

Final Project Evaluation Report

Your Details	
Full Name	Nancy Awuor Oduor
Project Title	Community Based Marine Litter Management for Restoration of Endangered turtle habitats along Kenyan Coast
Application ID	23325-1
Grant Amount	£5000
Email Address	Koduor2012@gmail.com
Date of this Report	15 th June 2019

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
To promote a changed community members' attitude towards marine wildlife				The communities were educated on the importance of turtle and other marine wildlife-they fully appreciate the role played by wildlife
To enhance turtles and marine conservation.				Conservation has been enhanced as can be seen in the weekly beach clean-ups by the community members, increase in reporting of incidence on turtle bycatch and accidental hitting by boats. The Kenya Wildlife Service have found a 30% reporting of incidences of turtle accidents and by-catches in the past 6 months in the region.
To promote a sound waste and marine resources management;				Education and training done on waste segregation and issuance of waste segregation sacks as well as connection of the communities with waste recyclers and municipality-to collect non-recyclables, have motivated the work and has since seen an improved solid waste management in the study sites.
To increase households' income and reduced exploitation pressure on marine resources.				The students and local beach communities were trained on making materials (dustbins, necklaces, sculptures) from litter for sale. Moreover, linking the communities with recyclers have enabled them to sell the plastic, glass and rubber. However, the recyclers normally demand, large quantities of the materials (from 100kg) that take time to collect
To map critical turtle habitats outside marine protected areas				A participatory approach was employed and the turtle critical habitats identified and mapped. The areas have been allocated to the Beach Management Units responsible for the areas by Kenya Wildlife Service. The recovery of turtles in these areas

				will be established during our follow-up programmes.
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled.

The first thing that greatly affected our project was the sudden drop in the value of GBP i.e. from KShs. 140 to KShs. 129 by the time of the project with the value rung up to KShs. 125. This highly affected our financial planning. The project team however encountered the problem by collaborating with organisations like CORDIO-East Africa and Wildlife Clubs of Kenya (WCK), which offered material support to enable us achieve the project objectives. Apart from the financial challenge, the project team also experienced resistance from local communities from volunteering work. This was caused by the current frustrations due to the corruption rate in the government, poverty and increasing cost of living. The communities thus wanted payment before involved in the project activities expressing that there is a lot of money in the government. We however solved this by conducting civic education on how to become responsible citizens and why conservation is important to the community more than the government itself thus easing the tension. Finally, the bureaucratic nature of functioning in both local and county government caused delays in our activities e.g. getting permits for communities to conduct waste collection, approvals from KWS for turtle management. The process of getting the local government waste collection truck also took a long time making a lot of unrecyclable litter to pile at our beach collection points.

3. Briefly describe the three most important outcomes of your project.

- The biggest conservation outcome of this project is the identification and mapping of critical turtle habitats outside marine protected areas. This is very important as the results has been shared to Kenya Wildlife Service and this will form part of bigger objective of conservation of the turtles in the area.
- The second important outcome of this project is the organised and improved marine litter management in the study sites as seen in the established and use of litter bins and weekly clean-ups by the Beach Management Units. This has been motivated by the projects provision of clean-up and litter collection materials as well as sensitization on importance of responsible waste management.
- Another important outcome is the linkage of the beach communities with recyclers like Ocean Soles Glass mills and Kin-Cleaners for rubber, glasses and plastics respectively. The recyclers collect the materials on a monthly basis in payment of money to the community, this has as well created job opportunities and boosted household income for the communities as other residence from adjacent homes also bring and sell their materials, which are then paid by the recyclers.
- Finally, another outcome that can't be left out is the increased interest of the local communities on marine litter and turtle conservation. This is justified in the conduction and completion of a study on marine litter characterisation supported by the project for BSc. thesis in Marine Science. Marine litter

component was also developed and included in the Wildlife Clubs of Kenya's programme in schools.

4. Briefly describe the involvement of local communities and how they have benefitted from the project.

This project was entirely done with the local communities. Education and awareness campaigns have been done through local schools and community groups through the Beach Management Units in all the sites. The mapping was also done through a participatory approach with the communities, the digital map produced was thus an interpretation of the information provided by the community.

The local beach communities also benefitted through capacity building which involved provision of waste management materials (bins, sacks, gloves for litter collection and waste collection manual to guide their activities and linkage with recyclers enabling them to get extra income from the waste materials sold. They also benefitted from our education and training programmes that enabled them gain knowledge about marine conservation, turtle biology and marine litter management.

