

CASE STUDY: COLLECTIVE IMPACT OF MANAGED ACCESS PROGRAM PUTS BELIZE FISHERIES ON PATH TO RECOVERY

PROTOTYPE PROJECT OVERVIEW

The challenge

According to the Belize Fisheries Department, the wild-capture fishery sector contributes significantly to the country's economy. It brought in approximately \$29 million in 2012. But the open-access system that characterizes fishing in Belize has allowed uncontrolled numbers of fishers with readily obtained licenses to harvest more fish than the oceans can replenish. This has resulted in a threat of overfishing, declining stocks, and fewer economic benefits for fishers over the long term. Transitioning to a sustainable system would require transformative new policies, along with the support and participation of fishers, industry stakeholders, and their communities.

The prototype

Belize has designed and implemented a coordinated managed access program for its fisheries, including the country's main seafood exports, lobster and conch, that effectively unites the goals, efforts, and interests of fishers and fishing sector stakeholders with ocean stewardship at two pilot sites, Port Honduras and Glover's Reef. Based on territorial use rights in fisheries (TURFs), the new paradigm aims to protect the health of the world's second-largest coral reef ecosystem while ensuring the livelihoods of the fishers and fishing communities that depend on it. The program presents a clear opportunity to build and rapidly expand this innovative approach throughout all of Belize's waters by 2017.

The managed access program models the 50in10 Theory of Change, which posits that sustainable change requires four levers: policy reform, community empowerment, credible science, and market demand. All four levers are in place in Belize, and it rates highly in our assessment for growth and readiness, making it an ideal 50in10 prototype that other programs might replicate or adapt.

50in10 role and partners

Partners in the Managed Access Working Group include the Environmental Defense Fund (EDF), the Wildlife Conservation Society (WCS), the Nature Conservancy (TNC), and Rare—all active participants in 50in10—along with the government of Belize, local NGOs, fishing organizations, and fishing cooperatives. 50in10 helped foster collaboration among partners and co-funded a market analysis with EDF and Rare to help Belize fishing cooperatives

explore options to secure investment capital and access premium, higher-revenue export market opportunities.

50in10 Theory of Change in action

Policy reform

The Belize Fisheries Department began piloting managed access at two sites in 2011. Policy actions have included:

- Using a new area-based fishing licensing system and verification process that ended open access prior to the managed access pilot
- Collecting all catch data from fishermen to monitor total production from the two pilot sites
- An adaptive management framework to assess fisheries and make management decisions based on regularly collected data

Community empowerment

To succeed, the program must effectively unite the goals, efforts, and interests of fishers and fishing sector stakeholders with marine stewardship. It has already taken action to empower fishers:

- The Managed Access Working Group brings together fishers, fishing communities, government, and NGOs in a collective impact model.
- Fishers participate in decision making so they have a vested stake in the recovery of the reef.
- Fishers collaborate in the management of the fishery and provide monitoring and enforcement.
- Hundreds of meetings with fishers and coastal communities have built relationships and engendered support.
- The Belize Fisheries Department's social marketing campaign fosters community support for the adoption of sustainable behaviors and conservation strategies among Belize's diverse peoples.

Credible science

Gathering hard data on fishery health, catch, habitat, and so on is critical to scaling the program nationally and generating support for new fishery management methods. Credible science strategies include the following:

- Data-based catch limits and replenishment (no-take) zones rebuild and sustain the lobster and conch populations.
- Catch data and fisheries' independent data help determine stock assessments and total allowable catch (TAC) numbers.
- The Belize Fisheries Department oversees efforts such as protecting nursery areas and spawning populations, setting minimum size and weight limit regulations, closing fishing seasons, and creating inexpensive low-data stock assessment models for calculating catch limits and restoring fish populations.

Market demand

New management interventions may cause potential income loss in the short term, and there is the need to generate revenues to cover operating costs of the managed access system and reduce reliance on philanthropic funding mechanisms. Activities include the following:

- A national plan of programs to diversify income sources from fishing and non-fishing activities
- Fostering access to new premium markets to meet international demand for sustainable seafood
- Establishing a local seafood certification brand

Results

The prototype has been so successful that the Belize Fisheries Department has approved the rollout of managed access to its entire marine reserve network by 2017, putting an end to the open-access nature of Belize fisheries. Results include the following:

- The majority of the fishing community supports Belize's new policy.
- Fishers feel they have a vested stake in the recovery of the reef and are adopting sustainable practices.
- Fishers are stewards for long-term sustainability and play an active role in setting policy and carrying out enforcement.
- Fish stocks are recovering.
- After one year, fishing violations dropped 60 percent, and the department did not issue any licenses to unqualified fishers.
- More than 90 percent of fishers submitted catch data.

