

Final Evaluation Report

Your Details	
Full Name	Nancy Awuor Oduor
Project Title	Community-based Marine Litter Management for Restoration of Endangered turtle habitats along the Kenyan Coast
Application ID	32607-2
Grant Amount	£6000
Email Address	koduor2012@gmail.com
Date of this Report	30 th January 2022

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 generate data (land-uses maps, land-use changes, turtle and threats caused by human activities) that can guide management decisions				Only participatory and ground truthing mapping was done with community members. Satellite imageries was not used due to the high cost of images and consultation fee that went beyond the project budget. See Figure 1
To establish turtle and nesting trends in the South Coast of Kenya				Turtle conservation groups (TCGs) were engaged, and Nest monitoring initiated and still ongoing in the whole south coast of Kenya. See Figure 2 for spatial nesting trends.
To empower local communities through trainings and provision of necessary materials				Training on waste management and turtle nesting monitoring protocols and provision of basic clean-up and turtle monitoring materials were provided to all Turtle Conservation Groups in the study area.
To promote a sound waste and marine resources management;				Training, education and awareness campaigns done on waste segregation and issuance of waste segregation sacks as well as connection of the communities with local 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 provide a sense of ownership and promote a changed attitude of community members towards marine wildlife conservation				This was achieved through education and awareness campaigns and mentorship programs to turtle ambassadors (teachers, students and community members TCGs) who doubled as site coordinators and championed for change in their

				localities. The education programmes covered the importance of turtles and other marine wildlife. This changed attitude is evident through a joint monitoring programme, established teachers' conservation group and volunteering in anti-poaching patrols.
To increase households' income and reduced exploitation pressure on marine resources.				The local communities were trained on making artefacts (dustbins, necklaces, sculptures) from litter for sale. Moreover, we also linked them with local recyclers to sell collected plastic, glass and rubbers. However, the market demand for artefacts has been affected by COVID 19 since it is majorly relied on tourists.
To link stakeholders and advocate for policies and ensure establishment of holistic long-term turtle management plans enhancing conservation status and recovery of the endangered turtles and their habitat				This was achieved through bringing the TCGs and KWS together and forming a joint South Coast Turtle Watch team for turtle monitoring and conducting anti-poaching patrols as well as reporting poaching and mortality cases.

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled.

The difficulty that we had, which was brought about by the new COVID-19 regulations was restrictions in accessing learning institutions. The student ambassadors were thus reached through collaboration with Conservation Education Society and Wildlife Clubs of Kenya (WCK. Additionally, more activities (adopting sites) were diverted to the Community Turtle Conservation Groups (TCGs) instead of learning institutions as earlier planned.

The second difficulty was the transfer of one of the Co-PIs (Josephine Mutiso) from Kenya Wildlife Service (KWS) Mombasa to Nairobi Station and Hassan Mohammed from Mombasa to Lamu. This was managed by the Co-PIs nominating Mr Said Shee Mohamed, a Sergeant from KWS-Kisite Mpunguti Marine National Reserve and Park and Neville Agesa of Diani Turtle Watch who successfully coordinated the project's field activities. This was done since the funds could not facilitate the frequent travels of the Co-PIs to the project sites.

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

- The first major outcome of this project was the unification of South Coast Turtle Conservation groups and formulation of South Coast Turtle Watch. A WhatsApp group was established that has been crucial for sharing timely information with all the members.
- Establishment of new TCGs (Shimoni TCG) and rekindling of Msambweni TCG –To ensure full coverage of the area, more TCGs were established and currently conducting clean-up and education and awareness and turtle nest monitoring. Through the new TCG in Shimoni, an underwater monitoring was initiated in Shimoni having had several grazing sites and few nesting sites. The monitoring is expected to help reveal the population of turtles existing in the area. Another outcome was unification of teachers in conservation and formation of Kwale Wildlife Clubs Patrons Action Group (KWAPAG Network) - A conservation team of teachers based in Kwale.
- Curbing poaching of turtles in the area to zero cases as of December 2022. Through this project, anti-poaching patrols was initiated in collaboration with KWS, the team also pushed for and received support from the government by receiving community police paid by the government to manage the poaching activities in areas of Funzi and Kinondo where the cases were high.
- Increasing human resource working on turtle conservation in the area through establishment of turtle ambassadors and student's mentorship programmes. Four students successfully conducted and defended their BSc thesis project through the RSG project.

