

# SOLUTIONS IN FOCUS:

## The Great Blue Wall

Good practices for marine and coastal conservation  
in the Western Indian Ocean



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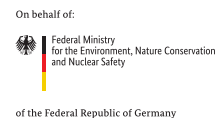
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# PANORAMA - Solutions for a Healthy Planet

PANORAMA – *Solutions for a Healthy Planet* is a global partnership initiative to facilitate learning from success in conservation. It promotes examples of inspiring solutions that showcase how nature conservation can benefit society. Through a modular case study format, solutions are being dissected into their replicable “*building blocks*” and their broader application is supported through cross-sectoral learning and exchange, relying on online as well as offline mechanisms.

PANORAMA allows practitioners to share and reflect on their experiences, increase recognition for successful work, and to learn with their peers how similar challenges have been addressed around the globe.

IUCN co-leads PANORAMA together with a growing number of partner organizations including GIZ, UN Environment, GRID-Arendal, Rare and IFOAM-Organics International.

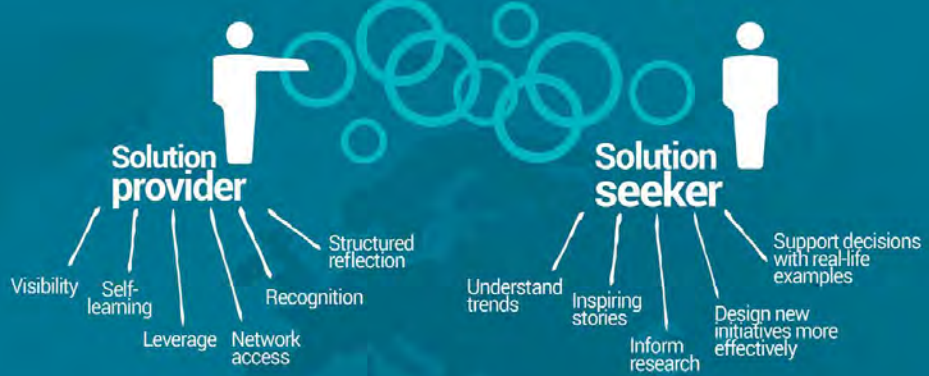
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by replicating "what works"

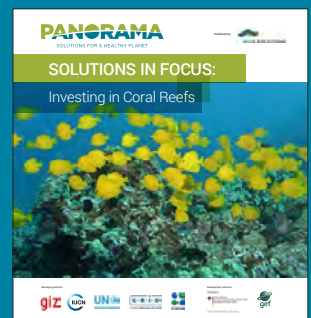
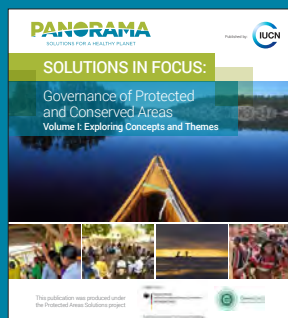
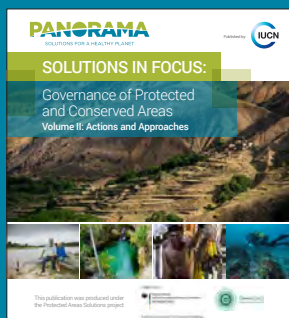
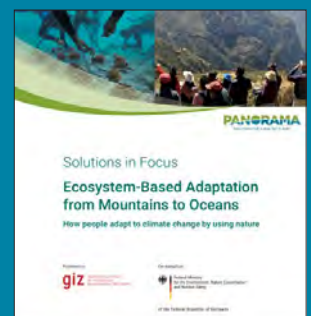
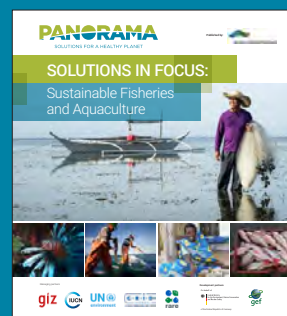


# The “Solutions in Focus” series

This booklet is part of a series of compilations assembling PANORAMA solution case studies on a defined topic. “Solutions in Focus” zooms in on a topic of interest covered by PANORAMA, allowing to explore common elements and shared learnings across success stories. It is a snapshot of the PANORAMA portfolio at a given time, rather than a representative assembly of selected “best practices” on the issue at hand.

## Further “Solution in Focus” booklets:

[panorama.solutions/en/resources/publication](http://panorama.solutions/en/resources/publication)







# Preface

This is the story of the untold. This is a picture of the unseen. This is the story of our true heroes – our blue guardians.

Our big blue planet is not doing well. We hear and see every day the situation getting worse. At times, we're shown pictures of celebrities stepping up to save the world. We're also told stories of big industry players making loud commitments to do better, one day. We hear of countries announcing ambitious pledges, others announcing also much less ambitious ones. Some are reason for optimism. Others much less so.

But how often do we hear the stories of the relentless work of those who, every day, go out there in the ocean or the coast and tirelessly do everything they possibly can to make it better. To protect it. To restore it. To nurture it. To take care of it. One needs to have a very fine ear to hear those stories. And yet, these stories are more than anything else reason for optimism. In fact, they probably are the only ones.

Our ocean is as vast as the eyes can see. Much bigger in fact. It's 70% of our planet. One could think that it is far too big to manage, to protect. But the truth is, there are thousands, millions of blue guardians on our planet. If only they would have the means to do more. If only they would have the rights to do more. If only they would have the power to do more.

This is where the Great Blue Wall enters into play. Because the reality is – we know exactly what needs to be done, where it needs to be done and how it needs to be done. Our Blue Guardians have been doing it for decades! The Great Blue Wall objective is to empower them to do what they do best.

The Great Blue Wall, championed by countries from the Western Indian Ocean, is a last attempt to make a difference, turn things around, and leave our blue planet as we found it, if not in a better state, for future generations. At the center of it all, are our blue guardians. They have to be. They really are the only ones able to turn things around. And they are increasing in number by the day.

This is the story of the untold. This is a picture of the unseen. This is the story of our true heroes – our blue guardians.

Thomas Sberna,  
Regional Head of Coastal and Ocean Resilience,  
IUCN Eastern and Southern Africa Regional Office (ESARO)

# 1. Background

## The Great Blue Wall Initiative

The Great Blue Wall (GBW) is a Western Indian Ocean (WIO)-led driven roadmap to achieve a nature-positive world by 2030. It aims at unlocking unprecedented nature-based recovery efforts through the establishment of a transformational movement. Its goal is to dramatically accelerate and upscale ocean conservation actions while enhancing socio-ecological resilience and the development of a regenerative blue economy by catalysing political leadership and financial support.

The Great Blue Wall (GBW) Initiative was officially launched at the 26th Conference of Parties of the United Nations Framework Convention on Climate Change in Glasgow, UK. The launch event held on 10 November 2021 was graced by high-level dignitaries from the WIO region and from across the globe, development partners and partner organizations within the GBW initiative.<sup>1</sup> The official launch event was followed by strategic engagement by IUCN and partners at a high-level panel on SDG14 at the 8th session of the Africa Regional Forum on Sustainable Development in March 2022, in Kigali Rwanda. Governments and partners from across the continent endorsed The Kigali Declaration and a Key Messages document, both of which highlighted the need for strengthening partnerships to embrace and fund implementation of the GBW, and to open up new opportunities for gender-sensitive and inclusive blue entrepreneurship.

The GBW aims to achieve its objectives by spearheading the establishment of a connected network of nature-people positive seascapes. This network will be connected by a living blue wall, that will act as a regional ecological corridor formed by conserved and restored critical blue ecosystems. It will also act as a wall against climate change impacts and biodiversity loss and shelter coastal communities, by creating the enabling conditions and necessary mechanisms to accelerate the development of regenerative ocean ventures.

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<sup>1</sup> Ambassador Peter Thomson; International Biodiversity and Climate Directorate, DEFRA, UK; Ministry of Blue Economy, Zanzibar; Ministry of ICT, Kenya; Ministry of Sea, Inland Waters and Fisheries, Mozambique; Minister of Ecological Transition, France; Minister for Agriculture, Climate Change and Environment, Seychelles; Minister for International Development Cooperation, Sweden; Minister of Maritime Affairs, Portugal; Minister of Foreign Affairs & Trade, Ireland; Oceans and International Environment and Science Affairs, USA; Former President, Seychelles; Director General, IUCN; Director General, WWF; President, Mission Blue; CEO, Wetlands International; Chief Sustainability Officer, Societe Generale; CEO, Nekton; President and CEO, TechnoServe; Co-chair, Facilitating Working Group of UNFCCC IPLC Platform; UK High-Level Climate Action Champion.

The GBW is an action-focused and action-driven regional response to three interconnected crises: Biodiversity Loss, Climate Change and Economic decline. It has therefore outlined three clear objectives to be achieved by 2030 in response to these crisis areas.

The GBW Initiative aims therefore at addressing the challenges through scaling the protection of **Seascapes**, conservation and restoration of **Critical blue ecosystems** and development of a **Regenerative blue economy**. The three components are strongly interconnected and should be considered as inter-dependent and complementary. Ecosystems health and human well-being are both targeted by nature conservation and sustainable development, and are the common denominators under the GBW's objectives.

## Biodiversity

Effectively and Equitably protect **2 millions km<sup>2</sup>** in the WIO by establishing large-scale Nature and People positive Seascapes.

## Climate

Conserve and restore **2 millions ha** of critical blue ecosystems to achieve net-gain compared to 2020 and sequester **100M tons of CO<sub>2</sub>**.

## Economy

Unlock the development of a regenerative blue economy that directly benefits **70M people** in coastal communities while also delivering conservation outcomes.



## 2. Approach and methodology

The aim of this PANORAMA Solutions in focus publication is to highlight existing good practices in the WIO region that contribute to the three main objectives of the GBW. Scaling such solutions across the region and integrating these into future planning and investments, as well as supporting knowledge exchange amongst key actors to build on “what works”, will all be key to achieving the ambitious goal of the GBW.

This publication focuses on 46 PANORAMA Solutions from the WIO region that provide a good representativity of the range of actions delivering tangible outcomes and that are promising for further development. We first classified them according to the GBW’s three components. We then identified their contributions to ecosystem health, human well-being or both, based on the description provided in the solutions’ impact section.

Seascapes		
Ecosystem health	1	Piloting Temporal Protected Areas for turtle conservation in island states: lessons from Seychelles
	2	Protection of nesting beaches to prevent extinction of green turtles on Aldabra Atoll
Human well-being	3	MIHARI, the first national LMMAs network in the Western Indian Ocean
	4	Network of Community -Managed MPAs for Inshore Small-Scale Fisheries in Mozambique
	5	Pioneering climate change adapted MPA management in Madagascar
Benefits for both ecosystems and human well-being	6	Mafia Island Marine Park: a success story of inclusive governance
	7	Strategic Adaptive Management of MPAs - towards inclusive and evidence-based MPA management
	8	Ensuring marine protection through Locally Managed Marine Area at Vamizi island in Mozambique
	9	Community participation in PA management provides development benefits
	10	Community Marine Conservation. The start of the Locally Managed Marine Area movement in Kenya in response to the decline of fish in Kuruwitu, on the North Kenya coast.
	11	Responsible control and monitoring for a sustainable management of fisheries and marine resources
	12	Sustainable Seas: Addressing destructive fishing practices in the Inhambane Province, Mozambique

Critical blue ecosystems		
Ecosystem health	13	Community-driven seagrass protection and monitoring
	14	Seagrass meadows restoration in Mozambique
	15	From participatory mapping to management measures of seagrass
	16	Reef Rescuers: Restoring coral reef ecosystem services
	17	Co-producing deep sea science for a more equitable and inclusive future
Human well-being	18	Example of successful symbiotic relationship between humans and the environment: Beneficial interaction of mangroves, Dabaso creek and the local community
Benefits for both ecosystems and human well-being	19	The Tahiry Honko project: Community-led mangrove management to protect coastal ecosystems and livelihoods in the Bay of Assassins, Southwest Madagascar. PATHFINDER AWARD 2021 WINNER
	20	Blue carbon credits financing community-based mangrove management
Regenerative blue economy		
Ecosystem health	21	The FISH-i Africa Partnership
Human well-being	22	Kaya Kinondo Community Bank: a successful mechanism for empowering people
	23	Mama Fatuma and the seaweed farming development in the south coast of Kenya
	24	Sea PoWer: an innovative seaweed farming technology to empower women
	25	Community Eco-Credit pilot - incentive for local marine management and opportunity for livelihoods improvement
Benefits for both ecosystems and human well-being	26	Promoting aquaculture for a better preservation of Soariake Marine Protected Area
	27	Octopus management - an entry point for collaborative fisheries management
	28	Kick-starting marine conservation through local fisheries management
	29	Community-based aquaculture development and marine protection
	30	Crowd funding for Marine Protected Area management
	31	Establishing plastic value chains in Vilanculos, Mozambique
	32	From Waste to Products: Maximising impacts of community-based plastic enterprise in Watamu, Kenya
	33	Community-based Waste Management Model (COBWAMM)
	34	Dirty Dozen: A methodology for tracking 12 types of common plastic found on beaches in Cape town
	35	Integrating Value chain in Sustainable Solid Waste management in Kwale and Mombasa Counties, Kenya
	36	The Litterboom Project
	37	Arena recycling Industry
	38	PREYO TZ

Benefits for both ecosystems and human well-being	39	Influencing community attitudes towards waste management
	40	Marine Conservation Entrepreneurship – from trash to trade
	41	Responsible Marine and Coastal Tourism Business Cluster Development
	42	Inclusive conservation governance on remote islands: Lessons from Seychelles
	43	Protected Area management on private islands: innovate finance examples from Denis and North Islands, Seychelles
	44	ABALOB: ICTs for small-scale fisheries governance
	45	Seychelles' first debt-for-nature swap for ocean conservation
	46	Capacity and empowerment of women fish traders in Tanzania.

The practitioners submitting a full solution on PANORAMA undergo a self-reflection process about their work, as they are required to identify the key ingredients that made the solution successful. These key success factors provide valuable insights about what is essential or crucial from the local level perspective. They can also be seen as “must-have” ingredients of a recipe of success for other practitioners implementing similar activities. These key success factors are the so-called “building blocks” of a PANORAMA solution.

In order to analyse the solutions’ contributions to **Seascapes** and **Critical Blue Ecosystems**, we used the Seascapes approach framework<sup>2</sup>, which proposes nine “essential elements”<sup>3</sup> that create “the appropriate enabling conditions” for “fully functional seascapes”. We classified the PANORAMA solutions’ success factors against these nine elements and outlined a synthesis description for each of these clusters of enablers. This approach helps to highlight what is considered most important in the practitioners’ perspective. It also shows the way local practices actually align with global guidelines, providing some nuances on priorities and current gaps.

