

The

# People4Nature

Issue No. 5 Q1 2019

Belong!

## Climate Smart

Women in Rural Zimbabwe  
Embrace Climate Smart Agriculture

## Annual Fisher Forum

Fishery Stakeholders Meet in  
Diani, Kenya

## Staring at Calamity

Sea Sand Harvesting is a Major Threat in  
South Coast, Kenya

A Community-led Blue Economy  
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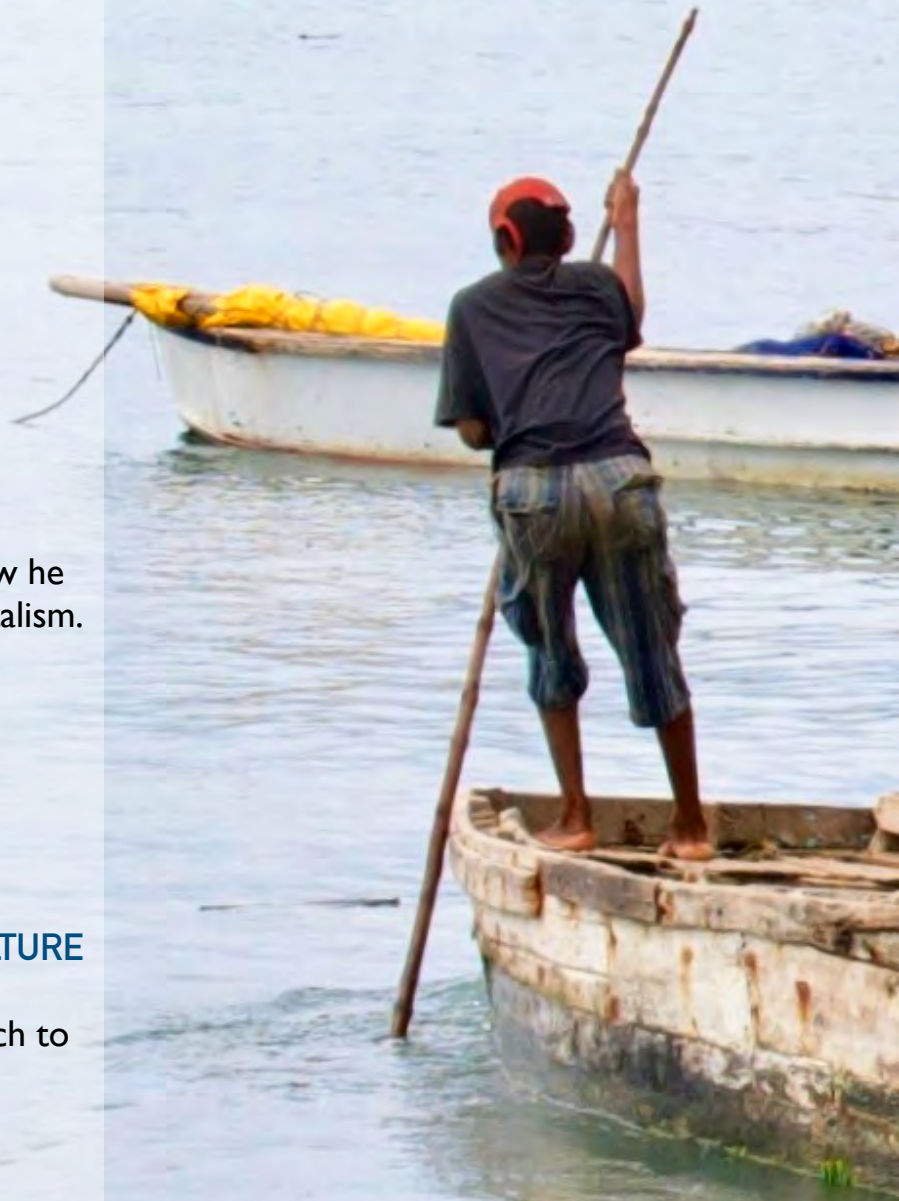
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# Editor's Note

In this issue, we have incorporated your views on how to make our magazine more attractive and with a variety of articles to read. And that has made this our largest issue to date.

Tree planting still remains the most recognisable conservation activity for many members. We have a feature on how our member, Amos Sowene, has made it a hobby and how he is influencing others to plant trees.

In response to the proposal by the Young People4Nature Platform, we have a page for our young members. Our first feature is Salome Ndechikio, a young tree planting enthusiast from Taveta, Kenya, who is following in the footsteps of Grandpa Amos Sowene,

We have also featured the People4Nature Awards, an annual event in recognition of our members for their contribution to the success of various activities of the People4Nature Global.

For our fishery stakeholders, the article on the annual fisher forum provides insight on the coastal fishery trends and efforts being made to improve marine and marine related activities at the coast of Kenya.

You will also enjoy reading articles on climate smart agriculture in Zimbabwe, the community-led sea weed farming initiative in Kwale County, Kenya and a report on the deliberations from our Platforms.

Enjoy your magazine!

On behalf of my co-editor, Ms. Catherine Musili,

Yours Sincerely,

**Phathisani Tabengwa,  
Bulawayo, Zimbabwe.**



In this quarter of 2019, the Network of Women in Conservation (NoW Conservation) was launched. The launch coincided with the International Women's Day celebrations on the 8th March 2019. The NoW Conservation becomes our 8th platform, whose mission is to support and mentor women in leadership.

