Community Management of Fisheries Is Improving Biodiversity and Livelihoods

Factsheet March 2014

CARE WWF Alliance in Mozambique shows that communities can successfully manage mosaics of small marine sanctuaries that allow fisheries to recover, improve biodiversity, and benefit the livelihoods of coastal fishing communities.

The Primeiras e Segundas is an integrated coastal conservation and development program implemented in the districts of Angoche, Moma, and Larde in Nampula province, and in the district of Pebane, Zambezia Province, since January 2008. The Primeiras e Segundas Program is guided by the overall goal for the CARE-WWF Alliance in Mozambique, which is to significantly increase food and livelihood security and opportunities for coastal inhabitants of northern Mozambique, with simultaneous increases in overall ecosystem productivity and renewal of the resource base.

In February 2010, the CARE-WWF Alliance supported the Moma District government, the Ministry of Fisheries, District Services for Economic Activities (SDAE) and local communities to establish 2 experimental fish sanctuaries in the Moma estuary. The communities of Thapua and Corane oversee these sanctuaries, which prohibit all fishing in specific no-take zones, while allowing artisanal fishing in adjacent spill-over areas.

In February 2014, the CARE-WWF Alliance and partners conducted a socio-economic survey of nearly 300 families in 6 coastal communities in the estuary to explore the social impact and the community perception of the surveys, together with a study of biological impact. The surveys demonstrated strong positive results of community management of fish sanctuaries,. They also provided valuable information on how communities use a combination of farming, fishing, and other natural resources.

Community commitment is key

Most (75%) of the heads of household are originally from the communities where they current live, and another 13% have lived in the communities for longer than 10 years. These community members are important sources of information about the changes in ecological circumstances over several years, and on livelihood strategies based on natural resources.

More than 85% of the households have children, so they have a vested interest in maximizing the potential to enhance livelihood strategies for current and future generations. These communities are the driving force behind the success of community managed interventions with the aim of improving the health of ecosystems, ensuring sustainable use of the land and sea, and building their resilience to climate change. Their perceptions and buy-in are therefore crucial for success.

Farming provides the foundation

Although many households rely on both farming and fishing, agriculture remains the main source of food or income for 90% of the households. Most farm less than 2 hectares of land, emphasizing cassava, corn, peanuts and different varieties of beans. However, harvests are declining due to crop diseases and pests.

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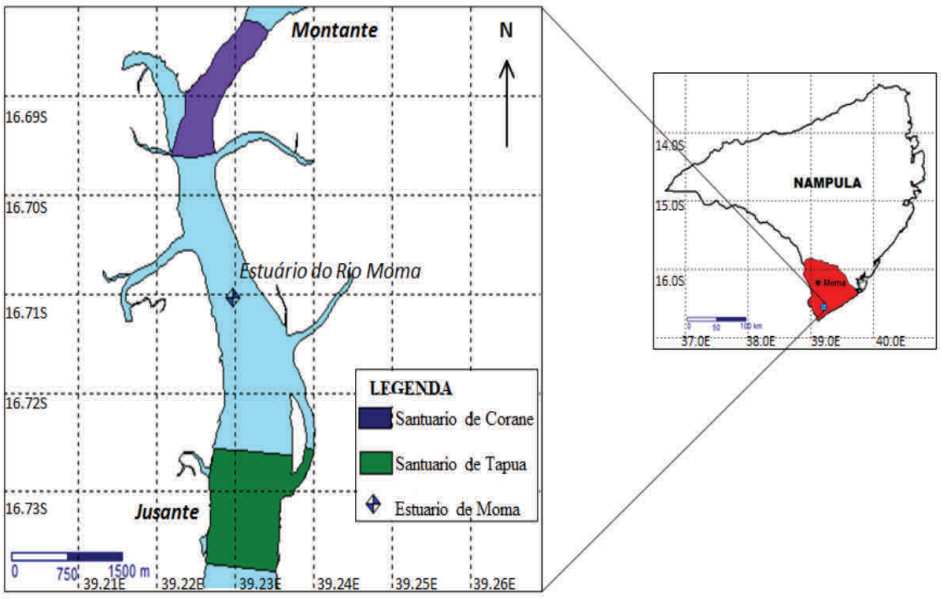

Lack of good seed stock heightens vulnerabilities to crop failure. Also, local farming techniques need to be adjusted to adapt to changing circumstances, to maximize agricultural productivity and decrease vulnerability to climate change.