A so-called **Regenerative Blue Economy** is on the one hand fostered by well governed and managed seascapes, as well as underpinned by healthy critical ecosystems. It needs truly transformative production and extraction methods on the other hand to improve coastal people’s livelihoods, while preserving the fragile balance of the ocean health.

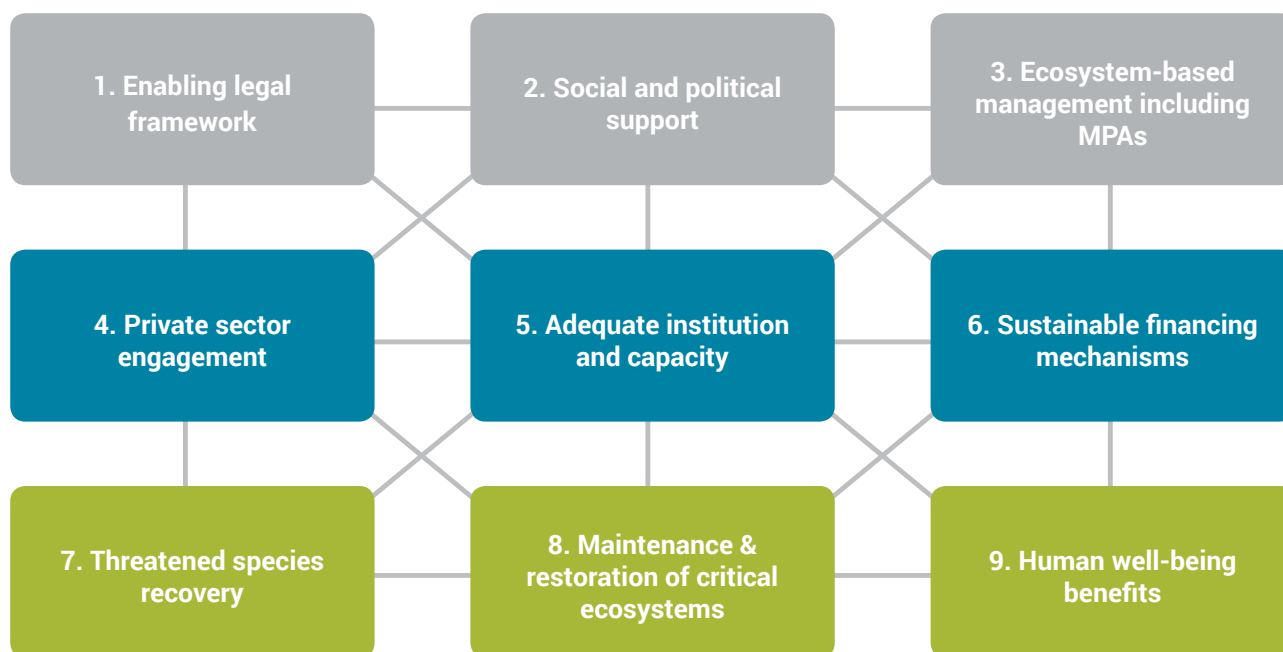
We selected the **Five principles of a Sustainable Blue Economy** as identified in UNEP’s Sustainable Blue Economy Transition Framework<sup>4</sup> to analyze the solutions contributing to the **Regenerative Blue Economy** component.

2 Murphy S. E. *et al.* 2020. “Fifteen years of lessons from the Seascope approach: A framework for improving ocean management at scale”, in *Conservation Science and Practice*, 2021;3:e423. The Society for Conservation Biology (wiley.com)

3 The 8<sup>th</sup> essential element of the seascapes approach framework is “Maintenance and restoration of critical ecosystems”. For the analysis, we treated the second pillar of the GBW, Critical Blue Ecosystems, as embedded in the first pillar, Seascapes.

4 Lobmüller, Janina & Lieberknecht, Louise (2021): *Sustainable Blue Economy: Identifying Pathways for Progress* (GIZ 2021). SBE Identifying pathways for progress – Capacity Development Hub (bluecapacityhub.info)





The nine essential elements of a Seascope adapted from the Seascope Guidebook (Atkinson et al., 2011): organized by elements related to Seascope process (top row), durability (middle row) and outcomes (bottom row): The Seascope has (1) an enabling framework of laws, conventions, regulations, and policies that facilitate marine conservation at local, national and/or regional scales; at all scales, from stakeholders in local marine managed areas to national leaders; (3) advanced large-scale management of marine implementation, monitoring, and evaluation, including MPA networks; (4) increased economic opportunities linked to healthy marine ecosystems and reduced impacts to those ecosystems through active engagement of the private sector; (5) adequate institutional frameworks and capacity, including personnel, infrastructure, and equipment, to make marine governance structures (governmental, commercial, and implement all priority marine conservation activities; (7) stabilized or improved population trends for threatened marine species; (8) maintained or restored critical habitats and ecosystems so that ecological processes and ecosystems services are sustained; and (9) improved the social/cultural and economic wellbeing of human communities dependent on marine and coastal resources and ecosystems.

Across the three first principles of a Sustainable Blue Economy, 6 sub-principles out of 11 are directly related to **Seascapes** and **Critical Blue Ecosystems**. This shows again the strong inter-connectivity between the three GBW overarching goals. Regarding the sub-principles that relate more strongly to sustainable economy, 13 in total, only 5 of them are exemplified by PANORAMA case studies from the region. Finally, the solution *Seychelles' first debt-for-nature swap for ocean conservation* encompasses all five principles and could potentially inform the creation of an innovative blended finance mechanism at the WIO regional scale, an aspect of the GBW's **Regenerative Blue Economy** objective.

For the analysis, we first grouped the solutions (and not their success factors), according to the framework sub-principles. Then, for each of these clusters of solutions, we listed their success factors, ordered and summarized them.

# 3. Analysis and discussion

## Findings against the Seascapes framework

### ***Social and political support: 16 success factors from the cluster of solutions fit this topic***

The importance of building trustful relationships was identified as a key enabler in two solutions (3, 17). Both of them are case studies concerning the national level, whether it is the creation of a national network of LMMAs or the co-production and ownership of science and data. All the other solutions that concern local activities, emphasized on the strategies aiming at engaging local communities in the conservation and management of their natural resources and ecosystems, as well as in the monitoring of climate related changes in their environment. It entails different approaches, such as awareness raising, participatory activities in management and planning, as well as a strong involvement of communities' champions.

### ***Ecosystem-based management, including MPAs: 15 success factors from the cluster of solutions fit this topic***

As key factors of their success, the local practitioners have identified actions that entail the designation of areas, their management, monitoring and enforcement of either remote marine areas or community-based conserved areas. They also refer to adaptive measures to inform the review of management plans, including climate change adaptation, and the importance of aligning them with national targets.

### ***Maintenance & restoration of critical ecosystems: 12 success factors from the cluster of solutions fit this topic***

The solutions in this category focus on mangrove and seagrass, as well as on coral reefs. A key enabler through all their success factors is the adoption of participatory approaches for mapping, planning and monitoring the ecosystems.

### ***Adequate institutions and capacity: 11 success factors from the cluster of solutions fit this topic***

Many success factors relate to good governance for having adequate institutions, with values such as inclusiveness and legitimacy through formal recognition of local communities and stakeholders' organisations. Capacities are built through various methods, from training programme and users toolkit to peer-to-peer knowledge exchange. They focus mostly on hard skills, but soft skills are emphasized as well in a few instances.

***Human well-being benefits: 10 success factors from the cluster of solutions fit this topic***

Two main approaches to improve human well-being are implemented by solution providers. The first one is to enhance opportunities for livelihoods in fisheries or in alternative sectors. The second one is to improve access to health and education facilities. Benefit sharing mechanisms sometimes accompany these measures as well.

***Enabling legal framework: 2 success factors from the cluster of solutions fit this topic***

Although the importance of an adequate legal framework at the national level to support actions locally is well recognized, only two solutions (4,10) in the **Seascapes** category have identified it as a key success factor. A reason could be that local practitioners focus on the actions that they actually implement on the ground, that they have more control on, than some potential policy or advocacy work undertaken. Another reason could be that most of the countries in the WIO region already have suitable legal frameworks that indirectly contribute to the success of the local solutions.

***Sustainable financing mechanisms: 1 success factor from the cluster of solutions fit this topic***

Only one solution, *Ensuring marine protection through Locally Managed Marine Area at Vamizi Island in Mozambique* (8), of this category has actually put in place a sustainable financing mechanism, through an innovative partnership between a university, a private lodge and the local community. The **private sector engagement (essential element 4)** is not listed as a key success factor in that solution, but it appears in the description of one of the success factors. It is not surprising to find very few solutions with sustainable financing, as key success factor, as it is still a rather current need than a common practice.



## Box 1: Five principles of a Sustainable Blue Economy

### **Principle #1: A Sustainable Blue Economy that protects, restores and regenerates healthy ecosystems:**

- Increases the extent and quality of ecosystems with clear evidence of restoration
- Identifies drivers of biodiversity loss and ecosystem degradation that are affecting the delivery of ecosystem services
- Increases the extent of effectively managed networks of marine protected areas
- Uses a certain percentage of structural finance for conservation, restoration and regeneration efforts.

### **Principle #2. A Sustainable Blue Economy that delivers equitable and inclusive processes and outcomes:**

- Improves access to benefits and use rights and improves equity of allocation
- Increases representation of woman, youth and marginalized groups in blue economy sectors, particularly in high-level positions
- Improves sanitation and health conditions for all communities living close to the ocean
- Expands the inclusion of small-scale users and business.

### **Principle #3. A Sustainable Blues Economy that enables climate stability and resilience:**

- Achieves carbon neutrality or negativity across blue economy activities, infrastructure and communities
- Integrates nature-based carbon sequestration and ecosystem-based adaptation solutions into conservation and restoration efforts, sustainable resource management and coastal development planning
- Ensures measures to mitigate and adapt to the risks of climate change and related natural disasters are in place, including nature-based solutions.

### **Principle #4. A Sustainable Blues Economy that supports sustainable consumption and production:**

- Identifies, understands and addresses discrete and cumulative impacts of blue economy sector on ecosystems
- Ensures regulatory and financial incentives are in place to generate innovation for sustainable extraction and production
- Increases use of good practice and technologies that minimize negative environmental impacts (including waste) and natural resource use and that phase out harmful technologies and production methods
- Establishes policies and regulations to ensure resource consumption is within sustainable limits.

### **Principle #5. A Sustainable Blue Economy that applies circular approaches:**

- Has system in place to achieve a reduction in the waste of resources and input of pollution to coastal ecosystems
- Has financial or regulatory systems in place to encourage reuse and recycling of resources
- Increases the contribution of sectors dependent on nature to restoring the regenerative cycle of nature
- Enables consumers to easily identify and access products that are produced with resource efficiency and less waste and are designed for long-term use.

## Findings against the Sustainable Blue Economy framework

***Increases use of good practice and technologies that minimize negative environmental impacts (including waste) and natural resource use and that phase out harmful technologies and production methods: 10 solutions (31, 32, 33, 34, 35, 36, 37, 38, 39, 40)***

All the practical case studies that exemplify this sub-principle concern waste management and valorisation, that generate local businesses and jobs, while removing plastics (and in some cases, other materials) from the coastal and marine environment. The main emphasis regarding the key enablers is put on infrastructures and facilities, as well as innovative techniques, that sustain the activity. Partnerships are also seen as crucial in this sector. Then equally important come communities' engagement and capacity building. Finally, the development or improvement of a legal framework is also mentioned a few times.

***Expands the inclusion of small-scale users and businesses: 8 solutions (22, 23, 24, 25, 26, 27, 28, 29, 46)***

The solutions that address this sub-principle are quite diverse in terms of topics. Some of them describe successful community-based aquaculture and community-based management of temporary closures targeting a specific species. Some others explain the implementation of savings facility that empower community members and act as incentives for conservation. One solution consists in empowering women whose livelihood is fish processing. Most of the success factors in this cluster highlight the importance of community engagement and participation in management actions. Among them, a couple of solutions put forward the mobilization of local leaders or champions to trigger the wider community's involvement and interest. Then, many of the success factors concern the development of sustainable business models, based on value chain analysis. Capacity building comes next, as an essential element for these activities to be successful. Finally, adequate technical support along the process of establishing these models was identified as an essential factor as well.

***Increases the contribution of sectors dependent on nature to restoring the regenerative cycle of nature: 3 solutions (41, 42, 43)***

One solution details the involvement of a tourism company in the conservation of an emblematic but endangered species and its ecosystems. The two others describe the implementation of an innovative finance mechanism for the conservation of islands in Seychelles. Their success factors can be divided in two main topics: conservation and funding mechanisms.

***Achieves carbon neutrality or negativity across blue economy activities, infrastructure and communities:***

***1 solution (30)***

The only case study that illustrates to a certain extent this sub-principle is *Crowd funding for Marine Protected Area management*, that consisted in raising funds to buy solar panels to produce energy on an island in Seychelles, drastically reducing fuel related costs and pollution.

***Ensures regulatory and financial incentives are in place to generate innovation for sustainable extraction and production: 1 solution (21)***

The *FISH-i Africa Partnership* solution consists in monitoring and combatting illegal fishing, through information sharing and collaboration at the regional level.

***Enables consumers to easily identify and access products that are produced with resource efficiency and less waste and are designed for long-term use: 1 solution (44)***

*ABALOB!* *ICTs for small-scale fisheries governance* provides an example of a concrete application of this sub-principle. It is an application that has been widely adopted by small-scale fishers in South Africa to monitor their catch. It also allows them to connect directly on *MARKETPLACE* for direct sell of their fish.



# 4. Solutions

# Piloting Temporal Protected Areas for turtle conservation in island states: lessons from Seychelles



**Solution Provider:** Andrew Rylance, **GOS-UNDP-GEF Seychelles Protected Areas Finance Project**



**Other organizations:** Marine Conservation Society Seychelles



**Location:** **Seychelles**



**Summary:**

The implementation of Protected Areas on a seasonal basis provides protection for turtles and their offsprings during the nesting and hatching season. The Temporal Protected Area approach ensures that the turtles are not disturbed, harmed or poached during these important periods. This initiative focuses on the protection of hawksbill turtles, as they nest seasonally, mostly on the inner islands of Seychelles. The main nesting areas in the south of Mahe, the largest and most populated island in Seychelles, have been nominated for temporary protection. The nesting beaches are patrolled regularly with an intensified effort during the peak season to facilitate protection of the species at this critical life-cycle phase, as well as recording of data from nesting turtles. Opportunistic encounters with the nesting females provide the necessary data for individual identification to better monitor their nesting behaviours.

