

sea life

On Madagascar, an innovative eco-tourism project is working to safeguard the marine environment and the communities who rely on it to survive. **Ruth Rosselson** reports.

On the west coast of Madagascar, around 200 km north of the nearest major town, lies the village of Andavadoaka. Most of the population live off the sea as they have done for centuries, fishing or hunting for octopus. With no paved roads to the village, the small sailing pirogues are not just fishing vessels but an important mode of transport. Life revolves around the sea and it is integral to the identity of the Vezo people of the area.

While fishing used to be just for subsistence or trade with inland farmers, in recent years the community have been selling their catch to large fishing companies. However, the marine life is not as abundant as it once was and villagers have noticed a decline. Suzanne, 70, used to fish for octopus. "There aren't as many as there used to be," she says. "We used to catch up to 40 each time. Now, we're lucky to get four or five." She

remembers when the bay was teeming with fish, and the fishers could fill their pirogues with little effort. "Now they must go much further, and they still don't catch as many," she says.

The reason for the decline in fish stocks isn't just down to overfishing. In 1998 and 2000, over 300 km of Madagascar's coral reefs suffered from mass bleaching episodes, resulting in the loss of up to 99% of their coral. Along with the threat of climate change and pollution, the reefs and abundant life they support are now seriously at risk. The growth of the coastal population, due to migration and larger families, places a greater burden on a fragile environment.

The remote location means that Andavadoaka is an unlikely tourist destination. Yet, this has not deterred Blue Ventures, a British not-for-profit organisation, from attracting paying volunteers to expeditions based in the village. Every six



MADAGASCAR

POPULATION 19.6 million
AVERAGE LIFE EXPECTANCY 62 years
AVERAGE PER CAPITA INCOME \$996

Covering more than 587,000 sq km and with more than 5000 km of coastline, Madagascar is the world's fourth largest island, after Greenland, New Guinea, and Borneo.

The south-western coast of Madagascar supports the fourth largest continuous coral reef system in the world, extending more than 300 km.

The marine waters of Madagascar are home to 70% of all species found in the Western Indian Ocean.

Among the 6,000 species known to live off Madagascar's coasts are giant clams, humpback whales, 829 species of fish, 400 species of coral, more than 56 species of sharks and five species of endangered marine turtles.





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weeks, the volunteers arrive in Andavadoaka, where they are trained in scuba diving and marine sciences, helping to collect information on these little-studied reefs. Hundreds of marine species have been catalogued from data provided by volunteers, including many that are endangered, and some that are believed to be new to science. The information is used to implement conservation plans across the region, and shared with government agencies to assist national conservation activities and fisheries policy. Volunteers also take part in community activities such as beach clean ups, and teaching English lessons to local children.

Most of the volunteers find themselves well out of their comfort zone in this remote village without modern amenities. "The whole experience was lifechanging" said Victoria, 24, from the UK. "I did things I never knew I was capable of." Blue Ventures also offers scholarships to Malagasy nationals, enabling them to join the expeditions and many have gained employment as a result.

Since 2003, Blue Ventures has successfully combined these eco-tourism packages with an award-winning conservation programme. The revenue from the expeditions, together with grants and awards, goes to fund conservation and community work. It began with a pilot project to create temporary seasonal 'no take zones' for octopus. These closures allowed the octopus to grow in size and number, resulting in greater yields when the restrictions were lifted. Catches of octopus in some areas increased 13 times, while the weight of octopus caught increased 25 times, so increasing incomes for the fishers. The closures were so successful that the Malagasy government decided to implement similar restrictions across the country.

Working with Madagascar's Institute of Marine Sciences and the Wildlife Conservation Society, the project includes 21 villages in a partnership known as 'Velondriake', meaning 'to live with the sea'. Since 2006, Velondriake has been

working to develop a network of community-run marine and coastal protected areas. This network spans 800 km and covers coral reefs, mangroves, seagrass beds and baobab forests. In 2009, Velondriake celebrated new local legislation making it easier for the community to enforce the reserves, and to punish those using destructive fishing practices.

The success of Velondriake rests on the fact that Blue Ventures and its partners work directly with the community. Members receive training in managing and monitoring. While this came from Blue Ventures' staff at first, increasingly, key individuals from the community have become educators themselves. Meetings and workshops are held regularly from which the boundaries of the reserves are determined. In September 2009, permanent no-take zones were announced. Velondriake is now the largest community-managed protected area in the Indian Ocean and has become the blueprint for similar projects in the region.

Blue Ventures community work isn't limited to the marine protected area. Alternative livelihood projects are developed to reduce fishing pressure. As a result, sea cucumber and algae farming projects have evolved, as well as eco-guide training and a flourishing women's association. Recognising the impact of population growth on the environment led Blue Ventures to launch a family planning initiative in partnership with government health officials. This provides access to family planning and reproductive health services to Andavadoaka and 26 other villages. It is hoped that these measures will reduce pressure on the marine environment and ensure the survival of the Vezo people's way of life. **D**

Find out more at www.blueventures.org



"I've seen big changes"

Roger Samba, a community outreach officer and trainer, is president of the Velondriake community. Aged 34 and married with two children, he was formerly a school teacher and president of the village of Andavadoaka.

"I was born in Lamboara, another village but moved to Andavadoaka to become a teacher. A few years ago, I became friends with the first expedition manager of Blue Ventures [which] stimulated my interest in conservation and education. My interest led me to try and get the village community to work with Blue Ventures on conserving our natural environment. Since Blue Ventures has been in Andavadoaka, I've seen big changes in the environmental knowledge of people. I've also had an opportunity to interact with the wider Malagasy community as well as people from all around the world. I really do believe there's been a widespread change in the mentality and understanding of the local community. People are now more educated and understand how important it is to conserve our natural resources for the future. I would like my village to become a town that works in harmony with the environment to safeguard our natural resources for everyone."

"It's definitely improved my life"



Clarice is a member of the village women's association, working with Blue Ventures to develop livelihoods for local women. She is 33, unmarried, and has three children aged 14, seven and two.

"Having Blue

Ventures in the village means that there's the possibility of employment and there are volunteers and tourists around to sell my embroidery to. It's a really important income for me because I don't fish and am not married. Each expedition, the women's association cooks for the volunteers and this is another way for us to earn money. It's definitely improved my life. My hut is very small and in great need of repair. Eventually I hope to earn enough money to build a new one."



Suzanne, 70, has seen octopus stocks decline and recover.

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