

## Africa/ Zanzibar

### Winning Strategies

*A mixed bag of innovative strategies helps to empower women and improve biodiversity in Zanzibar*

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It is spring tide in the Fumba Peninsula in Zanzibar. Amina Mustapha is crouched over knee-high waters, looking for bivalves until the tide returns. Most of the time, the meat helps to feed her family, but on a good day, Amina will be able to sell some of it as well, at the local market.

Since the soil is salty and mixed with coral rag, agriculture in the peninsula is virtually impossible, forcing women like Amina to depend on oyster- and other bivalve-collection for a living. Zanzibari women collect over 21 species of bivalves, out of which four are more prevalent and favored over others: cockles (*Anadara antiquata*), giant murexes (*Chicoreus ramosus*), conchs (*Pleuroploca trapezium*), and oysters (*Pinctada margaritifera*). The oysters are the most valuable, fetching up to US \$1 for about 20 specimens.

The Fumba Peninsula is situated within the Menai Bay Conservation Area (MBCA)—the biggest marine conservation area in Zanzibar located in the southwest of Unguja Island. Unguja Island is a site of regional importance within the Eastern Africa Marine Ecoregion. Its surrounding waters hold traditional fishing grounds, encompassing extensive areas of coral reefs, sea grass beds and mangrove stands. Together, these interconnected ecosystems form the resource base for local fisheries.

The government of Zanzibar officially declared Menai Bay a conservation area in August 1997. The main goal of the MBCA is to conserve the natural resources of the area for sustainable use, with active community participation. Although there are no 'no take' zones, the Bay has stricter fishing regulations than do other parts of Zanzibar. Stringent patrolling against illegal fishing is carried out in collaboration with the government's anti-smuggling unit. Local fishermen



help patrol their areas using hand-held radios provided by the World Wildlife Fund and use a 7-meter fibreglass patrol boat to respond to emergencies and incidents of illegal fishing. This patrol system has significantly reduced dynamite fishing in the area and those caught using illegal nets are increasingly being prosecuted in court.

When the USAID-funded Sustainable Coastal Communities and Ecosystems Program (SUCCESS) began working in Fumba with their regional counterpart—the Western Indian Ocean Marine Science Association (WIOMSA)—conservation in the MBCA had focused exclusively on off-shore fisheries. Meanwhile, the intertidal resources, which women gleaned during low tide, remained unmanaged. As a result, bivalve stocks were declining and gleaners had to walk into deeper and deeper waters to collect stock. SUCCESS used this opportunity to work with the women gleaners to evolve intertidal zoning methods for better bivalve management and also to find new ways of increasing earnings. Here was a perfect example of linking women's empowerment, economic growth and biodiversity conservation.

SUCCESS began by working with local women to produce jewelry from discarded seashells and to cultivate *mabe* pearls. *Mabe* pearls are half-spherical pearls, formed when a plastic half-dome is glued to the inside of a pearl oyster shell, and later, covered with nacre. The premise was that tangible benefits

would win constituencies and help improve biodiversity conservation. Further, this alternative livelihood had the potential to generate a much higher income than bivalve harvesting. Recently, the *mabe* grown on Mafia Island and set in silver, sold for US \$40 a piece in Tanzania.

Pearl culture however involved more than just teaching how to implant and set the oysters. To tend to the oysters, which thrive in deep waters, the women had to swim—an activity considered inappropriate for the Muslim women of Zanzibar. After discussions with the community, however, it was agreed that *mabe* farming was promising enough to justify breaking this cultural taboo. After receiving swimming lessons organized by SUCCESS, the women are now working the oyster lines. The first three cultured half-pearls were produced in May 2007, and a larger harvest is expected in November 2007.

The women also learned business management and jewelry-making skills. “Before we started, we were afraid our products might appear inferior to the jewelry and pearls imported from Asia. But fortunately we found that our local products were unique and different,” says Dr. Jiddawi, from the Institute of Marine Science. Interest in the jewelry has been high and there are several marketing and sales outlets, including local curio shops, festivals and trade fairs.

Amina is upbeat. “We find jewelry-making to be another great opportunity to improve our livelihoods, in addition to seaweed farming and other land-based activities” she says.

The success of these livelihood activities has won community co-operation and support for bivalve management. The SUCCESS program worked with MBCA and the villages of Bweleo, Fumba, and Nyamanzi to adopt four ‘no take’ zones, an associated co-management plan and village bylaws. The MBCA authorities and Department of Fisheries and Marine Products have enthusiastically embraced the initiative by adopting the bylaws. Once approved by the District Commissioner where the three villages are located, these bylaws will be legally binding. Thereafter, the ‘no take’ areas will be closed to all fishing and collection for an initial period of three years.

Although the bylaws still await final approval, Amina and the other women already conform to the rules. After developing a baseline count of the bivalves inside and outside the ‘no take’ zones, trained women from the village are eagerly monitoring the numbers and sizes of the cockles to determine improvements in stocks. The women feel empowered to take on local stewardship of the intertidal resources through community-based management. They are also encouraged by the first harvest of *mabe* pearl and the initial response to the jewelry sales. They are now looking to collaborate with women and men in other parts of the Menai Bay to replicate their success throughout the conservation area.

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