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

The project was entirely done with the local communities either as turtle monitors or ambassadors. The community benefitted from the training offered to them on turtle monitoring protocols, issued monitoring materials, and the lunch allowances provided through the project that together with sale of artefacts and recyclable plastics, rubbers and glasses boosted their household income. It also helped in boosting the human resources in the areas through the knowledge imparted on the turtle monitors and certificates offered, which will boost their CVs enabling them to be recruited as enumerators by other researchers in the area. Additionally, education and awareness in schools and art composition boosted the knowledge of the students on turtle conservation.

5. Are there any plans to continue this work?

Yes, with the motivation of the TCGs through provision of basic necessary materials by the RSG project, most of the turtle conservation work including nest and underwater monitoring, clean-ups and education and awareness activities are still ongoing through volunteerism by turtle ambassadors. Additionally, from this project, we established remote nesting areas on the south coast that needed further attention for clean ups, a proposal was developed and accepted, and funds issued

by Joanna Toole GloLitter Partnerships Grant. The grant will enable us to facilitate the turtle ambassadors work as we also engage fishermen to collect litter in the ocean and conduct beach clean-ups on remote turtle nesting grounds along the south coast of Kenya. Our next plan is to conduct beach quality/geomorphological assessment, how it is affected by human activities and how this is affecting nesting trends in the area. Besides these, we plan is also to expand our current litter management, nesting trends monitoring and ambassadorial activities beyond the south coast and Mombasa.

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

The first plan that has been used to disseminate the projects results is our recent follow-up workshop that involved all the stakeholders that we had during the inception meeting. The workshop was not only used for result dissemination, but also to establish the way forward for the TCGs after the end of project funding period. Like the quarterly reports the current results will shared through the Eracoma website and established social media channels including Facebook, Twitter and South Coast Turtle Task Force WhatsApp group. Additionally, the data produced are under preparation for a scientific peer review publication in Western Indian Ocean Journal of Marine Sciences. We also hope to get a chance to present the results in OMSA conference coming later this year in South Africa.

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 for 11 months – January to November 2022. This is almost the exact anticipated time for running major project activities including the follow-up for project evaluation workshop.

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
Stakeholders' mobilisation	554	579	+25	Increase due to additional management stakeholders
Training workshops (both indoor and outdoor activities)	558	526	-32	Training was done by the Project coordinators hence no trainers costs incurred
Mentorship and monthly site supervision /assessments	478	478		N/A
Education and awareness programs	2327	1648	-679	Activity conducted through cost sharing in collaboration

				with Base Titanium, Conservation Education Society and Marine Education Centre.
Mapping of LULC changes - Workshop - FGD -identification and management, Ground truthing; data entry and maps development; analysis	446	167	-200	Focused Group Discussion only done in Diani and payment for map development consultancy fee.
Assessment and monitoring nesting activities *** Anti-poaching patrols and underwater monitoring introduced	478	1339	+861	Change in sites' patrol frequency to 2 times a month and introduction of monthly anti-poaching patrols in Funzi and Kinondo @ £ 80 per trip (2 field coordinators, 4 students, 4 TCG members and 2 KWS rangers' lunch and Fuel) for 6 months
Project follow-up workshops (Management stakeholders, Schools and Community Groups)	367	446	+79	Additional charges for printing of certificates for turtle ambassadors; (TCG members, teachers and students
Administrative costs - Project office supplies (10% of the total amount)	300	300		Constant organisation's administrative charges
Communication (Telephone, email, Postal services)	215	239	+24	Airtime Compensation TCGs on reporting poaching and mortality cases
Miscellaneous Expenses	277	277		The unforeseen costs like for the additional TCGs
TOTAL	6000	5999	-1	

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

One critical step that should be done next is to extend the clean ups and marine litter management activities to remote turtle nesting sites and areas beyond the south coast and Mombasa. Although, this will be expensive due to accessibility of the areas, collaborations can be done by fishermen who visit the sites frequently during their fishing activities to help in the collection of litter through provision of incentives. Another important next steps should be to expand the environmental quality management of turtle nesting sites beyond marine litter and also beyond the beaches and also focus on underwater clean-up and turtle monitoring in all turtle foraging sites in the area. Additionally, more education and awareness campaigns on marine litter management is still necessary in residential areas beyond the

beaches where the wastes originate and in schools, especially public institutions where environmental studies and practical activities are limited.