Following the introduction of NoW Conservation Platform, the Summit made changes to the management of two of our platforms. Mrs. Immaculate Emma Kyomukama, the former Convener of the Indigenous P4N Platform, was tasked with the responsibility of convening the NoW Conservation platform. Mr. Moses Ziro and Mr. Jazzy Jeff Rasolojaona are the new Conveners of the Indigenous People4Nature platform.

In the third consecutive year, we have recognised the contributions our members have made to conservation and the growth of our network. We had twenty members who were recognised in six P4N Award categories - Environment Ambassador award, Convener's award, Environment Fund award, Service award (for retiring Conveners), Family award and the Employee of the Year award. (The full list of awardees is provided on page 7 of this issue).

The Platforms have continued to be an important avenue of engagement for members. It is important to note that some of the improvements made in this issue are attributed to the proposals made by Platforms.

Our network has also grown. In the first quarter of 2019, we registered our first member from South Africa. In total, eleven new members were registered from Cameroon, Ghana, Kenya, Tanzania, South Africa and the United States of America.

Let us continue to build our network.

### **The Summit**

## Message From the Summit



**Mr. Silvanus Uunona,  
Chairman,  
People4Nature Global  
(Namibia).**

# Updates from Our Platforms

## NoW Conservation

The Network of Women in Conservation (NoW Conservation) platform had its first ever discussion since its establishment, by identifying the challenges facing women in conservation and explored how they can be overcome. The common challenges facing women were identified as: -

1. Women, in many traditional set-ups, do not own land,
2. General lack of formal education is a hindrance to their active participation in decision making,
3. The burden of motherhood, limit women's ability to actively participate in leadership positions,
4. Inadequate economic empowerment,
5. Women, more than men, may have to bribe before their issues are attended to,
6. Women leaders, and women groups, often fall victims to conmen, than their male counterparts,
7. Women leaders have had the challenge of getting permission from their spouses to attend to meetings, workshops, and seminars outside their locality,
8. Traditions that marginalize women,
9. Lack of confidence to undertake leadership responsibilities,
10. In the corporate world, women have to work extra hard to prove their worth in a male-dominated world.

Members identified the following as solutions to the challenges facing women in conservation: -

1. Training through workshops, seminars, mentorship, among others,
2. Exchange visits, peer-to-peer learning, and even through the exchange of ideas and solutions on social media and emails,
3. Women can be empowered through the formation of women groups as focal points to deal with their challenges,
4. Empower women economically by initiating and/or building income generating projects.

## Indigenous P4N

Platform members defined indigenous peoples as descendants of populations which inhabited a geographical region at the time of conquest or colonization or the establishment of present states boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

Indigenous people face more challenges than local communities, although sometimes the challenges are the same. The main challenges facing indigenous peoples are: -

1. Being minorities, they are often marginalized,
2. They face extreme poverty especially in areas where impacts of climate change have set in,

3. Their human rights are often violated when in conflict with national priorities,
4. Their land is often encroached by other communities and stakeholders,
5. They are often regarded as backward and, their shrines and traditions, are associated with witchcrafts.

Indigenous and local communities can be supported to overcome the above challenges by: -

1. Mobilizing and sensitizing them on their rights,
2. Raising the public's appreciation of indigenous people's tradition,
3. Supporting their economic empowerment,
4. Shielding them from ravages of climate change,
5. Legally securing the natural resources, they own,
6. Supporting their efforts to design and implement their conservation and development projects.

## Young P4N

The Young People4Nature (YP4N) Platform deliberated on the need to have the activities of YP4N and its members featured in the People4Nature Magazine.

The proposed YP4N activities to be featured include: -

1. Short stories by YP4N,
2. Drawings and paintings,
3. Pictures of their environmental activities,
4. Poems and songs,

## 5. Puzzles and short quizzes.

Members of the platform are currently working to ensure YP4N is featured in the January-March 2019 P4N Magazine.

## Conservation Agriculture and Fisheries

The Platform explored the concept of Conservation Agriculture (CA). It is recognized as one of the environmentally friendly GAPs (Good Agricultural Practices) that have a positive effect on climate. It is defined as a system of farming that ensures the productivity of soil through minimum tillage, maintaining permanent organic soil cover and crop diversification through rotation and/or intercropping.

There are a number of benefits of CA that include: -

1. A good crop production system in the face of climate change,
2. Conservation of soil, soil moisture, and soil fertility,
3. Allows for the production of food throughout the year,
4. Makes the best use of soil fertility with crop rotation,
5. Ensures food secure and surplus for the market; hence more income.

The main challenges are that it requires investment in training, good planting materials, appropriate equipment and time that may be costly. Access to timely information on weather and extension services can also be a challenge.

These challenges can be overcome by training farmers, establishment of a team of service providers e.g. pest

control, and improvisation and development of the required tools by local welders and artisans.

The Platform members proposed topics for inclusion in a CA Training Module, including:

1. Concept, Principle and Practice of CA,
2. Land preparation,
3. Soil cover and soil health,
4. Weed control in CA,
5. Harvesting.

## Enterprise-led Conservation

The Environment Fund has so far supported nature-based businesses including fishmongers, fruit farmers (pawpaw and passion), tomato farmers, modern beekeepers, dual purpose local breed poultry farmers, fish farmers and cattle fattening businessmen.

The Environment Fund had no clear tool to evaluate a business proposal or monitor its development after being funded. Members proposed the use of a business plan as a tool to support members to develop the details of a viable business idea. The business plan format would capture information such as the summary of the business, the available business opportunity, how the business will be executed, the team that will execute the business plan, sources of finance and any other additional information related to the product or service.

To further assist members to develop their own business plan, a member seeking support from the Fund would fill in a

questionnaire that responds to the business plan format.

