

## Pioneering new approaches to marine conservation

**Blue Ventures** is an award-winning marine conservation organisation, dedicated to working with local communities to conserve threatened marine environments.

Our highly acclaimed conservation programmes work with some of the world's poorest coastal communities to develop conservation and alternative income initiatives to protect biodiversity and coastal livelihoods. The results of our work help us to propose new ideas to benefit coastal communities everywhere.

In recent years Blue Ventures has won widespread international acclaim for its innovative approaches to addressing the challenges faced by coastal communities. Its recent accolades include the United Nations' Equator Prize and SEED Award, two of the most prestigious global awards for biodiversity conservation.

## Sustainable approaches to community-based aquaculture

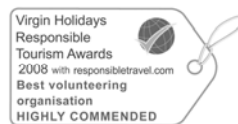
Coastal communities in much of the western Indian Ocean depend entirely on healthy marine resources for subsistence, income and cultural identity. However coastal ecosystems throughout the region are being degraded at unprecedented rates as a result of human impacts and climate change. In southern Madagascar, some of the largest reefs in the Indian Ocean are suffering from the impacts of overfishing and warming sea temperatures, yet this drought-prone region's tribal coastal *Vezo* communities currently have no alternative to traditional fishing for survival.

As part of an integrated conservation and community development programme being pioneered in the region, Blue Ventures is working to develop sustainable alternative income sources for *Vezo* coastal communities, through innovating new approaches to community-based aquaculture. In addition to reducing fishing effort and relieving pressure on fragile marine ecosystems, these alternative income sources aim to alleviate poverty in *Vezo* communities.

### Sea cucumber farming

Sea cucumbers, also known as sandfish, belong to the holothurian family of echinoderms, marine invertebrates related to starfish and sea urchins. Normally a common and placid inhabitant of the sea floor in tropical lagoonal environments, sea cucumbers filter their food from sand and sediment, thriving in shallow environments such as those found around the coasts of Madagascar. Yet populations of this animal have plummeted throughout the world in recent years in response to rapidly growing market demand from Asia, where the sandfish is prized for its alleged aphrodisiac properties. On the wholesale market in Singapore sandfish can fetch up to US\$220 per kilogram, and prices regularly rise higher still.

Blue Ventures is pioneering sea cucumber farming as an alternative livelihood for coastal communities in southern Madagascar. The technique provides an ideal alternative livelihood for coastal communities, being



relatively simple, and requiring minimal labour and low capital investment. The species being cultured, *Holothuria scabra*, is one of the most valuable tropical sea cucumbers, exported for the lucrative *bêche-de-mer* trade. Juvenile sandfish are reared in a hatchery and transported to family-owned enclosures in protected lagoons adjacent to *Vezo* villages. Once installed in the enclosures, community members maintain the pens for approximately 10 months while the juveniles grow to reach market size. At the end of the grow-out cycle, the families sell the sea cucumbers back to the hatchery for processing and export.

Families involved in the sea cucumber farming are responsible for the construction and maintenance of their pens together with the husbandry and surveillance of their stocks. They receive technical support and training from Blue Ventures at every stage of the process and work closely with local institutions, including local fisheries management committees. With no need for additional feed or chemicals the technique has no adverse impact on the natural environment. Following pilot studies conducted in 2007 the project has grown to a commercial-scale operation involving 25 families in the rearing of 30,000 juveniles per year.

## Seaweed culture

Blue Ventures is also working to develop seaweed culture as a new form of employment to bring much needed income to coastal communities in southern Madagascar. The project is focusing on the culture of *Kapphycus alvarezii* or *cottonii*, the most valuable species of red seaweed. A substance called caragheen, valued for its stabilising and gelling properties, is extracted from the seaweed and utilised by the food, agricultural and pharmaceutical industries. As the world demand for this production continues to grow, suppliers are looking to diversify the number of producing countries, currently concentrated in the Philippines and southeast Asia.

By working in partnership with private sector export companies this project is providing communities with direct access to the world's largest commercial seaweed buyer and facilitating the rapid proliferation of community-owned seaweed farming units in southern Madagascar, transferring the latest culture technology to village associations. In its current pilot phase, the project is working with 25 farmers in two villages, with a production system designed to enable each producer to grow a minimum of 500kg of dried seaweed per harvest, generating a minimum supplementary income of US\$50 per farmer per month.

---

**For information on Blue Ventures and its award-winning work**, please visit [blueventures.org](http://blueventures.org) and [blueventures.org/newsroom/our-awards](http://blueventures.org/newsroom/our-awards).

**For information on the project** or to discuss **partnership opportunities** please contact:

Frances Humber, Research Coordinator: [frances@blueventures.org](mailto:frances@blueventures.org) / +44(0)20 3176 0547

---

## Key achievements, 2003-2009

- Implementation of applied, multidisciplinary marine conservation, education and research programmes in [Madagascar](#), [Fiji](#) and [Malaysia](#).
- First European-based organisation to win the [SEED Award](#) (UNEP, UNDP, IUCN), in recognition of innovative entrepreneurial solutions for sustainable development.
- Creation of [Velondriake](#); the largest community managed marine protected area in the Indian Ocean - winner of the [UNDP Equator Prize](#) for biodiversity conservation and the [WWF J. Paul Getty Award](#) for conservation leadership.
- Replication of Velondriake's model for marine protected area creation at over [50 other sites in Madagascar](#), and other areas in the Indian Ocean.
- Development of innovative fisheries research and conservation efforts over 500km of coastline, focusing on [shark, turtle and reef fisheries](#).
- Creation of [Blue Ventures Carbon Offset](#); a highly-acclaimed community-based carbon offsetting programme investing in fuel-efficient stoves in rural communities, delivering tangible health, environmental and emissions benefits.
- Creation of sustainable [aquaculture initiatives](#) in Madagascar. The first commercial-scale sea cucumber farms in the Indian Ocean provide now alternative income sources for communities involved in conservation activities.
- Development of pioneering reproductive health and [family planning](#) services in partner communities, as part of integrated population, health and environment (PHE) programmes.
- Provision of [educational scholarships](#) enabling hundreds of children each year to attend school in partner communities.
- Provision of intensive residential marine conservation [training scholarships](#) to over 50 graduate students from developing countries, as well as fully-funded undergraduate and post-graduate study scholarships to under-privileged students.
- [Field-based training](#) in marine conservation for over 1,000 international volunteers.
- Creation of [socially and environmentally-responsible](#) ecotourism programmes within partner communities providing long-term financial sustainability for conservation efforts.
- Recognition from [numerous awards](#) for responsible tourism, including the [Condé Nast Environmental Award](#) (2009), the [National Geographic Geotourism Award](#) (2008), the international [Skål Ecotourism Award](#) (2006) and the UK's Responsible Tourism Award (a record 5 times –[2004](#), [2006](#), [2007](#), [2008](#) & [2009](#)).

---

**For further information or to discuss partnership opportunities please contact:**

Alasdair Harris, Research Director: [al@blueventures.org](mailto:al@blueventures.org) / +44 (0)20 3176 0547

---