



OVERVIEW OF THE SOUTH WEST INDIAN OCEAN INVESTMENT PORTFOLIO



PORTFOLIO GOAL

This portfolio aggregates various projects to reach a scale that will attract investors and is intended to provide the investment package and enabling environment to support people and communities, particularly those with low incomes, to reach an adequate and equitable standard of living, working and living, in harmony with the natural environment and resilient to a changing climate.

RETURN ON INVESTMENT WILL BE MEASURED USING A “THREE RETURNS” FRAMEWORK:

1

A return of coastal resilience.
Key to building climate mitigation and adaptation.

2

A return of biodiversity and fish stocks.
Key to ensuring on-going economic value and food security.

3

A return of thriving communities and investment.
Key to attracting resources and delivering sustainable development.

THE UNIQUE VALUE OF THIS PORTFOLIO APPROACH

1. QUALITY ASSURANCE

WWF is the largest conservation organisation across the globe and along with our partners, we represent credible leaders in the fields of conservation and sustainability.

Each project has been selected based on an evaluation of the following:



Contribution to improved coastal resource management.



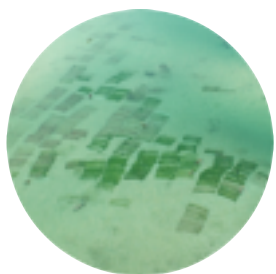
Contribution to social and economic upliftment of coastal communities.



Investment potential.



Replicability.



Scalability.



Stage of development.



Social and environmental safeguards*.

ENVIRONMENTAL AND SOCIAL SAFEGUARDS FRAMEWORK

*WWF's Environmental and Social Safeguards Framework (ESSF) provides an institutional mechanism to manage the environmental and social risks of WWF's work, helps deliver better conservation outcomes, and enhances the social well-being of local communities in the places where WWF operates. WWF's safeguards framework is designed to address a broad range of environmental and social risks, mindful of the different challenges and needs in different parts of the world. It systematizes good governance practices to achieve human rights, transparency, non-discrimination, public participation, and accountability, among other goals. The community-led enterprises promoted through this portfolio comply with this framework and gives an investor the assurance that they aim at delivering both conservation and social benefits.

2. SOLVING THE ISSUE OF SCALE

This portfolio aims to solve the challenge of scale required by investors by providing a means to aggregate projects across locations and thematics into a ticket size suitable to a wider range of private and public investors.

An aggregated approach across a portfolio of multiple small-scale projects spanning geographies, can create an investment proposal of sufficient scale to improve the attractiveness to a wider range of investors and minimise the relative transaction costs.

3. IMPACT MEASUREMENT

Projects within this portfolio contribute to all or some of these impact metrics.



SUSTAINABLE FISHERIES

Adopt sustainable practices to maintain healthy stocks & produce sustainable seafood.



MARINE DATA & TECHNOLOGY

Mobile phone and GPS technology supports enforcement, provides a means for communities and authorities to collect much needed data for fisheries management, and enables effective mapping and planning of conservation and restoration efforts. The technology as well as the data generated have a value that can be converted into income generation.



FLOOD AND STORM PROTECTION

Restored coastal ecosystems such as mangrove forests, sea grass and coral reefs increase flood and storm protection and build climate resilience.



CLIMATE MITIGATION

Carbon stocks from restored or conserved ecosystems can be monetized through the sale of carbon credit and/or provide certified emission reduction outcomes (if conditions of leakage and additionality are met).



DIVERSIFIED ENTERPRISE DEVELOPMENT

This diversifies community income which in turn reduces pressure on natural resources and builds socio-economic resilience.



RENEWABLE ENERGY

Solar home systems and solar-powered cooking stoves offer renewable energy, making the unsustainable harvest of mangrove fuel-wood or mangrove charcoal production redundant. The sale of renewable energy into these communities provides an investment opportunity, but the availability of energy also further fuel the economic potential of a community in many ways e.g. to provide energy to start up a business, to gain access to the internet, to support health and education and access to resources etc.

PROJECTS IN THIS PORTFOLIO



THE SOUTH WEST INDIAN OCEAN CONTINUES TO BATTLE DEVELOPMENT CHALLENGES INCLUDING HIGH LEVELS OF ABSOLUTE POVERTY, A YOUTH BULGE IN SEARCH OF FORMAL EMPLOYMENT, PREVALENT INFORMALITY IN THE ECONOMY, OVERDEPENDENCE ON EXPORTS FOR PRIMARY COMMODITIES, PERSISTENT INCOME INEQUALITIES, AND DEFICIENT INLAND-BASED INFRASTRUCTURE. THESE CHALLENGES ARE BEING COMPOUNDED BY THE ONGOING COVID-19 PANDEMIC.





...e countries in the South West Indian Ocean -
Mozambique, Kenya, Tanzania, South Africa and Madagascar.

The annual “gross marine product” of the Western Indian Ocean region – equivalent to a country’s annual gross domestic product (GDP) – is at least US\$20.8 billion. The region’s total ocean asset base is conservatively estimated to be at least

US\$333.8 billion.

These values are derived from direct outputs from the ocean (e.g. fisheries), services supported by the ocean (e.g. marine tourism) and adjacent benefits associated with the coastlines (e.g. carbon sequestration). Several of the countries of the South West Indian Ocean are among the poorest in the world, the ocean’s contribution is significant toward alleviating poverty. Of critical importance, for example, are the food and livelihood benefits that the ocean provides but which are not captured in conventional economic analysis.

**KENYA AND TANZANIA
LOST ABOUT**

18%

**OF THEIR MANGROVES OVER 25
YEARS, AND MOZAMBIQUE LOST**

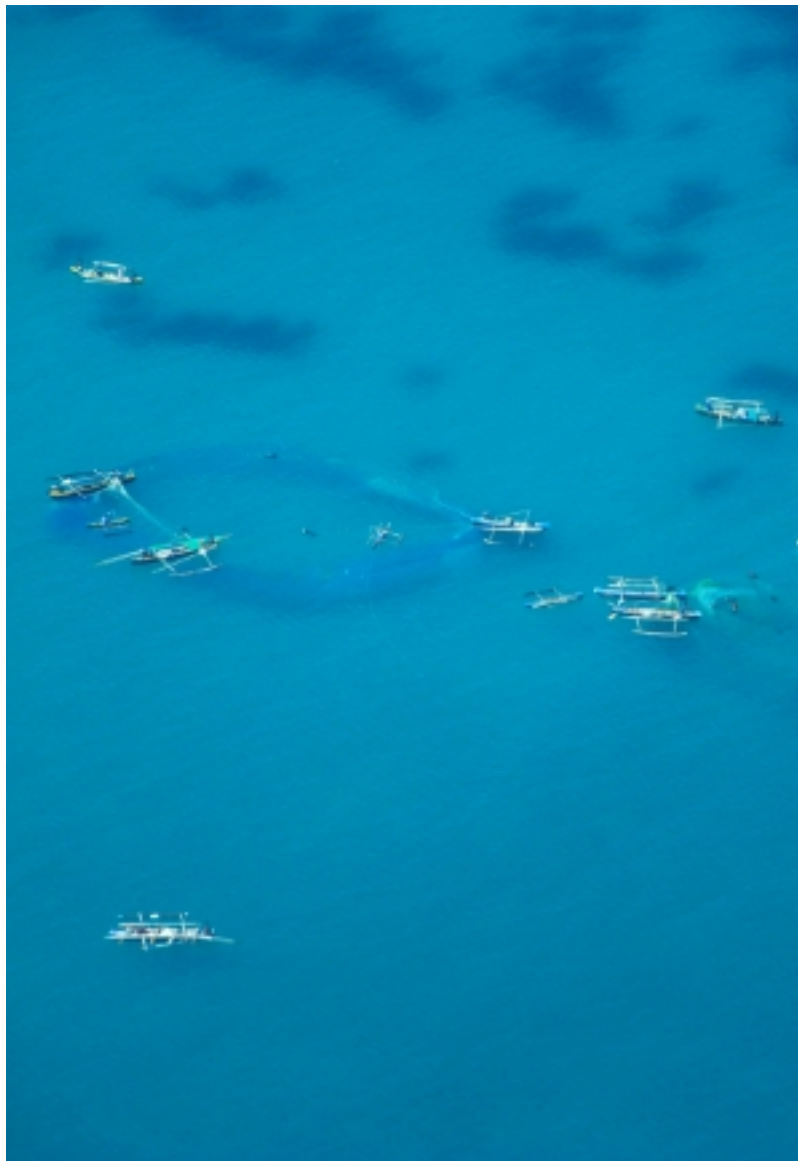
27%

Valuable coastal ecosystems are being degraded.

Much of this value is concentrated on the coasts, assets that we’re now rapidly eroding so much so that we have already lost half of our coral reefs and mangroves over the last 30 years due to overharvesting, climate change induced coral bleaching, pollution, acidifying seas, sedimentation, and changes in river flow. For example, **mangrove coverage is diminishing in most countries in the region – Kenya and Tanzania lost about 18 percent of their mangroves over 25 years, and Mozambique lost 27 percent over a shorter timeframe.**

Coral reefs, mangroves and seagrass beds are some of the planet’s most productive ecosystems, providing food security, important breeding and feeding grounds for fisheries and other species, protection from storms, economic opportunity and a host of other goods and services.

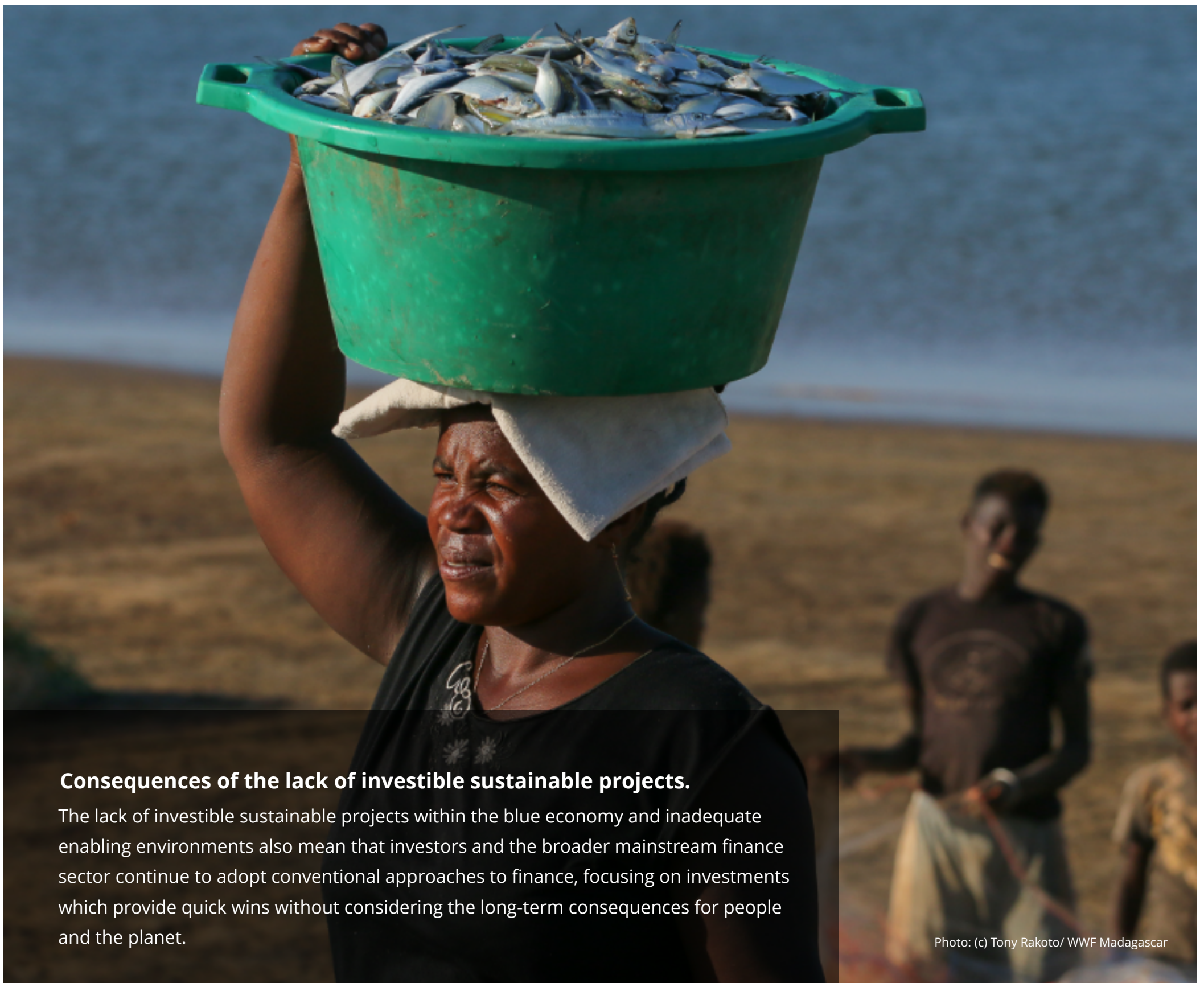
Further, coral reefs are the primary asset for the coastal tourism sector, providing coastal protection, recreation areas and seafood worth US\$18.1 billion annually. Tackling climate change is a global challenge, but countries in the region must take urgent action to protect reef health. This includes reversing the rise in those threats under their control, such as destructive fishing and pollution, and taking a proactive approach to improve reef conditions and identify reef-specific management actions and options.



