

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. 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	Akpona Adeloui hugues
Project title	Developing tools and strategies for a sustainable conservation of the endangered spotted necked otter (<i>Lutra maculicollis</i>) in Southern Benin' wetlands.
RSG reference	9212-2
Reporting period	January 2011 – June 2012
Amount of grant	£5940
Your email address	akpona@gmail.com
Date of this report	August, 3 rd, 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
Objective 1: Assessing socioeconomics and environmental impacts of conflicts			X	<p>The first step of this project consists in introducing the project to local communities of Oueme Valley and gather updated information on the current damages of otters, friendly mitigation strategies, fish preferred by otters, stakeholders involved in conflicts mitigation, alternative activities to compensate otters' damage, methodology of conflicts' costs evaluation, other animal causing damage on fishery materials, fishery materials frequently destroyed by otters, current months of high damage of otters. Village assembly, focus group and individual interview were conducted in Gangban, Oueme Valley with 32 fish farmers. 10 fallows were listed as sites where otter's damages were currently high. Based on this knowledge, we chose villages around those fallows to assess the socioeconomics and environmental impacts of conflicts.</p> <p>Individual fishermen monitoring survey was conducted in Hon and Kpome villages. The president of Fishermen's Union at surveyed village was contacted by the researcher and was accompanied by an intermediate agent (a friend or a known person of the president of the fishermen) in order to gain the trust of local actors. This agent acted as a guide and helped us conduct research in the region. A total of the 30 fishermen were selected and followed daily during 1 month. This selection was made with the assistance of the President of Fishermen's Union, as this is the best way to meet the others. Information collection during the daily individual fishermen monitoring was: the number of species captured (categorise as adult and young), the time duration of fishery engine set up, the daily incomes and whenever the fish and fishing engine were impacted by the otter with the estimation of damage cost respectively.</p>
Objective 2: Testing and sharing effective friendly			x	<p>The list of friendly mitigation strategies was updated. We surveyed local communities on the effectiveness of those friendly mitigation</p>

mitigation strategies				<p>techniques. Based on the perception of fishfarmers we noticed that those techniques were not effective as well and consequently not applied on the field. 70% of interviewees told us that the dog technique is the alone which could give some positive results. Based on the perceptions of Oueme Valley' communities towards the effectiveness of the dog friendly mitigation strategy, we organised an exchange visit between them and Hlan river communities. It was the occasion for the two groups to share their experiences about fishing practices, conflicts mitigation strategies and to create a network of fish-farmers in the wetland complex.</p> <p>We trained 10 local guards for otters monitoring and conservation.</p>
<p>Objective 3: Designing a strategic conservation plan and awareness tools</p>			x	<p>A strategic participatory conservation plan for otters based upon the previous results was elaborated based on the otter conservation plan elaborated by IUCN adapted to the context of Benin. Moreover, awareness tools were elaborated and shared during the exchange visit. Moreover, we made 12 sensitization sessions with fish-farmers.</p>

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

During the project implementation, we faced two difficulties. The first was related to climatic constraints which affected the period of data collection previously defined in our project. We were obliged to wait for the best period to collect our data and also for awareness sessions. The second difficulty was related to the evaluation of the effectiveness of friendly mitigation techniques. We set up the experiment on friendly mitigation techniques (dog) but we did not have the possibility to assess its effectiveness. In fact, conflicts occur along the rivers especially in fallows. Otters choose fishery materials and visiting sites randomly. We cannot assume that dogs crying near fishery materials disturbed otters. It was not possible to experiment the same technique for fishery nets which are installed in the river. Instead of having positive outputs from those experiments, we investigated the predictors of otter damage in order to focus our strategy on those predictors. The logic of our investigation is that if we know more about the factors which have a direct link with otter damage, we could develop proactive actions to reduce conflicts.

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

Outcome 1

Fish-farmers of Hlan River are connected to those of Ouémé valley through the exchange visit organised through this project to share knowledge, practices and acquire information on conflicts

management. This will have a long term impact for the conservation of otters in Benin. A conservation plan was elaborated and validated by actors.

Outcome 2

The main fishing gear used in the study area was gillnets (100% of the fishermen surveyed) with variable mesh length. Each gillnet was 50 m in length with a maximum height of 2.50 m. Other gear types used by the fishermen were hoop nets, locally called “adja” and the fish-hook called “mlin”. A total of 16 species was identified to be frequently caught by the fishermen in Hon and Kpomè village during the survey. The most common species taken were *Oreochromis niloticus* (29%) and *Heterotis niloticus* (24%) followed by *Distichodus brevipinnis* (11%), *Clarias ganiepinus* (11%), *Gymnachus niloticus* (10%), *Clarias agboyensis* (7%). The income generated by the fisherman per fish species ranges between 462775 FCFA (950\$) and 150 FCA (0.3\$) according to different species.