There were a number of

## Environmental Education and Awareness

proposals made to improve our People4Nature magazine. They include: -

1. Proposal to add sections on youth/children and advertisements on environmental products produced by members,
2. Acquisition of clear and sharper pictures to improve the appearance of the magazine and its articles,
3. Review and ensure articles are readable/legible on phone, laptop, computers or other devices,
4. Introduce a variety of articles – storytelling, report presentation, interviews, etc,
5. Expand the editorial team. Phathisani Tabengwa and Catherine Musili volunteered to join the editorial team,
6. Proposed format/sections (flexible) to include a message from editors, message from the Summit, feedback from readers, updates from platforms, youth news, advertisements, articles as per our platforms, etc.

The Platform proposed that members advertise their products free of charge until the end of the year. In the meantime, P4N-EnEA would ensure the magazine is more appealing and has a wider reach before the charges are implemented.

# 2018 People4Nature Awards

The People4Nature Awards is an initiative aimed at recognising the contribution and achievements of our members towards conservation of the environment as well as building our network.

There were six categories in the 2018 awards. They categories were: -

1. The Environment Ambassador Award,
2. The Family Award,
3. The Conveners Award,
4. The Service Award,
5. The Environment Fund Award,
6. The Staff of the Year Award.

## The Environmental Ambassador Award



The Environment Ambassador Award recognises individuals who have demonstrated how to conserve the Earth's natural resources or supported our efforts to sensitise our members and the public on the importance of conserving natural resources.

The following met the above criteria and their activities were featured in our 2018 magazines.

1. Loise Wanjiru Ndegwa, tree nursery owner, committee member of community forest association around Mt. Kenya (Kenya)
2. Silvanus Kweena Uunona, horticultural farmer using water conservation techniques (Namibia),

3. Kenneth Kunuthia Kiarie, strawberry farmer and owner, Kenbet Ltd (Kenya),
4. Halinishi Yusuf, Managing Director, Makueni Sand Harvesting Authority (Kenya),
5. Joseph Titus Chekangor, bird enthusiast and tour guide (Kenya),
6. Constance Ziro Kazungu, drylands forest conservationists (Kenya)
7. Jazzy Jeff Rasolojaona, Programme Officer, Natural Justice supporting indigenous groups (Madagascar),
8. Nancy Saumu Ronald, Programme Officer and forest expert with Gatsby Kenya (Kenya),
9. John Safari Ziro, Kwale County Deputy Director, Crops and Food and Agriculture Field Representative (Kenya),
10. Weston Mure Charo, member, Friends of Madunguni Forest (Kenya),
11. Omar Juma Abdalla, Secretary, Wasini Beach Management Unit (Kenya),
12. Mramba Charles Thoya, Chairman, Jilore Community Forest Association (Kenya).

## Family Award



It is an award to recognise members who registered all their family members to the network.

1. Cheli Gurung (Nepal),
2. Francis Kibanzu Mwenuko (Kenya).

## The Conveners Award



It is awarded to conveners who made great impact in steering their Platforms to discuss and make important contributions (policies, strategies, guidelines, etc) to the People4Nature Global network.

1. Immaculate Emma Kyomukama, Indigenous People4Nature Platform (Uganda),
2. Nancy Saumu Ronald, Wildlife and Forest Platform (Kenya),
3. Raymond Ndundi Mwambire, Young People4Nature Platform (Kenya),
4. Fadhila Ghikas, Enterprise-led Conservation Platform (Kenya).

## Service Award



It was awarded to retiring conveners for their service in the year 2017/2018.

1. Kusundwa Wamalwa Kusundwa, Co-convener, Indigenous P4N (Tanzania)
2. James Kapoto Dorop, Co-convener, Young P4N.

## Environment Fund Award



The Environment Fund Award is given to a member(s) who have been active in saving or wisely utilising the funds they receive from the Environment Fund.

1. David Karisa Konde (Kenya).

## Staff of the Year Award



The award recognises one of the staff, including volunteers, of the Secretariat of the People4Nature Global for his/her exemplary service, as voted for by members.

1. Janet Mueni Matheka, People4Nature Secretariat (Kenya).



# THE MAKING OF A CONSERVATIONIST

Mr. Amos Sowene Loroghwa is a resident of Taveta in Taita Taveta County, Kenya. Over two decades now, he has embraced tree planting as his second nature. A visit to his farm in Luvoro village reveals a person at peace with his environment. An expansive farm with a variety of indigenous and exotic shrubs, including the infamous mathenge (*prosopis julisflora*) cover most of his farm.

Kolokolo, as he is popularly known, did not initially venture into conservation activism. He has been active in local and national politics for a better part of his life. In 1992, he was the Organizing Secretary of Ford Kenya, a political party in Kenya, in Taita Taveta County. And in the same year he was elected Member of the County Assembly, then known as Councilor, representing Mahoo Ward. As a Councillor, he was elected the Chairman of the Town Planning Committee of the Town Council of Taveta.

He is credited for overseeing the construction of the Town Council staff quarters in Taveta and the planning of the new Taveta town. But what he still holds dear is the relationship he began with the Melhus Municipal Council, Norway, during his term as chairman. It is this relationship that eventually plunged him into active environmental conservation activities.

There were a number of projects that the partnership supported, including the environmental education initiative, that aimed at sensitizing Taveta residents to conserve their environment.



