

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	Marina Albuquerque Regina de Mattos Vieira
Project title	Wildlife Management: the interaction between formal and local regulations on wildlife conservation.
RSG reference	11286-1
Reporting period	February 2012 – July 2013
Amount of grant	£5932
Your email address	maaavieira@yahoo.com.br
Date of this report	July 19, 2013

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
Implement a participatory monitoring programme of wildlife use in five communities.			X	We collaborated with 74 local residents in implementing the monitoring programme, covering 71% of the family groups in the five communities.
Provide reliable information about fluctuations of game practices throughout time and space.			X	Of the 74 local residents who participated in the programme, 37 provided us with information about their hunting events using the self-monitoring datasheets throughout the entire study period.
Describe traditional management practices.			X	I conducted 62 semi-structured interviews with local residents of the 5 communities about their decisions on what, where, when and how much to hunt and not to hunt. I also asked 32 of these respondents about social taboos that regulate wildlife use. I was also able to observe some hunting events in the communities.
Analyse how the institutional sets (formal and informal) for wildlife use interact.			X	I conducted structured interviews with 71 residents and 27 representatives of the Management Council of the SDRPP about their knowledge and compliance with informal and the formal norms. Then we carried out a consensus analysis between local and external comprehension on these institutions.
Analyse how formal institutions are understood by the local users and how they are implemented (or not) by enforcement agencies.		X		There was one law enforcement event during the study period, but it was not possible to analyse how it was implemented. It was possible, however, to interview some representatives of state agencies on their perceptions of the legitimacy of the rules concerning wildlife use.

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

Participation of local residents in the programme was broad and representative, however not all of the residents who initially were interested in participating actually provided us with information about their hunting events throughout the entire study period. We understand this hesitation as a

result of the ambiguous status of hunting in Brazilian law, and perhaps insufficient time to develop adequate relationships of trust and confidence with all participants. Thus, it is always expected that the participation will increase over time as these relationships are strengthened. Visiting all five communities periodically, I was able to increase acceptance and comprehension about the relevance of the programme for the communities as well as to accompany data entry as often as possible. Still it was hard to gather complete information during this initial year of monitoring, for example the exact weight of the animals hunted.

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

- I. 71% (n=74) of the families from all five communities agreed to participate in the programme at least initially: especially considering the ambiguous status of hunting in Brazilian law, this reflects a relatively high level of acceptance by local people of the participatory monitoring programme in a volunteer manner. Additionally, in the first year of the programme we gathered information about more than 500 hunting events representing the minimum intake of bushmeat for approximately 100 families. These indicators are similar of the ones from the Mamirauá Sustainable Development Institute monitoring programme of wildlife use, a well established programme in the Amazonas State since 2002.
- II. A total of 62 interviews provided detailed descriptions of the informal institutions, rules and that regulate some aspects of hunting at the local level. This information will be used to improve and update the rules for Management Plan of the SDRPP so that they are more adequate to the local socioecological context;
- III. Emerging from these interviews, analysis of the local system for managing *barreiros* (licks used by animals seeking mineral salt from the soil) was especially important because it involves regulation of areas that are considered critical for wildlife conservation – both for local people and researchers - especially for tapirs (*Tapirus terrestris*). Access to salt licks is strictly controlled by hunters, and there are complex norms and ethics associated with maintaining the *barreiros*, including social taboos that ritually limit the pressure on these special places for wildlife, most notably tapirs which are highly endangered in many parts of the Amazon.

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

The involvement of local communities was essential for the development of this study since it was based on participatory monitoring and relationships of trust. Through the interviews we were able to understand important aspects about the hunting practices and the institutional systems that regulate wildlife use in those communities. Without their receptivity and trust this wouldn't be possible. Acceptance and participation in the monitoring programme was broadly distributed among the study communities, we were able to draw conclusions about the overall intake of bushmeat and about the effectiveness of some formal and informal rules for wildlife use.

5. Are there any plans to continue this work?

Yes. As result of the acceptance and comprehension by local people of the usefulness and importance of the monitoring programme, we plan to continue the monitoring programme in all five communities, investing in further capacity building for the monitors that already provide us with

information about their hunting events while also expanding the programme to four other communities of the SDRPP. These new communities use areas of *várzea* (forests that periodically submerge) in their daily activities. By expanding the programme to these areas, it will be possible to compare the different patterns and strategies of the hunters in different environments and also contribute to generate better information for decision making on wildlife management throughout the Reserve. Natural resources management strategies are being compiled in the SDRPP Management Plan that will be completed in 2014. Thus, reliable data about wildlife use will allow the elaboration of institutions more suitable to the socioecological context.

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

This work is part of my Master's project at the Instituto Nacional de Pesquisas Amazônicas (INPA, Manaus, Brazil). The results are described and discussed on my MS thesis, which will become accessible online as of September 2013 and from which will expect at least 3 publications (*in prep*) in peer reviewed journals. Parts of the results were already presented at three academic events:

- I. VIEIRA, M. A. R. M.; Muhlen, E. M.; Shepard, G. H. Monitoramento participativo como ferramenta para gestão da caça: estudo de caso na RDS Piagaçu-Purus, AM. 2013. X Simpósio sobre Conservação e Manejo Participativo na Amazônia. Instituto de Desenvolvimento Sustentável Mamirauá, Tefé, AM, Brazil;
- II. VIEIRA, M. A. R. M.; Shepard, G. H. O tabu na conservação: manejo local da caça na RDS Piagaçu-Purus, AM. 2012. IX Simpósio Brasileiro de Etnobiologia e Etnoecologia. Universidade Federal de Santa Catarina, Florianópolis, SC, Brazil; and
- III. MUHLEN, E. M. ; VIEIRA, M. A. R. M. Aspectos biológicos e etnobiológicos da gestão da fauna caçada na RDS Piagaçu-Purus, AM. 2012. IX Seminário de Apoio à Pesquisa. Instituto de Desenvolvimento Sustentável Mamirauá, Tefé, AM, Brazil.

