Blue forests

Community-led mangrove management to protect coastal ecosystems and livelihoods



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Some mangroves can sequester **more carbon** per unit area than **undisturbed Amazonian rainforest**

Globally, the extent of mangrove forests has declined by over the past century



The deforestation of mangroves account for up to

10% of global emissions from deforestation and annual economic losses of \$4-19 billion

> Data from Donato et al, 2011 and Pendleton et al, 2012

Mangroves are exceptionally productive ecosystems, not only for the unique biodiversity that they support, but also for the host of benefits, critical to the well-being of millions of coastal people, that they provide. These include coastal protection from storms, shore stabilisation, water filtration, building materials and fuelwood. They also support important fisheries, including shrimp and crabs, which are crucial to the livelihoods and food security of coastal people.

However, mangroves are being lost at a rate of 1-2% per year, faster than any other forest type on earth. Their precious goods and services will be lost completely if deforestation and degradation are not urgently addressed.

What is blue carbon?

The value of mangroves, or 'blue forests', to coastal communities is matched only by the extraordinary amount of carbon stored in their biomass and sediments, known as 'blue carbon'. This carbon has a value on international carbon markets.

If this value can be realised and transferred to the people whose livelihoods depend on the exploitation of mangroves, it could incentivise and finance community-led mangrove management, and help safeguard the fisheries that mangroves support. However, blue carbon has not been fully included in emissions accounting, and standards for blue carbon markets are still in their infancy. We are working to change this by researching the carbon dynamics of mangroves, helping to develop robust accounting methodologies for blue carbon projects, and supporting community-led mangrove conservation in the Indian Ocean.

Madagascar has the fourth largest extent of mangrove forests in Africa nearly **2,200**km² equivalent to **308,000** football pitches

Blue forests in Madagascar

Madagascar's mangroves support globally important marine biodiversity, and underpin the traditional livelihoods and fisheries of some of the world's most vulnerable coastal communities. Yet they are being lost at accelerating rates, particularly because of unregulated harvesting for timber and charcoal sold at local and regional markets.

Increasing demand for seafood from a rapidly growing population and poorly regulated international markets are exacerbating the pressures on mangrove fisheries, with further devastating consequences to the livelihoods that they support.

Building the foundations for blue carbon

Generating blue carbon credits through the sustainable management of mangroves could help to alleviate poverty and support biodiversity conservation in Madagascar's coastal areas. We are contributing to the science required to make community-led, rights-based blue carbon projects a reality, and building the capacity of local management associations to protect their mangroves.

Our research is seeking to quantify the exact nature and dynamics of carbon sequestration and fluxes in Madagascar's mangroves in order to ensure the proper valuation of blue carbon credits. By maintaining strong communications with national institutions, we are supporting the development of mangrove conservation projects that integrate into Madagascar's national REDD+ strategy.

We believe that blue carbon projects should go beyond simply fulfilling the conditions of Free, Prior and Informed Consent; they should be driven and managed wholly by local stakeholders. We are building the foundations for coastal communities to participate meaningfully in blue carbon and gain an equitable share of the benefits by engaging local management associations in project planning, management and monitoring. We are also providing regular updates on our progress and technical capacity building to national authorities in support of these initiatives.

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Our research

Our research priorities stem from our aim to develop blue carbon projects that fulfil the Verified Carbon Standard, Climate Community and Biodiversity Alliance, and Plan Vivo standards. These are:

Quantifying greenhouse gas emission reductions that can be achieved through mangrove conservation

- Remote sensing analysis of the historical changes of mangrove forest cover
- Carbon stock measurements within mangrove forests and wetlands
- Analysis of the drivers and underlying causes of mangrove and wetland loss
- Modelling of future mangrove forest and wetland changes

Understanding socioeconomic impacts of mangrove conservation

- Participatory research to determine local uses of mangroves and their fisheries
- Analysis of traditional user rights, tenure and laws affecting implementation of mangrove conservation projects
- Establishing socioeconomic baselines and projecting scenarios to evaluate the impacts of conservation activities and ensure that any financial costs borne by local communities due to these activities are fully compensated
- Researching and developing viable alternatives to mangrove forest and fisheries exploitation, including ecotourism and pro-mangrove aquaculture

Through our research, we are working to ensure that blue carbon initiatives bring equitable benefits to mangrove-dependent communities.

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Building community capacity for sustainable mangrove management

Madagascar's coastal communities stand to lose the most from the loss of mangrove habitats and, as the primary users of mangroves, are best placed to lead conservation initiatives.

We are working closely with community associations and local and regional authorities to:

- Ensure our partner communities have legal mangrove management rights;
- Establish forest management plans, including sustainable harvesting practices, to enable communities to sustainably profit from mangrove wood;
- Provide training in resource governance and enforcement;
- Support communities to conduct mangrove reforestation;
- Develop fuelwood and timber plantations to help meet local market demand from alternative and sustainable sources.