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 Rufford Foundation logo was used in various promotional events materials that was funded or the project activities were conducted. These include the banners i.e., the projects banner for education and awareness activities, with collaborators during the international Coastal Clean-Up 2021, and Sea Turtle Festival 2021. We also produced brochures and quarterly South Coast Turtle Watch Updates where the logo was used. Additionally, the logo was also used in PI and students presentations, printed t-Shirts, printed stickers on water dispensers donated to BMUs and certificates for turtle monitors/ambassadors and teachers

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

Name	Organization	Role
Nancy A. Oduor	Co - Director - Eracoma	Project PI – Overseeing all project activities, report writing, students' supervision, education and awareness
Neville Agasa	Project Coordinator -Diani Turtle Watch	Field Coordinator - Overseeing field activities-community mobilization, turtle nesting monitoring, trainings on nest monitoring protocols; Conducting anti-poaching patrols, students' supervision in the field
Bakari Mwasengeza	Field Assistant - Diani Turtle Watch	Assistant field Coordinator – Distribution and pick up of data forms, clean-up and other field monitoring materials, training turtle monitoring protocols,
Meryline Chebet	Student Intern - Kenya Conservation of Aquatic Resources (KCAR)	Research assistant - Office work, report writing, community education and awareness activities
Mr. Said Shee Mohamed	Sergeant - Kenya Wildlife Service - Kisite Mpunguti Marine National Reserve and Park	Field Coordinator - Overseeing field activities-community in Shimoni, mobilization, turtle nesting monitoring, trainings on nest monitoring protocols; Conducting anti-poaching patrols, underwater monitoring.
Paul Wambi	Warden-Kenya Wildlife Service (KWS)-Kisite Mpunguti Marine Park and Reserve	Collaborator - Provision of rangers and van for anti-poaching patrols, handling cases of poachers,
Geoffrey Mwanja	Environmental Officer - Base Titanium	Collaborator – Organisation of joint clean-up activities and education and awareness programs -Assisted in provision of materials for

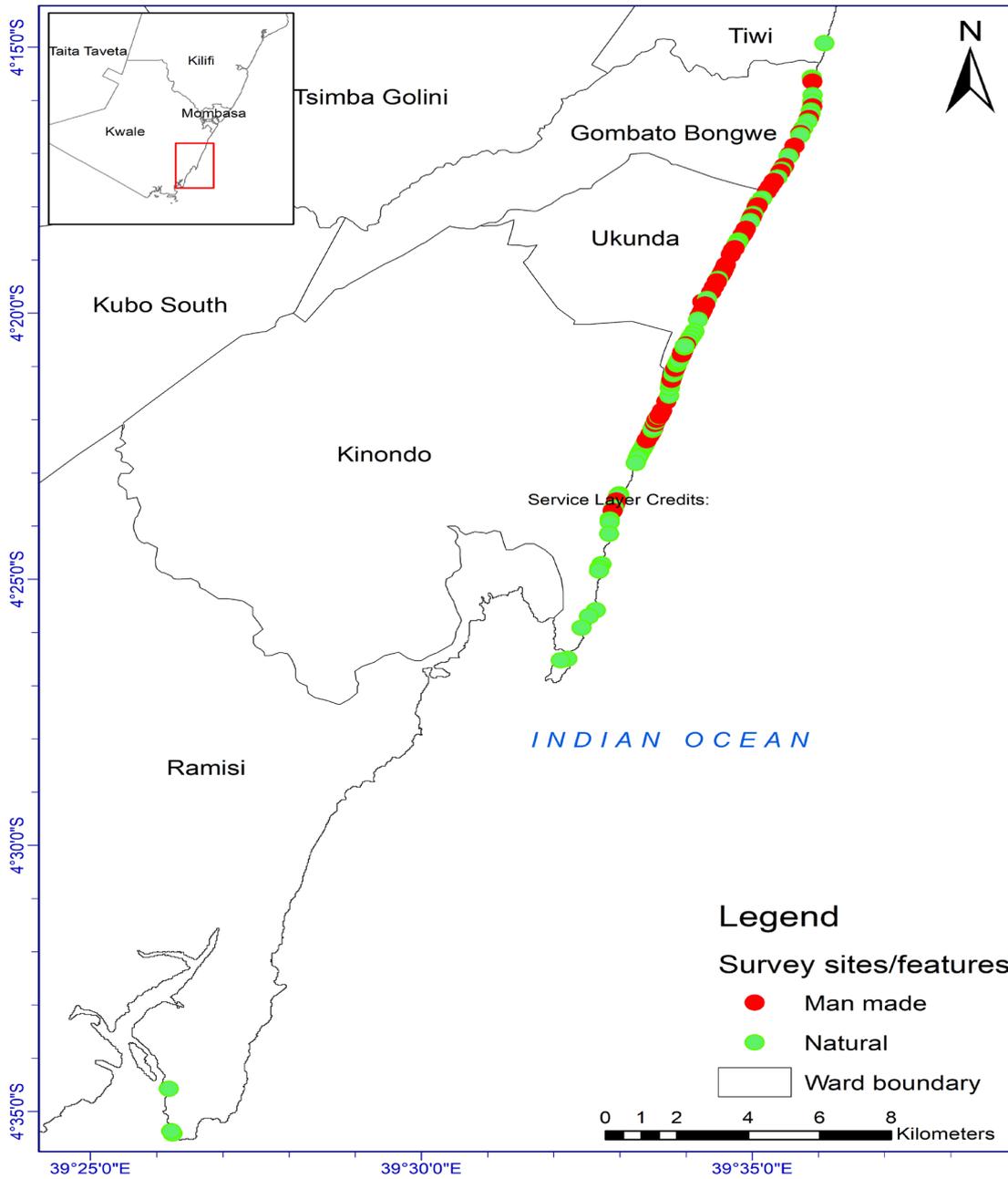
		clean-up activities
Kelly-Marie Martin	CEO - Marine Education Centre	Collaborator – Educating and awareness activities; Organiser, Diani Sea Turtle Festival
Brian Omondi	Technical University of Mombasa	Student Mentee – BSc. Thesis study on Mapping Impacts of human activities on Turtle nesting beaches in South Coast Kenya
Aitilia Joel	Technical University of Mombasa	Student Mentee – BSc. Thesis study on 'Turtle nesting trends in the South Coast of Kenya'
Stephen Odhiambo	Technical University of Mombasa	Student Mentee – BSc. Thesis study on 'Challenges affecting community members participation on conservation of sea turtles in the South Coast of Kenya'
Sherriff Injamu	Technical University of Mombasa	Student Mentee – BSc. Thesis study on 'Impacts of COVID-19 on generation and management of marine litter'

