



2019 Annual Report

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Sea Sense Mission

To promote the sustainable use of coastal and marine resources in Tanzania for the preservation of marine biodiversity and the health and prosperity of coastal communities.



Foreword

Sea Sense envisions a society in which coastal people and marine biodiversity live in harmony; where populations of the world's most iconic marine wildlife species flourish and coastal livelihoods support wellbeing and prosperity.

Coastal ecosystems link marine, estuarine, freshwater and terrestrial environments and support the physical and biological processes that underpin the health of the wider marine ecosystem. They are among the most biologically productive environments in the world and also play an important role in climate regulation through the storage and sequestration of carbon. Conservation and management of coastal ecosystems is critical to the preservation of marine biodiversity.

Tanzania, located on the central east Africa coast is rich in marine biodiversity. A network of coral reefs and seagrass meadows provide food and shelter for a diverse range of fish and invertebrate species. They also provide important feeding grounds for five species of marine turtle (green, hawksbill, loggerhead, olive ridley and leatherback) and a small population of dugongs. Whale sharks, whales and dolphins also make Tanzanian coastal waters their home. In 2014, in recognition of its high biodiversity value, the central Tanzania coast was declared a 'Site of Regional Importance to Marine Turtles' under the auspices of the Indian Ocean South-East Asian Marine Turtle Memorandum of Understanding.

The survival of marine biodiversity is inextricably linked to the wellbeing of coastal people. Millions of people depend on nature for their livelihoods and food security and hence, biodiversity conservation plays a critical role in sustainable economic development. Furthermore, assessments of biodiversity change can provide measurable indicators of coastal and marine ecosystem health. This kind of information is crucial for guiding coastal management policies and practices that benefit coastal people and their livelihoods.

Over the past 19 years since Sea Sense first set out on a journey to address the myriad of threats facing marine turtles, thousands of coastal people have engaged in marine wildlife conservation and education initiatives led by Sea Sense. Marine turtle poachers of the past have become ambassadors for conservation in their communities today, and the central Tanzania coast has been declared a site of regional importance to marine turtles, thanks to the hard work and dedication of coastal communities. A community-based approach to marine biodiversity conservation and a firm commitment to conservation actions that provide benefits to biodiversity as well as people have been at the root of Sea Sense's success. Our network of community Conservation Officers continues to inspire others and they are immensely proud of their contribution to marine biodiversity conservation in Tanzania.

A Snapshot of 2019

414 green turtle nests recorded by Sea Sense Conservation Officers

33,966 sea turtle hatchlings safely reached the sea

27 sea turtle nests predated by wild animals

1 sea turtle nest poaching recorded by Conservation Officers

142 sea turtle mortalities recorded by Sea Sense Conservation Officers

0 hawksbill turtle nests recorded by Sea Sense Conservation Officers



31 flipper tags applied to nesting turtles

8 nests inundated by the high tide

2 live dugong sightings

2 dolphin mortalities recorded by Sea Sense Conservation Officers



1,283 school pupils participated in school education programmes

5,280 people watched community theatre performances and joined in community debates

4,700 people across 12 villages in the Districts of Pangani and Mkinga participated in a marine wildlife road-show