PROJECT STORY

Collective Impact of Managed Access Program Puts Fisheries on Path to Recovery

Acclaimed for its beauty, biodiversity, and economic bounty, Belize's barrier reef is the impetus behind a transformative rethinking of the country's fisheries management system. The new paradigm aims to protect the health of the world's second-largest coral reef ecosystem while ensuring the livelihoods of the fishers and fishing communities that depend on it.

"It's a relatively new concept of moving from open access to rights-based fisheries management for small-scale developing world fisheries in an entire country at scale," says Larry Epstein, senior manager at the Environmental Defense Fund (EDF). "When it gets done, Belize will be the first to do it."

Belize convened the Managed Access Working Group, a coalition working under a collective impact model, to drive the transition by 2017 to sustainable fisheries throughout the country's 3,500 square miles of fished waters. In addition to EDF, partners include the Wildlife Conservation Society (WCS), the Nature Conservancy (TNC), Rare, the government of Belize, local NGOs, fishing organizations, and fishing cooperatives.

Belize's new rights-based approach allocates specific harvest areas to fishers and holds them accountable for those areas. Not only does this harvest limit method help increase fish species recovery, biomass, density, and diversity, Epstein points out, it incentivizes fishers to change behaviors. For example, under the open-access system, fishers raced to harvest as much as they could within a short time at the start of the season, flooding the market with fish and driving down prices.

Once Belize scales the new system nationally, fishers will enjoy future financial benefits and improved livelihoods from healthy fisheries, and they will play an active role in stewarding the long-term sustainability of the marine environment and resources. It's a critical shift: the wild-capture fishery sector contributes significantly to the country's economy, bringing in approximately \$29 million in 2012 and employing 3,000 Belizeans, according to the Belize Fisheries Department.

Prototype models 50in10 Theory of Change

"The Belize prototype is one of the best examples of how to develop a sustainable fishery using a collective impact approach, and it shows how well the 50in10 Theory of Change

model works,” says Megan Arneson, 50in10 acting executive director. 50in10 fostered collaboration among partners, and co-funded a market analysis with Rare and EDF to help Belize fishing cooperatives secure investment capital and access premium, higher-revenue export market opportunities.

According to the Theory of Change model, restoring fisheries requires the support of four factors: community empowerment, policy reform, credible science, and market demand. Belize is implementing new policy guided by scientific measurement that necessitates engaging not only fishers but also fishing communities. And market analysis will show the way to economic sustainability.

Piloting policy reform: managed access

Starting in 2011, the government of Belize, the Belize Fisheries Department, and partners piloted a rights-based approach for managing fisheries at two of the country’s marine reserves (Glover’s Reef and Port Honduras). The program works to improve the overall health and biomass of the coral reef ecosystem and reverse overfishing and illegal fishing by using harvest controls and replenishment (no-take) zones to rebuild and sustain the lobster and conch populations—two of the country’s most important commercial species. While fishing is prohibited in replenishment zones, licensed fishers are permitted to catch a controlled portion of fishery stocks within designated general-use zones at the two marine reserves.

The managed access program has been so successful that Belize will expand it to eight sites by 2017 to foster fish stock recovery and reduce fishing pressure. As in the pilot initiative, the Working Group, which includes fishers, will develop policy and build support for and compliance with the program among Belize’s nearly 3,000 fishers.

Economic incentives build support

Prior to the implementation of managed access, Belize’s open-access system allowed increasing numbers of people with readily obtained fishing licenses to harvest more fish than the ecosystem could replenish. This resulted in overfishing, declining stocks, and fewer economic benefits for fishers over the long term, explains Julio Maaz, WCS community fisheries coordinator. Although they made a profit in the short term, fishers had to spend more time at sea to catch more fish while depleting the marine environment they depend on long-term for income and food.

Managed access creates economic incentives for fishers and fishing cooperatives to become better stewards of marine resources. For example, fishers helped enforce fishing limits through active participation in the monitoring and reporting of commercial species catches, resulting in a decline in illegal and unreported fishing. They also developed a new fishing

licensing system and verification process, vetting the applications themselves to determine who would receive a managed access license and who would get renewed.