## Success factors

Nomination of the potential temporal protected areas

Education and awareness throughout the local community



## Impacts

There has been a remarkable decline in turtle poaching incidents, due to the frequent patrols by the monitoring team. The presence of patrol officers on the nesting beaches alleviates poaching activities.

More successful nestings have also been observed, especially as the public is educated and respect the Turtle watchers' Code of Conduct, which defines the "dos and don'ts" in the event of encountering nesting turtles and hatchlings.

Preparing nesting platforms prior to the nesting season and clearing natural and anthropogenic debris as obstacles for the turtles, helps the turtles to successfully nest, resulting in an increase in the number of nests recorded.

Temporal Protected Areas can be more acceptable by the public as they only place restrictions during specific times of the year. The temporal protection raises awareness of the area's value for other species and the impact of protecting these areas to increase successful turtle nesting. All these aspects can be strengthened through public workshops and explained through guided visits to the sites and on information boards.

Turtles are iconic species for Seychellois people, even appearing on the national currency. They are appreciated for their beauty and the important role they play in our biodiversity. Therefore, sea turtles are contributing towards the Seychelles' economy, promoting our country's value.



# Protection of nesting beaches to prevent extinction of green turtles on Aldabra Atoll



**Solution Provider:** Jennifer Appoo, **Seychelles Islands Foundation**



**Location:** **Seychelles**



**Summary:**

Historical exploitation of green turtles (*Chelonia mydas*) on Aldabra Atoll (Seychelles) led to a dramatic decline in the numbers of nesting turtles, with the lowest numbers observed in the late 1960s. In 1968, turtle protection regulations were implemented throughout Seychelles. Aldabra Atoll was designated a special reserve in 1981 managed by the Seychelles Islands Foundation and in 1982, Aldabra became a UNESCO World Heritage Site. Turtles at Aldabra have been well protected both in law and in practice with turtle nesting beaches strictly protected from poaching, development and pollution. The protection has been accompanied by consistent monitoring of turtle emergences. The successful conservation efforts have boosted the turtle population to 500-800 % over a period of 40 years with an estimated 3100-5225 females nesting annually. Aldabra Atoll now holds one of the largest nesting rookeries for green turtles in the Western Indian Ocean.

## Success factors

Proclamation of no-take marine protected area

Enforcement of protection of a remote marine protected area

Long-term monitoring to assess effectiveness of protection



## Impacts

The strict protection of Aldabra Atoll meant that any turtle exploitation and all turtle poaching activities ceased, that the coast remained undeveloped and unpolluted providing for excellent nest habitat and that the introduction of invasive predators has been minimal. Ultimately, this has resulted in an increase in the population of nesting green turtles, a species classified as a globally endangered on the IUCN Red List. Consistent and standardized monitoring of turtle emergences over the last 37 years has allowed the Seychelles Islands Foundation (SIF) to document the success of this solution. Aldabra now represents a successful model for effective turtle conservation for protected areas in the region and the green turtle population is a national pride for the atoll. In 2014, Aldabra became part of the Indian Ocean South-East Asian Marine Turtle Site Network in recognition of Aldabra's importance to marine turtles. Furthermore, the destructive commercial exploitation in the 1900s has now been replaced by eco-friendly tourism activities. Regular sightings of sea turtles around the atoll are one of the highlights of a visit to Aldabra, boosting tourism and in turn increasing revenue for management of the protected area. SIF is investigating the possibilities of rat and cat eradication and strict biosecurity measures are in place to prevent arrival of other invasive species.





# MIHARI, the first national LMMAs network in the Western Indian Ocean



**Solution Provider:** Vatosoa Rakotondrzafy, **MIHARI network**



**Location:** **Madagascar**



**Summary:**

Mitantana Harena Ranomasina avyeny Ifotony - MIHARI, the Locally Managed Marine Areas (LMMAs) Network of Madagascar, was created in 2012 from the initiative of 18 LMMA communities from the Southwest of Madagascar. Since then, it has kept growing and evolving. The network aims at supporting the LMMAs by building local leadership, sharing best practices, securing financial sustainability and making fishers' voices heard.

It is organised in a network structure, that allows national coordination and regional implementation.

Recently in 2020, MIHARI has become a formal entity with an independent status, that enables it to receive and manage grants directly.

The Malagasy government doesn't have yet formally embedded an LMMA Ministerial Decree in its legislation, but it has been involved in MIHARI's various fora and decision-making processes..

## Success factors

Trustful relationship with the government

Implementation of the network structure

Fishers' leadership enhanced



## Impacts

Operational since 2015, MIHARI is nowadays an officially recognized national movement of small-scale fishers.

Considered as marginalised and poor, small-scale fishers are often shy and reluctant to speak up. MIHARI has invested a lot in strengthening their capacities in leadership, public speaking, negotiations and partnerships creation. It has generated a leaders' movement with fishers' representatives in each village and LMMA. These leaders now dare to express themselves in public, in front of the government authorities, and take part in negotiations. This has led to the adoption of three motions.

MIHARI is a membership of 219 LMMAs, ramified in 10 coastal regions out of 13. The network has enabled the emergence of small-scale fishers who are convinced of the benefits to manage their resources and have adopted their own customary law called *dina*, to regulate their fishing activities in their LMMA.

MIHARI has also had a critical role in convening NGOs to work together. It has generally succeeded in mobilising all key stakeholders, from government to international donors, communities' associations and their supporting NGOs.

The LMMA approach is one of the models of co-management of natural resources in the Western Indian Ocean, that became widely known thanks to MIHARI. The network has inspired other countries, beyond the region.



# Network of Community -Managed MPAs for Inshore Small-Scale Fisheries in Mozambique



**Solution Provider:** Zach Lowe, **Rare**



**Location:** Nampula, Inhambane, Maputo, **Mozambique**



**Summary:** Rare's Fish Forever program empowers coastal communities to sustainably manage the coastal fisheries. In Mozambique, globally significant biodiversity intersects with high dependence on local fisheries for food security, rural livelihoods and climate change adaptation. Rare Mozambique has worked with 6 communities to shape the trajectory of community-based coastal fisheries co-management, and to embed fully protected reserves and community-managed access areas into the national management framework.

## Success factors

Enabling policy

Community-Managed  
Access and Reserve  
(CMA+R) networks

Behaviours adoption  
campaign

Financial inclusion



## Impacts

Rare's intervention has benefitted over 41,000 people directly and over 158,000 people indirectly. Rare has reached communities in 6 districts of Mozambique, including small-scale fishers, fish buyers, savings club participants, and other community members. Impacts include:

- Helped to develop the legal pathway for the implementation of community co-managed fisheries.
- Established the country's first formal area of ocean to be put under community co-managed access with reserves (CMA+R), aiming to cover 582 km<sup>2</sup> under sustainable management and 83 km<sup>2</sup> under full protection.
- Strengthened the capacity of community fisheries management bodies and fish buyers with skills and equipment for electronic registration of fishers and catches.
- Developed participatory ecosystem-based local fisheries management plans.
- Designed supplemental income initiatives for fishing communities, with nearly 800 community members financially supported to start 11 community enterprises through seed grants.
- Supported 22 Savings Clubs, comprising 444 members (68% of whom are women) which have collectively saved over \$270,000 USD during the life of the project.



# Pioneering climate change adapted MPA management in Madagascar



**Solution Provider:** Harisoa Rakotondrazafy, **WWF Madagascar Country Office**



**Other organizations:** Madagascar National Parks



**Location:** **Madagascar**



**Summary:** Threats posed by climate change on ecosystems and biodiversity in protected areas and human people are increasing. Protected Areas (PAs) can also be an effective tool to strengthen their resilience. This solution is therefore building resilient PAs in Nosy Hara that can help to secure long-term use of ecosystem services by local communities in a changing climate, while improving protection of the area's rich marine life by considering climate change into its management.

## Success factors

Climate change capacity for  
MPA managers

Climate witness community  
toolkit

Vulnerability assessment to  
climate change

Review of management plans to  
integrate climate change issues

Identification and  
implementation of adaptation  
options





## Impacts

- Improved MPA managers' skills and understanding of climate change issues and their links with 'business as usual' work;
- Better knowledge of the status of conservation targets (species and ecosystems) and their level of vulnerability and resilience;
- Increased awareness of climate change and the relevance of Marine Protected Areas in adaptation among practitioners and local communities; both in the project area and beyond, through the experiences and results of this initiative.



# Mafia Island Marine Park: a success story of inclusive governance



**Solution Provider:** Maggie Mchome, **Marine Parks and Reserves Unit**



**Location:** Kilindoni, Pwani, **Tanzania**



**Summary:** The Mafia Island Marine Park (MIMP) was established in 1995. It was the first of its kind in Tanzania mainland. The local community lives within the Park and their livelihoods depend mostly on the Park's marine resources. Before its creation, they observed increasing pressure on their fisheries resources due to migrant fishers, using illegal blast and pull net fishing methods. Both the community and the government saw the need to mitigate the decline and took action. The Park adopted early on a collaborative management and inclusive governance system, as well as prioritized socio-economic benefits for the local inhabitants. MIMP is thriving, being a pristine place for fish sanctuary and high tourism hub.

## Success factors

Inclusive governance and participatory management

Balancing Mafia Island's inhabitants' needs and conservation imperatives

Benefit sharing mechanism and alternative livelihoods



## Impacts

Communities have gained ownership on coastal and marine resources. Therefore, they actively participate in:

- Marine resources monitoring: coral reefs, fish catch, beaches;
- Law enforcement patrols;
- Awareness raising on conservation issues through environmental education programmes.
- Gender is well mainstreamed in conservation activities through equal distribution of marine resources and social benefits among the communities, as well as through inclusive and participatory management.

Environmental impacts:

- Mangrove restored in depleted areas;
- 98% decrease of illegal fishing practices;
- Increased fish catch, and fisheries resources overall, for both artisanal and commercial fishers.

Social benefits:

- 670 boys and girls from poor families assisted with payment of school / college fees;
- Village level infrastructures: 4 dispensaries (4,000 people benefit, including a health centre with maternity rooms), classrooms (600-800 students benefit), more than 7 water supply (4,000 people benefit).





# Strategic Adaptive Management of MPAs - towards inclusive and evidence-based MPA management



**Solution Provider:** Jennifer O'Leary, **California Polytechnic State University**



**Other organizations:** Science for Active Management Program, Kenya Wildlife Service, Marine Parks and Reserve Units of Tanzania, Seychelles National Parks Authority



**Location:** Kenya, Tanzania, Seychelles



**Summary:** The Strategic Adaptive Management (SAM) approach is part of the SMART Seas Africa Network and is applied by government agencies to develop evidence- and learning-based practices that increase MPA effectiveness. SAM builds capacity by (1) guiding staff in translating broad agency goals into measurable objectives, (2) engaging staff and stakeholders in MPA monitoring and (3) providing a framework to use data to inform and evaluate management actions. Managers and stakeholders think through what information is needed for evaluation, and researchers learn about management needs.

## Success factors

Development of national SMART objectives

Regular MPA monitoring

Data request form

Peer training



## Impacts

The application of the SAM approach has led to innovative conservation solutions, by bridging science and MPA management. Demonstrated impacts include:

- Increased management capacity and passion for conservation among MPA staff and local community members;
- Removal of invasive species and clean beaches maintained (management actions);
- Enhanced sharing of information between scientists and managers.





# Ensuring marine protection through Locally Managed Marine Area at Vamizi island in Mozambique



**Solution Provider:** Isabel Marques da Silva, **UniLurio**



**Other organizations:** IUCN, WWF, ZSL Living Conservation, Vamizi Island Lodge



**Location:** Vamizi Island, Palma, **North Mozambique**



## Summary:

A unique partnership between a lodge, a university and the local communities (especially the CCP, Community Fishing Council), resulted in more than 12 years of protection of natural resources through the Locally Managed Marine Area (LMMA) of Vamizi Island, or as it is locally known: a sanctuary.

The solution focuses on the mitigation of the two biggest problems of the local community: health and education. Supporting medical aid and capacity building for teachers of a local school were the “exchange currency” for starting an LMMA on the island. After initial mistrust, fishermen were persuaded to cooperate. Six years later, fisheries around Vamizi improved and became significantly better than those in surrounding waters.

Vamizi Island is now famous for its LMMA, a place where taking turtles, mosquito net fishing and illegal scuba diving are banned. The LMMA has increased the fisher's catch rates and can count on the Fisheries Council to control illegal fishing around it.

## Success factors

Developing basic education and health facilities

Sustainable financing for LMMA operations through tourism fees

Locally-based organization providing sustainable technical support

Conducting ecological monitoring



## Impacts

The first positive reaction from the community was being proud of their clinic and school. Finally they could go to a consultation without leaving the island and their children could study without leaving their home. A project for distributing meals in the school kept children attending classes. Grants for girls' education are supporting the best female students and changing mentalities about girls' education, changing people's sentiment about it or at least making them discuss it. These first steps had a substantial impact on the village and made people more willing to accept tourism and the LMMA.

Meanwhile, the CCP developed artisanal buoys, to demarcate the LMMA, made of local materials to avoid theft. Now CCPs from the mainland come to see how they are built and are reproducing the system. Other lodges are following in the steps of the Vamizi experience, supporting not only the patrols of the LMMAs, but also providing better education and health in remote locations.

Research shows that the number of species and individual fishes found there has increased, and so has the size and quantity of fish caught locally.

Overall Vamizi LMMA is a leading example of a successful cooperation between tourism, university and communities, but also an LMMA that is changing the lives of surrounding communities for the better.



# Community participation in PA management provides development benefits



**Solution Provider:** Christophe Du Castel, **Agence Française de Développement**



**Other organizations:** IUCN



**Location:** Moheli Marine Park, **Comoros**



**Summary:** The Moheli Marine Park, Comoros, was established in 2001 through a negotiated process agreed by the ten main village centres around the area. However, during political instability, external support dried up in 2005, and pressures on coastal ecosystem resources, vital to the local economy, have increased. The solution has been to revive the village dynamics around the protection of the Park, and since 2014 to develop income generating activities for both local communities and the Park's management.