761 Beach Management Unit members participated in capacity development programmes



Marine Wildlife Research and Conservation

Nesting activity in Tanzania



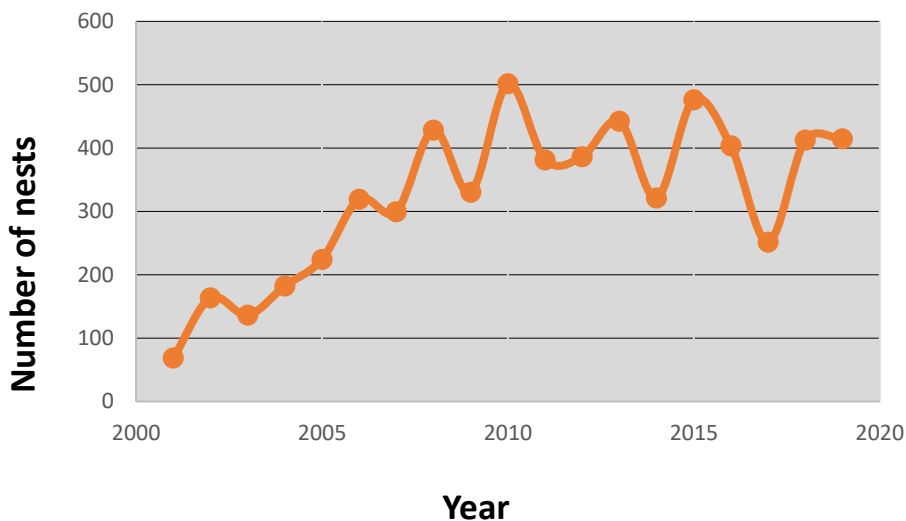
Throughout 2019 a network of 38 community Conservation Officers was active in nine coastal districts of Tanzania: Pangani, Kigamboni, Mkuranga, Mafia, Kibiti, Kilwa, Mkinga, Tanga City and Muheza.

Daily foot patrols of nesting beaches were conducted by Conservation Officers to monitor sea turtle nesting activity, protect

nests from poachers and predators, record strandings of marine turtles, dugongs and cetaceans and document illegal fishing activities.

A slight increase in the number of nests was seen in 2019 compared to the previous season, as can be seen in the graph below, with 414 turtle nests recorded, monitored and protected by Sea Sense Conservation Officers, all laid by green turtles. No hawksbill turtle nests were recorded during the year. 33,849 hatchlings safely reached the sea. Mafia, Pangani and Kigamboni continue to support the largest green turtle nesting populations in Tanzania.

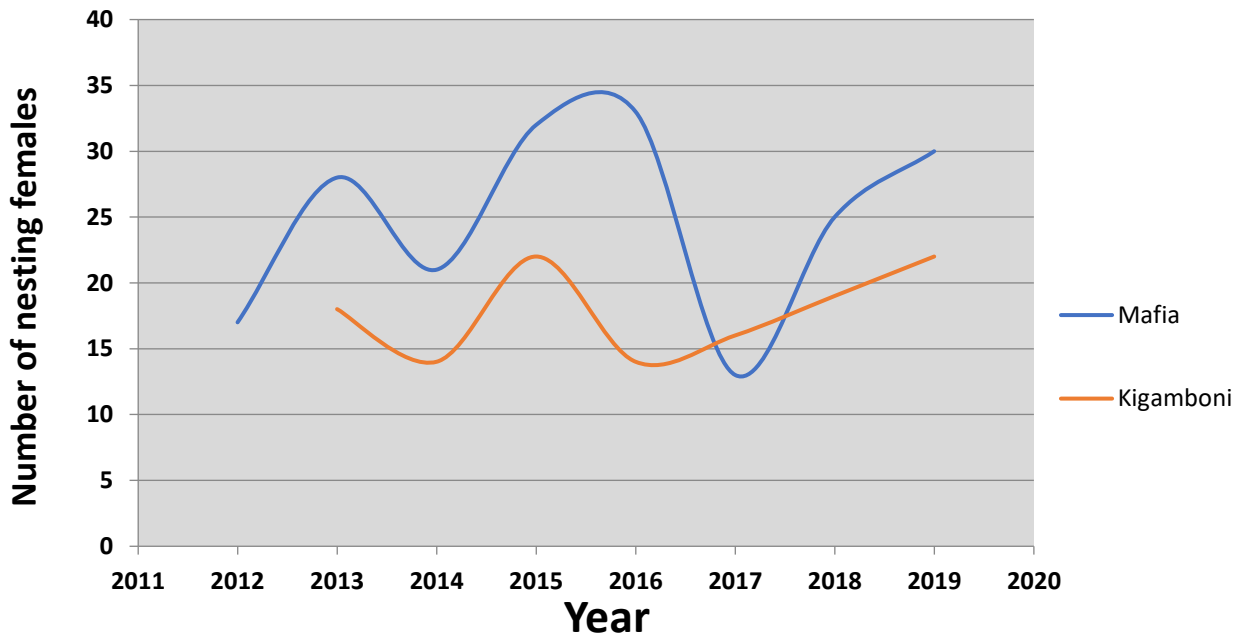
51 nests failed to hatch. 27 were predated by wild animals including honey badgers, monitor lizards, domestic dogs, and red ants, and 1 nest was poached by humans. 15 nests contained rotten eggs and 8 nests were inundated by the high tide before they could be relocated by Conservation Officers.