“The fishers saw it was making a difference,” says Janet Gibson, WCS country director. “There was no need to race to get out there when the season opened. They were getting better catches in a shorter period of time.”

According to Epstein, the two pilot sites demonstrated improvements two years after implementation, including the following:

- The sites issued zero licenses to unqualified fishers (as determined by fishers in Community Managed Access committees responsible for making recommendations on license eligibility).
- More than 90 percent of fishers submitted their catch data, which helps determine stock assessments and TAC numbers.
- Fishing violations dropped 60 percent.

Community empowerment: giving fishers a voice

To engender support for implementing changes, the working group used a community-based approach, meeting with hundreds of fishing communities over many months—listening, fostering relationships, and engaging fishers in decision making so that they would have a vested stake in the recovery of the reef, explains Gibson. “Building trust takes time, having faith takes time,” adds Maaz. “We are seeing the ecosystem degrade very quickly, but trust can degrade much more quickly.”

Maaz points out that the fishers came up with the name “managed access” for the program because it has an inclusive tone rather than the connotation of limited access that other labels, such as “catch shares” or “special licenses,” may imply. Similarly, fishers refer to no-take zones as “replenishment zones.” In addition, they have developed a three-strikes policy in which they kick out or suspend fishers for committing severe fishing violations.

“You must involve the community. Otherwise you are wasting time and money,” says Pablo Granados, director of marine science and implementation director of Fish Forever for Rare.

Pride campaign fosters sustainability, science-based management

Rare trained four employees of the Belize Fisheries Department as fellows in its signature Pride campaign. The two-year program focuses on leadership, communications, social marketing research, and technical assistance to foster community support for the adoption of sustainable behaviors and conservation strategies among Belize's diverse peoples. The fellows tapped Langostin the Lobster to serve as the campaign's lovable mascot, who appears at festivals and other events, spreading key messages to generate widespread support for sustainable fishery habits.

The fellows, who will graduate in January 2016, serve as managed access coordinators for the pilot sites and will play a key role in rapidly scaling the program nationally. They will generate support for the range of fishery management methods, including credible science strategies such as protecting nursery areas and spawning populations, minimum size and weight limit regulations, closed fishing seasons, and inexpensive low-data stock assessment models for calculating catch limits and restoring fish populations.

Belize's conch season runs from October 1 to June 30, and may end earlier if fishers meet the quota. Fishers harvest conch exclusively by free diving; the use of SCUBA gear (tanks) is prohibited. The lobster season runs from June 15 to February 14. Most lobster fishers use boats to travel to their fishing grounds, and harvest lobster via free diving. Some fishers use traps and shades (casitas) as aggregation devices to collect lobster by hand. Others use hooks or lassos to collect them.

Managed access to roll out nationally

After two years of successful implementation, the Belize Fisheries Department has approved the rollout of managed access to its entire territorial waters by 2017, ending the open-access nature of Belize fisheries. "There is an array of legal and policy instruments we are using for the rollout," explains Epstein.

Expansion of replenishment zones will happen in two phases, says Julie Robinson, TNC Mexico and Northern Central America fisheries lead: "We are hopeful that we can achieve expansion by the end of 2016.

"There's no certainty that we will get the policy and legislative changes to take place, but we do have the fishing community buy-in," she says. "They trust it, they believe in it, and they will push their representatives to push for it, too."

Building new revenue streams and high-value markets

To respond to potential income loss resulting from the new management interventions, TNC and the Belize Fisheries Department commissioned a national plan of programs to diversify income sources for fishing communities, says Robinson. Income-generating activities include seaweed, tilapia, and pig farming, as well as guiding tours.

50in10 partners also seek to increase revenues for fishers and fishing cooperatives via value-added products and access to new premium markets. Currently, the coalition is developing a local seafood certification brand with Belize hotels and restaurants. Labeling seafood with traceability information could spur the development of new products and services, Robinson says.

The hope is that the increased earnings fishers and fisher cooperatives enjoy will generate revenues to cover the operating costs of the managed access system and reduce the need for philanthropic funding mechanisms.

The Belize prototype clearly shows how using all four levers of the 50in10 Theory of Change—community empowerment, policy reform, credible science, and market demand—can make a collective impact. Belize’s fishery management reform model embraces a stakeholder-centered, participatory process that focuses directly on rebuilding fish populations to support and foster people’s livelihoods and marine resource stewardship. This community of innovative problem solvers is building sustainable and profitable fisheries at the right scale and pace to offer tremendous social, economic, and ecological benefits.