There is a coastal development juggernaut on the horizon.

The case for protecting healthy natural infrastructure, such as reefs and mangroves, is strong and momentum is building for scaled-up intervention. Certainly, from a climate change perspective, UNFCCC so-called ‘Blue CoPs’ in 2019 and 2020 have a substantial focus on oceans and the importance of the ocean’s so-called blue natural capital to achieving climate change mitigation and adaptation. However, conservation efforts are at risk of being undermined, and overtaken by the proposed development on the horizon and projected tens of trillions of investment in heavy infrastructure and exploitation expected in the next decade, much of which will take place on or within reach of the coast.

Despite the growing interest in the tremendous investment flows being directed at coastal areas, there remains a lack of understanding of the extent to which these investments will either support or undermine coastal ecosystems, national priorities and political imperatives. The economic value of coastal protection provided by coral reefs, mangroves and salt marshes in the Western Indian Ocean is estimated at US\$1.2 billion annually. As coastal development, urbanization and industrialization progress in the South West Indian Ocean, the value of coastal property and infrastructure will grow rapidly, and the measured economic value of coastal protection will climb accordingly. This will be reflected in a higher gross marine product.



Consequences of the lack of investible sustainable projects.

The lack of investible sustainable projects within the blue economy and inadequate enabling environments also mean that investors and the broader mainstream finance sector continue to adopt conventional approaches to finance, focusing on investments which provide quick wins without considering the long-term consequences for people and the planet.

Photo: (c) Tony Rakoto/ WWF Madagascar

LOCATION OF PORTFOLIO AND CURRENT INVESTMENT OPPORTUNITIES

Mozambique (Priemerias and Segundas, Quirimbas, Inhambane), Madagascar (Ambaro Bay, Kirindy Mite, South of Belo sur Mer, Nosy Hara, Tsiribihina and Manambolo Deltas, Mahafaly seascape), Kenya (Lamu and Shimon Vanga) and Tanzania (Rumaki seascape, South Africa (Kogelberg; Hamburg).



○ Presence of on ground teams and local scale successes.

● Also present in capitals with strong relationships with government and influence on policy.

28 PROJECTS HAVE BEEN IDENTIFIED ACROSS THESE LOCATIONS.

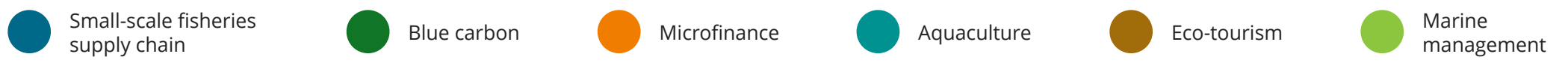
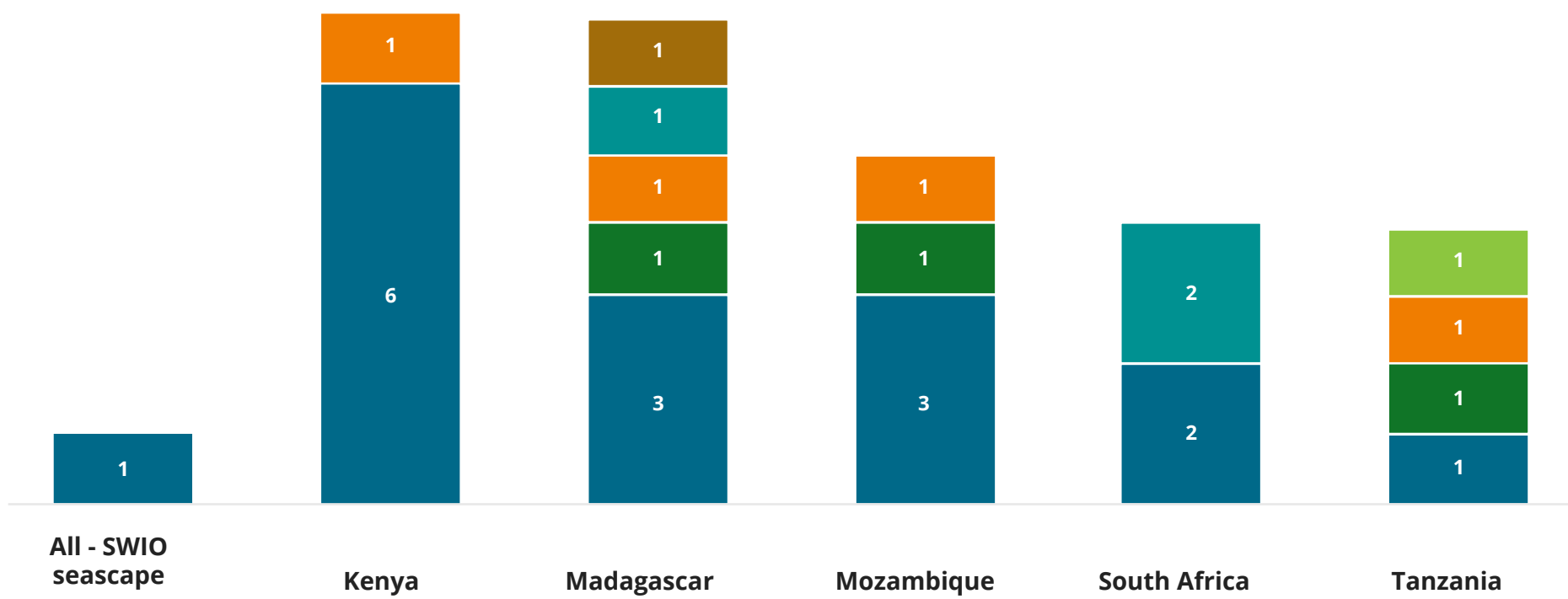
OPPORTUNITY ANALYSIS

This work has been carried out in partnership with Finance Earth and Ocean Hub Africa.

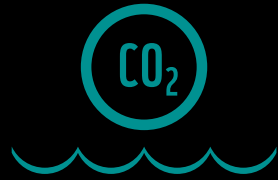


Project theme by location

Variety of themes identified across the seascape demonstrates opportunities for shared and capacity building across the region.



THE IDENTIFIED PROJECTS CAN BE CATEGORISED INTO SIX SECTOR THEMES



BLUE CARBON DISASTER RISK REDUCTION AND CLIMATE ADAPTATION

NUMBER OF PROJECTS: 4

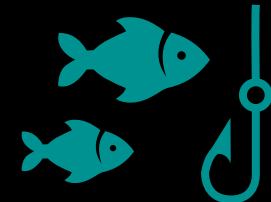
Generating saleable carbon credits from mangrove and seagrass protection, restoration, and/or creation, including through sustainable livelihood development.



AQUACULTURE

NUMBER OF PROJECTS: 3

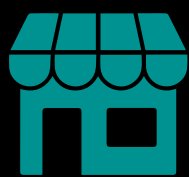
Sustainable aquaculture activities, including offshore seaweed production, coastal abalone ranching and onshore kob aquaculture.



SMALL SCALE FISHERIES (SSF) SUPPLY CHAIN

NUMBER OF PROJECTS: 15

Adding value to small-scale fisheries, including shared equipment, infrastructure, and business centres for fishing communities/co-operatives, and development of market channels through technology.



TOURISM

NUMBER OF PROJECTS: 1

Locally managed eco-tourism offering in Madagascar, including community-led accommodation and demonstration activities.



MICROFINANCE

NUMBER OF PROJECTS: 4

Generating income through the interest payment from loans and saving schemes, which enable coastal communities to invest in sustainable blue economy activities.



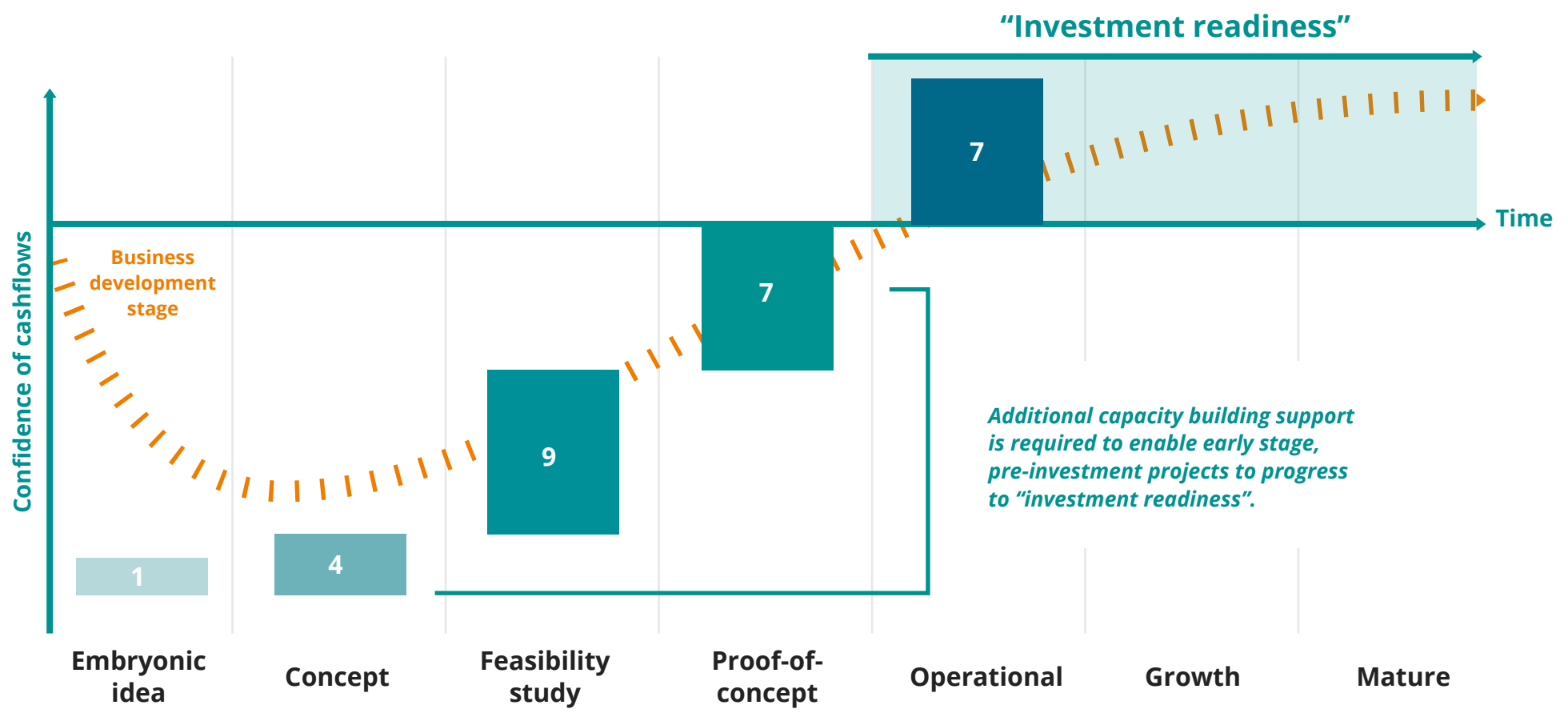
MARINE MANAGEMENT

NUMBER OF PROJECTS: 1

The establishment of a marine park, including development and renovation, implementation of demarcated zones, and the training of park management and operational staff.