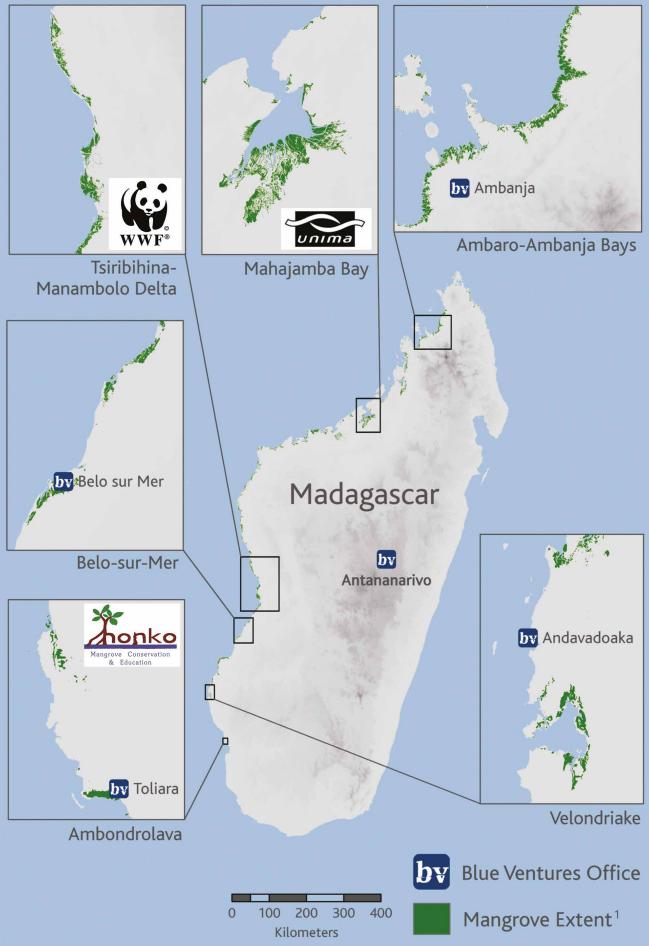
Integrating fisheries management

Although protecting and restoring mangroves should revitalise fish stocks, beyond deforestation, mangrove fisheries face additional threats from overexploitation. Effective fisheries management must therefore be integrated into community mangrove conservation strategies.

We are working with communities in Madagascar to develop pragmatic mangrove fisheries management approaches, including the use of temporary and permanent closures of mangrove fishing grounds to rejuvenate and sustain mud crab and shrimp fisheries.



In close partnership with the private sector, we are also developing a financial model that integrates marketbased incentives to drive sustainable mangrove fishing practices and ensure their long-term viability.









We rebuild tropical fisheries with coastal communities

Blue Ventures works with coastal communities to develop transformative approaches for catalysing and sustaining locally led marine conservation.

We work in places where the ocean is vital to local cultures and economies, and are committed to protecting marine biodiversity in ways that benefit coastal people. Our conservation models are designed to demonstrate that effective management improves food security and makes economic sense.

Over the past decade, our innovations have guided national fisheries policy and been replicated by communities, NGOs, businesses, donors and government agencies along thousands of kilometres of coastline. So far our work has impacted the lives of more than 150,000 coastal people.

Working holistically

Blue Ventures recognises that improving fisheries management alone is not enough to overcome the numerous and interrelated drivers of marine environmental degradation.

Our programmes in Madagascar encompass locally led marine conservation, sustainable fisheries management, community-based aquaculture and ecotourism businesses, educational scholarships and reproductive health services.

This integrated approach addresses the interconnected challenges of poor health, unmet family planning needs, environmental degradation and food insecurity in a holistic way. It enables communities to manage their resources sustainably, both now and for the future.

Communities first

Above all, we listen to community needs, responding in a sensitive and pragmatic way for lasting benefits.

Passion & belief

Our mission is urgent and critical, we believe that our models work, and we are determined to get the job done.

Valued people & effective teams

We work in diverse and inclusive teams where all members have a voice and influence. We are effective because our work is integrated across teams and projects.



Innovation & courage

We are resourceful and creative. We are prepared to take risks and challenge broken paradigms.



Openness & humility We are an open source social enterprise. We work in a transparent and collaborative way to pass on what we learn to others who share

Grounded in evidence

our vision and passion.

We have high standards and are not afraid to be self-critical. If we see that something doesn't work, we change tack until we're on the right course.





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



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THE ST ANDREWS PRIZE FOR THE ENVIRONMENT







Ashoka &

Asnoka & National Geographic Geotourism

finalist





Responsible Tourism Awards 2006: highly commended for 'Best Volunteering Organisation



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BUCKMINSTER FULLER CHALLENGE





Winner, Buckminster

For work to protect

Fuller Challenge, 2011

marine resources and improve the livelihoods of

poor coastal communities in Madagascar.



for creating the Indian Ocean's first replicable blueprint for Awards community-centred marine and coastal conservation planning.

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Observer Ethical Awards.

Blue Ventures was comm

ended

runner-up 2010.



Responsible Tourism Awards 2009: highly commended for "Best in a marine environment



Responsible Tourism Awards 2010: Winner Finalist for "Best volunteering organisation"



Responsible Tourism Awards 2004: highly commended for "Best in a Marine

Environment



seed awards 2005 WINNER







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Skal Ecotourism Awards 2006: Winner, "General Countryside"

winner (in partnership)