## Success factors

Revitalizing community engagement in park management

Community action for sustainable artisanal fisheries

Sustainable agriculture in watersheds and vulnerable coasts



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PARTNERSHIP  
NATURE AND  
DEVELOPMENT



## Impacts

Re-addressing the institutional and governance framework for the Moheli Marine Park has resulted in a more productive arrangement between local villages and protection authorities. Dialogue concerning impacts on local resources and livelihoods has moved from one of costs and claims to one of action and benefits. Trade-offs between protection and exploitation have become possible and resulted in reduced impacts on marine and coastal ecosystems. New areas of 'no-take' zones have both increased 'spill-over' and recovery of key commercial species (octopus, holothurians) and provided strict biodiversity havens within the Moheli island ecosystem. The active participation of villages in reducing watershed and coastal erosion are perceived as beneficial for their community, not just for the Protected Area.



# Community Marine Conservation. The start of the Locally Managed Marine Area movement in Kenya in response to the decline of fish in Kuruwitu, on the North Kenya coast



**Solution Provider:** Des Bowden, **Kuruwitu Conservation and Welfare Association (KCWA)**



**Other organizations:** UNDP, CORDIO East Africa, Wildlife Conservation Society (WCS), Oceans Alive



**Location:** Kilifi, **Kenya**



## Summary:

Kuruwitu Conservation and Welfare Association (KCWA) was set up in 2003 by members of the community concerned about the degradation of their seas. Over-fishing and effects of climate change needed to be addressed before the marine ecosystem was damaged beyond repair. Fishers and concerned residents who remembered how healthy and productive the sea had been in the past, felt it necessary to act before it was too late. In 2005, they took the unprecedented step of setting aside a 30-hectare Marine Protected Area (MPA). This was the first coral based Locally Managed Marine Area (LMMA) in Kenya. Twelve years on, the area has made a remarkable recovery. With fishing prohibited within the MPA, fish have grown in abundance, size and diversity. Fish catches in the area have improved and alternative income generating enterprises have been introduced. Kuruwitu has become a model for sustainable marine conservation. The KCWA shares its knowledge with other local and regional coastal communities.

## Success factors

MPAs

Institutional framework,  
legal requirements and  
management

Community welfare

Importance of  
conservation





## Impacts

The development of sustainable non-fishing based initiatives has shifted dependence on subsistence fishing, taking pressure off the fishing grounds. Fish stocks have improved dramatically within the LMMA, and an independent report shows a considerable increase in fish biomass and biodiversity of all marine life in the area. This has increased fish catches in the neighbouring fishing grounds, improving livelihoods. Turtles and nests in the area are protected through a community compensation scheme. Communities from along the coast and from other neighbouring countries visit Kuruwitu to see our living classroom. At least 20 other similar projects have started by other coastal communities inspired by KCWA. KCWA demonstrated the importance of community involvement in natural resources management plans; a principle that has influenced a change of policy away from the state to the local communities. Kuruwitu has been chosen to pilot a co-management initiative working with various stakeholders covering an area of approximately 100 square kilometres. This is one of the first collaborative management schemes of its kind on the Kenyan coast and will set a precedent in the future.





# Responsible control and monitoring for a sustainable management of fisheries and marine resources



**Solution Provider:** Alison Clausen, **Wildlife Conservation Society (WCS)**



**Other organizations:** Ministère des Ressources Halieutiques et de la Pêche (MRHP), Darwin Initiative, The Leona M and Harry B Helmsley Charitable Trust, Mac Arthur Foundation



**Location:** Antongil Bay, Ankivonjy Marine Protected Area, Ankarea Marine Protected Area, Soariake Marine Protected Area, **Madagascar**



**Summary:**

Responsible control and surveillance aims at reducing threats and pressures while maintaining the integrity of the targeted sites. The approach has two components: (i) community control and surveillance (CCS), (ii) joint control with local and national authority (including representatives from the Department of Fishery Control and Surveillance at the Ministry of Fisheries).

At each site, CCS members implemented weekly patrols to ensure law enforcement based on social conventions – named Dina - and MPA regulations. CCS members are equipped with canoe, binoculars and uniforms. They use Cybertracker, a component of Spatial Monitoring and Reporting Tools that gives on time the date, the location and types of offenses CCS members have faced. A protocol is generated for each patrol.

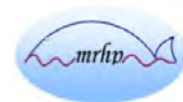
Based on the analysis of CCS reports, joint patrols are organized in case of important and repeated offences. Joint patrol members are entitled to arrest and seize illegal fishing gears.



THE LEONA M. AND HARRY B.  
**HELMSLEY**  
CHARITABLE TRUST



**MacArthur**  
Foundation



## Impacts

Thanks to this approach, in 2016, illegal gears were confiscated and burnt: 4 beach seines, 50 nets with too small mesh size in Mananara Antongil Bay and 64 scuba tanks used for sea cucumber hunting in Ankarea MPA. Offenders have been arrested and awareness of fisheries regulations among fishermen has been reinforced.

Thus, there is a decrease in offenses during the past three years. Use of illegal gears has decreased, local fishermen respect fishing zones and fishing calendar, in Ankarea and Ankivonjy MPAs the objective of « zero offense » has been achieved in late 2016. Moreover, the local association has been able to cover part of their operating cost, thanks to the fines they received from the offenders. With increased rule compliance of fishing zones and seasons, fishermen have noticed an increase in capture, mainly through larger octopus. We are currently analysing the relation between offenses and the wealth of marine biodiversity, using the results of periodical ecological monitoring.

There is also an increased ownership and commitment of the local community in implementing control and surveillance, once they saw the benefit from it. Joint control has incredibly improved the standing of the community co-manager of marine resources with their peers, authorities and partners. Such success has raised interest of other partners such as the MIHARI network.



# Sustainable Seas: Addressing destructive fishing practices in the Inhambane Province, Mozambique



**Solution Provider:** Marine Megafauna Foundation (MMF)



**Location:** Inhambane, **Mozambique**



**Summary:** Mozambique's ocean is home to precious marine biodiversity and Inhambane province is one of the few places where you can find whale sharks and manta rays year-round. Artisanal fisheries and tourism are critical to the economy of the country, yet both are threatened by persistent, destructive fishing practices. To address this threat, Marine Megafauna Foundation (MMF) tackles the root causes by educating and empowering local communities to manage their marine resources sustainably through innovative education, pioneering research and community empowerment. MMF Sustainable Seas Project has been creating an effective network of Locally Managed Marine Areas along Inhambane's coast, with sustainable fishing activities throughout the most bio-diverse waters. Improved scientific knowledge of key species and fisheries, combined with responsible marine resources management, mitigate threats to vulnerable species, helping communities to protect their valuable natural resources.

## Success factors

Four fishing communities successfully managing LMMAs along the Inhambane coast

A network of passionate and influential Ocean Ambassadors and Ocean Guardians from five communities

Community engagement through empowering activities



## Impacts

- Two successful temporary reef closures managed by the local CCP (Community Fisheries Council);
- A stronger and more empowered CCP;
- Engagement of the local government authorities in LMMA discussions;
- 37 local Ocean Ambassadors;
- 600 community members taking part in awareness raising activities, organised and supported by Ocean Ambassadors;
- 8 women from fisher households assisted to start-up their own successful ecotourism business, 2 fisher households with a diversified asset/income base and 3 fishermen placed in apprenticeship positions;
- 116 community members in 6 active Village Loan & Savings Associations programs;
- Commencement of our reef fish monitoring project. In November 2017 and March 2018, we carried out monitoring on 5 reefs in Tofo and completed a total of 148 transects;
- Three successful Mozambican research fellows taught to swim, SCUBA dive and take part in reef monitoring, contribute to scientific papers and interact with policy makers;
- Almost daily monitoring of megafauna sightings, and a database with 10 years of information on sightings, environmental conditions and fishing activities;
- Publication of scientific papers by key MMF researchers, which contributed to the increased protection status of whale sharks from vulnerable to endangered on the IUCN Red List in 2016;
- Research on the contribution of manta ray tourism to the Mozambican economy in 2016;
- A significant improvement in artisanal fishing methods.



# Community-driven seagrass protection and monitoring



**Solution Provider:** Mihary Ramiandrisoa, **Conservation Centrée sur la Communauté (C3)**



**Location:** Nosy Hara Marine Park, **Madagascar**



**Summary:** *Conservation Centrée sur la Communauté (C3)*, is a Malagasy association focused on marine conservation, which started to operate in 2009 in the North of Madagascar. Our mission is to expand conservation efforts worldwide by building the capacity of individuals and local institutions through research and training initiatives. C3 was the first NGO in Madagascar to introduce the internationally standardised SeagrassWatch methodology and assisted other NGOs and government marine science agencies in technical capacity building. We combined seagrass data collection with key informant interviews on the presence and habitat utilisation of the endangered dugongs and green sea turtles in order to map hotspots for long-term monitoring and protection. Our community stewardship approach has also led to the enforcement of gillnet bans in areas important for endangered species and community-based reporting on infractions and endangered species sightings.

## Success factors

Participatory approach

GIS mapping of seagrass meadows

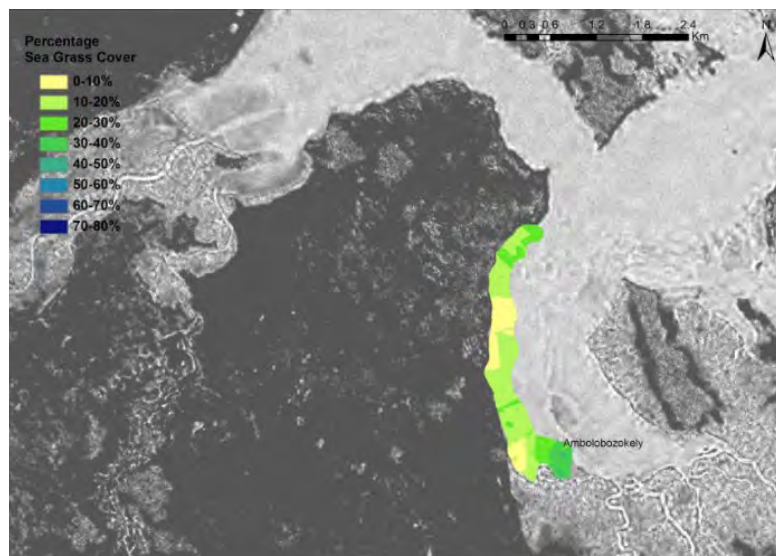
Annual monitoring of the seagrass beds





## Impacts

- Map of seagrass hotspots with data on species and their density;
- Map of dugongs' feeding areas ;
- Database on seagrass state, with monitoring results;
- Creation of Locally Managed Marine Areas, run by communities;
- Appreciation and understanding about the role of seagrass (and megaherbivores) in the health of coastal ecosystems and fisheries.





# Seagrass meadows restoration in Mozambique



**Solution Provider:** Salomao Bandeira, **Universidade Eduardo Mondlane**



**Location:** **Mozambique**



**Summary:** Seagrass meadows provide many ecosystem services, from fish juveniles nursery, to feeding ground for dugongs and sea turtles, coastal erosion mitigation and carbon sink. Seagrass meadows are subjects to degradation like many other natural ecosystems. Our research team tested several seagrass restoration methodologies. Some of them have been successful. We involved local communities in the restoration work, to raise awareness on the importance of seagrass, create ownership and reflect about the threats to seagrasses, as well as on the risks of reducing their importance for their livelihoods that depend on wealthy seagrass meadows. From 2017 to 2020, we conducted trainings on restoration methods, revisited the causes of degradation and assessed the restoration piloted in three different sites. Seagrass beds' main drivers of degradation are cyclones, sand accretion, trampling and sedimentation from flooding, as well as seagrass uproot for clam collection.

## Success factors

Successful seagrass restoration methodology

Social scientists to work with local communities

Formation of the A-TANYI seagrass association



## Impacts

- Nearly 1.5 ha mostly restored of the *Cymodocea serrulata* seagrass meadows (mostly in Inhaca but includes also Inhambane). Other seagrass species (*Halodule uninervis* and *Thalassia hemprichii*) were restored;
- Seagrass restoration methodologies tested and documented with three methodologies: sediment method (sod), sediment free methods and finger method. The sod method corresponds to clod of seagrasses that are detached from a donor bed by means of a shovel or a pvc/polythene tube;
- Data collected on species and environmental parameters;
- 3 post-graduate students trained;
- Several communities were involved in the restoration work, which raised their awareness on the importance of seagrass.



# From participatory mapping to management measures of seagrass



**Solution Provider:** Rindra Rasoloniriana, **Blue Ventures**



**Location:** Barren Isles, Melaky Region, **Madagascar**



**Summary:**

The Barren Isles are located off the coast of Maintirano, in the Melaky Region, on the West coast of Madagascar. This MPA (4,300 km<sup>2</sup>) is co-managed by the small-scale fishers association called Vezo Miray Nosy Barren.

The right conditions are found here for the development of seagrass beds, home to, among others, needlefish harvested by small-scale fishers during bad weather.

The preservation of this habitat required the delineation of the management areas involving active community participation. Participatory mapping revealed a seagrass area of about 600 hectares. Data feedback on the extent of seagrass beds coupled with education sessions on the ecological services of the seagrass beds were explained to the communities to raise their awareness.

Monitoring was carried out by the communities adopting the SeagrassWatch approach to assess the seagrass beds and introduce the communities to the monitoring technique. A data feedback session was conducted with the community members to engage discussions around management measures.

## Success factors

Participatory mapping

Participatory  
monitoring

Data feedback and  
interpretation

Community management  
and decision-making



**blue ventures**  
beyond conservation

## Impacts

The local community members have included the preservation of seagrass in their social convention called *Dina*.

The communities decided to include part of the seagrass beds within the areas of octopus temporary reserves, which are closed annually for a few months.

The participatory mapping and monitoring of seagrass have promoted social cohesion and led to greater commitment to the protection of marine habitats.

Overall, we have seen a greater ownership of sustainable fisheries management by small-scale fishers, contributing to the implementation of a community-led conservation programme.



# Reef Rescuers: Restoring coral reef ecosystem services



**Solution Provider:** Nirmal Shah, **Nature Seychelles**



**Other organizations:** GEF, USAID



**Location:** **Seychelles**



**Summary:** Reef Rescuers implemented the first-ever large-scale reef restoration project using “coral gardening”. It involved collecting over 40,000 small pieces of healthy coral from sites that survived a bleaching event, raising them in underwater nurseries and transplanting them to a 5,300 m2 degraded site at Cousin Island Special Reserve, affected by coral bleaching. It aims to build resilience in coral reefs damaged by bleaching and improve associated fisheries, tourism and coastal protection.