**Mr. Amos Sowene Loroghwa, Article Writer, is the Chairman, Taveta District Environmental Conservation Association (TADECA).**



**The annual tree planting ritual by a member of Melvus Municipality at Amos's farm.**

To date, the partnership has supported various initiatives in Taveta Sub-county including health and education. Annually, a delegation from Melvus Municipality mark their visit to Taveta by planting trees at Kolokolo's farm.

Kolokolo lost his Councillor's seat in 2002, but by then, he had developed a huge interest in environmental activities within Taita Taveta County. In 1998, together with other environmental conscious community members, Kolokolo formed Reu Reu CBO. The group's overall objective was to protect and conserve the Njoro Kubwa springs, the main source of tap water in Taveta Sub-County.

In 2005, Kolokolo was elected the Vice Chairman of Taita Taveta Wildlife Forum (TTWF). It is during this time that the issues of human-wildlife conflict and the demand for an equitable share of the revenue generated from the Tsavo National Park for the community, received a lot of national limelight. And although the efforts of TTWF, and other wildlife conservancies in Kenya, to have a new wildlife policy and law to address these issues did not succeed, they nevertheless, laid a strong foundation for long-term advocacy campaigns. These efforts eventually bore fruits in 2013 when the President assented to the Wildlife Conservation and Management Bill.

Kolokolo's involvement in the UNDP-GEF-SGP funded cluster of 7 community-led conservation projects to restore the River-Lumi Lake Jipe basin ecosystem (2004-2007), saw him elected the Chairman of Taveta District Environmental Conservation Association (TADECA) in 2007. The association was formed as the initiative's exit strategy.

Other notable activities he has been engaged in include the sensitization of artisanal miners on the legal and policy reforms in the mining sector, mobilization of fishermen to form and strengthen the national fisher forum, Samaki Network Association, as well as the popularization of the People4Nature Global network in Taita Taveta County.

Kolokolo started a unique tree planting initiative to mark important historical events, in addition to the annual Taveta-Melrose Municipal Council partnership tree planting ritual. Following the terror attack on Garissa University College in April 2015, Kolokolo planted 147 trees in his farm to commemorate the 147 students who lost their lives. And in September 2011, he planted 70 trees to mark the death of Prof. Wangari Maathai, the 2004 Nobel Peace Prize Laureate, and a tree planting crusader.

# In the Footsteps of Grandpa

Four years ago, Salome Ndechikio finally fulfilled her dream to plant her own tree. Her desire to plant trees had been aroused after observing her grandfather, Amos Sowene Loroghwa, plant many trees in his farm.

Grandpa Amos Sowene, had bought three tree seedlings of casuarina for Salome to plant. The three seedlings were planted by Salome and her parents, Japhet Efeta Mashamba and Jeritha Japhet.

To nurture Salome's tree planting interest, her father bought more seedlings that Salome and her two elder brothers, Charles, and Mashamba, planted at their farm in Msengoni Village.

In response to the gesture extended to them by Grandpa Kolokolo, Charles and Mashamba bought two seedlings that they planted at their grandfather's farm in Luvoro village.

The first seedling that Salome planted (top left) has now grown into a big tree (on left).



**Salome Ndechikio leaning on the tree she planted four years ago.**

# Women in Zimbabwe Embrace Climate Smart Agriculture

The interaction between human beings and the environment is the driving force behind ecosystem and climate changes over time. Climate change and increased variability now presents many new challenges for smallholder farmers who depend on rain-fed agriculture for their livelihood.

The situation is not any different in many rural areas of Zimbabwe. Farmers in Matabeleland South Province in South West Zimbabwe, face changing climate characterised by short wet season and a long and dry season.

In an effort to balance the interaction between crop productivity for small holder farmers and environmental conservation, climate smart agriculture techniques are being promoted in most of the districts in Matabeleland Province. Farmers are now aware of the importance of protecting and sustainably managing soil, water and land as critical for good crop production.

Climate smart agriculture is being promoted as a Good Agricultural Practice (GAP) to enable farmers cope with the changing climatic conditions.

Climate Smart Agriculture (CSA) is described as an approach that guides actions needed to transform and re-orient agricultural systems to effectively support development and ensure food security in a changing climate. CSA aims to address three main objectives - sustainably increase agricultural productivity and incomes; adapting and building



**Ms. Phathisani Tabengwa, Article Writer, is the Convener, Environmental Education and Awareness Platform and the Editor, People4Nature Magazine.**

resilience to climate change; and reducing and/or removing greenhouse gas emissions, where possible.

Climate smart agriculture encompasses good soil, crop, water, livestock, forestry, fisheries and aquaculture, and energy management.

The focus in Matabeleland Province, however, has been on soil, crop and water management.



**Women play an important role in climate smart agriculture in these parts of the country. They support each other implement CSA by working in groups.**

## **1. Water Management**

Water scarcity is becoming an increasingly important issue for many small-scale farmers in rural areas. Improved water management systems for crop production is becoming a must.

Farmers have adopted basin tillage as a way of capturing and conserving water for crops. This involves digging basins that are approximately 15cm wide by 15cm long by 15cm deep using a hand hoe. Land preparations starts after harvesting, where soil is dug out of the basin and heaped down the slope, next to the basin. This supports water harvesting and avoid the basin being buried by the dugout soil.

## **2. Soil Management**

It is understood that maintaining or improving soil health is essential for sustainable and productive agriculture. 'Healthy' soil will help to push sustainable agricultural productivity close to the limits set by soil type and climate.

Farmers in Matabeleland open up planting lines using a ripper line attached to the frame of a mould board plough.

### 3. Crop Management

It involves the use of high quality seed, use of manure, timely planting and weeding, and the control of pests and diseases.