CURRENT INVESTMENT PIPELINE PER BUSINESS DEVELOPMENT STAGE

To determine the ability of each project to generate financial returns for investors, and additional environmental and social benefits for communities, Finance Earth assessed their potential to be expanded (scaled) beyond their current operational scope within the existing project structure.



SCALABILITY OF THE PROJECT

11 PROJECTS

39%

WERE CONSIDERED HIGHLY SCALABLE,

indicating that their operations could be expanded across a substantially greater area or number of beneficiaries to unlock greater impact.

13 PROJECTS

47%

WERE CONSIDERED TO HAVE MEDIUM SCALABILITY,

indicating that their operations could be expanded, but only to a limited extent, across a greater area or number of beneficiaries.

2 PROJECTS

7%

CONSIDERED TO HAVE LOW OR NO SCALABILITY,

meaning that their operations were highly site-specific and unlikely to be expanded beyond their existing operations.

2 PROJECTS

7%

REQUIRED FURTHER ANALYSIS,

to determine their level of scalability.

These results demonstrate that there are significant opportunities to scale existing projects to maximise their benefits beyond their current operational scopes, creating the potential for catalytic investments by helping businesses expand their operations to support more beneficiaries.

REPLICABILITY OF THE BUSINESS MODEL

To determine the ability of each project to create and prove a business model that could generate long-term, sustainable benefits for investors, the environment and communities, Finance Earth assessed their potential to be replicated in other areas or regions.

26 PROJECTS

92%

WERE CONSIDERED HIGHLY REPLICABLE,

indicating that these projects could easily be replicated throughout the region or even globally to unlock benefits for the natural environment and coastal communities in other areas and/or for other purposes.

1 PROJECT

4%

WAS CONSIDERED TO HAVE LOW OR NO REPLICABILITY,

indicating that this project was highly location-specific and would be impractical or impossible to replicate elsewhere.

1 PROJECT

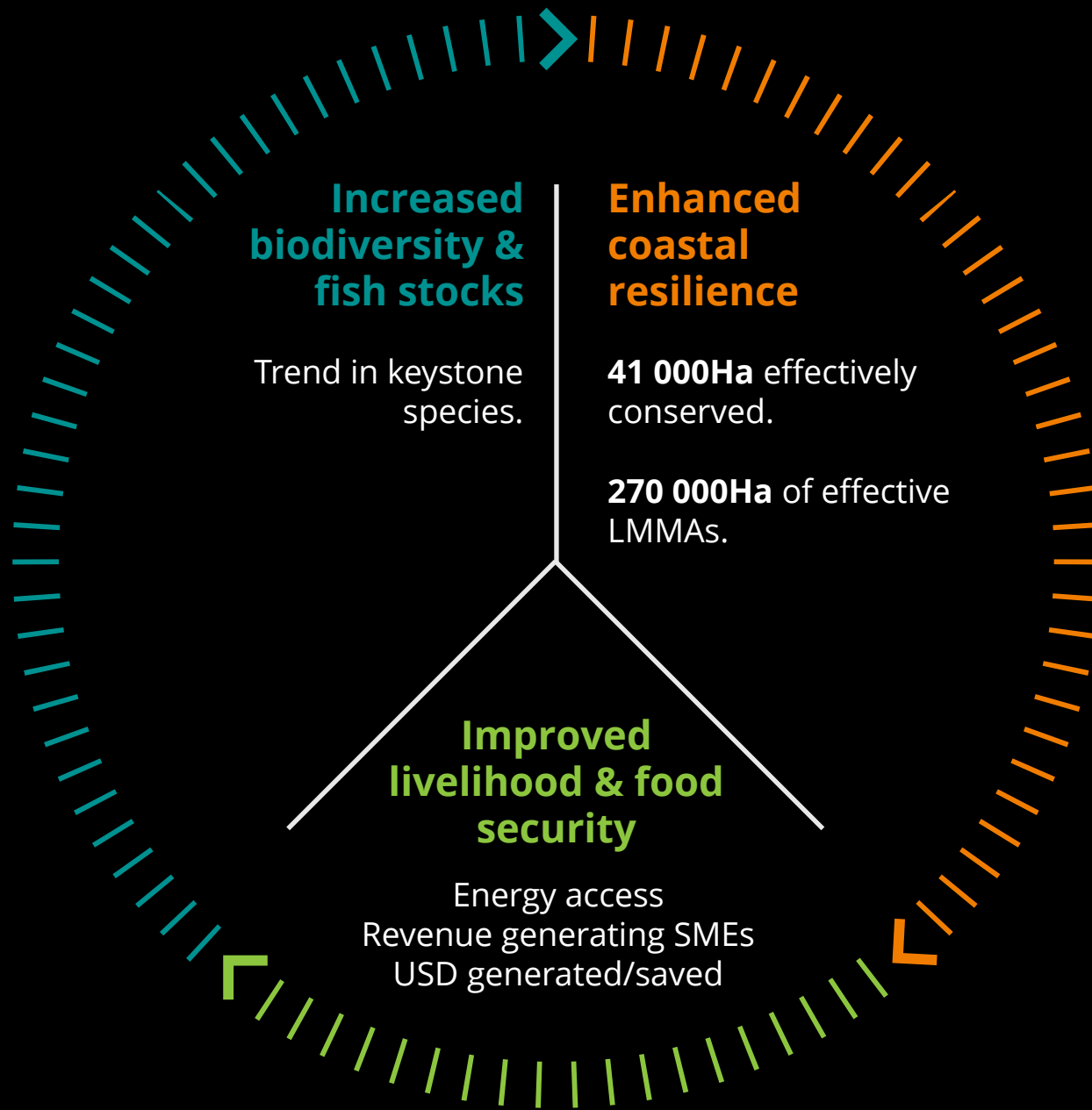
4%

REQUIRED FURTHER ANALYSIS,

to determine its level of replicability.

These results demonstrate that there are significant opportunities to develop these models to create tested and proven business models that can be learned from and replicated to generate benefits in other areas of the SWIO region and globally.

THIS PORTFOLIO WILL DELIVER:



SUSTAINABLE FISHERIES

Adopt sustainable practices to maintain healthy stocks & produce sustainable seafood.



MARINE DATA & TECHNOLOGY

Mobile phone and GPS technology supports enforcement, provides a means for communities and authorities to collect much needed data for fisheries management, and enables effective mapping and planning of conservation and restoration efforts. The technology as well as the data generated have a value that can be converted into income generation.



FLOOD AND STORM PROTECTION

Restored coastal ecosystems such as mangrove forests, sea grass and coral reefs increase flood and storm protection and build climate resilience.



CLIMATE MITIGATION

Carbon stocks from restored or conserved ecosystems can be monetized through the sale of carbon credit and/or provide certified emission reduction outcomes (if conditions of leakage and additionality are met).



DIVERSIFIED ENTERPRISE DEVELOPMENT

This diversifies community income which in turn reduces pressure on natural resources and builds socio-economic resilience.



RENEWABLE ENERGY

Solar home systems and solar-powered cooking stoves offer renewable energy, making the unsustainable harvest of mangrove fuel-wood or mangrove charcoal production redundant. The sale of renewable energy into these communities provides an investment opportunity, but the availability of energy also further fuel the economic potential of a community in many ways e.g. to provide energy to start up a business, to gain access to the internet, to support health and education and access to resources etc.



SOUTH WEST INDIAN OCEAN INVESTMENT PORTFOLIO PROJECTS

BLUE CARBON, RISK REDUCTION AND CLIMATE ADAPTATION



BLUE CARBON, DISASTER RISK REDUCTION AND CLIMATE ADAPTATION

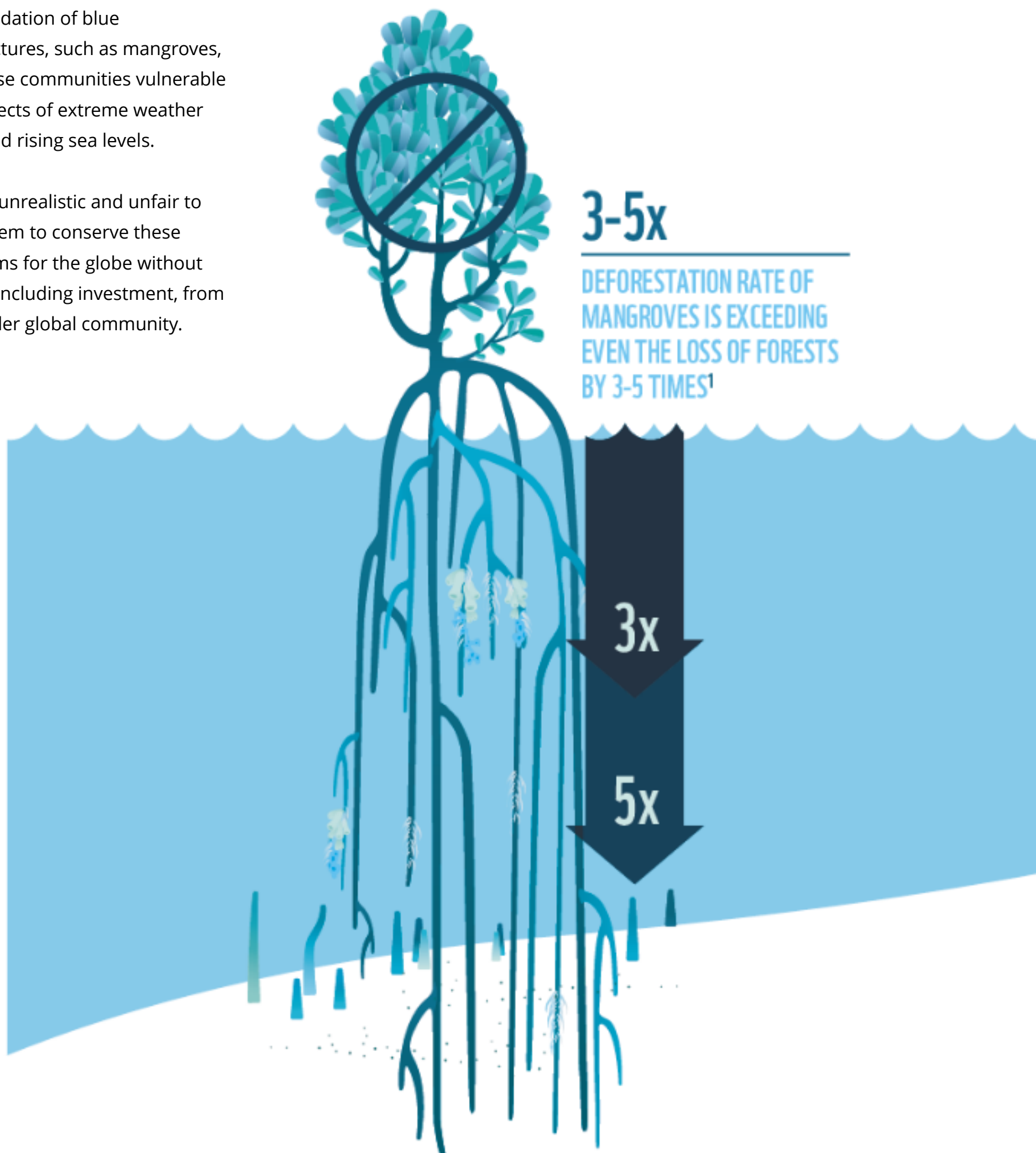
Mangroves are highly productive coastal ecosystems, with soil carbon sequestration rates per hectare up to 10 times larger than those of terrestrial ecosystems.

