

Final Project Evaluation Report

We ask all grant recipients to complete a project evaluation that helps us to gauge the success of your project. This must be sent in **MS Word and not PDF 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 – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Complete the form in English and be as concise as you can. Note that the information may be edited before posting on our website.

Please email this report to jane@rufford.org.

Your Details	
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Project Title	Landscape approach for reforestation and farmers' livelihood development in rural Ghana
Application ID	20628-2
Grant Amount	£5000
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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 examine the livelihood strategies of farmers in forest areas				Three communities fringing Ongwam II forest reserve in the Ashanti Region of Ghana were surveyed. These communities are Kruwi, Hwidiem, and Kyekyewere and the farmers were interviewed on their livelihood strategies.
To involve farmers in reforestation projects towards the improvement of their livelihoods.				Farmers in Kruwi and Hwidiem are happy to be involved in the reforestation project because of the benefits they will get from it. They have even started some of the nursery for the project.

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

The process of securing degraded forest land for reforestation by an individual was a bit difficult because forest reserves are mostly managed by the Government of Ghana and large scale timber companies who own concessions in forests for production purposes. I was however able to secure the permit because:

1. This is the first reforestation project being carried out by an individual on a small scale basis for research purpose and environmental benefits and which is geared towards livelihood improvement.
2. Involving fringe community farmers in the project will help reduce the farmers' illegal encroachment in the reserve since they will have free land to cultivate their crops.
3. According to the Forestry Commission of Ghana, the success of this project will be the basis to permit other individuals with similar interests to undertake such small scale projects.

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

- a) **Farmers in the study area have insecure livelihood systems:** Farming is the main livelihood activity in the study communities. These farmers grow on subsistence basis mainly for household consumption and sell the surplus during the weekly market. The sale of the farm produce is irregular since there is no fixed period for the maturity of the crops. About 80% of the farmers do not do any other work aside from farming and the sale of farm produce. This makes their living conditions poor during off-farming seasons.

The only safety net for some of these farmers especially the old is remittances from relatives in the city who are doing profitable businesses. More than two-thirds of the farmers live below \$1 a day. As a result, the households of the farmers are nutritionally imbalanced due to sole reliance on staple starchy foods from the farm with little amount of vegetables and protein.

The low income of the farmers do not permit them to engage in non-farm economic activities due to lack of start-up capital. In times of unfavourable climatic conditions and weather shocks, most of the farmers have no other option than to borrow from relatives and friends to survive. According to the farmers in Kruwi and Hwidiem, a disastrous wild fire that occurred in the year 2015 and burnt all their farms left them in extreme poverty and hunger. If they had alternative livelihood sources, these sources would have reduced the impact of the wild fire on their wellbeing.

b) **Primitive farming methods results in low yields and low farm outputs:** It was interesting to know that none of the farmers interviewed applies fertiliser to their food crops to increase yield. The reasons for no fertiliser application are as follows:

1. The farmers do not have enough money to purchase fertilisers.
2. There is no subsidized fertiliser opportunities for the farmers to access.
3. Those who can afford fertilisers do not know how to apply them because no agricultural extension agent has ever visited the farmers.
4. The farmers grow mostly cassava, plantain, yam, and cocoyam which they claim do not need fertiliser with the exception of maize.

About 60% of the farmers apply weedicides at the start of the farming season to clear the weeds on the land. After growing the crops, manual weeding is done to keep the farm free from unwanted weeds. No pesticides are applied by the farmers. As a result, any outbreak of pests and diseases easily makes the farm unfruitful. Since the farmers do their work manually and mostly without hired labour, their farm sizes are relatively small. Almost 80% of the farmers farm on less than 1 ha of land and basically for household consumption.

c) **Deforestation has turned most parts of the Ongwam II forest reserve to grassland:** According to the old resident farmers, 40 years ago the forest was full of timber and heavily dense to the extent that you could not enter some portions. Non-Timber Forest Products (NTFPs) gathered could sustain them for the entire week without depending on farm produce. Crops like cocoyam and fruits were naturally growing in the forests and the residents could pick these crops and other NTFPs from the forest whenever they wanted. Farming was so profitable that small farm size could produce significant yields because of the fertility of soil and the favourable environmental conditions partly due to the forest reserve.

In the 1980s, harsh climatic conditions resulted in extensive fire outbreak in the green belt of Ghana affecting almost all forests including Ongwam II forest reserve. This disaster brought about severe farming which led to massive deforestation by illegal chainsaw operators and some farmers for survival. Since then, the forest reserve has not regained its natural status due to farm population growth and activities of loggers. Efforts have been put in place by the Forest Services Division of Mampong Forest District to replant some of the degraded portions of the forest, but this has never been enough due to inadequate resources. According to the District Manager, interested environmental stakeholders are encouraged to come and partner the Forest Services Division to restore the forest reserve.



