

## 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

Grant Recipient Details	
<b>Your name</b>	Joana Sousa
<b>Project title</b>	Ecological and social dimensions of people-wildlife interactions in southern Guinea-Bissau
<b>RSG reference</b>	67.10.09
<b>Reporting period</b>	
<b>Amount of grant</b>	£4842.66
<b>Your email address</b>	<a href="mailto:joanavazsousa@gmail.com">joanavazsousa@gmail.com</a>
<b>Date of this report</b>	17 October 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
Characterise farming production systems (cash and subsistence crops);			yes	I collected relevant data on this topic and I did some literature review both on reports I found in Guinea-Bissau and in international journals. This will be an important part of my PhD thesis, providing background information about the economic environment. Knowing which crops people depend on and understanding their real value for households is important for future park management planning since this should be take into account the local livelihood systems.
Evaluate people's dependence on natural springs			yes	When I was in southern Guinea-Bissau in 2007 some villages did not have a manually operated water pump. However, nowadays the villages under study have pumps which help reduce the local dependence on natural springs for drinking water, therefore reducing any competition for fresh water between people and primates, such as chimpanzees. However, people are still dependent on natural springs as a source of water for the irrigation of nurseries.
Dependence on forest products		yes		People deeply depend on certain forest products, such as the oil-palm or trunks of some forest tree species for construction. Also, they use medicinal plants collected from the forest and several fruit species. Some literature review was followed to assess the use of medicinal plants, particularly the work of Frazao-Moreira. The dependence on oil-palm fruits is very evident, both for food and trading; this species is also used by primates and birds as food. Additionally, chimpanzees nest in oil-palms, bend them and break their leaves, which have a negative impact on palm fruit production. I've classified the objective as partially achieved because more could be done on characterising people's use of wild foods.

Document crop damage intensity: monitor crop-damage and identify species responsible for damage;			yes	Crop damage was documented in three villages in Cantanhez and two villages in Boe for every crop type, orchard trees and backyards. The estimates were made by using linear transects (in croplands) and by point sampling (in orchards).
Document crop damage intensity: identify spatial and temporal factors determining vulnerability to crop damage by wildlife.		yes		Spatially referenced data were collected on the habitat type bordering the croplands, distance to the nearest forest, distance to the nearest river, presence of permanent chasing elements (scarecrows, lights to chase nocturnal animals, noisy devices), among others. A temporal analysis between crop types will be possible. However a detailed temporal analysis for each crop would need a more focused approach to only a few crops and a few orchards to allow constant sampling in each one. I did two to three sampling repetitions for each crop type in every farm.
Document control methods used by the farmers			Yes	The methods used by farmers to control crop damage were document, as well as their perceived efficiency
Explore social meanings of damage: actual versus perceived damage			yes	The reports from farmers will be compared to what was actually measured in their farms. More than looking for mismatches, this will allow a more in-depth interpretation of farmers' reports, which is essential to understand the character of certain reports and the reason why they were made.
Explore social meanings of damage: factors that influence farmers' perceptions of risk to crop damage			yes	The factors shaping a certain perception of risk regarding a particular crop and a particular species were examined. These are related to (i) the food value or cash value of a specific crop, (ii) the existence of a control method that is perceived to function, (iii) the perceived status of a particular species in nature conservation, and (ii) species-specific features (e.g. how fearful the species is perceived to be, whether the species is perceived to spoil crops without really consuming it, unpredictability of damage, among others).

Other than the goals expected to be accomplished by the time I applied to RSG (as described above), other unexpected information was gathered, such as: (i) the role of certain species on local

cosmologies, (ii) the historical background regarding the dispute on land rights, (iii) different ways of classifying the territory.

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

The unforeseen difficulties were mainly related to the farming design of croplands which led to a more time consuming estimation of crop damage. This prevented me to fully accomplish the goal of documenting the dependence on forest products: I was not able to do participant observation on this subject; therefore I included questions about use of wild foods in my interviews. Regarding the other goal that was not fully accomplished (temporal patterns of crop damage) I should say that because of time constraints, I had to choose one of two approaches: (i) a more temporally detailed sampling in fewer croplands or (ii) a less temporally detailed approach in a greater number of crops. I chose to do two or three samplings in each cropland and measure approximately 100 farms (I can provide exact number of farms when I finish that analysis).

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

The three most important outcomes of my research project were: (i) to understand how farmers look at nature conservation initiatives; (ii) evidence that confirms that mangrove rice farming the best farming strategy to grow rice not only because it produces a higher rice yield per unit area of land (if this is true) than other farming methods used locally but also it is less likely to create conflicts with the park and the wildlife; (iii) to assess local people's perceptions towards chimpanzees ; (iv) to register the methods farmers claim to use to control its damage.

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

Local people benefited with the project in the following ways : (i) myself and local farmers followed informal talks that allowed us to share knowledge and experiences; (ii) five field assistants were hired and trained in sampling techniques, on measuring damage and on using a GPS device; (iii) two villagers were also trained in translating techniques, assuming afterwards the translation tasks needed, (iv) two local people were trained in photography and were given two digital cameras, (v) one local farmers' association received three bags of rice to acknowledge the accommodation they provided, (vi) my assistance with financial reporting for the farmers' association.