## Success factors

Vulnerability assessment and stakeholders plan

Capacity development for coral reef restoration

Coral reef restoration toolkit





## Impacts

- 5,300 m<sup>2</sup> of new reef, consisting of 18 out of 90 species of coral has been planted in the Marine Protected Area of Cousin Island Special Reserve, completed in June 2014 and to date healthy, functioning and resilient to bleaching;
- 41 practitioners from 11 countries have been exposed to reef restoration techniques by “on the job” work as volunteers up to 3 months in situ, and 8 experts have to date been formally trained through a full-time 6 week classroom and field-based training program.
- Recent monitoring has shown 300 % increase in fish species and 500 % increase in numbers of fish in the new reef compared to in the degraded control site.





# Co-producing deep sea science for a more equitable and inclusive future

**Solution Provider:****Nekton Foundation****Other organizations:**

Island Conservation Society, Islands Development Company, Seychelles Islands Foundation, Ministry of Agriculture, Climate Change and Environment, Seychelles Fishing Authority, Ministry of Fisheries and Blue Economy, Blue Safari Seychelles, The Nature Conservancy, SeyCCAT, OMEGA, Subsea Consultants, AP, Global Subdive, Inmarsat, ROV Support, Sky Ocean Rescue, Encounter Edu, EYOS Expeditions, Global Ocean Trust, Helly Hansen, IUCN, LH Camera, Triton, Sonardyne, The Deep, AXA, Western Australian Museum, Seychelles Tourism Board, Seychelles Ministry of Foreign Affairs and Tourism, University of Seychelles, Marine Conservation Society Seychelles, Nature Seychelles, National Institute for Science, Technology and Innovation, National Parks Authority Seychelles, Save Our Seas

**Location:****Seychelles****Summary:**

The deep sea is present in the waters of 70% of countries, but only 17% of these have the resources, equipment and expertise to be able to observe, research and sample these depths. To bridge the gap and promote a more inclusive, equitable approach to deep-sea research, Nekton conducts long-term trainings and deep-sea literacy activities, provides a better accessibility to networks and resources and applies the values of science co-production in partner host nation countries.

By co-producing deep-sea science, we can start to address the exclusive nature of surveying the deep sea and further ensure that the research conducted is wanted, useful and supportive of national objectives. It is a small step towards levelling the playing field and creating long-term mutually beneficial outcomes.

This solution focuses on our successful co-producing deep-sea science experience undertaken with the Government of Seychelles, from 2018 to 2022.



## Success factors

Co-production and building trust

Open and frequent line of communication

Ownership of samples and data

Joining Science and Communication

## Impacts

- Outputs that are implementable to address and fulfil co-defined national needs such as: creation of a field guide, supporting government where requested with processed data and input on reports;
- Increased public awareness and professional enthusiasm for deep sea science within Seychelles and the Western Indian Ocean;
- Increased knowledge in Seychelles to support long-term national and regional goals and ambition;
- New networks established within Seychelles, the Western Indian Ocean and internationally to support development of new initiatives;
- Knowledge sharing between scientists from Seychelles and internationally;
- New opportunities and relationships built to create longer term projects including a new deep-sea science course and MOOC hosted by the University of Seychelles including for scientists from the Western Indian Ocean (launched in late 2022);
- New data from a never explored habitat illuminated and shared with the public and policy makers.



## Example of successful symbiotic relationship between humans and the environment: Beneficial interaction of mangroves, Dabaso creek and the local community



**Solution Provider:** Melckzedek Osore, **Kenya Marine and Fisheries Research Institute (KMFRI)**



**Other organizations:** National Environment Management Authority, Kenya Wildlife Service, Kilifi County Government, Kenya Forest Service, Kenya Coastal Development Project



**Location:** Dabaso, Kilifi, **Kenya**



**Summary:** The shores of Mida Creek lie around 100 km North of Mombasa (Kenya) and adjacent to the Arabuko Sokoke Forest. Mida consists of marine and coastal ecosystems that comprise coral reefs, seagrass beds and mangrove forests, which are crucial for the livelihoods of the local coastal communities. Coral reefs provide food and income to the communities and other goods and services of strategic importance to the economy, including tourism, fisheries and coastal protection. In 2014-2016, the Dabaso Creek Conservation Group (DCCG) received a grant by the community development program Hazina ya Maendeleo ya Pwani (HMP) under the World Bank. The funds were used for construction of a resource centre, expansion of the kitchen/restaurant area and extension of the boardwalk. DCCG is a community-based organization located in Watamu area in the village of Dabaso.

### Success factors

Training programs for the environmental conservation

Involvement of local community, future plans sustainability

Crab Shark Restaurant expansion



## Impacts

- Agreements with the management of tourist hotels located in Watamu area and Malindi town to place the Crab-Shark restaurant in the tourists visit itinerary;
- Contribution to the development of schools and other community amenities around Dabaso and Watamu such as dispensaries. Schools are allocated special days to visit the DCCG and learn more about the importance of mangrove, crab cage farming and conservation and protection of the coastal environment;
- Youth are gaining practical experience and knowledge in coastal environment protection and conservation. DCCG members are invited to visit similar areas in Malindi, Kilifi, Mombasa and Kwale to teach fellow youths how to empower themselves and earn a living through a similar approach.





# The Tahiry Honko project: Community-led mangrove management to protect coastal ecosystems and livelihoods in the Bay of Assassins, Southwest Madagascar

**Solution Provider:**

David Parreno, **Blue Ventures**

**Other organizations:**

Velondriake Association, Plan Vivo, Darwin Initiative, The John D and Catherine Mac Arthur Foundation, Blue Forests, GEF, UNEP

**Location:**

**Madagascar**

**Summary:**

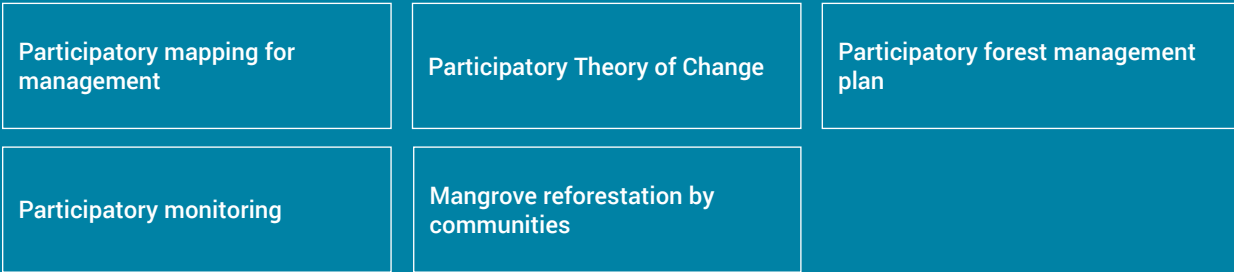
The project, co-managed by Blue Ventures and the Velondriake Association in the Velondriake MPA, aims to establish a sustainable, long-term mangrove payment for ecosystem services scheme which will reduce deforestation and degradation and restore mangroves in the Bay of Assassins (Southwest Madagascar), avoiding emissions of over 1,300 tonnes of carbon dioxide per year. Carbon credits generated by conserving and restoring mangrove ecosystems make an important contribution to poverty alleviation and biodiversity conservation in the area, by establishing a secure revenue flow offering communities the opportunity, where feasible, to construct schools, dig wells, provide community health services and other related services that will directly benefit community members of all ages.

The Velondriake Association is progressively increasing their presence in the field in order to monitor the implementation of this project with relevant communities, playing a key outreach role.





## Success factors



## Impacts

The impact to date has happened on different fronts:

Social development:

Developed local infrastructure and alternative livelihoods, such as beekeeping within mangrove forests, which has provided additional income to the local community;

Environment:

Improved conservation of the 1,300-ha mangrove ecosystem, which hosts a wide array of biodiversity, such as bird and reptile species, and marine species important for fisheries that depend on mangrove health;

Governance:

Strengthened community capacity to manage a Locally Managed Marine Area (LMMA), of which the blue forests are a part. Through this support, local communities themselves are establishing their own regulations and building a strong governance structure for management of the LMMA;

Women's empowerment:

Supported women's involvement in governance of natural resources, whose participation was previously limited due to local culture in which women rarely had a voice in local governance and management. Over the last 5 or 6 years, Blue Ventures actively promoted women's involvement in both mangrove and fisheries activities. Women are now engaged in carbon stock monitoring every year and are the leaders in mangrove planting. Women also now make up 30 % of the executive committee board for the LMMA.



# Blue carbon credits financing community-based mangrove management



**Solution Provider:** Salim Abdalla, **Mikoko Pamoja Community Organization**



**Other organizations:** Kenya Forest Service, Kenya Marine and Fisheries Research Institute (KMFRI), ACES



**Location:** Gazi beach, **Kenya**



**Summary:** This is the first community-run project of its kind in the world. Mikoko Pamoja promotes the restoration and protection of mangrove forests for local community benefit. It is validated by Plan Vivo to generate and sell mangrove carbon credits to companies and individuals, who would like to improve their green credentials. The revenue generated from the trading of carbon credits flows into a community benefit fund, which is managed by the community-led Mikoko Pamoja Steering Group. The fund supports local development projects in education, water and sanitation, and mangrove reforestation.

## Success factors

Participatory Forest Management Plan

Forest management agreement

Carbon know-how through strong partnership

Community environmental education and awareness



## Impacts

Through Mikoko Pamoja, the community has a powerful mechanism to generate revenue, which is benefiting community projects in health, education and mangrove management. Restoration efforts of lost mangrove areas increase the amount of carbon that can be stored and together with the enhanced restoration and protection of mangroves, a total emission reduction of 50,000 t CO<sub>2</sub> is expected over the next 20 years crediting period. In addition, healthy mangroves are nursery grounds for fish, ensure shoreline protection and support sediment stabilization. As the project has a strong ownership by the local community it also leads to improved education standards and enhanced awareness for the importance of healthy mangroves among the community. The success of Mikoko Pamoja is being replicated in Kenya's South coast at Vanga and across the Western Indian Ocean countries in Madagascar, Tanzania and Mozambique.



# The FISH-i Africa Partnership



**Solution Provider:** Mark Ssemakula, **Stop Illegal Fishing**



**Other organizations:** Fish-i Africa, NFDS, The Pew Charitable Trust, TMT, IOTC CTOI, Indian Ocean Commission



**Location:** Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, Tanzania



**Summary:** FISH-i Africa is a partnership of eight Southeast African countries, regional organizations and international experts, that gathers, analyzes, shares and strategically uses information to take action against illegal fishing operators. The initiative has shown that enforcement against illegal operators can happen, even if capacity is low and the ocean areas to monitor are vast. Key factors have been the access to timely and relevant information and intelligence, effective information sharing and close regional cooperation.

## Success factors

Information sharing and regional cooperation

Technical support and research

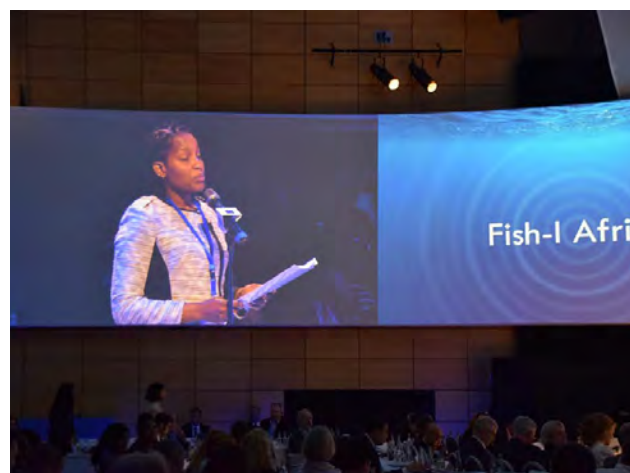
Raising awareness and promoting effective approaches





## Impacts

The information sharing and cooperation in FISH-i Africa has led to successful enforcement actions. Every action has made illegal fishing less of a low-risk high-reward activity and puts illegal fishing operators under the spotlight, while giving enforcement officials confidence to take further action. Overall, more than USD 3 millions of fines have been paid, vessels have been de-flagged and vessels operating under false and multiple identities have been identified. Fishing with forged licenses has been identified and prosecuted. Analysis of how illegal fishing, illegality, crime and lawlessness in the fisheries sector is taking place in the WIO shows common methods and techniques being employed. These modus operandi enable illegal operators to undertake illegal activity, often undetected, and when investigated to get away with it or with minimal penalties and sanctions. Features of FISH-i Africa that were deemed the most valuable by users were the provision of access to information about fishing vessels and licenses from other FISH-i countries; regional cooperation resulting in timely communications; advice provided to support decision making in respect to potential or realized cases and enforcement actions; and increased awareness about illegal fishing.





# Kaya Kinondo Community Bank: a successful mechanism for empowering people



**Solution Provider:** Melckzedek Osore, **Kenya Marine and Fisheries Research Institute (KMFRI)**



**Other organizations:** The World Wildlife Fund (WWF), National Bank of Kenya, Hayina ya Maendeleo ya Pwani, Community of Coastal Counties of Kenya-Jumuiya ya Kaunti za Pwani, National Government of Kenya.



**Location:** Kinondo, Kwale, **Kenya**



**Summary:**

Kaya Kinondo Community Financial Services Association (KKCFSA) was established in 2003. It has over 2,000 members of which more than 25% are women. The Association has previously conducted community outreach on banking services supported by World Wildlife Fund for nature (WWF), National Bank of Kenya and Base Titanium Mining Company. It provides loans at subsidized interest rates to community groups to undertake initiatives that protect the environment and improve livelihoods.

KKCFSA constructed a modern bank to improve effectiveness of providing timely micro credits. The Bank is enabling the community to access favourable loans, hence encouraging them to reduce their financial dependency. It is also nurturing community's culture to save profits obtained from their economic activities. In 2016, KKCSA gave out loans of KES 18 million (USD 180,000) to 358 members. It is transforming Kinondoni village into a modern self-sustaining economy.



## Success factors

Mobilizing Community Members through Local Leaders

Capacity building on financial management

Partnership strengthens stakeholder linkages for Sustainable Growth

## Impacts

- The financial independence has enhanced the resilience of the local people in times of crises e.g. during drought, the COVID-19 pandemic. The bank is diversifying services by offering loans to purchase bicycles and motorbikes in the thriving transport sector;
- Livelihoods of the local community are thriving because people can reliably obtain soft loans to invest in fishing, agriculture, tourism, co-management of forests and cultural sites;
- Enhanced saving culture of the people and improved infrastructure in Kinondo and the wider Msambweni Ward adjacent areas;
- Defaulting loan repayment is drastically minimised because issuance is usually through groups of shareholders who guarantee one another. Therefore, group members come to the rescue of another to avoid defaulting;
- Literacy rates have risen drastically due to the improved livelihood of the community, enabling them to secure affordable loans for paying school fees timely and regularly;
- Youths are gaining practical experience and knowledge in the banking sector. Plans are also underway to diversify clients by targeting the youth;
- Empowerment of the people of Kinondo and its environs;
- Plans are underway to replicate the bank in the neighbouring sub-county of Lungalunga;
- Through partnership with Base Titanium, a Memorandum of Understanding (MoU) has been developed to target farmers, in order to increase diversity of membership base.