Figure 1: Degraded portions of the reserve to be used for the project.
Source: Author's photograph, 2017

Some farmers have taken advantage of the degraded nature of the forest to illegally farm in the reserve (see Figure 2). Because the degraded portions have turned into a grassland (see Figure 1) but highly fertile for food crops, these farmers illegally farm on these portions of the reserve to sustain their livelihoods. These farmers are natives of the land and by tradition, the reserve is their common property. It therefore becomes difficult to drive them away from the land especially when they have already grown their crops on the land. One strategy the farmers adopt to avoid eviction from the land is to grow trees amidst their food crops as a way of reforesting the degraded portions of the forest. But these trees are not grown in the right way as prescribed by the Forest Services Division, making it a bit insignificant to the Division.



Figure 2: Illegal farms in the degraded portions of the reserve
Source: Author's photograph, 2017

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

The aim of the project was to improve upon the livelihood conditions of the farmers while reforesting degraded portions of the forest at the same time. Almost all the farmers complained of land scarcity. Most of the farmers were practising share cropping because they do not have lands of their own. They had to give a third of their produce to the land owner as the rent of the land at the end of each farming season. The sharing is done by dividing the land into three parts and the land owner chooses one, probably the favourite. In most cases the farmers are at the losing side but had no other option than to continue with the agreement. According to some of the farmers, this unfavourable farming condition coupled with unfertile land compelled them to encroach the forest reserve.

The farmers expressed significant interest in the project because they will benefit from the land for farming for about five years without paying rent. More than 30 farmers were at the verge of eviction from their illegal farmland but because the site for the project include the area where their farms are, the project is a big relief for them. These farmers have shown significant commitment to the project for the past four months when they were trained on how to raise teak seedlings for the project (see Figure 3). The farmers have nurtured the seedlings at the demonstration site very well for the past months and the seedlings are in good condition (see Figure 4). The farmers together with their trainers (forestry experts) have identified the challenges that came up during the nursery period and have learnt lessons to be applied during the raising of a bigger nursery in December 2017 for the project.



Figure 3: Nursery work with the project farmers. Source: Author's photograph, April 2017



Figure 4: Result of nursery demonstration with the project farmers. Source: Author's photograph, August 2017

It is not only the farmers who have shown interest in the project. All the community leaders are now involved. According to the leaders, the project has paved way for vulnerable farmers to have access to lands for farming and because of that, they will support the project for it to be successful. The community leaders took it upon themselves to make a roster for the farmers to water the seedlings every day and this has resulted in the healthy growth of the seedlings.

5. Are there any plans to continue this work?

There are plans to continue this project. The first phase of the project has been successfully completed. Farmers willing to be part of the project has been documented, site for the project has been mapped. The Forestry Commission of Ghana has approved on 48 ha of degraded forest to be used for the project and the tree species have been agreed upon with the Forestry officials.

The next phase of the project will include raising the nursery, preparing the land for planting, and planting the trees. Decisions on the tree species to nurse, the land preparation procedures, and the strategies for growing the trees have been taken in collaboration with the Forestry officials.

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

The results of the survey about the livelihood systems of the farmers and the rationale behind their illegal farming activities in the reserve have already been shared with the Forest Services Division in the study area and the regional office. These results were one of the basis for the application for the site for the project. Community group discussions have also been held with the farmers and community leaders to present the results of the survey to them and the recommendations discussed with them.

Concerning the scientific society, two manuscripts are in preparation from this project. The first one is concerned with deforestation in the Ashanti region of Ghana where the project is taking place. This manuscript will indicate that it is not only illegal and indiscriminate timber felling that is causing deforestation in the region but also illegal farming in the forest reserves. The second manuscript will demonstrate how farmers can be involved in reforestation projects through landscape approaches in a practical scenario. These manuscripts will be published in peer reviewed journals so that it can be accessed by scholars to contribute to the body of knowledge.

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

The project took 9 months (from December 2016 to August 2017) instead of the 6 months anticipated (November 2016 to April 2017). The reason was that, instead of ending the first phase of the project with farmers' education and documentation, I extended it to include the training of farmers on how to raise nursery. I did this to assess the commitment of the farmers to the project and used it as one of the proofs

to get approval from the Forestry Commission of Ghana to reforest the degraded land mapped.

The extension of the period was worthwhile because of the following reasons:

1. The farmers now know how to raise seedlings and high efficiency can be achieved in the second nursery.
2. It has indicated the commitment of the farmers to the project.
3. The farmers will have two groups of seedlings with different ages when the second nursery is raised. This will help the farmers to get seedlings to plant when the rains fall earlier than expected.

