

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	Emmanuel Acheampong
Project title	Building the capacity of farmers to restore degraded reserves and improve their livelihoods
RSG reference	27691-D
Reporting period	04/2019 – 06/2020
Amount of grant	£10,000
Your email address	ea.opoku@yahoo.com
Date of this report	14/06/2020

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
Plant 15 ha of the degraded land				We were able to plant 10 ha of the degraded land instead of the 15 ha. However, we went beyond our target to replant all the seedlings that did not survive the 2019 planting coupe. Additionally, we bought over 3000 seedlings of assorted indigenous tree species and interplanted the existing planted area with them. These species include mahogany (<i>Khaya anthotheca</i>), wawa (<i>Triplochiton scleroxylon</i>), ofram (<i>Terminalia superba</i>), sapele (<i>Entandrophragma cylindricum</i>) and others. The idea is that these indigenous species will gradually restore the land near to its previous state.
Train farmers in agricultural intensification technologies to close the yield gap while planting trees to restore the degraded forest.				An agricultural expert was invited to educate the farmers on effective farming practices. This education included how to treat maize and other crop seeds before planting to ensure successful germination, how to correctly use forest-friendly chemicals to control weeds, pests and diseases that attack crops, and how to improve crop yields without necessarily adding chemical fertilisers.
Train farmers in post-harvest storage and value addition techniques to avoid post-harvest losses.				Most of the farmers grow maize, yam, beans, tomatoes, and pepper along with other crops. The farmers were therefore educated on the correct method of storing their produce to avoid post-harvest losses. Value addition was not done since the farmers do not have the appropriate technology to process their farm produce. However, the correct storage means was enough to save their produce from post-harvest losses. This helped to improve the income of the farmers.

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

The rainfall pattern was erratic in 2019. The heavy rainfall from June to August did not occur in the project area and most parts of the region. As a result, more than 50% of the young seedlings that we planted from our nursery died due to the scorching sunshine with no rain. We however bought some seedlings from a private nursery producer who also works with the Forest Services Division at Mampong-Ashanti. This helped us achieve the beating-up and planting target for 2019.

Some of the farmers encountered crop failures for some of their crops due to the rainfall patterns. But their other crops as well as the motivations (in cash) they get from assisting in the project kept them going. Despite the difficulties, the contingency plans put in place by the project team helped to achieve significant successes.

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

1. Over 3,000 Indigenous species have been introduced on the land and about 10,000 additional teak seedlings have been planted.
2. About 30 farmers now know how to chemically control weeds, pests and diseases, without killing tree species or causing harm to the environment.
3. About 30 farmers are now confident on how to increase the yields of their crops and store their produce for some time without experiencing post-harvest losses.

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

About 30 farmers are now fully involved in the project and some other farmers are showing interest every day. The farmers have been involved in all the activities carried out at the project site, from preparing the land for planting, cutting pegs, transporting seedlings, through to planting and maintaining the young trees. The farmers have been benefiting from the rent-free fertile land, something that is going to continue for about 5-10 years. The farmers have benefited from free agricultural education and training provided by an agricultural extension officer through the project team. The farmers have also been benefiting from cash payments for their labour sourced for the project work that did not directly improve their livelihoods, such as cutting of pegs, transporting seedlings, and planting seedlings, and weeding around areas that require immediate maintenance.

5. Are there any plans to continue this work?

The project is going to continue for about 5 years before the entire 50 ha will be completely planted. Going forward, the planting coupe for each year will not be as big as the previous two coupes since maintenance of the previous ones will also be done alongside the planting for each year. More indigenous species will also be introduced at different stages until all the 50 ha are occupied. Once the trees begin

to form canopy, strategies to introduce non-timber forest products to sustain the livelihoods of the farmers involved will also be put in place. So, in summary, this project will continue until all goals are achieved.

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

Some results from this project are already being shared with the public through the social media platform of Environmental Conservation and Management Foundation (www.ecomafghana.org). One paper specifically written for this project has also been published with the journal *Forests*, and the paper is titled "Application of landscape approach principles motivates forest fringe farmers to reforest Ghana's degraded reserves". This project forms part of PhD research I am doing and as a result, the proceedings from the project will be read by the wider academic community. Rufford Foundation is acknowledged as the main financier of the project in every publication I produce.