The protection of blue carbon ecosystems offers an efficient pathway to avoid CO₂ emissions, particularly for places with large areas of coastal vegetation and high rates of loss, because:

- while they are equivalent to only 1.5% of terrestrial forest cover, their loss and degradation are equal to 8.4% of CO₂ emissions from terrestrial deforestation.
- the stored carbon degraded ecosystems become oxidised and releases back into the atmosphere.

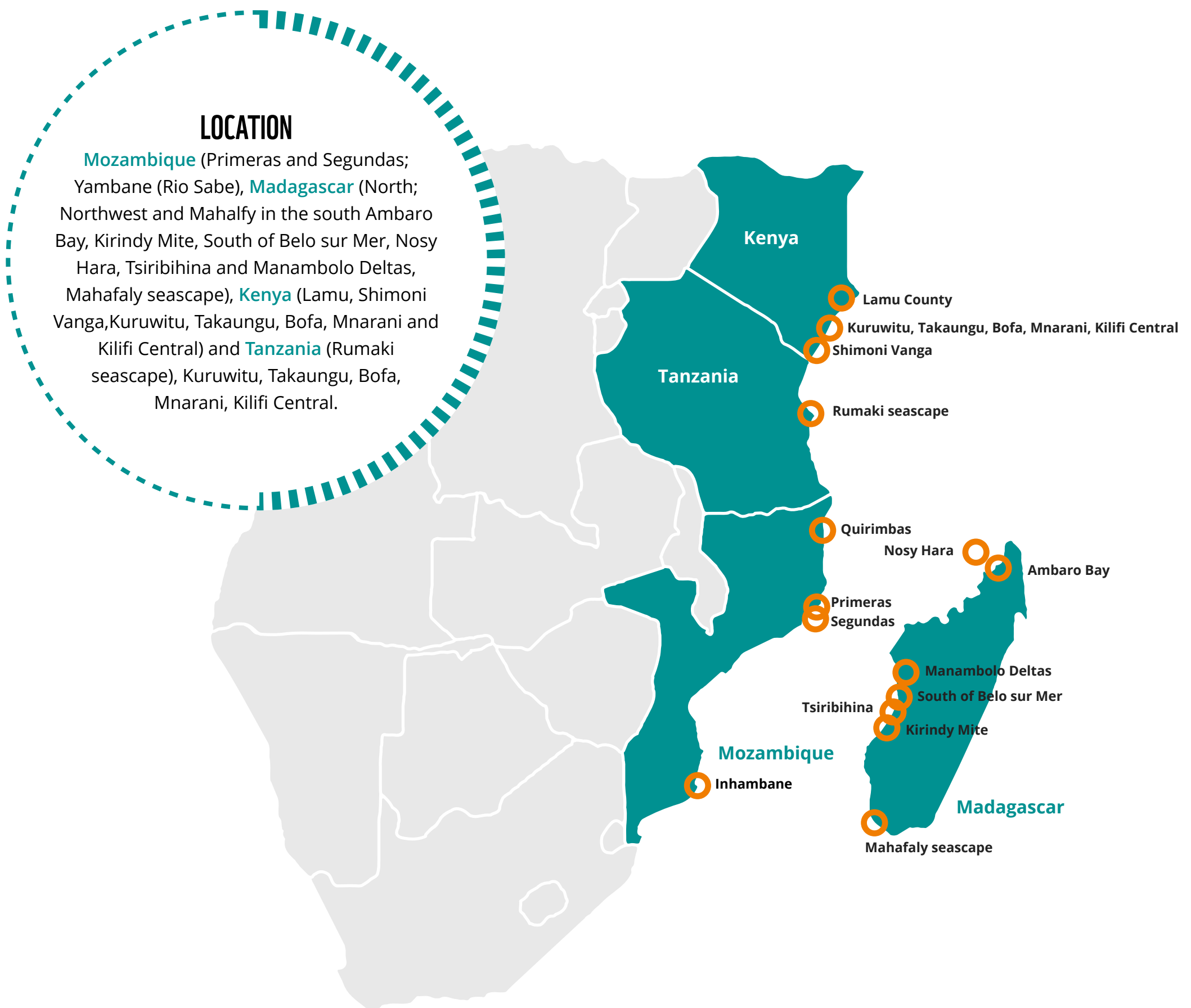
On-the-ground management of coastal and marine ecosystems often depend on coastal communities, yet the degradation of blue infrastructures, such as mangroves, leave these communities vulnerable to the effects of extreme weather events and rising sea levels.

It is both unrealistic and unfair to expect them to conserve these ecosystems for the globe without support, including investment, from the broader global community.



BLUE CARBON, DISASTER RISK REDUCTION AND CLIMATE ADAPTATION

Active community-led mangrove conservation and/or restoration at 11 locations across 4 countries in the SWIO region have been accessed and show promise for revenue generating opportunities through carbon markets leading to climate mitigation, adaptation and disaster risk reduction at a local scale.



Stage of development	Pilot.	
Revenue streams	<ul style="list-style-type: none"> • Primary: Blue carbon credit sale. • Secondary: <ul style="list-style-type: none"> - Product sales (honey, fish/crab) and mangrove conservation tourism. - Future cost saving (in terms of emergency relief and reconstruction post event). - Potential for insurance - Financial viability of insurance still to be determined (most likely sovereign parametric insurance). 	
Beneficiaries	Local stakeholders, including businesses, communities and government.	
Existing funders active in the seascape	Agence Française de Développement (AFD), Blue Action Fund, KfW, BMZ (German government).	
Existing partners	PCI Media, Adel Sofala, Kukumbi, Wetland International, Save Our Mangroves Now, IUCN and Eduardo Mondlane University.	
WWF's role is to	Access to funding and implementation support to the communities.	
Investment potential	<ul style="list-style-type: none"> + Growing market potential for blue carbon. + Already revenue generating. 	<ul style="list-style-type: none"> - Political challenges (blue/green washing). - Carbon certificates from mangrove conservation are still in pilot phase.

Expected profitability

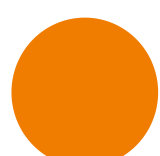
The carbon market and the ocean conservation interests are growing with expected high profitability potential.

COUNTRY	TOTAL MANGROVE COVERAGE	TOTAL RESTORABLE AREA	GLOBAL RESTORABLE AREA	CARBON SEQUESTRATION POTENTIAL	EXPECTED RETURN AT CARBON PRICE OF USD 60 PER TONNE	FLOOD PROTECTION BENEFITS	INCLUSION OF MANGROVES IN NDC
	Hectares	Hectares	%	Million tonnes of CO2	USD billions	USD billions	Adaptation/ Mitigation
Mozambique	294	25.9	3.3	8	66	1.94	No
Madagascar	261	8	1	3	57	0.36	Yes - A & M

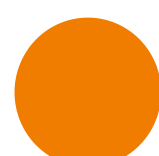
Social impact	<ol style="list-style-type: none"> 1. Disaster risk reduction. 2. Job creation. 3. Improved livelihoods.
Environmental impact	<ol style="list-style-type: none"> 1. Carbon sequestration. 2. Mangroves provide nursery grounds for commercial and food fish. 3. Reduced coastal erosion.
Resource needs and key enablers	<ul style="list-style-type: none"> • Technical assistance for community engagement. • Development of technical mangrove restoration skills.
Investment in market access (infrastructure and market building)	<ul style="list-style-type: none"> • Technical assistance for market access. • Improvement of road access for collectors (fish/crab), preservation equipment (cold chain) and shipment of goods (Chinese trade).
Project scalability	High - where similar conditions exist (most regions).
Risks and challenges	<ul style="list-style-type: none"> • Monitoring system reliability and scalability (MOMS). • Difficulties to certify direct link from conservation actions and actual carbon sequestration. • Greenwashing from carbon voluntary markets. • Crab fisheries require very quick collection and shipping (highly perishable goods). • Improved crab fishery resource management needed.



Stage of development



Scalability of project



Replicability of model



Investment potential



SOUTH WEST INDIAN OCEAN INVESTMENT PORTFOLIO PROJECTS

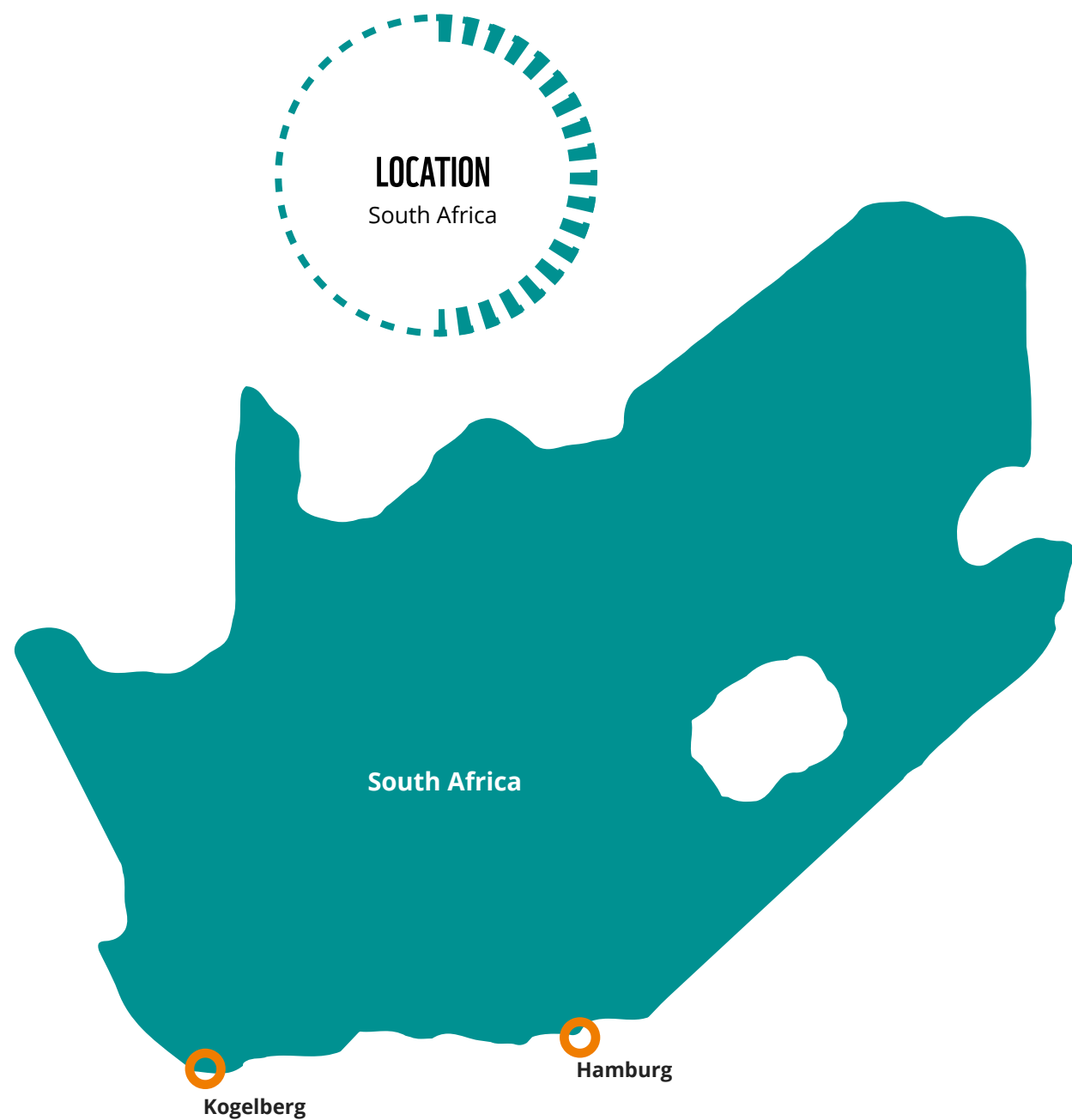
AQUACULTURE



TWO MAJOR TYPES OF AQUACULTURE HAVE BEEN IDENTIFIED AS KEY INVESTMENT OPPORTUNITIES ACROSS THE SWIO REGION:

ABALONE RANCHING

The creation of a community-led abalone ranching program, where excess abalone spat sourced directly from farms, is returned to ocean to reseed reefs to grow under natural conditions until harvested. This method avoids the land acquisition and capex costs associated with farming and provides jobs and improved livelihoods for the local community.



