
Supporting Co-Management of Brazil's Marine Extractive Reserves

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Environmental Challenge

Small-scale fisheries are the economic and nutritional backbone for many coastal communities in Brazil; employing around one-million registered fishers throughout the country. To help protect the livelihoods, resources, and cultures of these communities, Brazil implemented a rights-based resource management system known as marine extractive reserves (MER). These reserves empower communities to manage their local natural resources, but challenges like overfishing, limited funding, and high transaction costs among numerous beneficiaries make the success of these reserves difficult.

Challenges like these are not unique to Brazil, but instead are pervasive throughout many small-scale fisheries around the world. In the face of these challenges, many fisheries have been developing creative solutions, which are often simple and straightforward to implement. Because these solutions unfortunately do not easily spread, shared learning among fishing communities has the potential to greatly benefit their management outcomes.

Our Focus

Two core principles guided our progress. First, MER communities possess invaluable local ecological knowledge. This knowledge is imperative to developing meaningful and lasting fishery solutions. Second, shared learning between fishing communities, both within country and abroad, has great potential to catalyze positive change in Brazil. With this in mind, we asked, “how do other fisheries in Brazil and around the globe successfully address common pool resource management challenges?” and “how can we share these lessons with MERs in Brazil that are facing challenges?”

Our Approach

To help communities identify and address common management challenges they face, we created a decision tree and process guide from an academic literature review, MER beneficiary survey data, and personal interviews with Brazilian stakeholders and global small-scale fisheries experts.

This decision tree is a one-page, diagnostic tool that unpacks social, ecological, and economic outcomes, posing targeted questions in each section to help users identify common management challenges. Once challenges are identified, the process guide provides recommendations and case studies that include actionable steps communities can take to address a given challenge. By structuring the guide this way, we provide beneficiaries options they can choose from to make their own informed management decisions instead of asserting prescriptive recommendations in a one size fits all approach.

Major Findings

Through this project, we identified two important, general challenges MERs face in Brazil. The first is the large populations and land masses that MERs are asked to manage. Like other common pool resource challenges, the more beneficiaries that are included, the more difficult and complex management becomes. The second was that there are low levels of participation and cooperation within some MERs. This is concerning, because the success of rights-based resource management strategies, like MERs, is highly dependent on participation within communities.

Environmental Impact

Brazil's extractive reserves, like other fisheries around the world, are essential to global food security and the preservation of traditional fishing culture. They can also provide a venue for previously voiceless communities, like fisherwomen, to organize and advocate for their own rights. Our guide promotes shared learning between communities and provides resources for managers and communities to more easily and efficiently achieve their goals. Because rights-based fisheries share common resource challenges, this tool can be applied to other fisheries around the world as well. Its focus on incorporating local ecological knowledge and its reliance on shared learning, ensures that this tool is easily adaptable to other contexts.