Marine Wildlife Research and Conservation

Population census

During the peak nesting months of April and May, beach patrols were conducted at night, as opposed to during the day, at nesting beaches in Mafia and Kigamboni Districts. 2019 marked the eighth-consecutive year of the annual programme of flipper tagging, with many repeat encounters from previous tagging seasons. The graph below shows the number of nesting females during the peak nesting months of April and May for each season since 2011 to date. By the end of 2019's tagging season, a total of 140 females have now been tagged in Juani, and 84 females have now been tagged in Kigamboni, since the beginning of the tagging programme in 2011.



Analyses of tagging data have shown that green turtles lay 5-8 clutches of eggs per nesting season and use several different beaches during one nesting season. Green turtles nesting at Amani Gomvu, for example, are also nesting at Kimbiji and Mbutu (Kigamboni District).





Reducing Human-Whale Shark Conflict

In Tanzania, fishing and tourism activities can put considerable pressure on whale shark populations and may lead to physical injury and interfere with normal behavioral patterns.

In order to reduce human-whale shark conflict, Sea Sense held two awareness forums in Mafia Island. With the support of Beach Management Unit leaders, the latest scientific data on whale shark biology and behavior was shared with ring net fishers and whale shark tour guides. These stakeholders were encouraged to develop strategies to reduce threats to whale sharks from livelihoods activities.

With an improved understanding about whale sharks, ring net fishers and whale shark tour guides are now in a better position to make informed decisions on how to conduct their activities. Both groups expressed a willingness to participate in a wider stakeholder meeting, to continue the discussion on how to reduce threats to whale sharks.

Education and Outreach

Sea Sense's education and awareness programmes provide a source of information to citizens about endangered species, marine conservation and fisheries management, serving as a basis for eliciting citizen support for improved conservation of biodiversity

A marine wildlife and leadership education campaign was implemented in four Secondary Schools in Mafia District and Kigamboni Municipal, reaching 1,283 pupils. Following four days of information sharing and discussions, a debate between students of the two schools in each District and an essay competition were held, which were very successful, with students showing a great understanding of the information shared, as well as great confidence in speaking in front of their teachers and peers.

Community events were held on World Wildlife Day (March 3rd) and World Oceans Day (June 8th), in Tanga City and Mwarongo Street, respectively. More than 2750 people were reached through implementation of the events.

During World Wildlife Day, 2000kg of plastic waste were collected during a beach cleaning, and 2500 red mangrove (*Rhizophora mucronata*) seeds were planted close to Sahare fish market.

The World Ocean's Day event included a variety of activities led by several community groups (women, school pupils, the Village Liaison Council and a community theatre group) with targeted messages about biodiversity and the role of women in the small-scale fisheries sector.

Education and Outreach

Community theatre programmes were implemented in six communities in Mafia Island, four communities in Tanga City and four communities in Pangani District. Performances included messages about marine wildlife conservation, the importance of good governance of marine and coastal resources and the role of women and youth in the small scale fisheries sector and management of coastal resources. 5,280 people watched these community theatre performances and joined in community debates.