ABALONE RANCHING

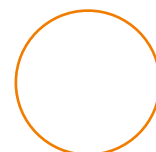
Stage of development	Concept.		
Revenue streams	Product sales.		
Beneficiaries	Ranching is expected to be run by the local communities implying job creation from operations, sales, management, security, etc.		
Existing funders active in the seascape	BMZ (Federal Ministry of Economic Cooperation and Development) – with the objectives of improved governance & livelihoods.		
WWF's role is to	WWF aims to align stakeholders (obtain buy-in from the communities and secure funding), and to undertake the feasibility study.		
Investment potential	<table border="0"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> + Clear revenue stream. + Substantial market potential in Asia (specifically China). + Limited infrastructure CAPEX. </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> - Time-to-market to be covered by investment (4/5 years to obtain first revenues). - Security of production. </td> </tr> </table>	<ul style="list-style-type: none"> + Clear revenue stream. + Substantial market potential in Asia (specifically China). + Limited infrastructure CAPEX. 	<ul style="list-style-type: none"> - Time-to-market to be covered by investment (4/5 years to obtain first revenues). - Security of production.
<ul style="list-style-type: none"> + Clear revenue stream. + Substantial market potential in Asia (specifically China). + Limited infrastructure CAPEX. 	<ul style="list-style-type: none"> - Time-to-market to be covered by investment (4/5 years to obtain first revenues). - Security of production. 		
Social impact	<ol style="list-style-type: none"> 1. Job creation. 2. Improved livelihoods. 		
Environmental impact	<ol style="list-style-type: none"> 1. Reseeding. 2. Limited coastal footprint. 3. Limited to no energy or feed required. 		
Resource needs and key enablers	<ul style="list-style-type: none"> • Technical assistance for community engagement. • Development of technical skills – an internal mangrove restoration skills gap exists (currently provided by Adel Sofalaand Wetlands International). • Building capacity for monitoring, reseeded. • Building capacity for security. 		
Expected profitability	To be investigated further with the feasibility study.		
Project scalability	Intermediate - on the West Coast of South Africa as abalone ranching requires specific conditions.		
Risks and challenges	<ul style="list-style-type: none"> • Legal: abalone exports are subject to international compliance. • Security linked to high-end product (theft, crime). 		
Expected profitability	To be investigated further with the feasibility study.		
Next steps	<ul style="list-style-type: none"> • Next step: further Strategic Livelihood Projects workshops to obtain buy-in from community. • Apply for funding from BMZ for feasibility study/proof of concept. • Get approval from national/regional Government. 		



Stage of development



Scalability of project



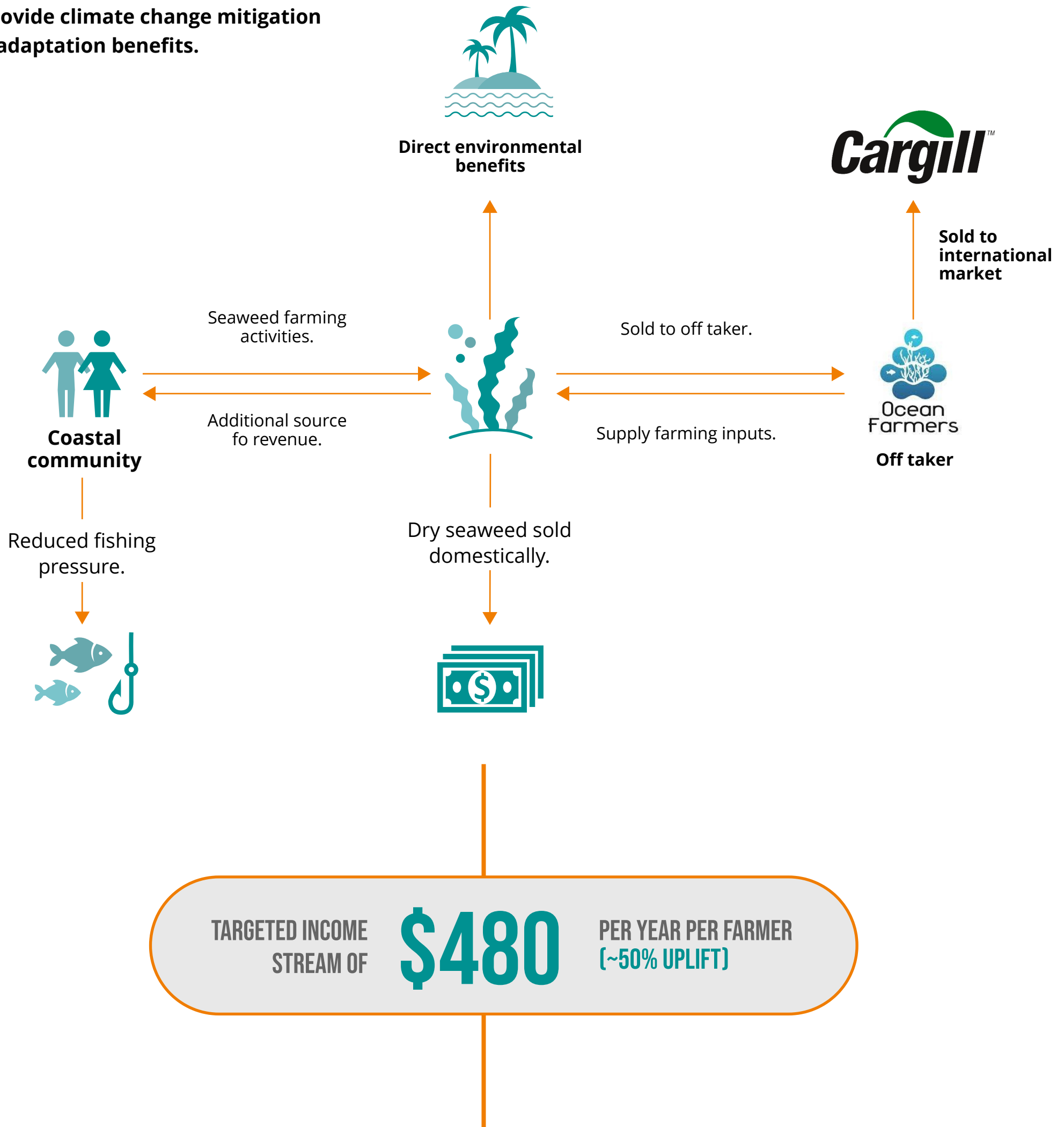
Replicability of model



Investment potential

SEAWEED FARMING

Investing in seaweed production as an alternative sustainable income stream for coastal communities and to provide climate change mitigation and adaptation benefits.



Capacity building

Projects delivery and management skills building.



Business planning

Business model development to determine investment need.



Strategic governance

Develop robust project governance model.



Post-investment support

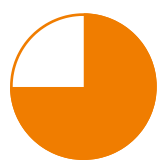
Support for community-led M&E.

SEAWEED FARMING

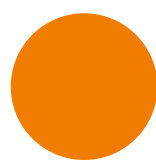
Seaweed farming implemented as an alternative income generating activity to reduce overfishing and empower women within local communities. Farmers sell harvested seaweed at a fair price to a dried seaweed exporting company, who in turn sells the products into the international (European) market.



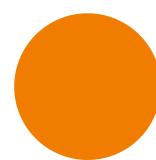
Stage of development	Stage of development.
Revenue streams	Sale of dried seaweed.
Beneficiaries	Empowered women and their households.
Existing partners	PCI Media, Adel Sofala, Kukumbi, Wetland International, Save Our Mangroves Now, IUCN and Eduardo Mondlane University.
Existing funders active in the seascape	OceanFarmers, Wildlife Conservation Society.
WWF's role is to	WWF has provided training, and technical support.
Investment potential	<ul style="list-style-type: none"> + Similar successful projects in the region (piloted by Blue Ventures). + Increasing global demand. <ul style="list-style-type: none"> - Access to market. - Sales and marketing abilities.
Social impact	<ol style="list-style-type: none"> 1. Job creation. 2. Improved livelihoods.
Environmental impact	<ol style="list-style-type: none"> 1. Reseeding. 2. Limited coastal footprint. 3. Limited to no energy or feed required.
Resource needs and key enablers	<ul style="list-style-type: none"> • Technical assistance for community engagement. • Development of technical skills –an internal mangrove restoration skills gap exists (currently provided by Adel Sofalaand Wetlands International).
Expected profitability	To be investigated further with the feasibility study.



Stage of development



Scalability of project



Replicability of model



Investment potential



SOUTH WEST INDIAN OCEAN INVESTMENT PORTFOLIO PROJECTS

SMALL-SCALE FISHERIES DEVELOPMENT



SMALL - SCALE FISHERIES DEVELOPMENT

Investment in small-scale fishers and fisheries can protect and restore fish stocks and foster local economic development. Revenue generating options identified include: cold storage solutions, value chain improvement, fisheries improvement projects and data and technologies for improved fisheries management (such as law enforcement, traceability and safety at sea).



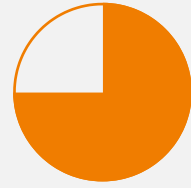
○ Presence of on ground teams and local scale successes.

● Also present in capitals with strong relationships with government and influence on policy.

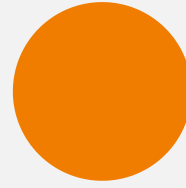
1. COLD STORAGE SOLUTIONS

KENYA

Fisheries cold storage (part of K-ecofish) - Investment in shared cold storage units to minimise loss of catch.



Stage of development



Scalability of project

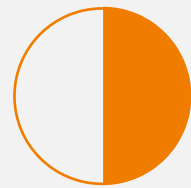


Replicability of model



Investment potential

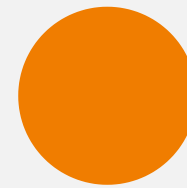
Solar-powered cold storage for small-scale fisheries - Pay-as-you-go cooling equipment powered by off-grid energy supply, operational 2020-2024, targeting reduction of post-catch waste and price increases.



Stage of development



Scalability of project



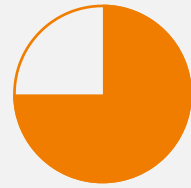
Replicability of model



Investment potential

TANZANIA

Small - scale fisheries supply chain. Kigali energy efficiency project - Energy efficiency and fishery closure project (Kigali Project).