The local schools benefitted through knowledge and exposure during the Flipflop, International Coastal Clean-up and World Environmental day events, providing them with experience in litter management.

Another group that benefitted is the national government through Kenya Wildlife Service and local government through the important turtle habitats identified and mapped as this will help in their protection efforts for the endangered turtle. The information can be added to the national turtle management plan. The local government can use the information collected about the sources, impacts and management measures from the community to develop a holistic litter management plan in the area. We also collected information from the community on priority issues that need to be addressed in terms of waste management, this is very beneficial to both local and national government.

5. Are there any plans to continue this work?

Yes, the school turtle conservation and marine litter management component has been integrated in the Wildlife Clubs of Kenya's educational programme while the collection and sell of litter is still continuing in our sites, the recyclers however require large amount of wastes i.e. up to 100kg, thus making the collection longer and delay in earnings for the communities. We hope to expand the collection area by connecting the BMU with the adjacent residents to realise the required amount within a short time for immediate income for the community. The project therefore hopes to get more funds to expand the project beyond Mombasa area as well as link the beach communities with the wider local communities to facilitate faster waste material collection for recyclers and ensure security in their income to dedicate more of their time in conservation.

6. How do you plan to share the results of your work with others?

The result of this project will be shared through different platforms like workshops, conferences and online platforms including our stakeholders' websites, newsletters, Facebook pages, Twitter handle and LinkedIn. Besides these, the project team have started sharing the results of the project through presentation in events, our work was presented at a seminar organised by UNESCO at KMFRI during the World Oceans day. We have also been accepted for a poster presentation at the Upcoming WIOMSA conference in Mauritius in July 2019.

The results have also been presented on local radio (Milele FM) under Blue Economy (audio recording available), and also featured in the national newspaper during our presentation on reusing plastics at KMFRI open day event. Besides these, our activities have been featured by Wildlife Clubs of Kenya June Newsletter, Facebook page and Twitter handle.

We are currently writing news briefs that will be submitted for publication on institutional newsletters of the County Government of Mombasa, KMFRI, Wildlife Clubs of Kenya, Kenya Wildlife Service-KWS and NEMA-Kenya. We also hope to get more data and publish a scientific paper in a recognised journal on marine litter and turtle conservation.

7. Timescale: Over what period was the grant used? How does this compare to the anticipated or actual length of the project?

The grant was used between July 2018 and June 2019. This is the exact anticipated time for running major project activities. One follow-up programme will however be conducted in September 2019 during the international Coastal Clean-up (ICC) event, where most students and community members will be brought together for the event at Bamburi Beach, which is one of our study sites.

8. Budget: Provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Mobilization of Schools and community Groups	140	175	+ 35	Drop in GBP value against KShs. and increase in transport (fuel) cost
Miscellaneous Expenses	200			
Follow-up (Schools and Community Groups)	450	540	+90	Drop in GBP value against KShs. and the increase in transport

				costs.
Communication (Telephone, email, Postal services)	440	470	+30	Exchange rate drop
Stakeholder Workshop	700	780	+80	Drop in GBP value against KShs.
Audio visual material and equipment for schools	500	200	-300	Audio visual equipment and some other materials were provided by Wildlife Clubs of Kenya (WCK), Kenya Wildlife Service (KWS) and CORDIO East Africa for schools and community groups for the education and awareness campaigns
Training material (pens, paper, posters) for schools and community groups	210	220	+10	Drop in GBP value against KShs.
Subsistence in the field	600	700	+100	Additional team members and the drop in GBP value
Transport to field sites (hired vehicle)	1760	1900	+140	Rise in fuel price causing a rise in transport fee as well as additional visit to Eco-World Watamu with community group representatives for benchmarking on making of artifacts from marine litter.
TOTAL	5000	4985	-15	1 UK Sterling Pound = 129 Kenya Shillings

ADDITIONAL NOTES TO THE BUDGET

To counter the financial discrepancies, the project team requested for support from the participating stakeholders. The venue and tea for Stakeholder meeting was also supported by Marina English Point. The project thus covered water, lunch, public address and transport costs for the 35 attendants. One training on making handcrafts was also not conducted for the community groups, the representatives were however taken to recycling company in Watamu for benchmarking purposes.