4,700 people across 10 villages in the Districts of Pangani and Mkinga participated in the Sea Sense marine wildlife road-show. A range of visual materials including sea turtle carapaces, artificial turtle eggs and a life-size model of a dugong were used to sensitize the public about marine wildlife biology, life history, status and threats to their survival.



The Future of Marine Conservation

Over the years that Sea Sense has been working with coastal communities, the critical role of youth in biodiversity conservation and as ocean ambassadors in their communities, has become very clear.

At the event in celebration of World Ocean's Day in Mwarongo, Tanga District, pupils from the Mwarongo Primary School performed a 'Parliament Session', organising themselves into political parties and using a Q&A platform to discuss and deliver information to the community about, among others, the conservation of marine wildlife and the impacts of illegal fisheries. With this event, the pupils set an example to other children and youth present at the event.

Pupils, and particularly girls, showed outstanding confidence in speaking in front of their teachers and peers, and defended their arguments skillfully during the debate held in the school marine wildlife and leadership education campaign. The theme of the debate was about whether it is important for citizens to dedicate time to protect marine wildlife.

A passionate and engaged youth is crucial for ensuring the future of marine wildlife, and in raising communities that understand the importance of using marine resources sustainably.





Capacity Building for Sustainable Fisheries

The Government of Tanzania has adopted a participatory co-management approach to natural resource management which recognizes and promotes communities as vital partners in resource planning, management and development. Sea Sense works closely with Beach Management Units (BMUs) and Village Liaison Committees (VLCs) to build their capacity to undertake the roles and responsibilities that have been devolved to them through the Fisheries Act 2003 and the Marine Parks and Reserves Act 2004.

The capacity building programmes implemented by Sea Sense focus on building an understanding of the guidelines on BMU establishment and operation, so that BMUs are aware of their role in marine resource management. The programmes also develop the technical knowledge and expertise of BMUs so that fisheries management tools can be utilized effectively, and governance systems promote sustainability.



Capacity Building for Sustainable Fisheries



In 2019, **422** BMU members in the districts of Kilwa, Lindi, Mkuranga, Kinondoni and Kigamboni Municipality participated in capacity building sessions on BMU establishment and introduction of National BMU Guidelines. Following the training, 14 of the 21 BMUs Sea Sense worked with held elections according to the current BMU Guidelines, with the support of village leaders, and are actively engaging in fisheries conservation and management.

BMUs in Kilwa, Kigamboni and Mafia Districts participated in capacity building sessions on data collection and communication. The training, in which **122** BMU members participated, highlighted the importance of data collection and how it can be used for decision making. As a result of the training, BMUs designed their own data collection tools.

49 BMU members in Mkuranga District participated in capacity building on ecosystems, fisheries management and governance. As a result of the training, BMU members have an improved understanding of the impact of illegal fishing practices and use of illegal fishing gears and have taken several steps to combat them and to educate their communities on the importance of following the appropriate laws and regulations.

61 BMU members in Kilwa District participated in capacity building on proposal writing. The skills gained through this training guided BMUs through the process of drafting project proposals, which will increase their capacity to access funds from external sources.



Women in Small-Scale Fisheries



Recognizing the vital role women play in managing and conserving biological resources, and in order to better understand the needs and interests of women fish worker groups in the coastal zone, Sea Sense, in partnership with the National Task Team for the implementation of the FAO Voluntary Guidelines for Small Scale Fisheries (SSF Guidelines) in Tanzania, collaborated with District Fisheries Offices (DFOs) and Village Councils (VCs) to conduct participatory mapping of the groups. The mapping exercise was conducted in six coastal districts, and 54 women fisher groups were interviewed.

The mapping of women fish workers helped to identify gaps in the participation and inclusion of women in the small-scale fisheries sector and highlighted the extensive challenges they face. This exercise will be used by Sea Sense to inform the designing of capacity building programmes that promote inclusive and gender responsive governance of small-scale fisheries and to influence the activities of the proposed Gender Desk at local and national government levels.