Stage of development

To be determined

Scalability of project

To be determined

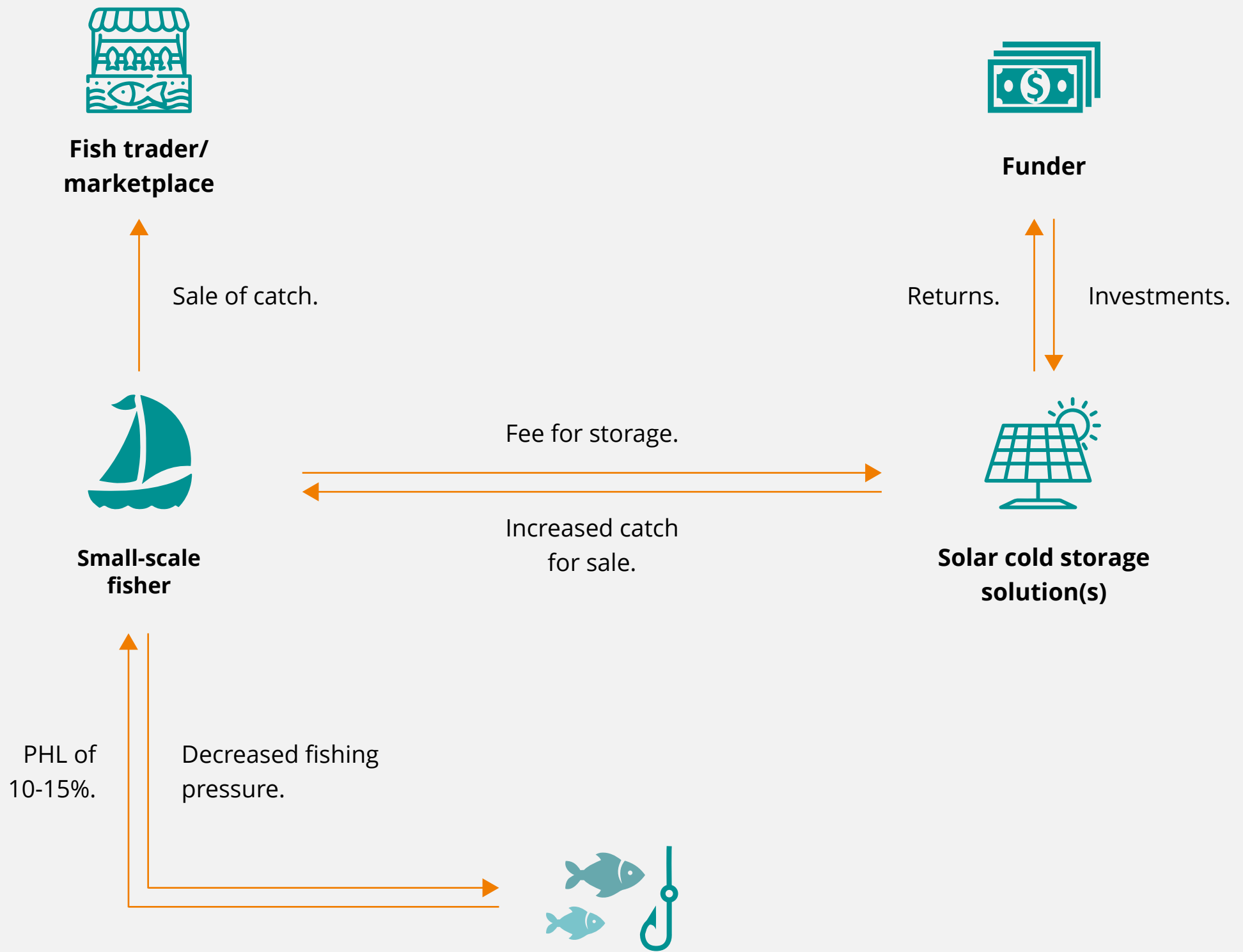
Replicability of model

To be determined

Investment potential



FINANCING THE PROVISION OF OFF-GRID SOLAR REFRIGERATION SYSTEMS TO REDUCE POST-HARVEST LOSSES (PHL) EXPERIENCED BY SMALL-SCALE FISHERS AND REDUCE THE PRESSURE TO OVERFISH.



TARGETED NET FISHER INCOME OF **\$640** [15% UPLIFT]

- Capacity building**
Projects delivery and management skills building.
- Technical support**
Procurement to inform costs.
- Seed investment**
Investment for equipment and infrastructure.
- Strategic governance**
Develop robust project governance model.
- Post-investment support**
Support for community-led M&E.

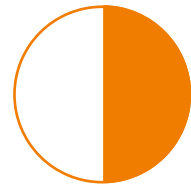
2. FISHERIES IMPROVEMENT

A) LOBSTER FISHERIES

SOUTH AFRICA

Fish for Good

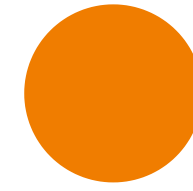
Fisheries improvement project working on enhancing the environment, social and commercial value of Eastern Cape lobster.



Stage of development

To be determined

Scalability of project



Replicability of model

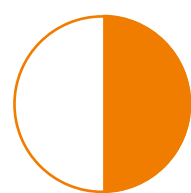
To be determined

Investment potential

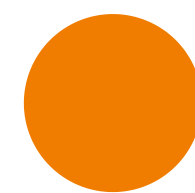
KENYA

Lobster fisheries improvement project

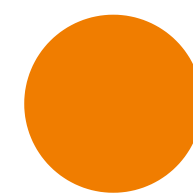
Creation of a lobster fishery management plan with co-managed community surveillance, based on MSC standards.



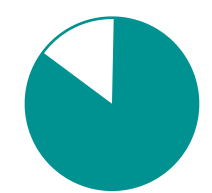
Stage of development



Scalability of project



Replicability of model



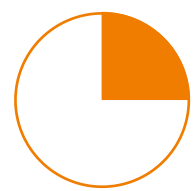
Investment potential

B) OCTOPUS FISHERIES

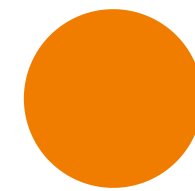
KENYA

Octopus fishery improvement project

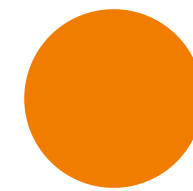
Octopus fisheries value chain improvement - project; has not started yet (currently at funding proposal stage).



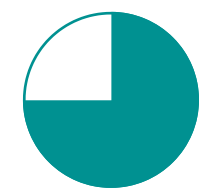
Stage of development



Scalability of project



Replicability of model

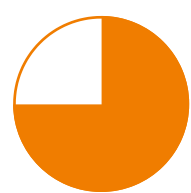


Investment potential

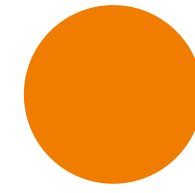
MADAGASCAR

Octopus and fish stock improvement

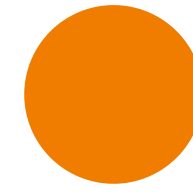
Establishment of marine reserves to protect octopus and other fisheries.



Stage of development



Scalability of project



Replicability of model

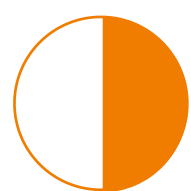


Investment potential

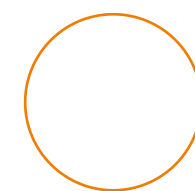
MOZAMBIQUE

Octopus fishery improvement project

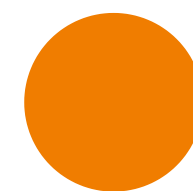
Development and pilot of an octopus closure model with women's associations (307 participants); paused due to insurgency in North Mozambique.



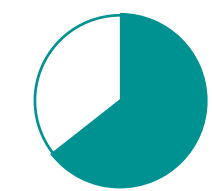
Stage of development



Scalability of project



Replicability of model



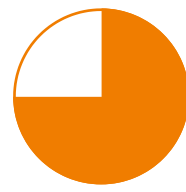
Investment potential

C) GENERAL

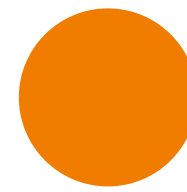
KENYA

K-ecofish project

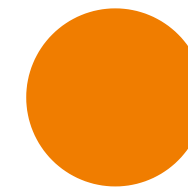
Programme seeking to strengthen community management of fisheries through investment in equipment and training for better monitoring and enforcement within fisheries.



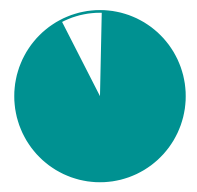
Stage of development



Scalability of project



Replicability of model

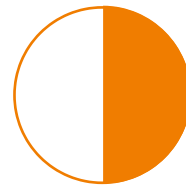


Investment potential

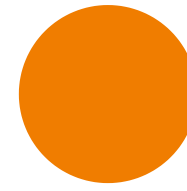
MADAGASCAR

Development of shared business centres

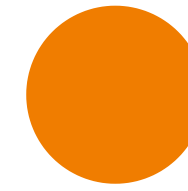
Development of fisheries chain in collaboration with local coastal communities through establishment of infrastructure and creation of shared resources.



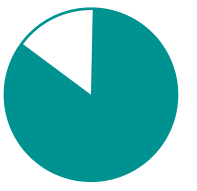
Stage of development



Scalability of project



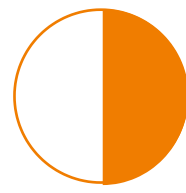
Replicability of model



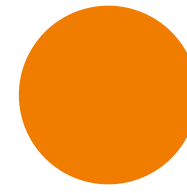
Investment potential

Sustainable small-scale fisheries management plan

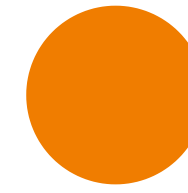
Creation of a coordinated fisheries management plan to improve management, increase incomes, improve community wellbeing.



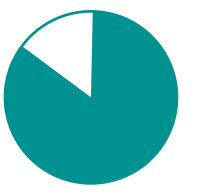
Stage of development



Scalability of project



Replicability of model

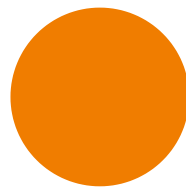


Investment potential

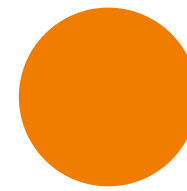
MOZAMBIQUE

Fisheries co-management

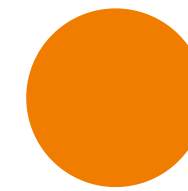
Training of government staff and local communities in fisheries co-management; establishing 2 local fisheries by June 2021.



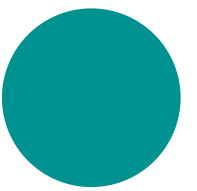
Stage of development



Scalability of project



Replicability of model



Investment potential

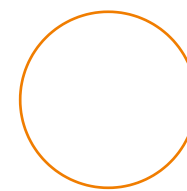
MOZAMBIQUE

Octopus fishery improvement project

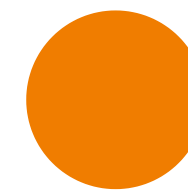
Development and pilot of an octopus closure model with women's associations (307 participants); paused due to insurgency in North Mozambique.



Stage of development



Scalability of project



Replicability of model



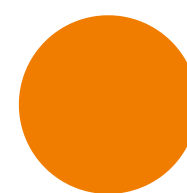
Investment potential

Fisheries management improvement

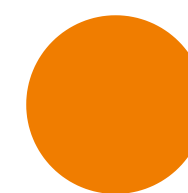
Fisheries management improvement project focussing on oyster, crab and other fish stocks; project not yet started.



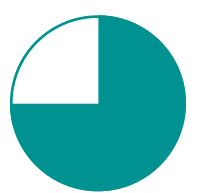
Stage of development



Scalability of project



Replicability of model



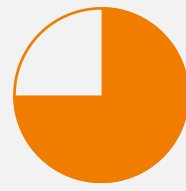
Investment potential

3. DATA AND TECHNOLOGY

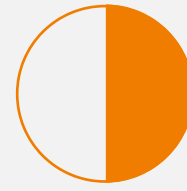
KENYA

Fisheries data collection

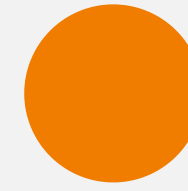
Strengthening catchment data collection from small-scale fisheries, with fish counted and weighted manually and data transmitted via mobile, to be linked to fisheries governmental database.



