

The Rufford Small Grants Foundation

Final Report

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

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. 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. 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	Teka Sèmadégbé Oscar
Project title	Mangrove conservation and restoration based on environmental education in Benin
RSG reference	10567-1
Reporting period	October 2011- October 2012
Amount of grant	£5961
Your email address	<u>Oscar teka@yahoo.fr</u>
Date of this report	28 November 2012

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
Global objective: To contribute to mangrove ecosystem conservation and restoration through environmental education and mangrove tree planting.			x	- The local communities of the three Districts were aware of the mangrove degradation as well as the possible consequences on their livelihood and participated actively in the project's activities (mangrove tree planting).
Specific objectives:				
1.1. To assess the main threats to mangrove viability.			x	The wood harvesting (54.4%), the urbanisation and anarchic settlement (40%), and the disrespect of traditional rule (30%) represented the main factors of mangrove vulnerability in the coastal area in Benin. The fishery, salt production, fodder and vegetation fire were less mentioned as vulnerability factors of mangrove. The majority of the informants declared the mangrove regression (Grand-Popo: 66.2%; Ouidah: 68%; Sèmè-Kpodji: 62.5%). Only little proportion of informants opined for the mangrove progression (Grand-Popo: 9.5%; Ouidah: 10.7%; Sèmè-Kpodji: 11.1%).
1.2. To increase the awareness of the local communities and schoolchildren (future generation) on the importance of mangrove ecosystem conservation, restoration and its sustainable use.			x	Through the project, the awareness of local communities and of schoolchildren was increased. The investigated populations from the three districts are aware of the necessity for the restoration (82.2%) and sustainable conservation (68.3%) of the mangrove. For the restoration, population agrees that one may plant the mangrove trees (<i>Rhizophora racemosa</i> and <i>Avicennia germinans</i>). At the same time they insist on the new alternative for service and firewood supply.
1.3. To strengthen the capacity of the local			x	Local authorities were built to the method of sustainable use of mangrove ecosystem in the three Districts.

<p>authorities on mangrove ecosystem conservation in other to motivate them to consider mangrove restoration as priority in the communal environmental plan.</p>				<p>Three training sessions on mangrove conservation and strategies for its sustainable use will be organised per municipality to focus the awareness of the local authorities to take into account mangrove restoration in their annual activities planning.</p>
<p>1.4. To restore the mangroves ecosystems by planting <i>Rhizophora</i> and <i>Avicennia</i> sapling (propagule) where the mangrove ecosystem is degraded or destroyed</p>		x		<p>6 ha of mangrove have been planted by the population and schoolchildren in the three Districts. Propagules of <i>Rhizophora</i> and <i>Avicennia</i> were collected locally in the mangrove ecosystem and planted.</p>
<p>1.5. To define with all the stakeholder's strategic actions which will be implemented by the local authorities for mangrove conservation.</p>			x	<p>Strategic actions were discussed with local authorities for mangrove conservation. Due to the fact that the use patterns of the mangrove vary according to socio-demographic characteristics of local populations, different people-oriented restoration and conservation measures were suggested. However, the majority of informants recommended in order to ensure the participation of local population, to look for other alternatives which will allow local population ensuring their livelihood. Some of them, recommended in order to decrease the high pressure of mangrove wood extraction the necessity to find other sources of firewood and service wood. Other recommendations relied on the reconversion of the salt producers in other income generating activities such as the breeding of small game animals. Otherwise if nothing is done, the</p>

				destruction of the mangrove will continue with negative consequences on fauna and flora habitats/diversity, and the disturbance of the socio-economic activities of inhabitants.
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

- The survival of afforested mangroves are 25% (Grand Popo), 37% (Ouidah) and 17% (Sèmè).
- The school calendar and the planning of environmental education were difficult to be harmonised. In fact, we had shifted several times the realisation of this activity. This leads therefore to a shift of the project activity end.

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

- The conservation of mangrove through replanting of mangrove trees.
- The education of schoolchildren for best mangrove conservation practices of the public.
- The capacity-building of the local authorities who will take into account mangrove ecosystem as priority in the communal environment plan.