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
Transportation (Total)	3328	3073	255	I was able to reduce the transportation cost because the region selected for the start of the project was closer to the team members than the previous region selected.
Flight: Cairns-Accra: Economy		1852		
Flight: Accra-Kumasi: Economy		123		
Trip to Mampong Forest Services Division		20		
Two meetings with project team, 5 persons		196		
Trip to the reserve, 4 persons		20		
Reconnaissance survey to communities around the reserve, 2 days		78		
Interview: 9 trips, 9 days		176		
Inspection of 2 project sites, 4 persons		20		
Farmer group education: 3 communities, 3 days, 4 persons		59		
Site mapping: Kruwi, 2 days, 4 persons		39		
Site mapping: Hwidiem, 2 days, 4 persons		39		
Kumasi-Mampong: Teak seeds and watering cans to nursery site		29		
Nursery site preparation, 2 trips		39		
Project meeting at regional, 3 times, 1 person		29		

Project meeting at national level, 3 times, 1 person		118		
Monitoring and nurturing nursery, once a week, 1 person		235		
Feeding (Total)	1432	529	903	The feeding cost was reduced because the number of days required for the surveying of the communities and inspection of the sites within each community were reduced because the communities were reduced from five to three.
Trip to the reserve, 4 persons		78		
Reconnaissance survey to communities around the reserve, 2 days, 4 persons		157		
Farmer group education: refreshment for farmers, 3 communities		176		
Project meeting at regional level, 3 times, 1 person)		59		
Project meeting at the national level, 3 times, 1 person		59		
Wages (Total)	1031	2116	-1085	More work was required to get the work done at the right time. Intensive field work, site mapping, etc. were required the project on track. But in total, less money was spent than the actual budget for the project.
Reconnaissance survey: 2 Forest guards riding motors, 2 days		78		
Interview: 9 days, 2 persons		353		
Interview trips: 2 Forest guards, 9 days		353		
Inspection of 2 project sites, 4 persons		78		
Farmer group education: 3 communities, 3 days, 4 persons		235		
Site mapping: Kruwi, 2 days, 4 persons		313		
Site mapping: Hwidiem, 2 days, 4 persons		313		
Nursery site preparation, 2 trips, 4 persons		157		
Monitoring and nurturing nursery, once a week, 1 person		235		
Accommodation	382	235	147	
Purchases (Total)	191	215	-24	New item were purchased which were not in the original list. Water holes, watering cans, and teak seeds were not in the original list of items.
Teak seeds, 20kg		59		
2 watering cans		39		
Water holes		59		
Miscellaneous		59		
Grand Total	6364	6168	196	Below targeted budget

NB: Detailed itemised expenditure with explanations have been attached

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

Now that the land has been given for the project, the next most important step is the timely raising of the next nursery. This is important because delay in the raising of the nursery can result in delay in the planting of the trees. According to the forestry officials, raising the nursery between October and December will be convenient for the early planting season which is between April and June. Preparing the land for planting will start after the nursery work has been done and this has to be done in February or March 2018 depending on the climatic condition at that time.

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?

The Forestry Commission of Ghana is aware that Rufford Foundation is the main funder of this project and it was one of the conditions the institution based on to grant me access to the land. The farmers involved in the project and the other assistants are also aware that Rufford Foundation is funding the project. The logo has not been used yet since I have not finished writing up the manuscripts from this project, but the logo will be placed in these manuscripts once they are completed. All the publications from this project will acknowledge Rufford Foundation as the funder of this project.

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

Mr. Donkor Tweneboah (District Forest Manager, Forest Services Division, Mampong Forest District): As the manager of the forest reserves in the study area, he provided advice on the suitable areas that could be used for the project, the process to get approval from the Forestry Commission, the trees suitable for the area, and the time suitable for the nursery. He has been involved in series of forest plantation projects similar to this project so he has the skills and experience to contribute to the success of this project.

Mr. Anthony Faibil and Mr. Seth Amponsah (Forest Technical Officers): They guided the farmers on how the nursery should be raised. They educated the farmers on farming practices that are friendly to the forest. They have over 15 years of experience in providing technical assistants to farmers and other foresters and as such, they have the requisite skills and experience to contribute to the successful implementation of the project.

Mr. David Agyei (Forest Guard): He monitored and has been monitoring the progress of the nursery. He was in charge of the field inspection because he is the forest guard of the location where the project is being done.

Alhassan Fuseini (Cartographer): He was in charge of mapping the area for the project.

Mr. Kwadwo Oppong, Mr. Awuah Bofa, and Mr. Kofi Nyarko (Community leaders): They have been organising the farmers for nurturing the nursery.

12. Any other comments?

I will like to express my sincere gratitude to RF for supporting this project that will have long term significant benefits to the farmers, the communities, and the environment especially the restoration of the forest reserve. I strongly believe that this project will continue and be sustained for several years. Through the support of RF, the team set up will work selflessly to ensure that this project is successful and will be replicated in other regions with high deforestation rates and deprived rural areas. Rural livelihoods improvement through forest regeneration is the main focus of this team.