

The Rufford Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Margaret Awuor Owuor
Project title	Enhancing community awareness, participation and education in environment conservation and management of Akara Hills, Kenya
RSG reference	23778-B
Reporting period	March 2018 - February 2019
Amount of grant	£9994
Your email address	awuorowuor@yahoo.com or owuor158@gmail.com
Date of this report	14/3/2019

1. Please 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 map the project areas and the natural resources found around Akara Hills				<p>This was successfully conducted and a comprehensive inventory of wildlife species inhabiting the forest was developed. 53 different bird species, 17 mammal species, six species of snakes and 28 species of trees were identified.</p> <p>A map zoning the Akara hills was developed</p>
To train 15 primary and 5 secondary schools.				<p>We identified three pilot schools with whom we established indigenous tree nurseries (Nyalula, Hawinga and Ndayi primary schools) to check on the performances of the tree nurseries. It was observed that due to the school closure period in August through to early September, the nurseries were not well attended to since the pupils were not in session, leading to some seedlings drying off especially at Hawinga and Ndayi. Nyalula Environmental Club tended to their nursery and produced about 251 seedlings. Due to changes in the school's management and curriculum, in future we plan to partner schools with community groups in their area to help them in raising tree nurseries where the groups will raise tree seedlings then donate to schools. However, we will train the schools on nursery establishment. We will call this "adopt a school, adopt a tree"</p>
To train 15 community groups				<p>We had 21 on-site training sessions with Yala Swamp Conservation Group (YASCO), Nyiego Community Group, Denge Community Group and Friends of Yala Swamp (FoYAS). In all these groups, we have comprehensively</p>

			<p>capacity built 96 participants and established 9 nursery beds in YASCO, FoYAS and Nyiego.</p> <p>Then we organised outreach with YASCO to visit other groups, a total of 10 community groups (Friends of Yala, YEBICOM, Gangu BMU, Kombo BMU, Hawinga Fishermen, KASEDO, Nyamaji women group, Rapudo Fish farmers, Seje Safe Water, Yala swamp Kadenge) were trained on different thematic areas using the <i>Training Manual for Community Tree Nursery Operators, Tree Farmers and Forest Resource Users</i>.</p>
<p>To rehabilitate the Akara hills through tree planting on the hills and its surrounding so as to restore degraded habitats. approximately 100,000 indigenous /exotic trees were to be planted</p>			<p>This is an ongoing process. As pointed out previously, we have community members owning pieces of land on the hills, so we had to work out a strategy and approach to rehabilitate the hills. In August with the help of the local village heads across the Akara hills, we identified individual persons whose farms extends into the hills. This was to aid in equipping the farm owners with seedlings to plant in their farms in the forest, and especially to ensure that the seedlings were not neglected to wither off. 35 were identified from four villages directly lying in the Akara Hills namely: Kubar A, Kubar B, Ohaya and Kadhayi. This was a major breakthrough for us for we are now able to work with the communities living around the hills with ease.</p> <p>We have managed to raise 50,000 seedlings with the different community groups and planted a total of 20,000 with different groups around the hills. We are still far from the target of 100,000 but the help of the community groups, we continue to raise seedlings to be planted in March 2019 when the rains come.</p>
<p>To train the community on alternative sources of energy and</p>			<p>We have installed five energy saving cook stoves. However, the process is still ongoing. We aim to install 20</p>

alternative sources of livelihood				energy saving cook stoves by end of April 2019. YASCO group has also installed beekeeping hives.
To empower the community living around the Akara hills to play a role in decision making on the management of forests and natural resources				This is the main goal of this project and we have achieved it. Our community can now talk for themselves when faced with environment challenges. They continue to engage the county government and lined ministries to come up with policies that will help conserve the Akara Hills and surrounding ecosystems. During the World Wetlands Day, the community conservation groups that we have worked with organised activities for the day for example they planted trees and painted famous fauna in the area on stones.

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

1. Damage to nursery beds by heavy rains: - The nurseries were stabilised at their boundaries by stacks of bricks and construction rain-water (overflow) diversion channels/ terraces.
2. Termite attacks on nurseries: - Pesticides were acquired and effectively administered in all the nurseries to control termites spread and attacks.
3. Presence of heavy rains during this period: - Activities rescheduled to appropriate times of the day
4. We had the ban on plastic bags in Kenya affecting access to potting bags. We mobilised neighbours and friends to help collect used milk packets which were collected from the homes and recycled as potting bags.

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

We developed a checklist for the flora and fauna found in Akara Hills. The checklist included both the common names, scientific and IUCN conservation status of each specie identified. We found that the ecosystem hosts the globally endangered grey parrot (*Psittacus erithacus*) and critically endangered hooded vulture (*Necrosyrtes monachus*).

