

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	Idohou Alix Frank Rodrigue
Project title	Participatory actions towards ecological restoration of agroforestry systems adjacent to the biosphere reserve of Pendjari in Benin
RSG reference	25733-B
Reporting period	June 2018-June 2019
Amount of grant	£ 9993
Your email address	rodriguidohou@gmail.com
Date of this report	19 June 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
Assess local knowledge about culturally promising agroforestry trees for revegetation of the area				Semi-structured interviews have been performed in the areas adjacent to the biosphere reserve of Pendjari in Benin. This assessment has been done with men and women of major sociolinguistic groups (Waama, Peul and Ditammari) within four of the previously mentioned areas to hold the survey: Dassari, Nagasseka, Sepounga, and Pouri. In each zone, 30 informants of both sexes and of major sociolinguistic groups have been interviewed. Interviews combined free-listing and well-structured interviews based on locally known species. The list generated by those informants was made of: <i>Adansonia digitata</i> , <i>Hyphaene thebaica</i> , <i>Borassus aethiopum</i> , <i>Khaya senegalensis</i> , <i>Pterocarpus erinaceus</i> , and <i>Vitellaria paradoxa</i> .
Investigate rapid multiplication strategy for the most promising/culturally important agroforestry trees and produce them at high scale (half being fruit producing and half being woody species)				Based on the preliminary literature search and personal fieldwork, multiplication strategy of those species has been gathered or tested. For almost all species the best regeneration technique is based on the seed germination but through breaking dormancy with seeds. For all species, we collected/extracted viable seeds (i.e. those that submerge after soaking in water) from mature fruits. For some of those species this, it was necessary to extract the seeds coated and wash everything in water at room temperature to extract the seeds. Pre-treatments consisted of scarification, hot water and cold water for 2 days.

<p>Identify progressive countrymen/women for negotiation of lands and plant culturally important and locally adapted trees in the area</p>			<p>Land issue constitutes a recurrent problem in the areas due to loss of soils fertility and practice of extensive agriculture. In addition, authorities in charge of the National Park of Pendjari with the help of the national Forest Office has initiate a strategy of recovery of the previously abandoned core areas of the park which is used by locals for agriculture or animal rearing. By the way, most landowners in the areas practice agroforestry systems which allows them already to keep some fruit producing or medicinally-important species in the field. This constitute in their knowledge an important land part already devoted to agriculture. When women are of concern, they are not often, allowed to acquire lands or inherit them even when they father dies. However, they constitute an important component of the marginal group involved in traditional agriculture in the region. In conclusion, negotiation did are still ongoing with countrywomen even some men promised not to let their land entirely for restoration activities. In addition, they propose to introduce some seedlings of those currently identified most promising species in their agroforestry systems.</p>
<p>Produce a revegetation practical guide/manual for local practitioners and authorities</p>			<p>Some data sheets exist in the literature and has been produced either by laboratories (Laboratory of Biomathematics and Forest Estimations, Center for Studies, Research and Forest Training of the National forest Office, Laboratory of Applied Ecology, and Laboratory of Genetics, Horticulture and Seed Science). They datasheets has been exploited and other developed for the remaining species.</p>
<p>Propose and develop policies and recommendations for</p>			<p>This is a long-run activity involving local authorities, policy makers, researchers, national Forest Office,</p>

regulating deforestation and degradation in the ecosystem.				rangers and local people. A consensual framework has been proposed and strategies are still being developed.
Enhance public education/awareness on importance of participatory restorations for a positive responsiveness.				Local people awareness has been raised on the most important findings leading to change in their view and their renewed willingness to highly contribute to restoration of the degraded areas.

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

Unforeseen difficulties include:

- Seedlings attacked by parasites.
- Low regeneration whatever the applied treatments.
- Lack of water for experiments.
- Late field preparation by collaborators.

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

The three most important findings are below:

-Assessment of local knowledge about culturally promising agroforestry trees for revegetation of the area

Semi-structured interviews have been performed in the areas adjacent to the biosphere reserve of Pendjari in Benin. This assessment has been done with men and women of major sociolinguistic groups (Waama, Peul and Ditammari) within four of the previously mentioned areas to hold the survey: Dassari, Nagasseka, Sepounga, and Pouri. In each zone, 30 informants of both sexes and of major sociolinguistic groups have been interviewed. Interviews combined free-listing and well-structured interviews based on locally known species. The list generated by those informants was made of: *Adansonia digitata*, *Hyphaene thebaica*, *Borassus aethiopum*, *Khaya senegalensis*, *Pterocarpus erinaceus*, and *Vitellaria paradoxa*.