Women in Small-Scale Fisheries

The Government of Tanzania, through the Ministry of Livestock and Fisheries, has committed to the establishment of a national network for women fish workers, under their Letter of Agreement with the FAO for the implementation of the Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in Tanzania, signed in November 2017. The launch of the Tanzania Women Fish Workers Association (TAWFA) took place in April 2019, with the participation of 55 women fish workers from 21 districts of Tanzania. Sea Sense supported the participation of four women fish workers from Dar es Salaam. During the launch, the proposed TAWFA Constitution was presented and suggestions for improvements were provided by the participants. Elections were held to select 20 leaders of the Association, as well as the positions of Chairperson, Deputy Chairperson, General Secretary, Deputy Secretary and Treasurer, and recommendations were made for capacity building of TAWFA.



Governance and Leadership



In order to effectively manage fisheries and conserve marine biodiversity, stakeholder groups such as BMUs, VLCs, Local Government and District Authorities must have the necessary skills to be accountable and committed leaders. These groups have an extremely important role in local governance of marine and coastal resources and are important groups to consider in terms of capacity building.



In 2019, Sea Sense trained 156 BMU and VLC members on the concepts of good governance and strong leadership and facilitated discussions on the common obstacles to good governance. In Dar es Salaam and Kilwa, members of village and ward councils in Kilwa Kivine, Songo Songo, Somanga, Msasani and Kawe also participated in training sessions on good governance, which aimed to help build an understanding among leaders of the importance of strong leadership and their duty to represent citizen's interests.



Information Exchange in 2019

In 2019 Sea Sense:

- Presented a poster at the 39th International Sea Turtle Symposium (ISTS).
- Gave an oral presentation at the Africa Regional meeting of the ISTS.
- Participated in the annual meeting of the IUCN Marine Turtle Specialist Group.
- Produced, in collaboration with BBC Media Action, an episode of the Habana Habana programme, focusing on the contribution of women to the small-scale fisheries sector.
- Presented at the South African Institute of International Affairs National Capacity Building Workshop on Marine Coastal Ecosystem Based Adaptation (EbA) in Tanzania.
- Presented a poster at the 11th Western Indian Ocean Marine Science Association (WIOMSA) Symposium.
- Participated in the 8th Meeting of Signatories to the Indian Ocean South-East Asia Marine Turtle Memorandum of Understanding.
- Contributed two articles to the African Sea Turtle Newsletter.
- Participated as a 'Changemaker Panelist' in the Africa Global Issues Service Summit.
- Participated in the launch of the Africa Women in Fisheries Network (AWFishNet).
- Participated in the 2nd Technical Workshop Towards the Development of a Shark and Ray National Plan of Action for the United Republic of Tanzania.



2019 in Review

In 2019, Conservation Officers recorded 414 nests. Nesting green turtle populations continue on an upward trend, largely due to the extraordinary commitment and dedication of Sea Sense Conservation Officers. There was one incidence of nest poaching (in Mafia Island) which is always very disappointing for the Conservation Officer team but predation by wild animals poses a bigger threat to incubating eggs. In 2019, 30 nests were predated by monitor lizards, honey badgers, domestic dogs and red ants.

In 2019, Sea Sense projects reached a wide variety of marine and coastal stakeholders and helped to improve understanding of the linkages between biodiversity conservation, sustainable fisheries, coastal livelihoods and food security.

As a direct result of Sea Sense capacity building and awareness raising programmes, perceptions have slowly begun to change around the participation of women fish workers in the fisheries sector, who have now started to contest and gain access to leadership positions, supporting and believing in their own capabilities as leaders.

Capacity building programmes have enabled Beach Management Units and Village Liaison Committees to implement their roles and responsibilities more effectively, as well as strengthen cooperation with their communities and local government and district leaders.

Sea Sense observed increasing levels of citizen engagement in marine resource conservation, especially from women and youth, groups who are usually marginalized but showed an encouraging boost in active participation and confidence.

In 2019 there were two live sightings of dugongs reported by the Dugong Monitoring Network.