9. Looking ahead, what do you feel are the important next steps?

The next step should be extension of the project activities to other areas beyond Mombasa and waste management programme beyond the beaches. Education and awareness about marine litter and the general solid wastes should be done to the general public as most of the litter that end up in the beaches and other important turtle habitats were shown to originate from the carelessly thrown wastes from residential areas and highways taken to the beaches through run-off in our study area. So we need to create awareness on turtle conservation and the solid wastes and provide waste segregation bags in the residential areas to allow ease of reuse and recycling as we did at the beaches with the support of the local government. The government, through the Kenya Wildlife Service should support the community through BMUs to conserve the identified turtle habitats by extending the

strict rules and punishment of trespassing beach grabbers as it is done in the marine parks. Finally, with appreciation of responsible waste management, collection and segregation the community need a functional recycling plant to avoid long wait and transport of the waste materials as well as help provide employment to them.

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

Yes, the logo was used in various promotional events materials like banners e.g. During the international Coastal Clean-up in September 2018, Flipflop event organised by UN and other partners, school education and awareness banner, world environmental day, World Oceans Day.

It was also used for branding re-usable water bottles and t-shirts for educators as well as in brochures of Kenya Marine Debris Volunteer Program (KMDVP).

Moreover, the logo was used in our questionnaires created for Focused Group Discussions in schools and community groups. We also shared the logo with our stakeholders like CORDIO East Africa, Kenya Marine Debris Volunteer Program, Technical University Environmental Club and the Kenya Conservation of Aquatic Resources –KCAR (coordinating the International Coastal Clean-up in Kenya) to be put in their banners for events linked to our project work e.g. education and sensitisation programs.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Name	Institution	Role
Nancy Awuor Oduor	Kenya Marine & Fisheries Research Institute_KMFRI (KMDVP)	PI – Coordinated all the project activities including Management of all project finances and other resources as well as organisation of projects events
Patrick Wanguche	Kenya Marine & Fisheries Research Institute_KMFRI (KMDVP)	Conducted Mobilization and Education of community members and schools on turtles and habitat conservation
Lenice Ojwang	CORDIO-East Africa	Assisted with mobilisation of resources from CORDIO and also conducted Education and sensitization programs. Also assisted in the development and interpretation of questionnaires in Swahili language.
Silas Ekesa	Wildlife Clubs of Kenya (WCK)	Assisted in organisation of schools education and sensitization programs and outreaches
Anne Margret	Technical University of Mombasa (TUM)	Taking notes and compilation of all project activities, report i.e. the projects secretary. She also conducted her Bsc.

		thesis on marine litter characterisation through the project
Daniel Maina	Kisiwani Conservation Network	Shelly beach Contact Person/ Mobilizer/Facilitator/ interpreter of English to Swahili.
Betty Ojuka	Kenya Wildlife Service (KWS)	Education and sensitization of the community on the legal issues concerning turtle and habitat conservation and the importance of Marine Protected Areas.
James Mbugua	CORDIO-East Africa	Data analysis and Mapping of critical turtle habitats

12. Any other comments?

I would like to express my sincere gratitude to Rufford Foundation for having provided the financial support to undertake this community capacity building project. Further annexes below.