The development of the Akara Hills Forest Geographical Map: A final map for the forest has been produced and is available for use by interested conservationists in word, pdf and jpg formats and the production of Akara Hills Forest Conservation and Agroforestry guide for communities. To aid in strengthening community education component of the project, a project guide titled "Tree nursery establishment, tree management and sustainable forest management practices". This guide has been

freely donated to the participating groups and more copies are under production for interested individual forest resource users.

Installation of energy saving cook-stoves to the community with the help of a well-wisher who has been following our project since it started in 2009.

4. Briefly describe the involvement of local communities and how they have benefited from the project (if relevant).

The communities have been at the forefront of this project. They are involved directly since the project's main focus is to enhance community participation and awareness in environment conservation. The project conducted 21 on-site training sessions for four target community groups namely: Yala Swamp Conservation group (YASCO), Nyiego Community group, Denge Community group and Friends of Yala Swamp (FoYAS). In all these groups, we have comprehensively capacity built 96 participants and established nursery beds. These groups have also been equipped with watering cans labelled Rufford and indigenous seeds of the following species: - *Grevillea*, *Moringa*, *Kei-apples*, *Markhamia* and *Albizia lebeck*.

During the project we worked with the Friends of Yala Swamp CBO who conducted outreaches to Friends of Yala, YEBICOM, Gangu BMU, Kombo BMU, Hawinga Fishermen, KASEDO, Nyamaji women group, Rapudo Fish farmers, Seje Safe Water, Yala swamp Kadenge. This allowed the groups to own the project and also share the knowledge gained. This initiative of allowing community groups to train themselves is making the groups have a stake in the project. They are learning from each other's challenges and successes. From this co-training approach, the groups have decided that, they are going to come up with an umbrella conservation group consisting of the members of the other small conservation groups in the area. This umbrella body will allow them to speak as one voice on matters conservation in the area. I can allude this development to our project which always strives to bring the community groups together.

5. Are there any plans to continue this work?

Yes. The project is gaining interest from other researchers, community-based groups with whom we have not reached and the local administration who are carrying out their work around the Akara Hills and Lake Kanyaboli ecosystems. So, we will continue reaching out to more community groups to plant more trees and educate them on the need to conserve the environment. I would like to report that Siaya County has been selected as an area where the International Day of the Forests will be held on the 21st March 2019. The theme is "Forests and Education" which is in line with the activities and aim of this project. In response to this, I together with my team, we are working closely with the community groups so that we can use this opportunity to reach out to other community members who are not part of the project to engage in conservation activities. We are planning to have a tree planting activity during this period. This is because we have been raising seedlings with the community groups that we worked with.

The community group YASCO with whom we have been working over the years are working on establishing a resource centre to act as a community outreach and training centre, with the help of Mr. Aaron Greene (project team member), they have started by identifying important fauna of the area and painting them on stones, that are a common feature of the area. We hope we can make the development of this centre a reality in future for it will be a source of ecotourism and thus an income earner to the community.

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

I presented this project at a conference known as IAP2 (International Association for Public Participation in Victoria, BC, Canada as a model for community participation in conservation last year 2018. The project and presentation were recognised as a very grassroot community engagement and public participation work.

The training manual was distributed to the different community groups and schools. The manual contains the issues the project addresses concerning environment conservation in the area.

I hope to publish the findings of this work's progress in a book chapter like I did previously.

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

The project is still ongoing. However, we have managed to complete the activities that were planned for this grant period within the stipulated time.

8. Budget: Please 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.

Exchange rate £ 1 = Kenya Shillings 125

Item	Budgeted Amount	Actual Amount	Difference	Comments
Communication (internet services and Telephone) for the duration of the field work 11 months@ 20 pounds/month	220	220		This was used for purposes of informing or reaching out to the groups when meetings were organised. We had to facilitate the Yala Swamp Conservation group who were carrying out the outreaches, to reach out the other community groups we gave the group leader approximately