In 2019, Sea Sense, in collaboration with district authorities, organized whale shark awareness forums, which brought 30 ringnet fishers and 30 whale shark tour guides together to share information and identify strategies to reduce human-whale shark conflicts.



Measuring Our Impact

Measuring the long-term impact of our projects enables Sea Sense to incorporate feedback from our beneficiaries, which informs the evolution of our work. We use a combination of evaluation methodologies, which, in turn, use a qualitative approach and include Focus Group Discussions, semi-structured interviews and collection of personal testimonies to document changes in attitudes, behaviours, relationships and power dynamics.

Voices From the Field

Women leadership training

'To me, the most important part of the training was that we were taught how important it is for women to support other women who contest for leadership positions. This was a turning point as I am certain that, as a result, I got a lot of support and votes from my fellow women when I contested for a leadership position. My triumph underlines the strength of women in our society. Now I am looking forward to working with everybody and I will make sure to motivate more women to participate in marine resource management and conservation in our area. The training provided by Sea Sense happened at the right time, and I am certain it was a springboard to women's participation in the election, and to one woman having won a seat in the Village Council.'

Hasara Hassan, Chairperson of Maghofuni Sub-village, Kilwa Kivinje.



Voices From the Field



Secondary School Marine Wildlife and Leadership Education Campaign

'The debate held during this activity has enabled me to identify myself as a good speaker in front of people. I've always wanted to be a good speaker, but I was too shy to stand and speak in front of people. Sea Sense has helped me overcome my fear of speaking in front of an audience, and I have learned a lot from the team. This debate has also increased my knowledge concerning marine wildlife and I learnt a lot from my fellow students, whether they were defending or opposing the given topic. I now understand that the conservation of marine resources is not something that can be achieved by just a few people. Instead, it requires cooperation from everyone in the community, and we as the generation of tomorrow are responsible for educating our parents and relatives on the current information about our marine environment.'

Laylat Jumanne (15), Form II student, Kilindoni Secondary School, Kilindoni



The Key to Our Success

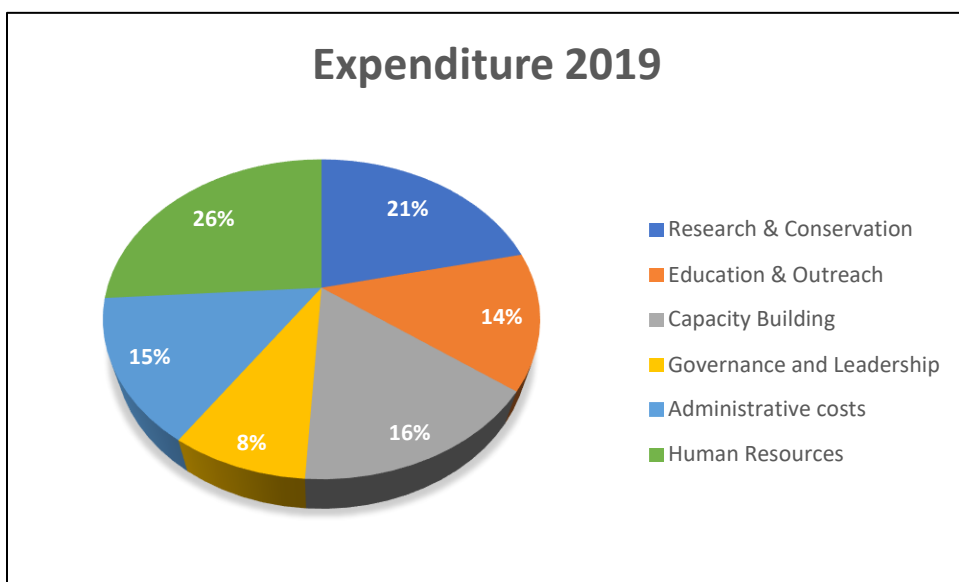
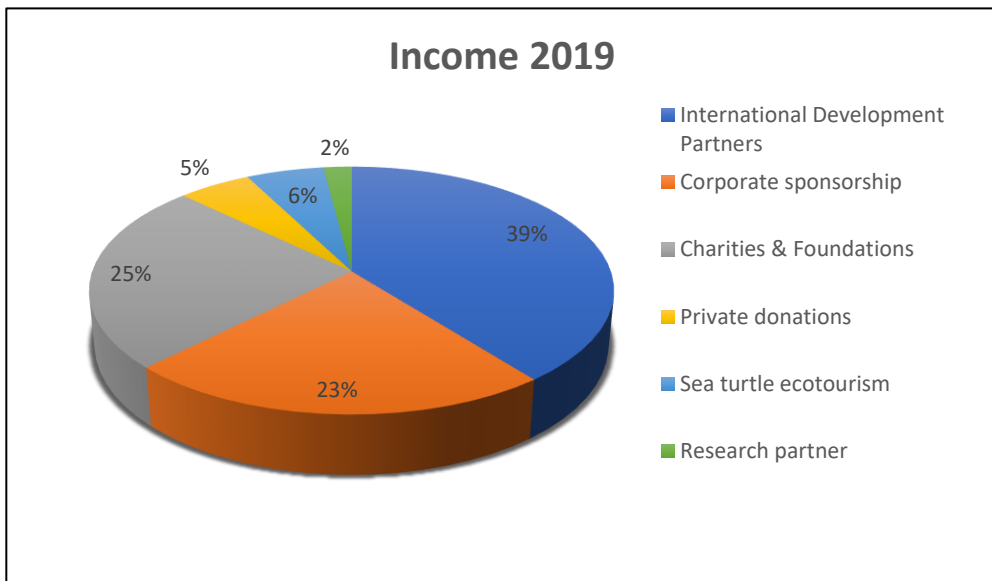