# Mama Fatuma and the seaweed farming development in the south coast of Kenya



**Solution Provider:** Melckzedek Osore, **Kenya Marine and Fisheries Research Institute (KMFRI)**



**Other organizations:** National Government of Kenya, Kibuyuni Seaweed Self-Help Group, Country Government of Kwale



**Location:** Kwale, **Kenya**



**Summary:** Mama Fatuma, a hard-working middle-aged woman living in Kibuyuni village of Kwale County embodies the success of seaweed farming on the Kenyan coast. In a village where the predominant economic activity of fishing is a preserve of the men, Mama Fatuma encouraged fellow women to embark on seaweed farming as an alternative economic activity to wean them off over-reliance on their men folk and to enable them to contribute to the family income. Following research trials and support from various sectors, seaweed farming is now earning Kibuyuni village over USD 11,000 from the initial USD 2,000 in 2012. It begins to thrive in various places along the South coast of Kenya and is improving livelihoods through provision of additional income for families to pay school fees, meet medical costs and diversify the economy. It has also generated interest in mariculture and marine science generally among the youth in coastal Kenya.

## Success factors

Mama Fatuma seaweed farmer champion

High potential for seaweed value addition on the market

Adequate technical, infrastructure and financial support



## Impacts

- The harvest doubled from 5,204 kg in 2012 bringing income of KES 46,840.5 (USD 426) to 10,554 kg in 2018 at the cost of up to KES 263,850 (USD 2,398). The unit price has fluctuated widely from KES 9 per kg in 2012, to KES 30 per kg in 2015 for a total KES 1,277,490 (USD 11,608.36) earned by the community;
- The sale of products from seaweed was substantially improved when the community was given space to sell their products to a wider market during cultural events in Kwale and at trade fairs such as the Kwale Cultural Show, International Fairs in Mombasa and Nairobi etc.;
- Seaweed farms became learning sites for students from schools and universities, as well as tourist attractions for local and foreign visitors;
- Upscale of seaweed farms from Kibuyuni to 11 other villages along the South coast of Kenya;
- Women and youth empowerment through engaging in a successful business model.





# Sea PoWer: an innovative seaweed farming technology to empower women



**Solution Provider:** Cecile Brugere, **Soulfish Research & Consultancy**



**Location:** Zanzibar, **Tanzania**



**Summary:**

In Zanzibar, seaweed farming is a small-scale but important livelihood activity, carried out at 80 % by women. Recently, declines in production were observed, proved to be mostly due to climate change.

Tubular nets - an innovation piloted in the context of the Sea PoWer initiative, have shown promise over the traditional "off-bottom" peg and rope technology, to improve seaweed productivity and local ecosystem conditions. However, tubular nets are used in deeper waters, and thus, require swimming or boat handling skills that most women do not have. Establishing seaweed farms in deeper water, using new technologies, could only be a successful adaptation option, with institutional support, significant investment and through the empowerment of women and the participation of local communities.

## Success factors

Building women's capacity and social capital

Progressive challenging of gender norms

Engaging with seaweed buyers and other community members

An adapted technology co-designed with woman seaweed producers





## Impacts

Thanks to the innovative and gender-sensitive approach that Sea PoWer has used to introduce the tubular net technology and develop the capacity of the women seaweed producers, Sea PoWer has become more than a technology project. It has become a concept under which seaweed farming innovation cannot be separated from women's empowerment.

The Sea PoWer pilots demonstrated that seaweed productivity from tubular nets in deeper water is higher than with the traditional off-bottom technique in shallow areas.

With this technology, women are getting fewer stings and cuts from paddling in the lagoon, as they are mostly on the boat.

At the end of the project, women showed their confidence in using the tubular nets and the innovative protocol of production, and in working together more closely than they ever were in the past. Women engaged with the SeaPoWer initiative reported that:

- 91% have better knowledge on how to farm seaweed;
- 91% have become a role model for other women;
- 87% have built their social capital;
- 83% feel stronger and more important as a woman;
- 78% have earned more income for themselves and their families;
- 70% have increased their self-esteem.



# Community Eco-Credit pilot - incentive for local marine management and opportunity for livelihoods improvement



**Solution Provider:** Tanguy Nicolas, **Fauna & Flora International (FFI)**



**Other organizations:** Mwambao-MCCC, Greenfi



**Location:** Mkoani, South Pemba, Zanzibar, **Tanzania**



## Summary:

In partnership with Mwambao-MCCC and GreenFi we began working on a Community Eco-Credit scheme we named "MKUBA".

2.5 years since inception, a review of the model has revealed interesting first results and shed light on areas requiring attention. Many aspects are already truly encouraging. A grant to the community has allowed for nearly 370 community-managed loans for 213 individual beneficiaries in 5 groups with over 50 % of women, for a total loan value of over USD 27,000. The original grant capital of USD 4,000 has grown to USD 5,000 via an Islamic finance approach. Repayments are near 100%. Loans can be used for household improvements or income generation compatible with community marine resources management plans. Each loan comes with a self-determined environmental commitment and as a result, legal fishing gears have been adhered to, 40,000 mangrove propagules have been planted and patrols and security of closed areas have significantly increased. In 2021, the MKUBA is now being implemented in 3 more communities in Zanzibar.

## Success factors

Community-level ecosystem management institution

Eco-credit/MKUBA groups Monitoring system for repayments and environmental compliance



## Impacts

- A high degree of satisfaction has been reported among the majority of participants, with community requesting to roll out more MKUBA groups and neighbouring communities expressing willingness to replicate the scheme;
- This degree of satisfaction provides the community with a tangible link between locally-led coastal and marine resources management, within Pemba Channel Conservation Area, and the improvement of residents' livelihoods;
- Strengthened local management plan implementation, with **MKUBA** groups' participating in community patrols (additional to those piloted by the fishers' committee), 20,000 mangrove propagules have been planted since inception.



# Promoting aquaculture for a better preservation of Soariake Marine Protected Area



**Solution Provider:** Alison Clausen, **Wildlife Conservation Society (WCS)**



**Other organizations:** Indian Ocean Trepang, Copefrito, The Leona M and Harry B Hemsley Charitable Trust



**Location:** District of Toliara II, **Madagascar**



## Summary:

Like most coastal areas in Madagascar, Soariake MPA is located in a remote area where people depend on fishing activities for their subsistence and the lack of alternatives leads to overfishing of marine resources.

In 2016, WCS Madagascar established a partnership with two private companies – COPEFRITO and Indian Ocean Trepang (IOT) – operating in Southwest Madagascar to promote aquaculture in Soariake MPA through an industry approach based on “village farmers”. Sea cucumber and seaweed farming have been chosen with regards to local context and potential.

For sea cucumber farms, IOT provides technical support and seed at a competitive price, and they are committed to buy the harvest. WCS ensures the equipment for the enclosures of the local communities in charge of the management of the farm. For the seaweed aquaculture, COPEFRITO provides plants, equipment and technical support, the local communities manage the farms and sells the harvest to COPEFRITO.

## Success factors

Value chain approach

Technical support

Co-management of Soariake MPA



COPEFRITO

THE LEONA M. AND HARRY B.  
HELMSLEY  
CHARITABLE TRUST

IOT  
Indian  
Ocean  
Trepang



## Impacts

In August 2017, nine farmers had their first sea cucumber harvest from their farm in Andravona. 250 kg, representing around 40 % of the total production were collected and sold to IOT. Farmers earned USD 850 (USD 100 per farmer), which represents around three months income compared to traditional fishing, adding significant revenue for fishers.

40 households have participated to the launch of seaweed farming in November 2016. The seaweed has a short harvest cycle – 45 days, and provides substantial income to households: around USD 53 per month for a farmer at a starting phase (an increase of 75% compared to income from fish catch), and USD 130 for those in an advanced stage (3rd cycle).

Thanks to these positive results, we are extending the partnership to implement seven new enclosures in three villages, and to reach around 200 new farmers in seaweed farming. The extension is based on Soariake MPA potential (2 ha for sea cucumber and 1500 ha for the seaweed farming) and its capacity further to environmental assessment of the MPA. In addition to the business agreement with the farmers, an environmental friendly ruleset has been designed to respect the MPA's potential: farms will not infringe reefs, coral habitat and sea turtle nesting sites.

The value chain approach, mutual confidence between partners, a transparent and win-win partnership are the key pillars of this project.





# Octopus management - an entry point for collaborative fisheries management



**Solution Provider:** Lorna Slade, **Mwambao Coastal Community Network**



**Other organizations:** Fauna & Flora International, Blue Ventures, IOC-Smartfish programme, Biodiversité - un trésor partagé



**Location:** South Pemba, Tanzania and Unguja, Zanzibar, **Tanzania**



**Summary:** This solution addresses sustainable marine management in Zanzibar in the face of increased fishing pressure. It illustrates that the implementation of a successful octopus management regime can improve yields in a very short period of time through 3-month voluntary no-take zones (NTZ). The participatory approach in training, learning and data analysis can provide an entry point for the wider introduction of collaborative management, to the benefit of all stakeholders.

## Success factors

Community data collection and participatory analysis

Participatory video for documentation and lesson sharing

Fisher committee capacity building

Value chain analysis for key fisheries



## Impacts

- Successful demonstration of local management capability
- Successful demonstration of a successful management regime for octopus
- Increased quantity and average size of octopus over the project period (early 2015 to today)
- Improved understanding of local governance and MCU (Marine Conservation Unit) regulations both by Village Fisher Committee (VFC) and by Pemba Channel Conservation Area (PECCA) managers
- Understanding of the mechanism of establishing local by-laws
- By-laws in place
- Steps in building collaborative management understood and documented in a manual
- Ability to collect, log and analyze basic catch data locally
- Ability to document experiences and observations using participatory video so that lessons can be shared more widely
- Community willingness to both repeat the closure for octopus but also to begin exploring targeted management regimes for other species such as sea cucumbers, cowries and key fish species
- A close relationship has developed between marine conservation unit authorities and the local village fisheries committee (VFC)



# Kick-starting marine conservation through local fisheries management



**Solution Provider:** Rupert Quinlan, **Blue Ventures**



**Location:** Andavadoaka, **Madagascar**



**Summary:** Voluntary and temporary closures of octopus fishing grounds are used as a point of entry for community-based conservation. Closures typically cover 25% of a community's overall octopus fishing area and are in place for 2-3 months at a time. There is compelling evidence that this improves fishery yields and local incomes, thereby building support to protect natural resources through Locally Managed Marine Areas (LMMAs); areas where the management of marine resources are at least in part under community control. These LMMAs often employ marine management strategies such as bans on destructive fishing practices and community-enforced permanent no-take zones.

## Success factors

Community assessment

Peer-to-peer learning exchange

Collaborative closure design

Collaborative regulation setting

Community-based opening of closures



**blue ventures**  
beyond conservation

## Impacts

Research into the effectiveness of the octopus closures has shown that they can improve catches and income, with landings from closed fishing sites increasing by more than 700 % in the month following the lifting of a closure, boosting the catch per fisher per day by almost 90 % over the same period. On average, we've found that 1 dollar worth of octopus left in the closed fishing site has grown to USD 1.81 by the end of a closure. In Madagascar, the success of early closures has led to other communities following suit, with more than 270 closures having taken place to date. Adoption continues to grow each year, not only in Madagascar, but now in other countries in the region. The approach has also been introduced to artisanal fisheries for mud crab and spiny lobster. Following the successful establishment of the closures, fishing communities across Madagascar have grouped together to establish more than 190 management associations and 70 LMMAs that ban destructive fishing practices. MIHARI, Madagascar's LMMA network, now covers over 17% of the island's seabed, and is championed at the highest levels of government. At the end of 2017, Blue Ventures' work in Madagascar is improving the lives of over 200,000 people. The imperative now is to bring this successful approach to coastal communities across the Indian Ocean.





# Community-based aquaculture development and marine protection



**Solution Provider:** Christian Vaterlaus, [marinecultures.org](https://marinecultures.org)



**Location:** Jambiani, Zanzibar, **Tanzania**



**Summary:** This solution addresses poverty reduction in Zanzibar for its coastal communities through a more sustainable management of their natural resources, additional income, and consequently, better quality of life. The approach of implementing ecological aqua farming of bath sponges with women in coastal communities promotes healthy economic growth, reduces environmental pressure and threats to marine life and other natural wildlife, improves public health and strengthens the economic and social status of women.

## Success factors

Sponge aquaculture as an alternative means of income

Evaluation of suitable sponge species

Setting up a sponge farm

Development of independent business models

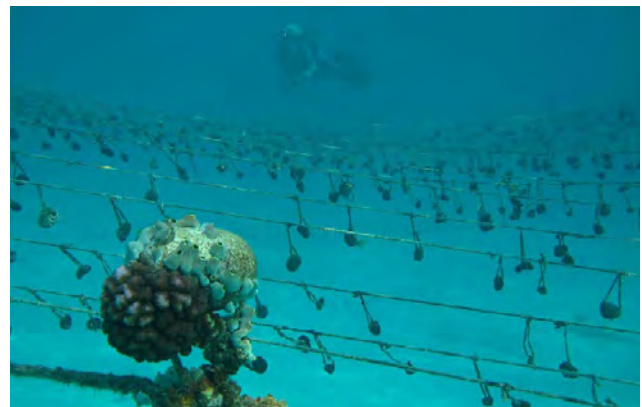


[marinecultures.org](https://marinecultures.org)



## Impacts

- Each sponge farm feeds about 2-3 large families with ~10 people. We install 4 new farms per year. Scaling is depending on the production in the nursery farm.
- Women of Jambiani learned how to farm sustainably bath sponges and how they can sell them locally. After one year training they get independency.
- An Artificial Reef (AR) with reef balls was built with the fishermen committee of Kibigija to learn more about the importance of reefs and biodiversity. Our coral farmers learned to cultivate corals and plant them on the AR.
- The pilot project mooring & buoys in Jambiani & Paje proved that anchor damages can be reduced and corals get protection and more respect. In 2016, we installed 40 more buoys in Zanzibar, Pemba and Mafia.