The results were presented in April 2013 to the local residents of all five communities where the work was conducted, during which time we discussed the results and the interest of the participants on the continuity of the monitoring programme. We intend to produce an educational booklet to be used at the schools with the results of the present work. We plan to build capacity for the participatory analysis of the results and carry out discussion sessions about the results in the communities at the end of every year of data collection. We will also present the results at the next Management Council of the SDRPP meeting, where residents of all communities of the Reserve and external stakeholders (government, third sector, researchers) partake in decision making about natural resource management strategies.

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 Rufford Foundation grant was used from April 2012 to April 2013. The RSG was fundamental for the implementation of the monitoring programme, allowing investment in field materials and logistics in order to carry out more frequent trips to accompany the monitoring. The project began in October 2012, when the Instituto Piagaçu (IPI), the organisation that supports this work, signed an institutional partnership with the Mamirauá Sustainable Development Institute (Instituto de Desenvolvimento Sustentável Mamirauá - IDSM), which, in turn, is financed by the Brazilian Science, Technology and Innovation Ministry (Ministério de Ciência, Tecnologia e Inovação – MCTI). Since then, this research also has had financial support from the IDSM through the partnership with IPI,

which guarantees the continuity of the monitoring in the five communities and supplies two of the researchers involved with this project with research scholarships. Additional funds, however, would allow us to expand the monitoring programme to more communities inside the SDRPP, to invest in capacity building for the monitors and, above all, to do more research about special institutions such as those involving the use of *barreiros* and their influence on the actual conservation of species preferentially hunted.

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.

Local exchange rate: £1.0 = R\$3.39

Item	Budgeted Amount (£)	Actual Amount (£)	Difference (£)	Comments
Field Supplies	531	322.29	208.71	We expected to buy a lantern with battery to be carried on the boat and fuel barrels, but IPI has lent us when needed.
Scales (200kg)	213	177.91	35.09	As it was the first attempt to ask for the monitors to weight the bushmeat they hunted, we opted to invest in scales only for the two communities with broader participation.
Voice Recorder	89	26.69	62.31	-
Datasheet for self-monitoring (copies)	107	120	-13	-
GPS Garmin	425	167.83	257.17	We had budgeted a GPS Garmim Map 60CSX. As it was not available at the store, we opted to buy a simpler model eTrex since it would be sufficient to be used for navigating in open areas.
Outboard motor	1875	1334.32	540.68	We bought the outboard motor at a store recommended by IPI and IDSM and got a good discount for it.
Field assistant	584	711.64	-127.64	We had additional spends with field assistants due to more activities during fieldwork, especially involving visits to all the monitors periodically.
Fuel	1217	1510	-293	Fuel had an increase from £0.86 (initially budgeted) to £0.92. We also visited more frequently the monitors.
Boat tickets	284	290	-6	-
Outboard motor maintenance	171	148.26	22.74	-
Food	426	561.76	-135.76	Additional spending with food were also due to more time at fieldwork.
Notebook Dell	0	561.3	-561.3	It was not initially budgeted, but it was

Inspiron				essential for field activities and it was possible to buy with the adjustments in the other supplies.
Total	5922	5932	-10	We had a £10 bonus from the amount initially asked.

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

The expansion of the monitoring programme, aside from supplying information at a greater spatial scale, is essential to providing reliable information about hunting practices that can inform decision making on wildlife use and conservation more adapted to local particularities. Capacity building with the residents is also required to involve local people more in the process of data analysis, formulation of hypotheses, and collection of more detailed data. One of the main results of the interviews was the description of the institutional system that regulates the use of *barreiros*. We believe that these areas deserve more attention in order to analyse if these traditional, local institutions actually represent a way of limiting hunting pressure in these places and thus protecting some species from overhunting.

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?

We used The Rufford Foundation logo on 2 banners presented at academic events:

- I. VIEIRA, M. A. R. M.; Muhlen, E. M.; Shepard, G. H. Monitoramento participativo como ferramenta para gestão da caça: estudo de caso na RDS Piagaçu-Purus, AM. 2013. X Simpósio sobre Conservação e Manejo Participativo na Amazônia. Instituto de Desenvolvimento Sustentável Mamirauá, Tefé, AM, Brazil;
- II. VIEIRA, M. A. R. M.; Shepard, G. H. O tabu na conservação: manejo local da caça na RDS Piagaçu-Purus, AM. 2012. IX Simpósio Brasileiro de Etnobiologia e Etnoecologia. Universidade Federal de Santa Catarina, Florianópolis, SC, Brazil.

11. Any other comments?

We thank for the Rufford Foundation financial support which allowed the implementation of a participatory monitoring programme of wildlife use in the context of co-management of Protected Areas in the Brazilian Amazon. This way we were able to improve information gathering about wildlife status, local people subsistence and management strategies.