Outcome 3

The 5 candidate generalised linear models (GLM) best models in predicting otter damage pointed out the importance of fishing engine setup duration, village proximity to the river, the total adult and juvenile fish species captured. So from this model the otter damage increases significantly with the total otter fish adult captured by any given fishing engine (0.13 ± 0.03) as well as the engine setup duration (1.84 ± 0.63). The relationship between the Otter damage cost estimation and the engine setup time duration fitted well with a quadratic model with the explained variance of 36.6%. From this model we concluded that the otter damage cost estimation increases with the engine setup time duration. A rapid increase of otter damage cost estimation was noticed after 1000 minutes suggesting that, fishing engine must not be checked out after 1000 minutes in order to reduce the otter damage from long time of fishing engine setup.

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

Local communities were involved in the project implementation through exchange visits, awareness sessions, data collection, and guidance of researchers on the field.

5. Are there any plans to continue this work?

We plan to implement the conservation plan elaborated. Our project suggests that fishing engine must not be checked out after 1000 minutes in order to reduce the otter damage from long time of fishing engine setup. It is important to implement this on the field and estimate its effectiveness in reducing conflicts' costs. Moreover, we plan to promote alternative income-generating activities to affected fish-farmers. Those activities have to be chosen based on the benefit they provide and their impact on reducing fish-farmers' threats on otters. For a next step, we will also pursue awareness and monitoring of conflicts. At least, it will be important to focus the future of the project on a network of stakeholders in order to have harmonised actions.

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

We plan to publish in peer-reviewed journals a scientific paper and also organize restitution sessions of the project outputs to local communities and NGOs working with communities. The results will also be presented during conferences at local, national and international levels by using oral talks or posters. We will share our results through a technical report on the “Otter Specialist group” website.

I had presented a poster on the project results at the first International Union on Forestry Research Organizations Regional Congress during the session “Wildlife Ecology and Management” held in Nairobi from June 25th to June 30th, 2012.

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

The project has been implemented during 18 months. The delay was due to the climatic constraints which affected the experiments and the mobilisation of fish-farmers and also to the length of experiments we made. Moreover, during the project implementation our country organised lections and this affected the mobilisation of actors for the project activities.

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
Scientific measurements materials and scientific literature	250	250	0	Two GPS were bought to facilitate the field data collection done by two researchers. We bought online four new scientific publications related to conflicts mitigation.
Digital camera: OLYMPUS Camedia C-750 Ultra Zoom	200	200	0	The digital camera was used to take various pictures, prepare education awareness, posters and leaflet. It will also be helpful for for preparing the future of the project.
Office furniture (Paper, CD, floppy disk, flash disk, etc.)	100	100	0	This item considered CD, papers, flash disks, etc
Field guide and surveys documents	200	150	+50	We prepare, printed and made photocopies of field guide.
Communication	100	100	0	We bought an internet key to facilitate communication and documentary research. Moreover, the money was used to buy credit on telephones for the feld researchers and guides to take appointments.
Travel to research sites	800	950	- 150	Travels to research sites. Travels from the main city to pilots sites and from site to site is estimated to £800 for a total of 2000 km (estimated distance to join all the sites to be sampled). The rate of £0.5/ km is used because of the price of fuel. A car will be hired for field work and the estimation included fuel cost.
Assistants and local workers	900	1000	-100	Field assistants and casual workers were paid during the project implementation.

				Considering the high number of villages (around 12) that were investigated, 2 researchers and 4 occasional and local workers were hired
Hiring small boat	190	140	+50	The boat was hire for £35 per month during 4 months.
Sharing the best friendly mitigation strategies among fish farmers	400	300	+100	We paid less than planned for the transport of community members and accommodation.
Strategic action plan elaboration	500	500	0	We made a stakeholders analysis, and identify with the participations of actors the main areas for a sustainable conservation of the species.
Printing the action plan	400	250	+150	
Awareness campaign, education.	400	500	-100	This include materials and sessions organisations
Training of 10 guards in otter conservation	300	300	0	Training 10 guards require the production of training materials, accommodation, transport and perdiem
Total	5940	5940	0	

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

- Reinforcing of a network between fish – farmers and NGOs for a long term conflicts management.
- Testing, estimating and sharing the effectiveness of the recommendation of a maximum of 1000 minutes for fishing engine setup.
- Promoting long term alternative income generation activities such as livestock breeding, aquaculture, beekeeping, promotion of annual crops to affected community members for conflicts' management.
- Developing and implementing in different languages, long term tools for a sustainable and low cost awareness programmes.
- Organizing special campaigns and participate to local and national workshops to build awareness on the issue of manatee conservation.
- Establishing in a participatory approach and implement some limitation for fishing (for example permanent or non permanent no-fishing zones).
- Developing and implementing habitat restoration plans at degraded parts of key sites identified for otter conservation.

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?

We have used the logo of RSG for awareness sessions and during my poster presentation at the IUFRO conference held in Nairobi. RSG will be acknowledged in the scientific papers which will be published.