-Production a revegetation practical guide/manual for local practitioners and authorities

Some data sheets exist in the literature and has been produced either by laboratories (Laboratory of Biomathematics and Forest Estimations, Center for Studies, Research and Forest Training of the National forest Office, Laboratory of Applied Ecology, and Laboratory of Genetics, Horticulture and Seed Science). They datasheets has been exploited and other developed for the remaining species.

-Enhancement of local people awareness on importance of participatory restorations for a positive responsiveness

Local people awareness has been raised on the most important findings leading to change in their view and their renewed willingness to highly contribute to restoration of the degraded areas.

-Participation and presentation of the current project's findings in the International Biodiversity day at Cotonou held by the forest office.

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

Local communities have been fully involved in all steps during implementation of the project activities. They were first involved in the field work for data collection because they were more knowledgeable in the areas prone to host the species as field expert. They have also been involved in all germination activities and finally during the sensitisation and awareness raising activities and experiences exchange with local communities. They were also highly involved in awareness raising campaign and their contribution is highly required in proposition and development of policies and recommendations for regulating deforestation and degradation.

5. Are there any plans to continue this work?

Yes. This is a very first step towards recovering the secular degraded areas around the national park of Pendjari in Benin. Local people have also expressed the pursuit of the currently started activities for better and more interesting results.

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

Parts of the current project's findings have already been shared during seminars and workshops. As a member of the African Academy of Sciences, I have been invited for the General Assembly meetings during which presentation of results/activities will also be made.

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 was planned to last 12 months of intensive activities. However, time contingencies of last minutes and unexpected events lead to a slight extension of 1 additional week.

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
Preparation for fieldwork	500	500		
Travel for Fieldwork and subsistence	2500	2285	-215	Less money was spent than expected
Most promising species nurseries establishment	900	1200	+300	Several unexpected situations happened such as low seeds germinations and several seedlings attacks leading to tacking back the experiments several times
Revegetation (seedlings planting at high scale)	2100	2400	+400	More efforts have been needed to achieve the goals leading to more investments
Communication	150	150		
Best practice manual production and multiplication	600	500	-100	As some existing initiatives have been exploited, less money has been spent here contrary
On-field data entry, compilation, and analysis	390	290	-100	At my home institution, some trainees proposed their help for data compilation. This helps to reduce significantly the proposed amount
Educational workshop training	1500	1268	-232	Some retention has been made as enough money was not available for all activities
Materials translations to local language	1353	1400	+47	Some increase has been noted which were not expected
TOTAL	9993	9993		

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

Next steps should be:

- The pursuit of the currently not fully achieved goals.
- Acting as a focal point for any participatory actions involving stakeholders for a successful action plan.
- Initiation of alternative livelihood schemes for those who will be affected by the conservation or participatory restoration plan such as development of alternative strategies including use of bees and agroecology, as complement to Livelihoods for riparian population.
- Continuation of the public education/enlightenment and participatory restorations for a positive responsiveness.

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. The foundation has been acknowledged during presentation at national or international colloquia and conferences of the findings and during workshops/seminars. Logo of the foundation has also been used.

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

IDOHOU Rodrigue, PhD. I am the first responsible and coordinator for all project's activities. I am in charge of successful implementation of the project and producing progress reports as well as final report.

OROU Gaoué, PhD. He is an Associate professor in Quantitative ecology and ethnobotany. He gave advice on the practical steps toward data collection.

AGUESSY Aymard, MSc. He is a recently graduated Master in Natural resources management and biodiversity. He helps in data collection and organisation of meetings with locals.

D'OLIVEIRA Lionel, Agronomist Engineer. He is a socio-economist with specialisation in sensitization and advocacy plans. He helped in workshops organization and during interview preparations with locals.

AGLISSI Léon, BSc. He is a technician in the field of propagation (by seeds or from vegetative organs). He helped in the propagation section and follow up on the field.

NGOs (Cidev and AVVD), local communities, and local organizations also helped in all project activities for successful results.

12. Any other comments?

Special thanks again to The Rufford Foundation for having made this possible.