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

-Involvement of local communities

Local communities were involved in the environmental education. Indeed, we selected and trained 50 persons from the three investigated Districts. In addition, we discussed with the selected persons about the sustainable conservation of mangrove ecosystem in villages assemblies we organised. Apart from these persons, we also selected and formed 15 schoolchildren environment clubs for mangrove conservation and restoration. In each club, a discussion session was held twice a month on different topics related to mangrove ecosystem conservation. For the mangrove trees planting, local communities were also involved. They helped especially in the collection of *Rhizophora* and *Avicennia* propagules, the planting of mangrove trees.

-Local communities' benefits

The livelihood of local communities relies on the exploitation of the mangrove (fishery, salt production, fire and service wood, medicinal plants use). Due to the current degradation of this mangrove, the productivities of the ecosystem are decreasing and affect therefore negatively the socioeconomic life conditions of the local communities. Thus, the restoration and the sustainable conservation of the mangrove will help these communities after 5-6 years to improve their livelihood. Since the degradation of mangrove leads to generation conflicts between young and elder people, the sustainable conservation and restoration of the mangrove ecosystem will help to minimise of occurrence of such conflicts and enhance the relationship between new and old generation and therefore reinforce the socio-ecological balance in the investigation area.

5. Are there any plans to continue this work?

Yes, there is a necessity to continue this work and especially in the field on providing new alternatives of fire and service wood to local communities.

The extension of the work in other parts of Benin coastal area where the mangrove ecosystem still facing to high threats and degradation rate.

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

- The results of the project have been posted in the workshop of ABEPa held on the 17 November 2012 in Benin.
- The results of the project have also been disseminated through rural radio in Ouidah that presented our results to local communities.
- At the international, we prepared a manuscript entitled: "Mangrove Degradation and Endogenous Strategies for Participatory Restoration and Conservation in Benin" which has been submitted to Journal of Sustainable Development for publication.

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

The project lasted 14 months as per the proposal, and in which the mangroves trees were planted, and environmental education was done.

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
Assistants for environmental education and tree planting (three assistants)	810	810	0	Approximately estimated.
Assistant travel on the field (three motorbikes rented)	480	480	0	Approximately estimated.
Fuel for motorbike (assistant)	360	450	-90	Approximately estimated. Fuel has become more expensive in Benin. So more funds are requested.
Project leader travel to the field (6 ways travel to the field)	81	120	-39	Approximately estimated. The travel costs are higher. So, more funds are requested.
Posters and flyers printing for environmental education (10 posters and 100 flyers)	300	300	0	Approximately estimated.
Tee shirts confection with Rufford symbol and mangrove picture (100 t-shirts)	400	350	+50	Approximately estimated. The confection of Tee shirts is cheaper

School children/Population travel for field visit and sensitization (1 visit per municipality)	608	600	+8	Approximately estimated.
Propagule collection	306	336	-30	Approximately estimated. The propagule collection is more expensive as estimated.
Tree planting (1-hectare tree planting/village)	1215	1100	+115	Approximately estimated. The tree planting is more expensive as estimated. So more funds are requested. I reduced the area to be afforested.
Radio rural broadcasting (2 diffusions/Municipality)	648	650	-2	Approximately estimated.
Consumables for reporting (ink for printer, paper, etc.)	108	150	- 42	Approximately estimated. The need of consumables for reporting is really more expensive as estimated
Camera Samsung 10 megapixels for pictures making	219	219	0	Approximately estimated.
Internet and telephone fees	126	120	+6	Approximately estimated.
Final workshop for results communication	300	282	+18	Approximately estimated.
TOTAL	5961	5967	-6	

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

- Planting of rapid growth trees in order to supply fire and service wood for local communities.
- Educating the local communities for protecting planted mangrove areas.
- Continuing planting mangrove and educating of local communities of surrounding mangrove areas in the coastal zone of Benin,
- Re-conversion of the salt producers and fishers in other income generating activities such as the breeding of small game animals. This reconversion will help them to ensure their livelihood without degrading the mangrove.

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

Yes, the RSGF logo was used on the Tee shirts and banners, I realised for the environmental education sessions.