**5. Are there any plans to continue this work?**

Yes, I will be continuing to work in the Cantanhez National Park. My plan for the short term is to develop a project that will both, support the local farmers association and encourage swamp rice farming.

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

I have already sent a preliminary report of my results to local NGOs and the biodiversity institute of Guinea-Bissau and also plan to send a final report to these entities. Two meetings were held in Bissau with local NGOs and e-mails were exchanged with an international NGO to discuss my results and their relevance for conservation initiatives. Unfortunately the Guinea-Bissau Institute for Biodiversity still did not reply to my report with preliminary results. I also intend to submit three manuscripts to international journals and RSG will be acknowledged.

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

The RSG was used for longer period of time and the fieldwork was postponed. Therefore the RSG covered the following period: September 2010 to May 2011 and September 2011 and April 2012.

**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
Flights (Lisboa-Bissau/Bissau-Lisboa) during	£864.94 £864.94	£360.74 £360.07 £363.00 £416.77	+£229.29	These regard to: Lisbon-Bissau September 2010, Bissau-Lisbon May 2011, Lisbon-Bissau September 2011, Bissau-Lisbon May 2012.
Visa	£55.20	£55.20	0	
Residence permit	£28.05	£73.33	-£45.28	
Field assistant wages	£788.48	£1013.76	-£225.28	
Digital cameras	£515.20	£112.23	+£402.97	I did not buy the cameras I was expecting but this <a href="http://www.trailcampro.com/bushnelltrophy.camhd.aspx">http://www.trailcampro.com/bushnelltrophy.camhd.aspx</a> . I do not remember how much I paid of shipping costs plus customs duties but it was approximately £80.161 (100€).
Weather station	£193.01	£193.01	0	
Reports	£73.60	0	+£73.60	
Meeting tropical doctor	£54.28	£54.28	0	
Medication	£121.7	£243.4	-£121.7	
Vaccines (rabies, typhus and polio)	£91.66	£91.66	0	
Travel and health insurance	£240	£226.63	-£13.37	
Return flight (London-Oxford)	£184	£123.03	+£60.97	
Coach (Oxford-London, London-Oxford)	£53.70	£29.2	+£24.5	
Diesel	£294.40	£478.40	-£184.00	During 2010/2011 I spent an average of £18.40/week for 32 weeks instead of £18.40/week (for

				16 weeks as I applied for. The £391.07 respect to the fieldwork period of 2010/2011. The 2011/2012 was covered/funded by myself.
Digital Camera of movement detection	£125.10	£204.31	-£79.22	
Return transport to Bissau/lemerem or Beli	£294.40	£406.98	-£112.58	I went by motorcycle from lemerem to Buba and or from Beli to Gabu. I slept one night in Buba and Gabu, and the next day I got a public transport to Bissau. Therefore these expenses refer to: diesel for the return journey; two nights in a hotel for each return journey and one return ticket in public transport. I did 5 return journeys in the 2010/2011 fieldwork period and 4 in the 2011/2012 fieldwork period.
<b>Total</b>	£4842.66	<b>£4806.02</b>	£36.64	

<sup>1</sup> The exchange rates used were: 1£=818.27XOF, 1€= 0.80£; 1\$=0.62£

The following expenses were covered totally by me since I did not receive the fund requested from Xi-Sigma and Biosocial Society: the return flight London/Lisbon, the coach Oxford/Luton, the diesel for the fieldwork period of 2011/2012, the rechargeable batteries, the printing of military maps and Google Earth images, the motorcycle and the GPS device. The amount of £36.64 that was left from the RSG was used to partially fund the return flight London/Lisbon in 2012.

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

Regarding myself the important next steps is to find a postdoctoral scholarship that will allow me to keep on doing research in southern Guinea-Bissau on (i) people and wildlife interactions, (ii) control methods on crop raiding, and (iii) people-people conflicts regarding nature conservation. The important steps for conservation in Cantanhez National Park are: (i) to deepen the participation of the local communities in the conservation process; (ii) to promote swamp rice farming, which will improve food security and reduce the conflicts between people and the management of the park; (iii) to better understand the patterns of damage of the cane rat; and finally (iv) to implement and test the actual efficiency of the crop damage control methods already used by the farmers as well as test new control methods.

### 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?

RSGF logo was used in the following presentations:

Sousa J. 2010. Assessing perceived and actual crop losses in Southern Guinea-Bissau: analysing preliminary data and refining the focus of my research. Oxford Brookes Student Symposium. Oxford, United Kingdom.



Sousa J. 2012. The national park and their actors: a new 'space' within a framework of other 'spaces' Cantanhez National Park, Guinea-Bissau. Seminar Series on African Environments. 4<sup>th</sup> October – 29<sup>th</sup> November. Oxford Brookes University, United Kingdom.

Also, the RSGF foundation logo in to be used on the final reports to NGOs and RSGF will be acknowledge in my thesis and on papers published in international journals.