult to endure. Even while they individually benefit from the program, this is at the expense of lost wage for their families. If the program were to be replicated, some considerations ought to be made for providing some incentives to enable vulnerable fishers to forgo their daily fishing wages in order to fully participate in the training. For the small investment, the spin-off benefits to fishers, community and the reserve as shown above are not only invaluable for current generation of stewards but will be spread to the new generation of upcoming fishers.

Keep the blend of class-based learning with hands-on field activities

The blend of classroom-based learning with field-based practical learning experiences, site visits, and cross-border exchanges with other fishers enriched the learning experience. The program must continue to ensure that as much as possible, field and practical experiences are an integral part of the training.

Ensure that the training is consistently learner-focused

Given the range of background of fishers, many with primary school as the highest level of formal education, the quality and delivery style of new technical information must be learner-focused, rather than traditional classroom lecture presentations. This requires a level of skill which the facilitators must blend presentations with consistent feedback, interaction with and engagement of the learner.

To ensure that the learning environment is always effective and that the learner has grasped new concepts, facilitators could utilize various non-traditional learning assessment techniques – e.g. oral presentations and demonstrations by the learner, peer teaching, etc., to ensure constant learning reinforcement of new material, and to verify that fishers could later accurately share new information to others. Without feedback by the learner, there are risks to the quality of information when the assumption is made that one-time, one way presentation by a teacher is adequate. The learner-focused approach might require a bit more time period to dynamically engage learners in the classroom learning process.

Link data collection activities with outcomes of data

While fishers are trained to collect catch data, it is also important to for them to be aware of how the analysis of data can also be applicable to understanding local trends. By bringing the use of the data to clearer light, this could also encourage consistent accuracy in data collection.

Continue to reinforce training and expand reach to others

Given the sheer size of PHMR and the increasing threats it faces, the number of community stewards is still very limited. Although these few have been serving effectively and enthusiastically, the training of more stewards to increase support and demands is recommended. Continue to encourage the participation of the senior Community Stewards by offering refresher training courses and a system of rewards to encourage the work that they are doing.

Link training and activities to developing climate change awareness

Given the current global dialog and strategies regarding climate change, this training ought to also mainstream information about climate change trends and impacts, while showing the importance of the participation of community stewards and their communities to climate change adaptation.

Expand public awareness about the training and increase support

Draw on the support of locally respected leadership in all communities to ensure that the program and the trainees are widely recognized within their communities. Conduct a meeting with key community leaders and local media to share information about the intent and benefits of the program.

Cost benefit analysis

The total budgeted cost involved in training 11 community stewards was BZ\$50,000. This amount includes expenses for transportation of stewards and educators to training events, salaries for training coordinators and administrative staff, materials and supplies, and food for training events and planning sessions.

For the investment made in training the fishers, and based on the fishers reports of their increased awareness, knowledge and skills, and further based on their enthusiastic levels of participation and increased reporting of illegal activities in the reserve, the Community Stewards program has been an extremely effective way of fostering community participation in management of PHMR. The strong commitment and enthusiastic levels of participation of community stewards to ensure sustainable use of the reserve further demonstrates the program's invaluable benefits. The change in attitude, values and behavior that results from increased knowledge and awareness could have a multiplier effect as the community stewards spread these by word and example to their communities and other fishers.

Put quite simply in relative terms, for the average price of a car for one person burning fossil fuel, 11 passionate, committed community stewards from various communities were trained and are now actively contributing to the protection of a precious resource that will benefit current and future generations. This knowledge, skills, attitudes and values that have resulted from this investment has also begun to show evidence of reduced fishing pressure on the natural resources and stresses on the ecosystems.

Climate Change Adaptation

The Community Stewards Program has immense implications for Climate Change Adaptation. Most importantly, the increased stewardship of communities in protecting critical habitats will positively contribute to and enhance the protection and sustainable use of resources in the Mesoamerican Barrier Reef System.

Where to find out more about this program

For more information about this program and other similar initiatives of TIDE, contact TIDE's Program Manager, Joe Villafranco, at the Toledo Institute for Development and Environment (TIDE) via email: joevillafranco@tidebelize.org, or phone +501-722-2274 or by visiting www.tidebelize.org.