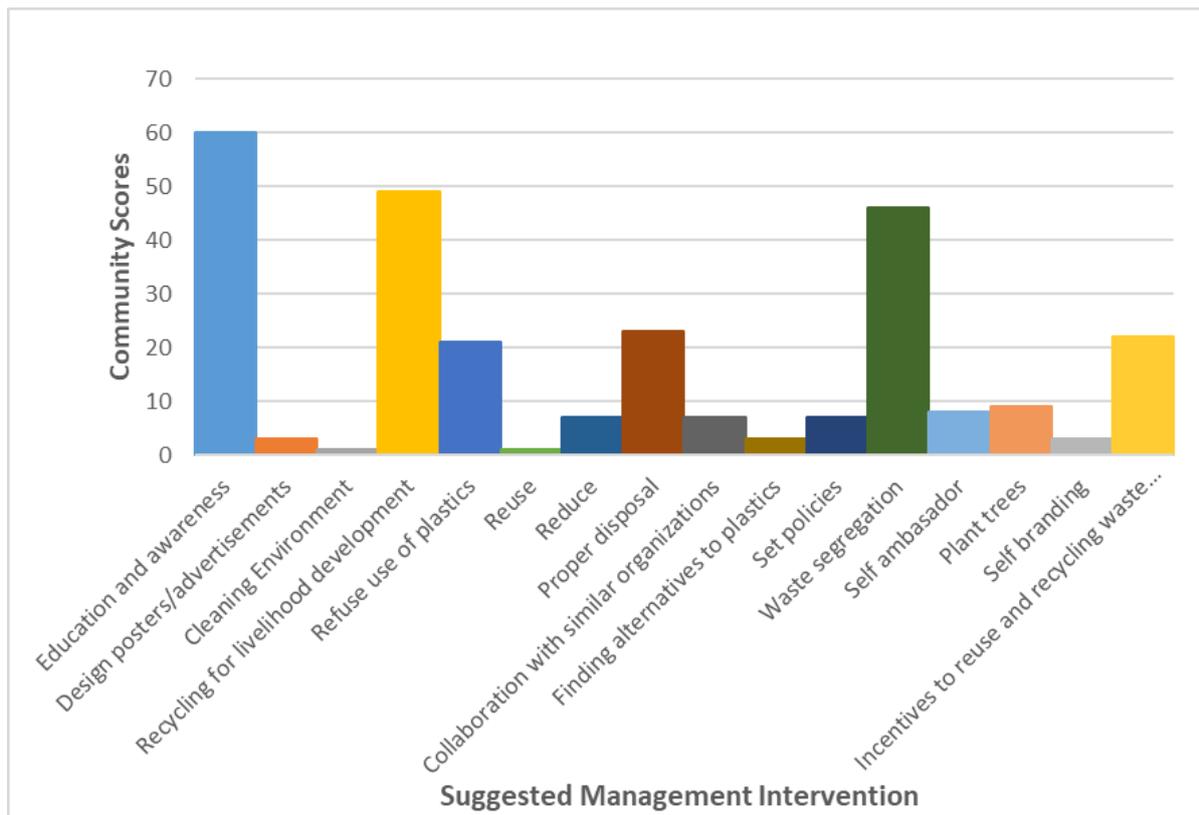


Figure 1: Marine litter management strategies as suggested and scored by the community members (about 200 members were interviewed through focused group discussions followed by individual scoring)

Annex II

Questionnaire for Focused Group Discussions

Managing marine litter: Rehabilitation and Conservation of turtle habitats around Mombasa County: A Community Based Approach to Marine Litter Management Environmental Education program –Knowledge Assessment Guide for FGDs

Introduction

This study is part of marine litter management project supported by The Rufford Foundation, currently conducted in Mombasa area with an aim of reducing the amount of wastes in the beaches to create healthy nesting habitats for endangered sea turtles in the area. The study involves the inclusion of local communities including schools and community groups in the management process through environmental education, recycling and reuse (trash to cash) initiatives of the litter to facilitate prevention of generation and control of the litter from the beaches. In this study, a knowledge assessment is being carried to determine the level of knowledge and attitude of the students concerning marine litter, their sources, impacts and management measures. This information is important as it will be used as a guidance in the development of environmental education curriculum that will be used in education and awareness campaigns, in other learning institutions, about marine litter and solid wastes that is now a menace in the region.

Study Goal & Objectives

The study aims at assessing the level of knowledge of students and their attitudes towards marine litter for the development of environmental education curriculum that will promote behavioural change and help in long term management of marine litter.

The study objectives are:

- To present data on the knowledge of and the attitude towards marine litter among school going children around Mombasa area.
- To develop a reliable curriculum that can be adopted for environmental education in schools concerning marine litter.
- To identify the best methods for behavioural change and management of marine litter.

Study Approach

- Focused Group Discussions (FGDs) – to assess if the students understand what marine litters are, their sources, impacts and possible management approaches that are applicable for the region.
- Individual Scoring - Students to vote for the identified Sources, Impacts, and Management which they think is most relevant for Mombasa.

Guidance Questions for the FGDs

The following are the questions to be addressed in the FGDs:

- In your own opinion, what do think marine litter is?

Sources

- Where do you think marine litter found in the beaches around Mombasa do come from?

Impacts

- How do you feel when you go to the beach and find a lot of litter spread on the beach?
- What are the impacts of marine litter?

Management:

- Is there something that we can do about the litter in the beaches?
- What can we do about the marine litter in beaches around Mombasa region?
- Whose responsibility is it to remove the litter from the beaches and why?



Litter bin made by the Community using Wires at Jumba Ruins



Education and awareness programs in Schools.



Participatory Mapping of nesting sites with CBOs.