# Crowd funding for Marine Protected Area management



**Solution Provider:** Nirmal Shah, **Nature Seychelles**



**Location:** Cousin Island, **Seychelles**



**Summary:** In April 2014, an online crowdfunding campaign via Indiegogo was initiated to finance the installation of a modern, stand-alone 5 kw photovoltaic system on Cousin Island Special Reserve. Within 50 days GBP 25,000 were raised to cover the costs. The solar system was installed in 2015 and makes the energy supply of the island independent from fossil fuels and reduces emissions by approx. 15 tonnes of CO<sup>2</sup> per year, thus making the management and running of the MPA more sustainable.

## Success factors

Private sector partnership

Evaluation of suitable sponge species Crowdfunding for financing a renewable energy system

Solar power plant installation



## Impacts

The solar power system saves the NGO Nature Seychelles, who manages the Cousin Island Special Reserve, approximately USD 750 per month in direct transportation costs and fuel used for running a generator, which itself needs regular maintenance, and replacement every two years. Expensive long distance fuel transportation by boat and storage on the island is not necessary anymore, which also diminishes the risk of contamination in the nature reserve. In its first year, carbon emissions on Cousin Island were reduced by around 15 t already. This also allows Nature Seychelles to buy fewer carbon credits on the international market which it does regularly to ensure that Cousin remains the world's first carbon neutral nature reserve. These savings are used for research, staff, island maintenance, boat repairs, and other things, thereby improving management of the reserve.



# Establishing plastic value chains in Vilanculos, Mozambique



**Solution Provider:** Raymond Obare, **Maíra Valladares, 3R**



**Other organizations:** Amor, PARCO, Municipality



**Location:** Beira, Maputo, Matola and Vilanculos, **Mozambique**



**Summary:**

Vilanculos is a small paradise with rich biodiversity along the Indian Ocean in Mozambique, which has been suffering from marine litter for decades. The purpose of this project is to reduce the amount of plastic leakage into the ocean in this city. The project established eco-points in Vilanculos, where plastic waste materials is collected at cost by waste pickers, local residents and organizations. The material is sorted, processed and sent to recyclers within and outside Mozambique. The various partnerships and advocacy actions carried out have resulted in an increasing collection of plastic waste. This has significantly improved the local marine environment due to the plastic management system put in place.

3R works on creating integrated solutions for waste produced in Mozambique. The company is committed to the circular value chain contributing to the circular economy.

## Success factors

Partnerships

Advocacy for development





## Impacts

Various partnerships with different stakeholders have resulted in the establishment of new eco-points in the city.

Setting up a Material Recovery Facility (MRF) went a long way to enhance sorting, processing and sending the material recovered to recyclers within and outside Mozambique.

Waste volumes in local dumpsites has been reduced and recycled volumes have increased. The current waste production is approximately 19 t/day, 2.7 % being plastics as a result of the project. In total the organization managed to collect 6 t of waste material that has been recycled.

Selling and sending the processed material to recycling industries in Mozambique and abroad was very welcomed as it led to opened markets for exploitation leading to increased sales.

Awareness has been raised with the local population for reduction of waste, including, better management of plastic waste at source.

The marine ecosystem has drastically improved due to the plastic management system established, including regular beach clean-up exercises by young people and waste pickers.





# From Waste to Products: Maximising impacts of community-based plastic enterprise in Watamu, Kenya



**Solution Provider:** Raymond Obare, **Steve Trott, Watamu Marine Association**



**Other organizations:** Eco World Plastic recycling



**Location:** Watamu, Kilifi, Malindi, **Kenya**



## Summary:

Watamu Marine Association (WMA) is a unique initiative on the Kenyan coast bringing together members from the community, tourism and environment sectors. WMA promotes community development and empowerment, and advocates for the protection and preservation of Watamu Marine Park and Reserves. WMA is exploring participatory and co-management potential with the managing authorities and agencies. WMA promotes member groups, business ventures and partner projects in Watamu and the surrounding areas.

The project has created a dynamic plastic waste value chain between the local community and the tourism industry. This created jobs for recyclers and part-time income for the community beach-cleaning teams and provides an environmental service to hotels. The project now plans to expand its operations to the larger neighbouring coastal towns of Malindi and Kilifi, targeting a population of more than 400,000 people along a 70 km stretch of coastline. All hard plastic waste is machine crushed at Eco-World Recycling in Watamu.

## Success factors

Partnerships

Infrastructural  
development

Creation of employment

Up-cycling plastic waste



## Impacts

Procurement of a waste collection vehicle to transport plastic waste and marine litter collected within Watamu and its neighbouring towns to recycling facility.

Procurement of PET crusher machine for processing plastic waste bottles that process 2 tonnes of plastic per day.

100 waste pickers from disadvantaged women and youth groups were able to get decent employment and earn a weekly income from the project by participating in the sponsored "Cash 4 Trash" beach clean-ups.

Placement of large plastic waste collection containers in Watamu and Malindi towns for public use and to raise awareness on waste segregation at source, including assisting the county government in enforcing waste management.

Procurement of an injection moulder for making marine litter plastic keyrings and fridge magnets for sale at the Eco World shop, consequently ensuring income and decent living for the workers at the factory.

Collected over 33 t of marine litter from the Watamu Marine Park and beaches since January 2020.

Trained over 30 local community artisans on how to make up-cycled products from fishing gear and flip-flops marine litter.

4 key stakeholder meetings held in Watamu and Malindi to discuss ways in which we can strengthen and develop circular economy partnerships and collaborative processes between civil society, government and private sector in the project area.



# Community-based Waste Management Model (COBWAMM)



**Solution Provider:** Juma Bosco, **Big Ship CBO**



**Location:** Mombasa, **Kenya**



## Summary:

Community-based Waste Management Model (COBWAMM) is a youth-led social enterprise inspired by the Big Ship organization. Its mission is "To provide a reliable, affordable and efficient waste management service and derive value from resource-rich waste products in order to promote healthy communities and protect natural resources."

COBWAMM has two strategies:

1. Resource Collection (RECO) - This is a franchise model that simplifies solid waste management operations for the urban poor, placing special emphasis on helping women and young people;

2. Material Recovery Facility (MAREFA) - This is a model for deriving value from resource-rich waste in order to improve livelihoods.

With a view to increasing the rate of waste collection, particularly in low-income and densely populated neighbourhoods, efforts were taken to sort and generate revenue from materials at source.

## Success factors

Zoning of waste collection neighbourhoods

Material Recovery Facility (MAREFA)

Effective customer services

Legal framework on waste governance



## Impacts

- Facilitated effective residential waste collection, especially in low-income and populated neighbourhoods;
- Provided innovative training on entrepreneurship, including how to start and run social enterprises;
- Developed networks of both private and public waste actors;
- Improved state of the environment, employment opportunities and higher living standards for the urban poor including youths, women and people with disabilities.





# Dirty Dozen: A methodology for tracking 12 types of common plastic found on beaches in Cape town



**Solution Provider:** Raymond Obare, **The Beach Coop**



**Other organizations:** Aaniyah Omardien



**Location:** Cape Town, Western Cape, **South Africa**



**Summary:**

The Beach Cooperative (Co-op) began in 2015 when a group of volunteers started meeting every new moon to collect marine debris at our local surf break – the rocky shore at Surfers Corner in Muizenberg, Western Cape, Cape Town. The Dirty Dozen + Program offers a simple way to contribute useful data while also making a difference in terms of cleaning beaches. The Dirty Dozen are 12 types of litter selected to track different sources of marine litter. The protocol is led by a leader of the beach clean-up who must brief scribes on how to capture the data and the people involved in the clean-up must be aware of the 12 types of plastics. The collectors must call out and bag any of the 12 items as espoused in the methodology. The leadership provides general information about the beach i.e. the length of the beach (GPRs) as well as total items of the number collected. The totals are collated and the impact shared after the clean-up. The methodology also accommodates other items that are not the dozen list.

## Success factors

Multi-sectoral partnerships

Creative science-based  
education

Community Initiatives



## Impacts

- Conducted and disseminated research on various issues i.e. waste management best practices focused on single-use plastics in the Southern African hospitality sector, understanding consumer plastic bag behaviour;
- Pioneering 59 beach clean-up campaigns, that has led to the collection of over 6 t of plastic waste ;
- Raised the profile of women as anti-pollution champions by having an all-female board including enhancing the capacities of women to be anti-plastic campaigners, i.e competitions;
- Helped change one government regulation on Cape Town's tidal pool by reviewing the cleaning protocols and incorporating a more sustainable process of cleaning such pools;
- Mentored and coached two businesses (Fast food and Pick n Pay) to shift to more sustainable plastic procurement practices, as well as developing sustainable business models in line with circular economy;
- Launched the Dirty Dozen Clean-up™ mobile app on the Marine Debris Tracker platform enabling people to collect plastic waste and log the Dirty Dozen data whenever they visit their local beach;
- Conducted 12 New Moon Beach Clean-ups that bring together surfers, beach lovers, local businesses, scientists, and people who love nature;
- Reached over 100 young people, by enhancing the capacities of young people (ways of change) as beach clean-up change agents, including being anti-plastic champions.



# Integrating Value chain in Sustainable Solid Waste management in Kwale and Mombasa Counties, Kenya



**Solution Provider:** Raymond Obare, **Centre for Environmental Justice and Development (CEJAD)**



**Location:** Mombasa, Kwale, **Kenya**



**Summary:**

The Centre for Environmental Justice and Development (CEJAD) aims to combat plastic and waste pollution by promoting sustainable solid waste management, through public education on impacts of plastics to the environment and demonstration of BATs/BEPs such as source separation of waste, reuse, recycling and recovery as well as value chain efficiency.

The project conducts the following activities:

1. Equipping the women artisans with machinery, tools and equipment for making sculptures and items out of plastic waste.
- 2- Training women artisans on product development and packaging.
3. Establishing a pilot waste segregation at source and management system for recovery, reuse and recycle of plastic and other waste.
4. Training women artisans on marketing and how to maintain market linkages.
5. Undertaking a market research for their products.

## Success factors

Multi Stakeholder Forums

Training and capacity building



## Impacts

- Sensitized and trained community groups in old town on plastic waste substitution, recycling, reduction, recovery and safe disposal practices;
- Established a model centre at the Madubaa landing site for demonstrating best practices for zero-waste, 3Rs (reducing, recycling and re-using), showcasing viable plastic waste products and enterprises, troubleshooting and continuous learning.
- Facilitated public/stakeholder dialogue on mainstreaming plastics and UPOPs reduction and management in county government policy, plans, budgets and projects.





# The Litterboom Project



**Solution Provider:** Raymond Obare, **The Litterboom project**



**Other organizations:** TUFBag, Parley



**Location:** Durban, KwaZulu-Natal, Port Elizabeth- Eastern Cape, Cape Town-Western Cape, Hazyview-Mpumalanga, **South Africa**



**Summary:** In South Africa almost 90 % of South Africa's marine plastic pollution originates from its own river systems. The Litterboom Project (TLP) uses a large pipe that is anchored across the river, which acts as a catchment for all surface-level plastics, which are predominantly HDPE and PET. This preventative measure is set up strategically where it can collect the most rubbish and where the team collects, sorts and sends the plastic off for recycling.

## Success factors

Infrastructural development

Partnerships





## Impacts

- TLP currently employs over 36 staff dedicated to five of Durban's most polluted river systems, collecting over 33,000 lbs of plastic every month;
- The Durban Green Corridor litter booms in the Umgeni River catchment are serviced by plastics collectors and the collected materials are sorted and sold to plastics recyclers;
- A successful Black River Pollution meeting on 24 October in 2018 brought various role partners together to share information and come up with a river pollution strategy – an action plan for 2019 putting TLP on the course of being scaled;
- TLP has reduced the City Council budget for rivers clean in Kwazulu Natal by 98%.



# Arena recycling Industry



**Solution Provider:** Lydia Gaspare, **Arena Recycling Industry**



**Other organizations:** US Embassy in Tanzania



**Location:** Dar es Salaam, **Tanzania**



**Summary:**

Arena Recycling Industry was established in 2018 with the aim of saving the world from plastic waste. The company is a social business enterprise that collects plastic waste from beaches in Dar es Salaam and produces building materials such as Eco-Bricks, paving blocks and tiles out of recycled plastic waste for the construction of affordable houses, toilets and other buildings in rural areas. This solution not only contributes to plastic-free beaches and waterways but also helps bridge the water and sanitation gap by constructing water tanks and latrines with eco-bricks. Arena educates and promotes the change of behaviour in waste disposal, by involving community into recycling logistics and improving their income by buying collected plastic waste from the environment. The collected plastics are then sorted according to density, melted and mixed with sand to produce bricks.

## Success factors

High quality products

Plastic waste value chain

Establishing strong partnership



## Impacts

To date, Arena has successfully collected more than 500 t of plastic waste and has produced and sold more than 25,000 Eco-bricks and 10,000 m<sup>2</sup> of pavement blocks. The collection of plastic waste contributes to the health of the environment and surrounding communities. Also, Arena has partnered with Young Water Solutions Organization to serve 4,500 students by constructing 12 pit latrines and 2 water tanks in Kiburugwa and Karume primary schools in Dar Es Salaam. This means that 70 % of students have access to quality water and sanitation through the construction of water tanks and toilets by using Eco-bricks. Moreover, Arena has created employment for vulnerable people especially women and youth through business and project activities. It has created 8 direct jobs and 20 indirect jobs, 65 % of these employees are individual households who are living with less than USD 2 per day. Arena has reached more than 6,000 people through exhibitions, congresses, conferences, public speaking and social media platforms on awareness about plastic waste management.





# PREYO TZ



**Solution Provider:** Abdalah Nyambi, **Plastic Recycle and Youth Organization (PREYO)**



**Other organizations:** Mo Dewji Foundation; Ilala Municipal Council



**Location:** Dar es Salaam, **Tanzania**



**Summary:** The Plastic Recycling and Youth Empowerment Group - PREYO - is Tanzania's youth start-up aiming to reduce the plastic pollution problem in Tanzania and Africa at large. We are driven by the urge to end the waste pollution problems in cities by turning waste into valuable commodities. We have managed to reap the benefit out of waste by turning them into refillable block pavement (building materials), home decoration (flowers) and furniture. PREYO's mission is to restore, protect and enhance the environment, to ensure public health, environmental quality, and economic vitality. PREYO plans to turn every trace and remains of plastics into precious reusable items. Economically, PREYO will harness the benefit of waste and plastic trash where after the installation of the plastic recycling industry, more than 2,000 individuals will get direct and indirect employment.