Since its foundation in Mafia Island in 2001, Sea Sense's network of community 'Conservation Officers' has enabled the organization to have a strong link with the wider community. Conservation Officers are democratically elected by their communities to work alongside Sea Sense and promote community stewardship of marine resources. Conservation Officers are crucial to the implementation of all Sea Sense's projects, as their conservation knowledge and expertise is well respected by their fellow citizens and they are viewed as 'ambassadors for conservation' in their community.

Once per year, Conservation Officers come together for a meeting to share ideas and experiences, discuss solutions to common challenges and identify emerging issues. In 2019, during our annual meeting in Pangani, Conservation Officers gave important input into Sea Sense's expanding work with women fish workers, and how to better engage women in our work in their communities. During the meeting, the importance of tracking our impact was discussed, as Conservation Officers play a crucial role in collecting monitoring information from citizens of coastal areas.

Sea Sense Finances

In 2019, Sea Sense received funds from six main sources: international development partners; charities and foundations; corporate sponsors; research partners; private donations and sea turtle ecotourism. Income for the year was USD 245,293 and included funds from four new partnerships with USAID, Songas, Minara Foundation and Letz Sushi.



Sea Sense Advisory Board and Management

Advisory Board

Dr. Magnus Ngoile – Acting Chair
Melkiory Ngido – Finance Member
Mathias Igulu – Member
Blandina Lugendo – Member
Jason Rubens – Member
Catharine Hicks – Member

Management

Joana Trindade – Executive Director
Lindsey West – Technical Advisor

Acknowledgements

A big thank you to all our donors and supporters whose financial support enabled Sea Sense to achieve so much in 2019. Our sincere thanks also go to our Conservation Officers who work tirelessly to conserve marine wildlife in Tanzania. Thanks also to Village Chairpersons, Council Members, Beach Management Units, Village Liaison Committees, District Authorities and the Government of Tanzania for helping to protect marine wildlife and critical coastal habitats in Tanzania.



Cover photo by Symphrose Makungu, courtesy of the PROTECT project, USAID.
Whale shark photo by Bronwyn Llewellyn.





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