**Concilia Tshuma, a CSA farmer weeding her CA plot (100m by 10m) where she planted sorghum and intercropped with cow peas**



# THE ANNUAL FISHER FORUM

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The Fishers Forum is an annual event organised by the Wildlife Conservation Society (WCS) and the Kenya Fisheries Service (KeFS). This event brings together community representatives, scientists and managers from different institutions to discuss key issues on the management and conservation of coral reefs and small-scale fisheries.

This year's event was held at the Kaskazi Beach Hotel, Diani, Kwale County on 17<sup>th</sup> January 2019. The theme of this event was *Knowledge and Information Sharing on Small-scale Fisheries*.

The event was attended by representatives from different Beach Management Units (BMUs),

including Funzi, Kuruwitu, Msumarini, Mkwiro, Kanamai, Nyali, Mvuleni, Mwaepe, Bamburi, Mtwapa, Shimoni, Mnarani, Mwandamu, Bondo, and Kibuyuni.

Participants were presented with various research findings before making key recommendations. The research findings presented were on trends in fish catch, how to enhance sustainable fisheries along the coast, promoting sustainable fisheries in the Kenyan Coast Region, the impacts of a decrease in the tourism sector (Mkwiro and Vanga), and the Kenya-Tanzania Transboundary Conservation Area (TBCA).

## Trends in Fish catch

The research covered a period of 22 years (1996-2018), focusing on 11 BMUs from the Northern Coast and 9 BMUs from the Southern Coast of Kenya.

These BMUs are Kenyatta, Kanamai, Bureni, Vipingo, Kuruwitu, Kijangwani, Kinuni, Nyali, Mtwapa, Reef, Msanakani, Marina, Tradewinds, Mwaepe, Mvuleni, Mwanyaza, Mgwani, Chale, Gazi, Msumarini and Tiwi.

It was observed that when the number of fishermen (per square kilometer) increased above 6, the fish catch (kg/square kilometer/day) reduced significantly. As a consequence, fishermen had moved further off-shore to fish.

Generally, there was an increase in the number of emperors and snappers in conservation areas. There was also notable increase

in the catch for other species, while there was a decrease in the catch for octopus, rabbit emperors and parrotfish in the conservation areas.

It was recommended that the number of fishermen per square kilometer be reduced by encouraging off-shore fishing, and more effort be made to creating conservation areas to

maintain the numbers of emperors and snappers.

## Promoting Sustainable Fisheries in the Kenyan Coast Region

Fisheries management and development in Kenya is a devolved government function since 2013.

Most of the County governments at the coast of Kenya focused on the issuance of boats to, and educating the fishermen.

However, the Kwale County Government put emphasis on reducing the cost of fishing while Kilifi and Mombasa County Governments were invested in promoting the conservation of resources and the environment.

It was observed that

promoting sustainable fisheries could be enhanced through conserving the resources rather than reducing the cost of fishing.

It was also observed that the catch generally decreased in all BMUs that received nets, and interestingly, there was an increase in fish catch in BMUs that used basket traps in their

conservation areas as opposed to using fish nets.

In conclusion, Counties from the Coast region should focus on maximising resource and environmental conservation activities as a way of enhancing sustainable fisheries.

## Sustainable Fisheries for Sharks and Rays in Kenya

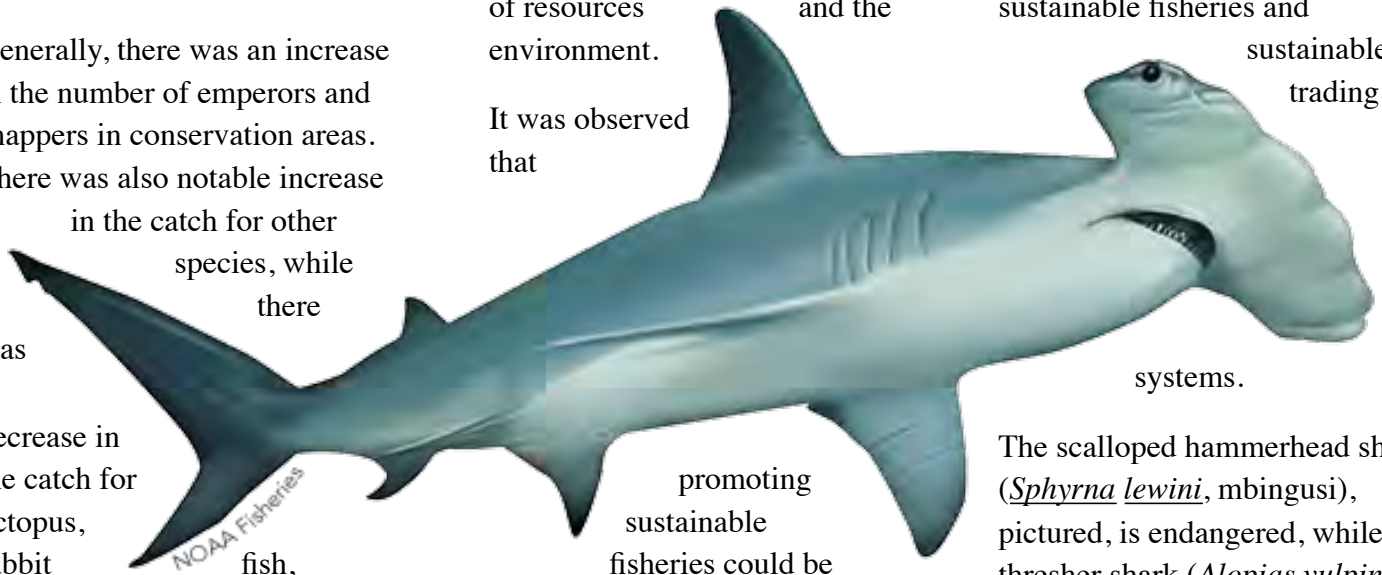
Sharks and rays are mainly caught for meat, skin, and oil. Their numbers have significantly decreased globally. This has put them at risk as they take a long time to reach maturity.