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 Rufford Foundation grant was used over 15 months. The overall timescale of the project was not exceeded although some aspects of the project delayed due to erratic rainfall patterns.

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.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Round trip flight from Cairns to Accra, Ghana	1727	1887	+160	Exchange rate fluctuations caused this
Round trip from Accra to Kumasi	138	32	-106	I took bus transport instead of air to avoid excessive luggage charge and to save money for unforeseen costs
Transportation for stakeholder meeting, 7 team members for 3 days	336	336		
Food for stakeholder meeting, 7 team members for 3 days	403	403		
Stipend for trainer for 1st capacity building, 2 days	192	192		
Transportation for 1st	224	32	-192	*Only one team member

capacity building, 1 team member, 2 days				accompanied the expert to the capacity building program to reduce cost and save money for other tasks
Food for 1st capacity building, 1 team member, 2 days	269	38	-231	*Only one team member accompanied the expert to the capacity building program to reduce cost and save money for other tasks
Stipend to gather 16,500 pegs for 2019 planting	264	264		
Transporting 16,500 pegs to the project site by a tractor		80	+80	This was skipped in the budget but became necessary since the farmers gathered all the pegs at one place far from the site
Stipend for trainer for 2nd capacity building, 2 days	192	192		
Transportation for 2nd capacity building, 1 team member, 2 days	224	32	-192	Only one team member accompanied the expert to the capacity building program to reduce cost and save money for other tasks
Food for 2nd capacity building, 1 team member, 2 days	269	38	-231	Only one team member accompanied the expert to the capacity building program to reduce cost and save money for other tasks
Stipend to peg the land with 16,500 pegs for 2019 planting	264	264		
Stipend to uproot, transport and plant seedlings for 2019 planting	264	264		
Purchase of 9000 stumped seedlings to add to 2019 planting and 2018 beating-up		864	+864	The erratic rainfall pattern and the scorching sunshine experienced in 2019 killed more than 50% of the young seedlings we nursed for 2019. So, we had to buy some already grown seedlings to meet our target.
Supervision for planting	240	240		

and beating-up for 2019, 1 person, 15 days				
Purchase 40kg of Teak seeds for nursery for 2019 beating-up and 2020 planting	176	128	-48	The seeds of other tree species were not nursed. We decided to buy the seedlings from the Forestry Research Institute of Ghana.
Purchase 10 barrels to store water for nursery for 2020 planting	320	320		
Purchase 100 gallons to store water for nursery for 2020 planting	112	112		
Purchase 6 watering cans to water the nursery for 2020 planting	77	77		
Purchase 5 hoes to prepare the nursery for 2020 planting	20	20		
Purchase 5 cutlasses	20	20		
Purchase 5 hand forks	16	16		
Transporting equipment to project site		80	+80	This was skipped in the budget but was necessary to do
Carrying out survival surveys and clearing bushy areas in the 2018 field for beating up, 5 farmers for 3 days		120	+120	This was not included in the budget but was necessary for the work to progress. Part of the saved money was used for this task.
Carrying out beating-up in the 2018 field, 5 famers for 2 days		80	+80	This was not included in the original budget but was necessary for the work to progress
Preparing nursery site and filling 10,000 polypots with soil for 2019 beating-up and 2020 planting	256	256		
Putting 20,000 seeds into the 10,000 polypots, 2 seeds in one polypot		160	+160	The original plan was to nurse the seeds on beds since that is easy. But we were advised that it will be better to use polypots due to the rainfall pattern. Using polypots cost more but more effective than seed beds.
Stipend to maintain the	1256	1256		

