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	Assessment of Suitable Areas for Doum Palm Cultivation and Development of a Community Based Domestication Programme in Benin
RSG reference	20795-2
Reporting period	November 2016- November 2017
Amount of grant	£5000
Your email address	rodrigidohou@gmail.com
Date of this report	15 November 2017

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
(i) map the geographic distribution of the doum palm across landscapes in Benin				Fieldwork in the frame of the project revealed that the species was only present in the Sudano-Guinean and Sudnian zone of Benin. In these zones the species was mainly found in agroforestry systems. As regards the ecoregions within the country the species presence was noticed in West African savannas and around the Togo Highlands (towards the mountainous regions in Benin).
(ii) assess the suitable areas for the species domestication				Exploration of the seven combinations of environmental variables showed that combination of vegetation Index and gross primary production were the main drivers for distributions of the species. Partial ROC evaluations indicated that the models were robust, yielding predictions statistically significantly better than random ($P < 0.01$). Geographically, our results suggested high potential for cultivation of the species across Benin. Models identified the northern (Sudanian) areas, with some extension southward towards the Guineo-Sudanian zone as really suitable. Overlay of potential distributional areas with other environmental features (protected areas network, human demography) showed that areas around some protected areas were suitable for the species; these areas held only sparse human populations.
(iii) identify together with land use managers, local NGOs and natural resources management institutions, local decision				Areas identified as very suitable for the cultivation of the species have been field-visited together with land use managers, local NGOs and natural resources management

makers, local associations the areas available for the species cultivation.				institutions, local decision makers, local associations. Much of the areas identified have been comforted by the field visits. Other parts of the machine-learning suitability areas have not been confirmed by the expert knowledge; thus reinforcing the need to always return back on the field to confirm or invalidate outputs from the strong run of the models.

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

As field verification work occurs during high agricultural season, it sometimes very difficult to get full adhesion and participation of local people. However, we managed with their availability and got their unmarketable support during the fieldwork. Some areas were also remote and very difficult of access due to bad quality roads. To tackle this, we were sometimes obliged to go round or continue our way within the vegetation.

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

- Suitable areas for the domestication of doum palm are available.
- On-field confirm areas for cultivation/restoration of the species are available and could be used for the coming reforestation day using native trees.
- An oral presentation of the preliminary results has been made in a frame of an International conference of the University of Abomey-Calavi.

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

During implementation of the project activities, local communities have been fully involved in all steps. Indeed, fieldwork for data collection was done exclusively with their full participation (as they were more knowledgeable in the areas prone to host the species as field expert). Next to that, they have also been involved in on-field verification of adequacy of the results from the machine learning with field veracity. Finally, they were involved in the sensitisation and awareness raising activities and experiences exchange with local communities. They helped to organise a workshop and fully took part in it.

5. Are there any plans to continue this work?

Yes, this work needs to be continued for a successful representation and effective conservation of the population of the species in its natural habitat and most importantly the whole ecosystem in general.

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

A more detailed report is being written and will be soon shared with land use managers, local NGOs and natural resources management institutions, local decision makers and local associations. In addition, a paper is being prepared for submission to a good quality and open access journal to scientifically validate the outputs and share the findings with the community (both scientists and conservationists). We also plan to take advantage from the campaign of NGOs on environmental conservation in the project areas to continue the sharing of outputs and sensitisation work.

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

The project was planned to last 12 months. However, due to the unexpected event, we were to ask for an extension of 2 additional months. Fortunately, everything went perfectly and the project last 12 months as anticipated.

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. 1 £ sterling = 4.44 Nuevo Sol

Item	Budgeted Amount	Actual Amount	Difference	Comments
Travel to the sites	1300	1400	-100	There was an unexpected rise of the fuel price during intensive fieldwork period
Data collection sheets production	300	300	0	
Scientific literature and field guide	375	350	+25	We got some reduction of expected cost
Communications (internet and telephone)	600	550	+50	We got some reduction of expected cost
Hiring rooms for training workshops	650	650	0	
Per diem for Food and transport of participants to workshops	725	725	0	
Research assistance and local workers	250	250	0	
Results spread, education awareness, sensitization and lobbying	800	800	0	
TOTAL	5000	5025	-25	

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

Looking ahead, next steps of this research includes:

- Dissemination of the final draft of conservation action and restoration plan for the species and engagement of land use managers, local NGOs and natural resources management institutions, local decision makers, local associations in discussions regarding steps to their implementation.
- Propose and develop policies and recommendations that can be adopted to effectively regulate deforestation and degradation in the species natural ecosystems.
- Act as a focal point for any participatory actions involving stakeholders for a successful action plan.
- Initiate and advocate alternative livelihood schemes for those who will be affected by the conservation or participatory restoration plan.
- Continue public education/enlightenment and participatory restorations for a positive responsiveness.
- Monitor the demography of the species through field surveys.

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

Yes, Rufford logo was used in all presentation and during dissemination activities in all the project areas. I also acknowledge The Rufford Foundation support in the currently ongoing manuscript.

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

Rodrigue IDOHOU. I am the first responsible of the project and the principal investigator. I am an agricultural engineer and specialized in forestry and agroforestry systems management. I was involved in all project activities (including data collection, data analysis, sensitization and report writing)

Lucrèce ATINDEHOU, MSc. She is specialized in natural resources management with several ecological inventories experience. She is a field assistant and was involved in field data collection, and local population sensitization.

Thomas KASSA, He is a BSc in natural resources management. He is a field assistant and helped during data collection and awareness raising.

Orou GAOUE, PhD, specialized in population ecology, Forest ecology and ethnoecology. He gave advice in ecological data collection

Many other stakeholders (land use managers, local NGOs and natural resources management institutions, local decision makers, local associations, young, etc.) were also part of the implementation team of the project

12. Any other comments?

We are very grateful to the foundation and its donors for helping us contribute in our way to the conservation of the natural resources in this era of increasing threats. Without continuous funding and trust from The Rufford Foundation, we would have not been able to make this happen.