Conservation focus has been on the species of sharks and rays that are at risk of extinction, sustainable fisheries and

sustainable trading

systems.

The scalloped hammerhead shark (*Sphyrna lewini*, mbingusi), pictured, is endangered, while thresher shark (*Alopias vulpinus*, papa mkia mrefu), silky shark (*Carcharhinus falciformis*) and ocellated eagle ray (*Aetobatus ocellatus*, piyo) are listed as vulnerable.





In Kenya, activities to conserve sharks and rays have revolved around the development of a National Plan of Action for Sharks and Rays (NPOA), the use of Baited Remote Underwater Visual (Video) Surveys (BRUVS), and research on sharks and rays catches, traders and fishermen.

Progress has been made in undertaking a Baseline Shark Fishery Assessment (2016-2017), an Ecological Risk Assessment (2018) and drafting of the NPOA for sharks (2018-2019) by the World Conservation Society.

It was observed that adult sharks and rays have been caught using nets and handlines in deep waters while the juvenile ones are caught next to the beaches.

### **Impacts of the Decrease in Tourism Sector (Mkwiro and Vanga)**

In the year 2014, the tourism sector in Kenya was affected when the number of foreign tourists decreased.

A research was carried out to determine the impacts of this development on the villages of Mkwiro, Shimoni and Vanga. Mkwiro and Shimoni highly depend on tourism while Vanga relies on agriculture, fishing, and small businesses.

The findings of the research determined that tourism activities reduced by 62% in Mkwiro and 15% in Vanga. The effects were mostly felt in Mkwiro village and

were spread throughout the year. This led to many men seeking formal employment while women ventured into small-scale businesses and domestic tourism. The effects were also severe on companies owned by foreigners.

In this period, there was minimal change in the number of domestic tourists, although overall all tourism businesses were affected.

### **Kenya-Tanzania Transboundary Conservation Area (TBCA)**

The proposed TBCA area runs from Diani (Kenya) to Tanga (Tanzania), and includes a 200 meters coastal strip from the boarder of the ocean.

The objective of setting up TBCA is to harmonise management of marine resources found in the two



**Idle boat and boat operators during low tourism season.**

The research concludes that tourism can be revived if security in the region can be beefed up, incentives can be given to domestic tourists, women can be encouraged to venture into tourism activities and conducive tourism business environment is created.

countries and ensure marine resources are protected and conserved, for sustainable economic development and harmony among the communities living in the area.

Stakeholder engagement started in May 2014 with a meeting between Kenya Coastal Development Programme and



**Facing the area between Vanga and Tanzania from Wasini Village.**

the United Nations Environment Programme/Nairobi Convention.

A team was formed to spearhead the activities of TBCA followed by stakeholder meetings in Tanga (Tanzania) and Matuga (Kenya). So far there is a TBCA Guideline.

The TBCA is important in ensuring a healthy and sustainable marine ecosystem that support essential ecosystem functions and provide ecosystem services. 60% of coastal communities depend on ocean resources to support their livelihoods.

The challenges identified include overfishing and the use of undesirable vessels, environmental pollution and destruction, migrating fishermen, lack of border signs in the ocean, illegal businesses such as charcoal burning and the

difference in laws governing fisheries in Kenya and Tanzania. These challenges can be overcome by establishing a common governance system within the TBCA.

Focus is now on sensing the community and stakeholders on the TBCA, and their involvement in establishing the TBCA area.

### **Challenges in Promoting Businesses for Women in Small-Scale Fisheries**

Women have no information on the businesses that promote sustainable fisheries and the knowledge to managing them. Inadequate finance, proper fishing gears, storage facilities for fish and good market were sited as challenges that face women in small scale fisheries. Discrimination and poor

governance systems were the other challenges.

### **Stakeholder Resolutions**

Stakeholders resolved to encourage communities to venture into alternative livelihoods to reduce the number of fishermen per square kilometer, avoid fish breeding areas and fishing during breeding seasons as well as collaborate

with other institutions, including the government, to promote sustainable fisheries.



**Ms. Janet Mueni, Article Writer, is the Programme Assistant, People4Nature Global.**



# KIBUYUNI SEAWEED FARMING

Seaweed farming was first introduced to the East African region in 1988. It was first grown in the Island of Zanzibar, Tanzania. For over 20 years, Zanzibar had been supplying the global seaweed market with a sizeable product.

In Kenya, the first ever seaweed farm was established at Kibuyuni village in 2006 by the Kenya Marine and Fisheries Institute (KMFRI) in collaboration with the Kibuyuni Beach Management Unit (BMU). For years, Kibuyuni BMU struggled to establish seaweed farming as an alternative blue economy enterprise.

In 2012, the Kibuyuni Seaweed Farmers Organization, a user group within the Kibuyuni

BMU, was registered to promote and commercialise seaweed farming.

The group membership has grown steadily as former fishermen and fishmongers have turned to seaweed farming as an alternative economic activity. The group currently has 125 members, 70 of whom are women.