nursery for 5 months, 4 persons				
Stipend for trainer for final capacity building, 2 days	192	192		
Transportation for final capacity building, 1 team member, 2 days	224	32	-192	Only one team member accompanied the expert to the capacity building program to reduce cost and save money for other tasks
Food for final capacity building, 1 team member, 2 days	269	38	-231	Only one team member accompanied the expert to the capacity building program to reduce cost and save money for other tasks
Purchase of 3000+ assorted indigenous tree species from FORIG		288	+288	We did not nurse the indigenous tree species because they need special care and the rainfall pattern was not good. This made us revise our strategy by buying the seedlings direct from the nursery experts, FORIG. This was made possible because we were able to save money from other activities whose costs we revised. The revision of the costs of other activities did not change the expected positive outcomes of those activities
Transporting 3000+ assorted indigenous tree species from Kumasi to project site		128	+128	
Stipend to gather 3000+ pegs for the assorted indigenous tree species		80	+80	
Putting 3000+ pegs in the existing plantation for the assorted indigenous tree species		80	+80	
Planting the 3000+ assorted indigenous tree species within the existing plantation		144	+144	
Stipend for field manager, 3 days a week from 1/04/2019 to 30/06/2020 (195 days)	1560	1560		
Transportation for field manager, 3 days a week from 1/03/2019 to 30/05/2020 (195 days)	936	936		
Monitoring the project once a month for 15 months, 1 person	480	480		
Miscellaneous (phone calls, pens, pencils, note pads, A4 sheets, printing, etc.)	80	80		
Total	11000	11841	+841	There was a 5% contingency

				(550), so we went over that a bit, but the overall work was great due to the revisions we made.
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*The capacity building program was run in small groups since all the farmers were not available at the same time. As a result, the team agreed to cut down cost by letting only one member join the trainer to carry out the programme. The small groups proved to be more effective than the larger groups we were expecting since the participants had enough time to ask all the questions they wanted.

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

In the next 3 years, most of the trees already grown will have canopy cover and this covers 20 ha of the land. This means that the farmers can no longer grow their food crops in those areas. Although there is still 30 ha of land to be planted with trees that the farmers can farm on, the maintenance of the already planted area requires that there should be an economic motivation attached to that. I will therefore want to introduce some non-timber forest products in the planted areas so that the farmers can benefit from that while maintaining the existing plantation.

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?

James Cook University is aware that the Rufford Foundation is the main financier of my project. The Forestry Commission of Ghana has it on their records that the Rufford Foundation is funding this project. All the social media updates through ecomafghana has the Rufford Foundation as the main financier of this project. So, the Rufford Foundation has received publicity in every part of this project, including the manuscript publication with the journal Forests.

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

One Forest Manager (**Mr. Donkor Tweneboa**, the then District Manager, Forest Services Division, Mampong-Ashanti. Mobile: +233244467020): He oversaw all activities that were carried out on the project land, from clearing the land to the time that the seedlings were planted during the first phase. He was transferred to the capital city but was still in correspondence during the second phase of the project.

One Forest Technical Officer (**Mr. Anthony Faibil**, Forest Services Division, Mampong-Ashanti. Mobile: +233246758971): He supervised the nursery process (filling the polypots with soil and putting seeds in) pegging, spacing, and transplanting the seedlings.

One Forest Guard (**Mr. David Agyei**, Forest Services Division, Mampong-Ashanti. Mobile: +233554747892): He was part of the supervision of the project with the Forest

Technical Officer. He visits the farm and monitors the progress of the project when necessary.

One field manager (**Mr. Samuel Agyei Sarpong**, local community member and personal assistant. Mobile: +233544241479): He was running all the daily activities with me and in my absence, he is the acting project implementer. He has been a farmer for over 15 years and skilled in the growing of various crops and been part of reforestation projects before.

Two assistant field managers. These two are part of the registered farmers and assist the field manager in most of his activities. They are highly skilled farmers and always available on site. They organize the rest of the farmers for any communal work and report any incident to the field manager in his absence.

12. Any other comments?

My ultimate goal is to reforest the entire 50 ha treeless land within a couple of years and possibly extend the idea to other areas, and I am so much happy that with the financial support from Rufford Foundation, the first two phases of the project has been completed successfully. This project is gradually bringing to the realisation of the Forestry Commission of Ghana that landscape approaches to reforestation is possible and highly effective in Ghana. Gradually the project is gaining recognition and all thanks to the Rufford Foundation for making this idea of mine a reality. I count myself as very fortunate for having an effective and committed team to work tirelessly towards the project's implementation, even in my absence, and I strongly believe that the financial support from Rufford Foundation has contributed largely to this success. THANK YOU TO RUFFORD FOUNDATION FOR YOUR KIND SUPPORT.