## Success factors

Skilled and talented team members

Creating effective partnership and innovation



## Impacts

PREYO has managed to collect about 6,000 tons of plastic including both PET bottles and PP and 3,000 t of HDPE. They have successfully raised awareness about plastic waste in the restaurant community and at the bus stands, because these are the main sources of plastic littering. PREYO has partnered with NipeFagio and Zaidi recycling at various events of beach clean-up where they have collected a significant amount of plastics, thereby preventing leakage into the environment. These initiatives have received global attention and were granted a Green African Global Climatic African Ambassador Award and the Mohamed Dewji Foundation support. PREYO has supported about 200 people who are waste pickers through the purchase of plastic waste at a price of TZS 200 per kg.





# Influencing community attitudes towards waste management



**Solution Provider:** Lindsey West, **Sea Sense**



**Other organizations:** USAID, UK AID



**Location:** Pangani District, **Tanzania**



**Summary:** The solution addresses poor waste management in Pangani District, Tanzania for a coastal community at one pilot site. Creative and participatory outreach tools were used to raise awareness about the importance of waste management, to initiate dialogue among citizens and village leaders, and to mobilize people into action. Citizens and leaders subsequently applied their new knowledge to formulate local waste management bylaws, providing a sustainable, legal framework for improved waste management.

## Success factors

Community awareness of the impacts of poor waste management

Building capacity for waste recycling

Formulation and implementation of waste management bylaws

Documenting and sharing the success story



## Impacts

- The risks to human health caused by illnesses associated with poor sanitation e.g. vomiting, diarrhea, cholera, are reduced. This impact is significant because the loss of productivity caused by illnesses compromises family incomes and decreases resilience to other livelihoods challenges e.g. climate change.
- Degradation of coastal habitats caused by poor waste management is reduced, thereby creating a healthy and productive environment for marine biodiversity to flourish and for coastal livelihoods to prosper.
- There is a tangible improvement in attitudes towards community stewardship of marine and coastal resources, because the positive impacts of waste management actions are highly visible. Citizens start to recognize that they have an important role to play in the protection of their environment and through this role, they begin to demand greater accountability from their leaders and improved governance of natural resources.



# Marine Conservation Entrepreneurship – from trash to trade



**Solution Provider:** Julie Church, **Ocean Sole Foundation**



**Other organizations:** Kuruwitu Conservation and Welfare Association; Watamu Marine Association



**Location:** **Kenya**



**Summary:** Ocean Sole (OS) is a marine conservation entrepreneurship model, which upcycles discarded flip-flops into products for sale, thus creating an economically viable enterprise, employing the skills of local artisans. Through this process (and associated programmes), OS supports sustainable livelihood alternatives, skills improvements, waste collection and uses this to improve the establishment, management and expansion of local Marine Protected Areas.

## Success factors

Ocean Sole Solution in a Box: from Trash to Trade

Ocean Sole Solution in a Box: from Awareness to Understanding





## Impacts

Ocean Sole currently demonstrates:

- More than 50,000 kgs of discarded plastic and marine debris is collected each year from the coastlines and waterways of Kenya and turned into works of art, generating global sales of above USD 400,000 per year.
- Provides skill development training, livelihood opportunities and an increased income for more than 1,000 local people.
- Raised awareness and understanding for more than 10,000 school children, students, local community members and international audiences about marine debris pollution and conservation per annum. Ocean Sole replicating initiatives would be given similar or higher targets.





# Responsible Marine and Coastal Tourism Business Cluster Development



**Solution Provider:** Manuel Bollmann, **Fair Trade Tourism**



**Other organizations:** Dyer Island Conservation Trust (DICT), Marine Dynamics Tours, Dyer Island Cruises, Grootbos Foundation, Farm 215 - Private Nature Reserve, Grootbos - Private Nature Reserve, Southern Right Charters, White Shark Projects, Whalesong Lodge



**Location:** Cape Whale Coast, **South Africa**



**Summary:** Fair Trade Tourism (FTT) and the Dyer Island Conservation Trust (DICT) have joined forces to ensure that the people who contribute their land, coastal and marine resources, labour and knowledge to tourism are the ones who reap the benefits. Together with businesses, civil society and local government on the Cape Whale Coast (South Africa), the DICT creates awareness about protecting the marine environment to travellers visiting the coast's little towns of Hermanus, Stanford, Gansbaai and Kleinmond.

## Success factors

Certification, Business and Market Development Support

Public-private collaboration for conservation

Conservation of key flagship species

Fishing Line Recovery Program and Blue Flag

Ecosystem Restoration and environmental education



## Impacts

Together, the Fair Trade Tourism certified businesses in Cape Whale Coast area, employ many men and women in decent jobs, while having a positive impact on their host communities, their culture, livelihoods and economic development. Through the provision of tangible economic benefits derived from tourism, a significant part of the Fynbos coastal flora is conserved. Income generated through tourism and donations paid by tourists finances the protection of one of the last habitats of the endangered African Penguin. Tourism income also provides the means for researching a marine ecosystem, which is highly frequented by several species of sharks, whales and seabirds. Fair Trade Tourism and Blue Flag certification ensure that the whale and shark watching vessels are operated according to international standards that seek to minimize harm done to marine biodiversity and the marine ecosystem in which they operate. The companies' whole ethos is based on conservation and protection of the environment and the belief that "Your Choice Makes a Difference", encouraging tourists to choose wisely.



# Inclusive conservation governance on remote islands: Lessons from Seychelles



**Solution Provider:** Andrew Rylance, **GOS-UNDP-GEF Seychelles Protected Area Finance project**

**Other organizations:** Ministry of Environment, Energy and Climate Change, Private Investors, Seychelles National Parks Authority, Seychelles National Parks Authority, Islands Development Company, Island Conservation Society



**Location:** Outer Islands, **Seychelles**



**Summary:** Seychelles is located in the Western Indian Ocean, between Madagascar and the Horn of Africa. It is an archipelago comprising 155 islands (as per the Constitution), spread across more than 1.4 million km<sup>2</sup> of Exclusive Economic Zone (EEZ). The Island Conservation Society (ICS), a Non-Governmental Organization in Seychelles, has been working together with its partners to develop a new financing model for managing conservation on remote island atolls. This model involves the establishment of Foundations, whose memberships comprise representation from government, parastatals / state-owned enterprises, private tourism investors operating on the islands, as well as ICS. Each Foundation ensures joint decision-making and transparency in environmental management on the islands, as well as financial self-sufficiency. Since 2006, 11 Foundations have been established for 13 island groups. Six are fully funded with active conservation programmes, and three of them have endowment funds.

## Success factors

Foundation establishment

Endowment Fund

Conservation management plan



Seychelles  
National Parks  
Authority

## Impacts

The Foundations have already delivered a series of impacts for the conservation on the islands which they support, namely:

- **Transparency and equity:** The membership of the Foundations consists of private investors on the islands, government (Ministry of Environment, parastatals such as Islands Development Company and Seychelles National Park Authority) and NGOs. There is joint ownership and equal voting rights on decisions within the Foundations. Each is governed by a Constitution and Agreement between stakeholders on the islands.
- **Financing conservation:** The Foundations are responsible for the sustainable financing of the conservation efforts on the islands. These consist of direct contributions from the tourism investors on the islands, as either a fixed fee per guest, or proportion of turnover. In addition, Corporate Social Responsibility Payments (CSR) are channelled from tourism investors to the Foundation for conservation activities and to build a permanent endowment fund. IDC provides accommodation, transport, logistical support and CSR.
- **Governance:** The Foundation oversees implementation of the conservation management plan on the island within its sphere of responsibility.





# Protected Area management on private islands: innovate finance examples from Denis and North Islands, Seychelles



**Solution Provider:** Wilna Accouche, **GOS-UNDP-GEF Seychelles Protected Area Finance project**



**Other organizations:** Green Island Foundation



**Location:** **Seychelles**



**Summary:**

Green Islands Foundation, with support from the Government of Seychelles - UNDP-GEF Protected Area Finance project, has developed and implemented sustainable financing solutions for proposed Protected Areas on two private islands, Denis and North Islands, in Seychelles. These will be the first private island reserves in Seychelles and, through the project, the islands will trial and implement novel long term sustainable financing mechanisms to fund setting up, management, policing and research at these reserves. Steps are underway to proclaim the surrounding waters around North Island and Denis Island as marine reserves, ensuring their inclusion within the national Protected Area network. Island owners are dedicated to take the lead in monitoring and enforcing these new Protected Areas in collaboration with selected NGOs and with assistance of Seychelles government.

## Success factors

Developing and trialling innovative financing mechanisms

Innovative funding schemes



## Impacts

Seeking long term and sustainable financing of nature reserves allow remote, private islands to receive legal protection status based on their high biodiversity value. These islands would otherwise fall outside of the government's managed network of protected sites.

The access to long term financing allows such remote sites to receive permanent protection, consistent management and for long term research to be carried out.

The financing mechanisms proposed also include the production of high-end, unique merchandise that provides a market for local artisans to develop and sell such products to visitors. Hand-made tie-dye pareos specifically designed for sale to Denis private island's clientele were made by Roots Seychelles, a small local company. Two local artists also painted landscapes and seascapes of Denis Island of which prints will be made available for purchase for visitors.



# ABALOBI: ICTs for small-scale fisheries governance



**Solution Provider:** Serge Raemaekers, **University of Cape Town**



**Other organizations:** Abalobi ICT4FISHERIES NPO, Fisher communities of South Africa, Department of Agriculture, Forestry and Fisheries South Africa



**Location:** Cape Town, **South Africa**



**Summary:** The ABALOBI initiative is a transdisciplinary research and social learning endeavour, bringing together stakeholders with traditional fishers taking centre stage. It is a participatory action research project with a strong community development component. ABALOBI, a free app/programme, is aimed at social justice and poverty alleviation in the small-scale fisheries chain, transformation in the way we produce knowledge, stewardship of our marine resources and building resilience to climate change.

## Success factors

Transdisciplinary social learning process

Co-design of the app suite and co-production of knowledge



agriculture,  
forestry & fisheries

Department:  
Agriculture, Forestry and Fisheries  
REPUBLIC OF SOUTH AFRICA



## Impacts

- Fishers, monitors and cooperatives have actively recorded catches and associated variables in daily logbooks and dashboards. Regular workshops have assisted in fine-tuning the recording and reporting functions and use of the dashboard. As a result of gathering data and discussing emerging trends during workshops, fishers have written letters to the Minister to call for a stop on the overexploitation of a particular fish species, others have discussed climate change related implications and suggested new adaptation responses, and others have used the data to apply for loans to purchase better safety equipment;
- In November 2015, the Fisheries Minister endorsed ABALOBI as the official catch management system for the implementation of the new Small-scale Fisheries Policy;
- Fishers in one of the pilot sites have grouped together to discuss and prepare for the implementation of the Policy and have successfully engaged with a retailer interested in purchasing several seafood species in a Fisheries Improvement Project that will see the use of ABALOBI towards traceability, and a type of Fairtrade certification;
- ABALOBI now initiated a restaurant supported fishery via the MARKETPLACE app where fishers can sell their products at a fair price, and patrons can purchase fresh fully traceable seafood.





# Seychelles' first debt-for-nature swap for ocean conservation



**Solution Provider:** Angelique Pouponneau, **Seychelles Climate Adaptation Trust (SeyCCAT)**



**Other organizations:** Seychelles Conservation



**Location:** **Seychelles**



**Summary:**

Since 2013, the Government of Seychelles identified the need to reduce economic vulnerability and dependence on tourism, increase the GDP from marine sectors, create high-value jobs and ensure food security through the protection and sustainable use of marine resources. The Seychelles' Conservation and Climate Adaptation Trust (SeyCCAT) was created in 2015 together with the Government of Seychelles and The Nature Conservancy. The parties concluded the first debt-for-nature swap for ocean conservation, through a USD 21.6 million debt restructure. SeyCCAT was given the management of two innovative financing deals: the Blue Grants Fund (total of USD 11.6 million) and the Blue Endowment Fund. SeyCCAT is now a Conservation Trust Fund tasked with mobilizing resources to advance the Seychelles' Blue Economy.

## Success factors

Public - Private Partnership (PPP)

Autonomy and independence of the trust

Representativeness of the board

Capacity building to access the funding opportunities



## Impacts

SeyCCAT supports the implementation of a Marine Spatial Plan to designate 30% of the Seychelles' Exclusive Economic Zone (EEZ).

SeyCCAT has created social inclusion in the development of the Blue Economy, through the disbursement of USD 700,000 annually, as grants to advance marine protection, sustainable fisheries and blue economy. Since its launch in 2017, it has indeed issued over USD 1.5 million in grants to more than 25 grantees implementing a total of 33 projects. The grants have benefited Marine Protected Areas such as Curieuse Marine National Park, Aldabra, Bird Island, Alphonse Island and Farquhar and with baseline assessment of the marine biodiversity of Fregate Island, an aspiring MPA.

More than half of the funds have gone towards projects led by or benefited women and a third towards youth-led or projects where youth are the primary beneficiary. 23 projects have benefited small-scale artisanal fisheries.



# Capacity and empowerment of women fish traders in Tanzania

**Solution Provider:**

Editrudith Lukanga, **Environmental Management and Economic Development Organization (EMEDO)**

**Location:**

Victoria Lake, Tanganyika, Mwongozo, **Tanzania**

**Summary:**

The Environmental Management and Economic Development Organization (EMEDO) hosts the Secretariat of the African Network of Women Fish Processors and Traders (AWFISHNET). We support building a gender-fair society and a gender-responsive fishery in Africa that recognizes, utilizes and enhances women's potentials and capabilities in the fisheries sector for sustainable and equitable development. We also contribute to enhance knowledge generation and dialogue between policy makers, civil society and scientists in order to develop fisheries and ocean policies that better account for the realities of marginalized coastal people living in poverty, and to help bridge between policy formulation and implementation. We specifically strengthen the organizational capacities of women fish workers organizations (national associations) where they already exist, and establish new ones where they do not yet exist.

## Success factors

Hight degree of commitment

Transformational Leadership training



## Impacts

- The Tanzanian Women Fish Workers Association (TAWFA), a structured and formally recognized organisation is in place for women's voice to be heard. Representatives of this network are now invited to participate in workshops and meetings related to small-scale fisheries management and governance;
- TAWFA representatives were invited to participate in sharing their views for the Small-Scale Fisheries (SSF) guidelines implementation plan and the revision of the Fisheries Act. It was the first time that women from the small-scale fisheries sectors were invited to such a policy negotiation process;
- TAWFA became a member of the African Association of Women Fish Traders and Processors;
- A gender desk at the government was established, after the engagement of EMEDO with FAO on the SSF guidelines implementation plan.













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