## **But what exactly is seaweed farming?**

The seaweed is a green and brown plant found growing naturally in shallow areas of the sea. There are two strains of seaweed found at the South Coast of Kenya, *Kappaphycus alvarezii* (cottonii) and *Euchuma denticulatum* (spinosum).

Seaweed is grown on suspended ropes spread over a distance. The rope can hold 49-50 seedlings at a go on the seabed and only requires ocean waters to grow.

The seedlings take 45 days to mature. Regular farm operations include replacing seedlings washed away or unhooked by tides, cleaning and tightening the ropes.

Mature weeds are harvested by ripping them off from the ropes, after which, they are transported to an open space for drying for about three to four days.

The dry seaweed is then stored in a storage facility. The store at Kibuyuni is equipped with processing facilities, enabling the group to process soaps, lotions, cakes and other products.

### **Benefits of Seaweeds**

In the fourth Century, Japan used seaweed as food, while China joined them in the sixth century.

In the 1960s, Norway pioneered the use of seaweed as an additive in animal feed. The seaweed meal was made of dried and powdered brown seaweed.

Thereafter, seaweed extracts have been used as food thickeners and fresh seaweed is believed to help lose weight and lower unhealthy cholesterol levels in the blood.

The weeds are also a good source of folate, zinc, sodium, calcium, magnesium, omega 3 and vitamins A, C, E and K. In the global pharmaceutical and

cosmetic industries, seaweeds are a common ingredient in hair shampoos, lipstick and skin medicine.

Seaweed has also been used as an additive to soils. The high fibre content of the seaweed acts as a soil conditioner and its mineral content as fertiliser.

### **Production**

Kibuyuni farmers have produced and sold over 44 tonnes of dried seaweeds at approximately Sh1,345,810. The dried seaweed is

Programme –KCDP- provided support in upscaling of seaweed farming, construction of drying racks and the purchase of boat for seaweed value addition techniques.

Kwale County Government has supported the development of seaweed production by availing tools for production and constructing a store for seaweed. Part of the store is now used for value addition with equipment supported by the National



**Sea weeds being dried at the store.**

being exported dry to counties like China, Ireland and Malaysia.

### **Partners**

Kibuyuni Seaweed Farmers Organization has received support from various stakeholders. KMFRI has continued to provide research, technical support and training on seaweed production while the Kenya Coast Development

Government through KMFRI under Blue Economy Implementation Committee (BEIC).

The seaweed initiative also received technical support from the Blue Growth Initiative, an initiative of Food and Agriculture Organization to sustainably develop fisheries and aquaculture.

The initiatives' objective was to "Foster investment in coastal Aquaculture and promote an effectively governed mariculture development that is socially inclusive, equitable and environmentally responsible, and provide opportunities for sustainable and profitable farming."

The initiative was implemented in collaboration with the Ministry of Agriculture, Livestock and

processors of both semi-refined and refined carrageen around the globe.

C-Weed, has currently purchased 100 tons of dried seaweed at a cost of Ksh. 2,000,000. This impacted directly on the livelihoods of 52 beneficiaries of Kibuyuni and Nyumba Sita groups.

In addition, the company, has

seaweed shed at a cost of US\$ 11,500.

Other key achievements of the projects include the development of a draft National Mariculture Strategy and Development Plan, a Baseline Report on Mariculture in Kenya and an Atlas of potential Aquaculture areas in the Coastal region.

### Future Plans

To grow seaweed business, there are plans to submit soap samples to the Kenya Bureau of Standards and to brand the product.

Further, efforts will be made to upscale seaweed farming to other coastal communities, diversify products, develop a Business Management Model, provide start-up capital, and invest in infrastructure and capacity building of staff working in the factory.



**The first batch of sea weed for export being flagged off.**

Fisheries, specifically the State Department of Fisheries and Blue Economy, and the County Government of Kwale in close collaboration with KMFRI.

Through the initiative, FAO was able to link Kibuyuni Seaweed Farmers to a larger market through C-Weed Corporation Kenya Ltd. It is, one of the world's leading commercial growers and suppliers of bailed, dried seaweed to the major

invested extensively by extending services of three technical officers to provide day-to-day technical support to the farmers and provided a farming tool and bailing machine worth Ksh. 2,000,000 (USD 20,000).

Apart from the support given through training in seaweed farming, FAO supported the purchase of two pieces of seaweed grinders at a cost of USD5,000 and constructed a dry



**Mr. John Safari (article writer) is the Deputy County Director, Crop Production, and FAO Field Programme Assistant, Kwale County.**



# Staring at Calamity

## Sea Sand Harvesting in South Coast Kenya

Sand has become the second most consumed natural resource on the planet after water. Unfortunately, the smooth and fine desert sand found in plenitude is not suitable for construction. Only sand from water can be used in construction. It is mainly used in concrete and glass making.

Globally, the demand for sand has been driven by migration to cities, rapid population growth and the growth of the construction industry.

### **The Genesis of the Problem**

Kenya has taken a path to accelerate development through mega projects in infrastructure, mining, oil and gas, energy and

large-scale agriculture. These are projects without which the country will never achieve its Vision 2030, a blueprint for achieving development by 2030. Unfortunately, establishing mega infrastructure projects require huge amounts of natural resources, such as sand.

One of the flagship projects under Vision 2030 is the construction of the Standard Gauge Railway from Mombasa to the border with Uganda. The Kenya Railways contracted China Road and Bridge Corporation (CRBC) to undertake the project.