Stage of development



Scalability of project



Replicability of model



Investment potential

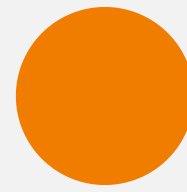
SOUTH AFRICA

Abalobi app

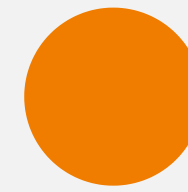
WWF working with Abalobi app to offer a marketplace for fishermen to sell their catch and record data; WWF is helping to onboard fishermen, and brings resources co-management practices.



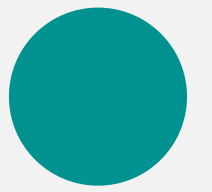
Stage of development



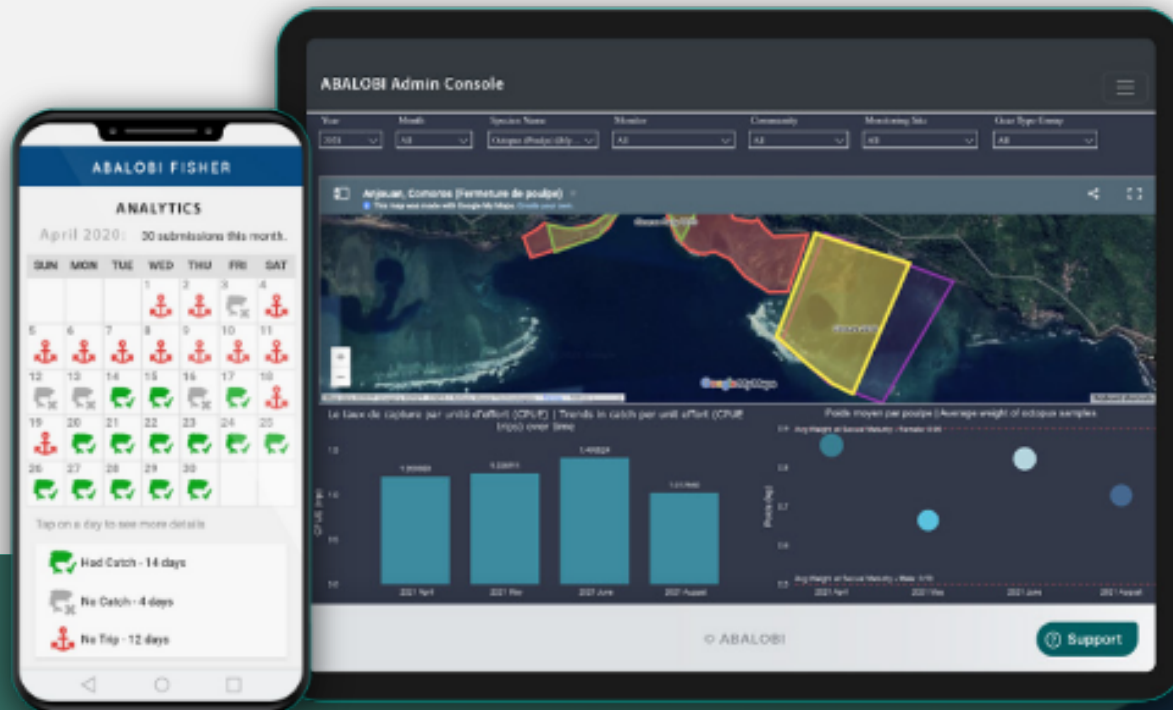
Scalability of project



Replicability of model



Investment potential



WHAT IS
Fish With A Story?

[WATCH THE VIDEO HERE](#)

ABALOBİ'S SUITE OF MOBILE APPS

Abalobi's suite of mobile apps is designed for small-scale fishers and aims to drive long-term ecological sustainability, improved seafood traceability and the promotion of fair and transparent supply chains, by providing access to a marketplace that connects fishers directly to chefs at local restaurants who can purchase their fish at a fair price.



Stage of development	Operational
Revenue streams	<ul style="list-style-type: none"> • Logistics (delivery) fee. • Marketplace transaction fee and membership for buyers in Proof of Concept stage. • Fisheries data could also be sold through a licensed platform in the future.
Beneficiaries	Fishermen get an average of 86% of the revenue generated across the platform, the remaining goes to Abalobi.
Existing partners	All first round grant funders have been involved as partners.
Existing funders	ZAR18m in total from Food Agriculture Organisation UN, African Union, Oak Foundation, Technology Innovation Agency, Catalyst Fund, South African Brewery Foundation, the Waterloo foundation, UN Development Program. The WWF work with Abalobi supported by BMZ and Government of Flanders.
Lead support agency and role	Offer a marketplace for fishermen to sell their catch and record data by helping to on board fishermen and facilitates implementation of resources co-management.

SOUTH AFRICA



Stage of development



Scalability of project



Replicability of model



Investment potential

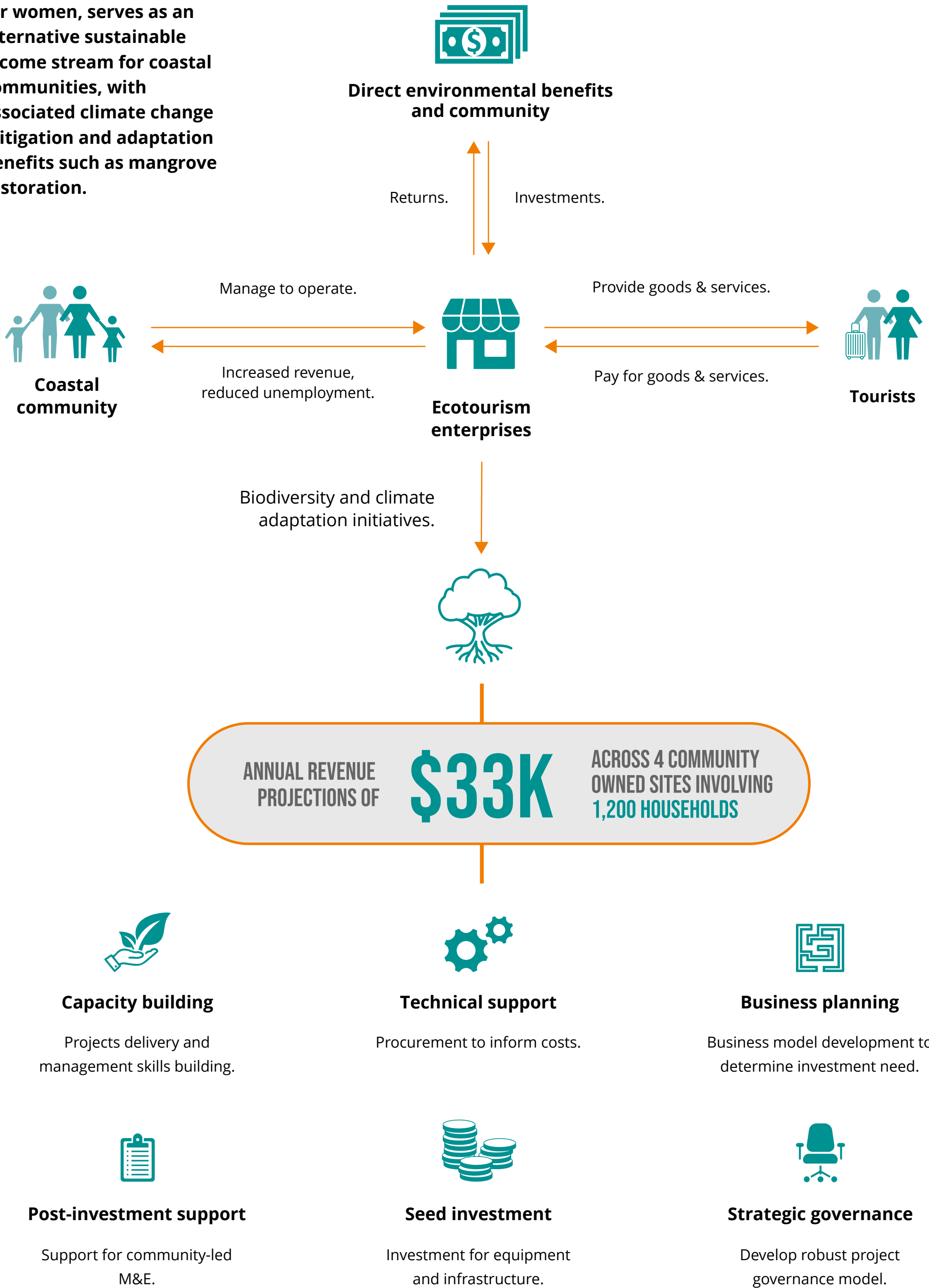


SOUTH WEST INDIAN OCEAN INVESTMENT PORTFOLIO PROJECTS

TOURISM

TOURISM

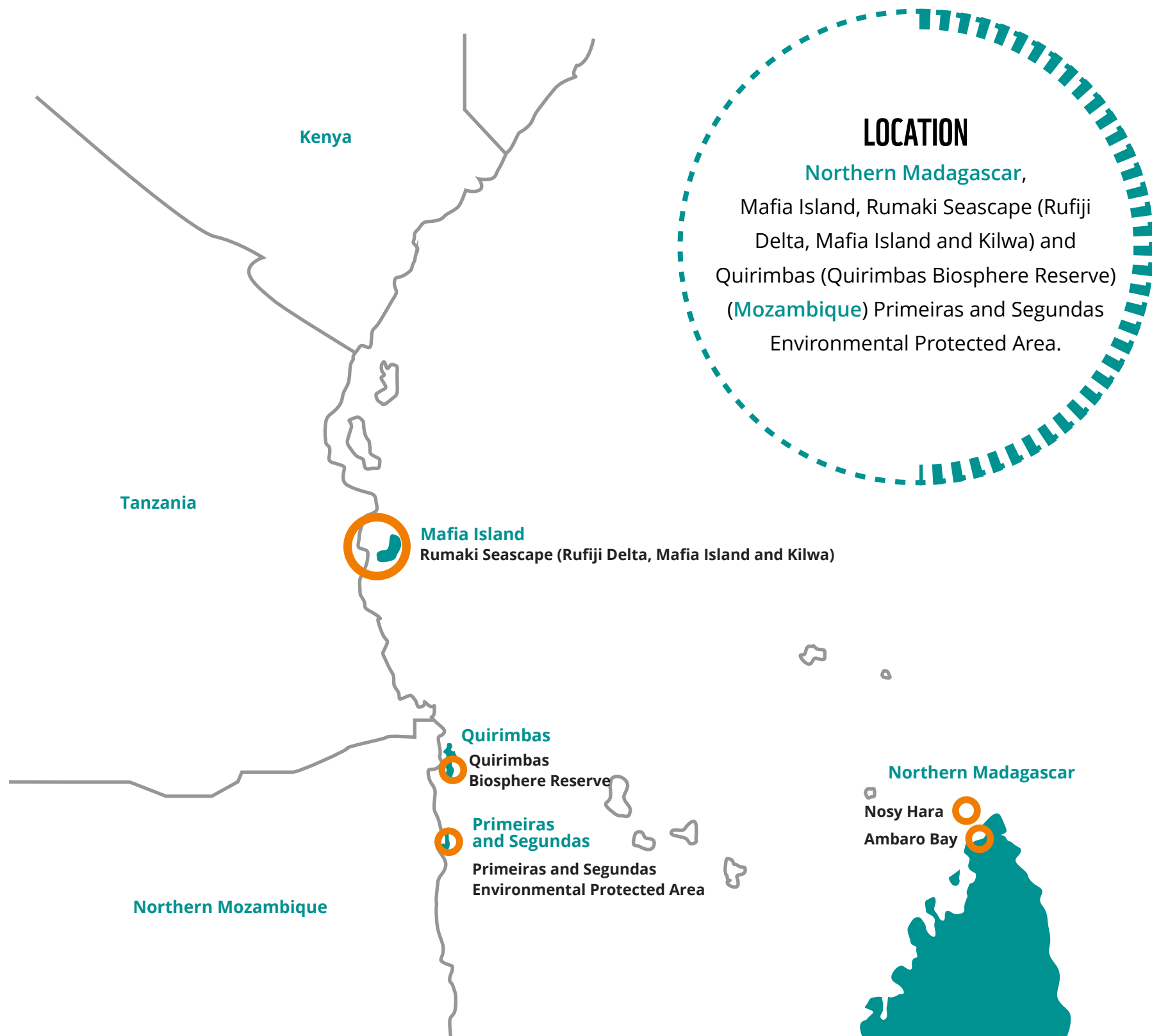
Sustainable ecotourism, an activity with high inclusivity for women, serves as an alternative sustainable income stream for coastal communities, with associated climate change mitigation and adaptation benefits such as mangrove restoration.