Fishing is an important supplement

Fishing is a vital part of livelihoods in these coastal communities, with over half of the households fishing at least 3 times per week. Women tend to focus on collection of marine species such as crabs, mollusks and clams., especially in mangroves and inter-tidal zones.

Fishing nets are expensive, so many fishermen tend to use hook and line and other methods. A large portion of the men work for boat owners, who retain half the catch, so the workers only take home a small portion of the catch for household consumption. When larger quantities of fish are caught, they are sold fresh for local use; few fish leave the communities where they are landed.

Benefits for people & for biodiversity

The vast majority (88%) of households reported that the fish sanctuaries in Thapua and Corane increased the number of fish available in spill-over zones. This is supported by data from the biological study, which demonstrated not only an increase in the number of fish, but also an increase in the size of the fish as well as a doubling in the number of species over 4 years. This increasing fish population has led to a surge in the number of fishermen working the waters in the spill-over zones.

Large protected areas can hurt the livelihoods of fishing communities. In contrast, the evidence shows it is possible to design a mosaic of smaller community managed sanctuaries can enable fish populations to recover, while still allowing fishers to work the spill-over zones close to home.

As a result, one of the most important impacts of the sanctuaries is that more fish has become available to families, either from having a fisherman in the household, or indirectly through sale of fish on the market. This is reflected in local diets; nearly 70% of families say they eat more fish because of the sanctuaries. This is especially significant before agricultural harvests come in, or when farm yields are low.

These fish sanctuaries have clearly increased the abundance, size and diversity of fish in spill-over zones. This has drawn fishers from communities farther away, increasing the number of people competing for fish. Nearly 75% of respondents supported the establishment of more sanctuaries elsewhere in the estuary. This would mean other communities could benefit from this methodology, while reducing the pressure of having fishers from many communities working the spill-over zones of the current sanctuaries.

The sanctuaries are popular. Over 84% of respondents said that the objectives of the fish sanctuaries are just, and 75% of the men and women surveyed supported the creation of more sanctuaries.

Growing demand for fish sanctuaries

Based on this demand, 21 communities in Moma estuary have formed Community-Based Natural Resource Management committees, focused on establishing more fish sanctuaries in Moma estuary. A further testament to the success of this approach is seen in the larger, more highly populated estuary in neighboring Angoche. Based on learning exchanges with their counterparts in Moma, 19 communities have already worked with the CARE WWF Alliance and the Ministry of Fisheries to select sites for new community-managed sanctuaries.

People can manage their resources

Agriculture and fishing exist side by side in coastal Mozambique. The combination offers diversity to family livelihoods, helping to build overall wealth, while reducing vulnerability to climate change and other shocks.

The socio-economic and biological surveys demonstrate that people are able protect their marine systems in ways that allow fisheries to recover, improve biodiversity, and benefit fishing communities. Clearly, people want more of this approach. The impressive demand by neighboring communities for technical support in establishing their own locally managed fish sanctuaries shows that this approach, once started, can rapidly improve lives and protect biodiversity at scale, and for relatively minimal cost.

For more information about the CARE-WWF Alliance:
email: info@care-wwf-alliance.org
website: http://primeirasesegundas.net

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World Wildlife Fund US
1250 24th Street, NW
Washington, DC 20037
www.wwfus.org

CARE USA
1825 I Street, NW, Suite 301
Washington, DC 20006
www.care.org

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