To meet its demand for sand, CRBC identified the pristine coastline from Tiwi to Diani as a

suitable source of sand. Dredging of sand began in 2013 and this sparked an outcry from locals and conservation Non-Governmental Organizations (NGOs) in Kwale County. They feared dredging the sea would have permanent negative consequences on the delicate marine ecosystem.

Despite opposition by the community and other stakeholders, National Environmental Management Authority (NEMA) issued a license to CRBC on May 22, 2015, to harvest the sand without undertaking full Environmental and Social Impact Assessment (ESIA) as required by law.



### **Sea sand harvesting**

According to the Tribunal Appeal No. NET -152-2015 issued on 22 January and released in February 2016, NET cancelled the license [NEMA/EIA/PRS/1581] issued by NEMA and directed that the proponent (Chinese Roads and Bridges) to undertake a full ESIA.

The tribunal ruled that a proper Environmental Impact Assessment (EIA) hadn't been undertaken. This was after locals appealed against the license issued on May 22, 2015 to the company by NEMA.

The current conflict has been sparked by the on-going dredging and sand harvesting for the

construction of the Kenya Oil Terminal and the second phase of the container terminal in Mombasa's Port Reitz.

Dredging is being carried out on the ship channel in Port Reitz and the collected dredge spoil being dumping at a designated site offshore.

The vessel then proceeds to Waa and Tiwi coral reefs off Diani beach in Kwale County, on Kenya's South Coast to harvest sand for use in the construction of the two terminals.

These conflicting interests on natural resource use arise because the government has not formally

designated locations for sand harvesting, nor has an estimate of the anticipated demand for sand been made.

### **The Impact of Off-Shore Sand Harvesting**

Coral reef is one of Kenya's principal natural assets supporting the coastal economy and Counties. Fisheries, tourism and coastal protection heavily depends on a healthy coral reef. But the health of the coral and marine ecosystems can be adversely affected by off-shore sand harvesting.

The following are the known impacts: -

1. Dredging the sea floor spreads sand that suffocates and kills corals, fish and other marine life;
2. Due to disturbances of the sea, fish either die or relocate to other areas, affecting fishermen's livelihoods,
3. It deepens the seafloor at the base of the coral reefs and the sand balance between undersea sediments and shorelines changes. This may encourage beach erosion and popular beaches, such as Diani, may be lost.
4. Beach erosion may result in destruction of beach vegetation and destruction of breeding sites of turtles;
5. Loss of beaches due to erosion will affect tourism activities and tourism dependent livelihoods,
6. There is fear that heavy metals from the dredge spoil from Likoni, that is dumped off-shore, could contaminate the ocean.

### Recommendations

1. Considering the regular and mega-infrastructure projects, there needs to be a national strategic environmental assessment on sand for large scale construction. This would help inform where sand harvesting should be done and locations where conflict with other sectors, like tourism and fisheries, could be avoided;
2. An environmental impact assessment which would



**The dredging vessel, Willem van Oranje, as observed in the Tiwi-Waa seafront, Kwale County, Kenya.**

- highlight what mitigation measures need to be put in place to minimise damage;
3. Institute mechanisms for real-time monitoring of sediment plumes, how they are affected by the wind, waves and tides, and what would trigger harvesting activities to be postponed or altered to avoid damage to nearby sensitive reefs;
4. Kenya's National Environment Management Authority should suspend the operations immediately and require that the 2014 environmental impact assessment be updated.
5. If Kenya is to achieve its Blue Economy aspirations, there is need for Marine Spatial Planning and integrated planning among different government departments.



**Mr. Moses Ziro (article writer) is the Secretary, People4Nature Global and the Executive Director, Africa Nature Organization.**



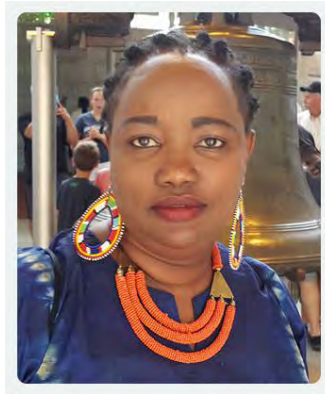
# Welcome Home!

The People4Nature Global family is growing! Eleven new members joined the People4Nature fraternity this quarter, including the second youngest member, Mulana Sarah Chanzi, who was registered early this year at the age of 10 days.

We also had the pleasure of registering our first member from South Africa, Dr. Sechaba Bareetseng. Ms. Ruth Adeka and Salome Ndechikio (Kenya) are the other members not pictured below.



**Fon. Lekunze Nembo,  
Traditional King,  
Cameroon.**



**Ms. Martha Ntoipo,  
Tanzania.**



**Mr. Unusa Karimu Boli,  
Cameroon.**



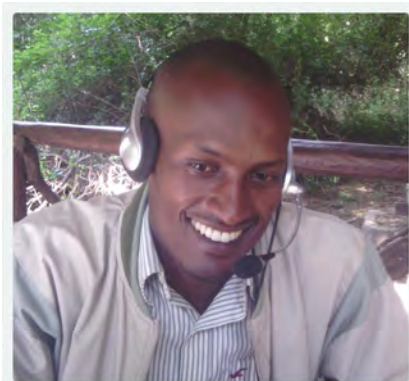
**Mr. Patrick Akowuah,  
Ghana.**



**Mr. and Mrs. Samuel Chanzi, parents  
of Mulana Sarah Chanzi, USA.**



**Dr. Sechaba Bareetseng,  
South Africa.**



**Mr. Jackson Sasine,  
Kenya.**



**Mrs. Penina Siantei,  
Kenya.**



**Mr. Nicholas Outa,  
Kenya.**

# The People4Nature Belong!



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