12. Any other comments?

The funding applied from National Geographic that was meant to conduct the scientific research project on '*The impacts of coastal development on beach geomorphology and its implication on sea turtle nesting and reproduction success in the South Coast of Kenya*' was not successful. The team is thus still on the lookout for funds to be able to be able to conduct this research.

I would like to thank The Rufford Foundation for having provided the financial support to undertake this community capacity building project. It has helped in my professional development and opened more opportunities necessary for my growth. We have also collected a lot of data through the project that we are hoping to publish soon. This will be a big boost for my team and me to our conservation work. Further annexes below for the preliminary results.

Annex 1: Map showing beach suitability in the South Coast of Kenya.



● Unsuitable due to man-made factors

● Unsuitable due to natural factors e.g., cliffs

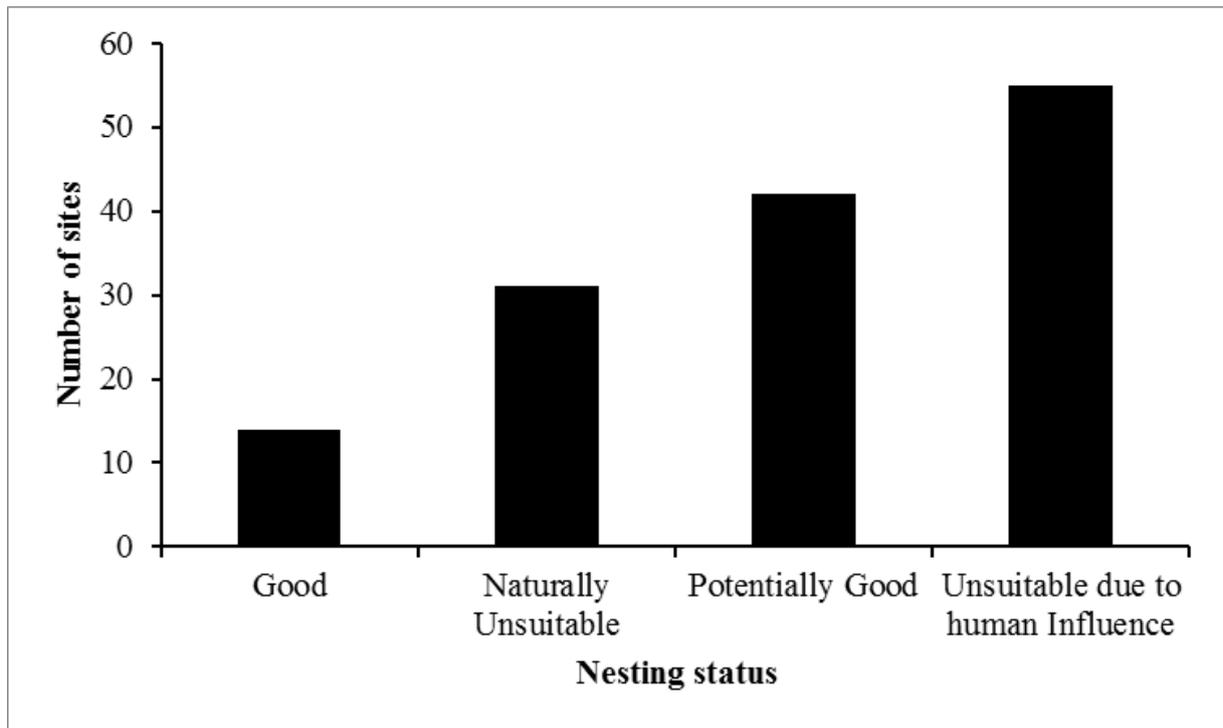


Figure 1: Site suitability to turtle nesting activities.

Annex 2: Nesting trends summary:

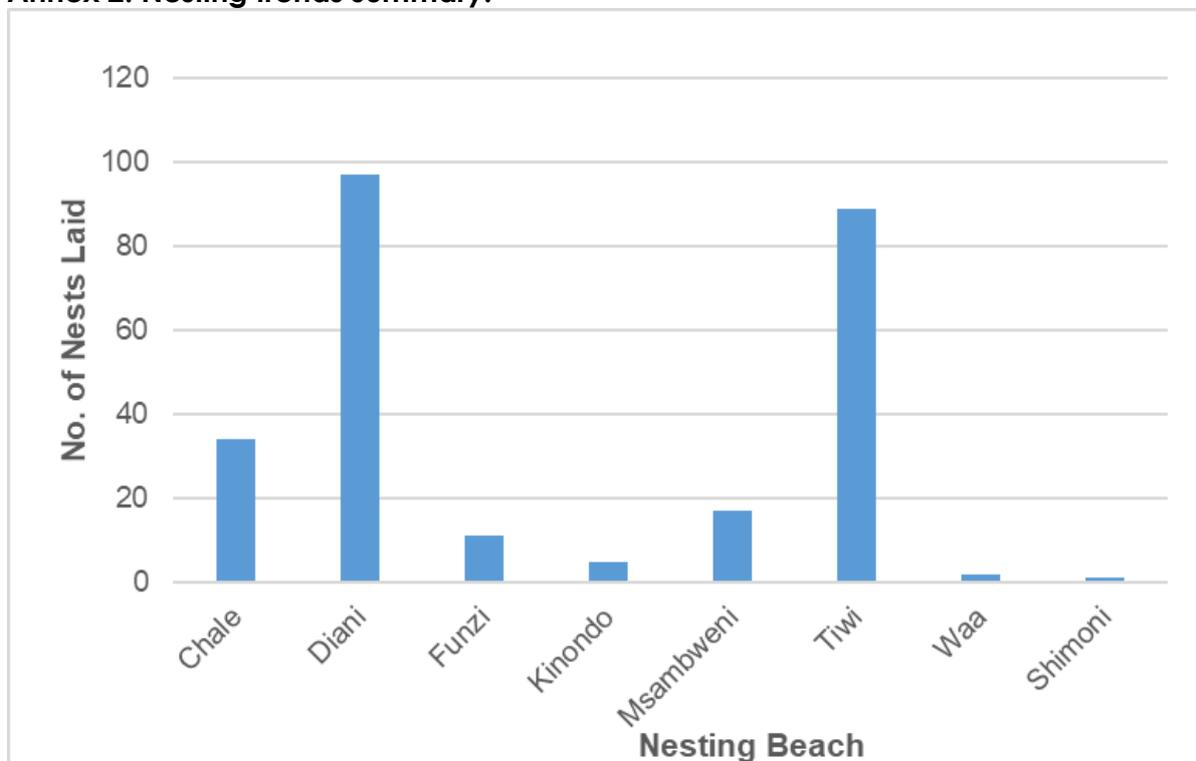


Figure 2: Number of nests laid per site.



Community Training session on identification of Sea turtle species at KWS, Kisite Mpunguti Headquarters. © Neville Agesa.



Issuance of certificates to the turtle ambassadors (left) and group photo with female ambassadors. © Brian Omondi.



Group photo with turtle Ambassadors during the project Follow-up workshop at Kisite Mpunguti National Park. © Brian Omondi.