Coral reef ecosystems are the most important ecosystem in the ocean providing food, livelihoods and ecosystem services such as coastal protection. They also provide a habitat for one in four species in the ocean.

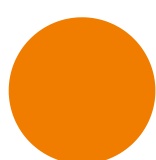
Unfortunately, they are disappearing before our eyes with potentially devastating consequences for life in our ocean.

Provision of local accommodation, visits to villages, the opportunity to partake in activities such as recreational fishing and demonstrations of mangrove protection for tourist groups. Tourist spend on accommodation, handicrafts and recreational activities supports the livelihoods of the wider community and provides a diversified revenue stream for fishers.



TOURISM

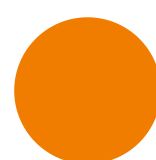
Stage of development	Concept.		
Revenue streams	<ul style="list-style-type: none"> • Local accommodation. • Guided tours of local villages, coral reefs and mangrove restoration sites. • Restaurants. • Farming (fish, honey) and craftsman product sales. 		
Beneficiaries	Village communities (mainly fishermen households).		
Existing partners	The department of Local Tourism & Madagascar National Parks providing sales and marketing support; Agamo, a local training association (in the Midwest).		
Existing funders	BMZ (Federal Ministry of Economic Cooperation and Development) – with the objectives of improved governance & livelihoods.		
WWF's role is to	Promoting the impact of projects to partners, facilitating the implementation of co-management practices and providing initial training on the ground (best practice).		
Investment potential	<table border="0"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> + Proof of concept validated with a pilot site in the Midwest. + Clear revenue streams. + Good market potential & scalability. </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> - Required upfront costs for each destination. - Current uncertainty in the sector. </td> </tr> </table>	<ul style="list-style-type: none"> + Proof of concept validated with a pilot site in the Midwest. + Clear revenue streams. + Good market potential & scalability. 	<ul style="list-style-type: none"> - Required upfront costs for each destination. - Current uncertainty in the sector.
<ul style="list-style-type: none"> + Proof of concept validated with a pilot site in the Midwest. + Clear revenue streams. + Good market potential & scalability. 	<ul style="list-style-type: none"> - Required upfront costs for each destination. - Current uncertainty in the sector. 		
Social impact	<ol style="list-style-type: none"> 1. Revenue diversification: existing fishing livelihoods are challenged by conditions that don't allow fishers to go out to sea everyday (on average, 11-12 days per month are too windy). 2. New job opportunities. 3. Skills development. 		
Environmental impact	<p>Raising awareness about the importance of mangroves in the ecological robustness of the region + creating a source of revenues from mangrove.</p> <p>Potential negative: tourism activities can be seen as a source of pollution (transport, consumption models, etc.).</p>		
Resource needs and key enablers	<ul style="list-style-type: none"> • Infrastructure development (B&B, drinking and hot water, means of transportation, etc.). • Hospitality training. • Marketing expertise. 		
Expected profitability	<p>Tourism drives a wide variety of revenues for the community. Its limitations lies within access to infrastructure and seasonality (and current pandemic).</p> <p>To be investigated further with the feasibility study.</p>		
Project scalability	High - Following the example from Northern regions with a 100 estimated coastal villages with touristic assets (and close to Nosy Be airport) representing work for at least 400 households, the project is largely replicable.		
Risks and challenges	<ul style="list-style-type: none"> • Access to sites (pilot site access: 4x4 and pirogue). • Communities capacities. • Access to drinkable water. • First aid and security centres. • Cooperation with guides. 		
Next steps	<ul style="list-style-type: none"> • Conduct further financial analysis to build business plan. • Create a local entity (eg. cooperative) to centralise promotion, booking and client management. • Aggregate village initiatives for increased investment potential. 		



Stage of development



Scalability of project



Replicability of model



Investment potential



SOUTH WEST INDIAN OCEAN INVESTMENT PORTFOLIO PROJECTS

MICROFINANCE



MICROFINANCE

The microfinance facility aims to incentivise sustainable marine activities and increase financial literacy and inclusion, facilitating increased economic resilience in coastal communities.



(#) Village Banks already established to date.

Collaboration between local stakeholder communities to develop the fisheries supply chain through the establishment of infrastructure and creation of shared resources. With the aim to improve livelihoods through increased revenues, reduced post-catch losses and better resource management.

MICROFINANCE

Stage of development	Feasibility Study.
Revenue streams	Microfinance savings and investments interest.
Beneficiaries	BMUs owned by fishers who get better value for their catch, therefore directly benefiting from the services. Microfinance services are centralised at BMU level, benefiting the community directly.
Existing partners	PCI Media, Adel Sofala, Kukumbi, Wetland International, Save Our Mangroves Now, IUCN and Eduardo Mondlane University.
Existing funders	European Union grant funding (€900,000), money not dedicated to loans within the micro-finance projects, but instead for training and support as loans come from community-based savings. WWF, Japan Social Development Fund, European Union, Blue Action Fund, Tanzania Informal Microfinance Practitioners. Kenya: Danida Market Partnership Development; Vest Frost, Total Hospital Solutions, xSolar, WWF Denmark, M-PAYG (mobile pay as you go).
WWF's role is to	WWF coordinates and supports skill development for the Beach Management Units.
Investment potential	+ Existing pilots of similar initiatives have proven successful.
Social impact	<ol style="list-style-type: none"> 1. Financial empowerment (loans accessible with less friction and less paperwork). 2. Community building and financial management building. 3. Food security.
Environmental impact	<ol style="list-style-type: none"> 1. Improved fisheries management. 2. Reducing post-catch fish loss: estimated that 1/3 of Kenya's post-harvest seafood is lost before it can be sold and safely consumed. 3. Microfinance loans are conditional on sustainability criteria being met. This differs depending on the use of the loan. 4. The increase average price per catch should result in lesser strain on capture fisheries (given quotas and adequate monitoring).
Resource needs and key enablers	<ul style="list-style-type: none"> • Technical assistance for community co-management. • Access to mobile money.
Expected profitability	Revenues are generated over the life of the savings scheme (interests on savings/loans) whilst costs largely only occur at inception for training to financial literacy. The current scheme being increasingly attractive to local communities, the profitability will rise with the number of users.
Project scalability	High - Project designed around scalability of proven methods to remaining challenges in East African SSF communities.
Risks and challenges	<ul style="list-style-type: none"> • Legal: abalone exports are subject to international compliance. • Security linked to high-end product (theft, crime).
Next steps	<ul style="list-style-type: none"> • Investigate a for-profit version of the loan scheme, potentially through investing in BMUs. • Development of digital solutions for fisheries management and Savings Association.





SOUTH WEST INDIAN OCEAN INVESTMENT PORTFOLIO PROJECTS

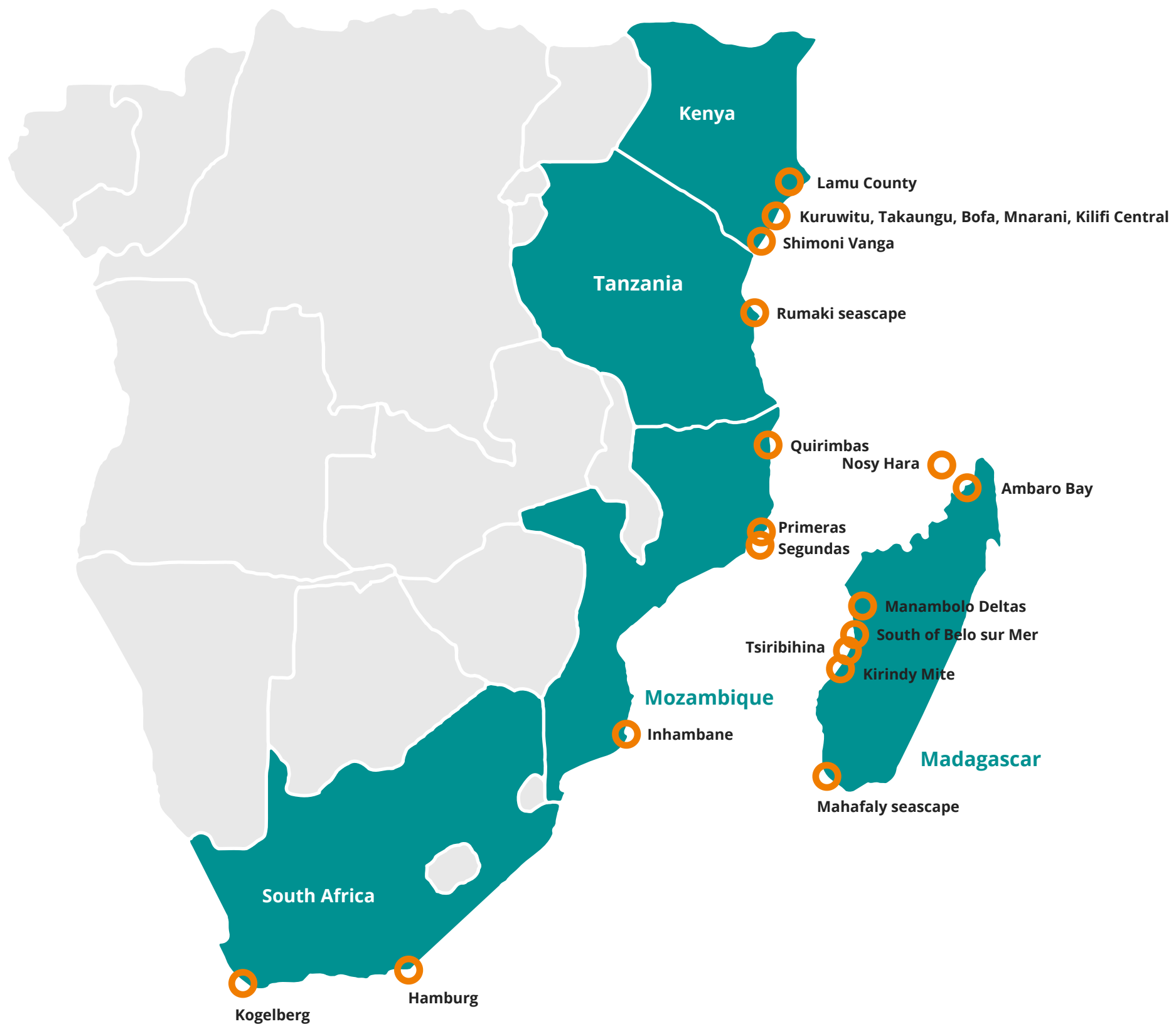
MARINE MANAGEMENT



Photo: (c) Tony Rakoto / WWF Madagascar

MARINE MANAGEMENT

We have projects focussed on marine protected and community conserved areas in all of these project locations. These are currently reliant on traditional conservation grant funding. There is potential for innovative business models to be developed to attract public and private sector finance but business models for these projects are in the very early stages of development.





**IF YOU ARE INTERESTED IN INVESTING OR COLLABORATING
PROFILED IN THIS PORTFOLIO, THEN PLEASE SEND US A MESSAGE
AND WE WILL BE IN TOUCH SHORTLY.**

email: coastalcommunitiesinitiative@wwfmedpo.org

**This project was supported by the Ocean Risk and Resilience Action Alliance (ORRAA)
and was funded with UK aid from the UK government.**



Working to sustain the natural world for the benefit of people and nature