				£2 pounds to buy talk time during every outreach planning session
Planning and organizing of training workshops on alternative sources of energy i.e. making charcoal briquettes and on alternative sources of livelihood i.e. bee keeping	250	250		Yala swamp conservation group (YASCO) who have engaged in activities like bee keeping helped in organising the training. YASCO also helped in the training on alternative sources of energy. The planning and organisation of each training costed approximately £ 50 and we had 10 outreaches. Some of the trainings were done voluntarily by the YASCO group bringing the cost down.
Purchase of seeds (assorted species) 11 kg @ 20 pounds/kg for establishing the nurseries in schools and community groups	220	440	+220	We used some money from the budget line of developing training materials. We had to buy more seeds since the once we had budgeted for some were destroyed by termites and heavy rains and termites
Purchase of nursery establishment and management equipment	687	687		We had to buy bricks to enforce the nursery bed since they were being destroyed by the heavy rains. We also dug water channels to divert rain water from washing away the nurseries. We also had to buy pesticides to help control termite attack on the trees. We designed watering cans for all the groups and schools visited during the project
Training materials (designing posters, marker pens, flip charts, pens and note books)	800	580	- 220	We used £220 from this budget line to buy additional seeds for during the period when the project began in April last year there were heavy rains that were destroying the nurseries. Some of the seedlings were also attacked by termites We designed and printed the training manual and maps for the forest to guide during the training. We provided some of the training materials like pens and note books to YASCO during the

			<p>outreaches. Instead of posters we designed the Rufford stickers for the watering cans.</p>
<p>Subsistence in the field for approximately 4 people during the 112 days of field activities with schools and community groups @ 9 pounds/day/person</p>	3897	3897	<p>The project team varied at different times depending on the activities that we. However, we were able to use the funds within the budget lines. We facilitated the community members who helped in identifying the flora and fauna during the development of the checklist and in identifying the community members who owned farms in the Akara hills. The number of days in the field went to 120 since we had to redesign the tree nurseries after they were destroyed by the rains</p>
<p>Transport/car hire to carry out the different activities organized by the project team estimated at 70 km per trip per day for 112 days @ 50 pence/km</p>	3920	3920	<p>During the period when the project began, there were heavy rains so we had to get a car that could go through the rough terrain. The fuel cost also went up during the project. We had approximately 120 days of work. The cost was managed because for example; The Kenya Forest Services with the help of the Head of Ecosystem Conservator assisted us get a pick-up which we fuelled, this helped us distribute seedlings during the tree planting with community groups in Kubar</p>
TOTAL	9994	9994	<p>The work was carried out within the stipulated budget line because while preparing the initial budget we worked with the existing market rates which some changed in the course of the project like fuel costs went up. We also had the community group YASCO offering to carry out some of the training activities with minimal subsistence.</p>

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

- Organise a tree planting day when the rains come. We have planned with the local administration to have tree planting days every quarter of the year so as to reach our target. The Government of Kenya has it in their national agenda to increase the forest cover in the country. So, through this project, we are working to help achieve this goal.
- Work with the community to mobilise resources/ funds to build the community outreach centre where they will store some of the artefacts in the area, put pictures of important ecosystems flora and fauna and use this as a training facility which can be a source of income to the community.
- Need to install rainwater harvesting facilities to help in water storage to aid in keeping the nurseries and to save water. The nurseries are a source of income to the communities because they sell some of the seedlings like for kei apple, so they need continuous water supply especially in times when the rains disappear.

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

Yes, watering cans labelled Rufford, in the training manual and during the conference presentation.

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

Aaron Okoth: He did help with community mobilization and training on the need for a well conserved ecosystem, developing of the checklist and mapping of the Akara Hills forest ecosystem.

Gabriel Oduor: He was to design the maps using the GIS technology, however, he was not available for he was working out of the country.

Moses Odhiambo: Helped in developing the maps of the forest area.

Rogers Oteng'o: He helped in the installation of the energy saving cook-stoves.

Simon Ogutu and **Caroline Anam:** are project team members but were not available.

Zeph Migendi (Rufford grantee): helped in the training of the community groups on tree nursery establishment, alternative sources of energy and livelihoods with the help of the YASCO group. He also worked closely with the schools to help in establishing the environment clubs. In addition, we worked with Zeph in developing the training manual which will be used by community groups in future trainings.

12. Any other comments?

I would like to thank the Rufford Foundation for this grant that has continued to help me empower my community to be involved and engaged in the conservation and restoration of degraded ecosystems and develop the culture of planting trees.

It will be important to note that during this granting period, we worked with the YASCO community-based group to train the community groups through outreaches and using the manual on the different aspects of conservation like:

- a) Sustainable forest conservation methods (roles of human in forest conservation).
- b) Forest products and ecosystem values (why conserve forests?).
- c) Sustainable and viable alternative livelihood earning initiatives in the Akara Hills forest.
- d) Green energy alternatives (solar lamps, energy saving cook stoves etc).
- e) Market linkages (where to get seeds, pesticides and market for seedlings).

This approach was aimed at having the community fully engaged in the project since they understand the conservation issues in the area, and we also wanted them to fully own the project going forward.



Established tree nurseries. ©Margaret Owuor.



Milk packets recycled as potting bags after the plastic bags ban. ©Margaret Owuor.



Margaret (third from left) during a visit to the YASCO tree nursery. ©Aaron Greene.