

## The Rufford Foundation Final Report

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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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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Grant Recipient Details	
<b>Your name</b>	Rebecca Borges e Silva
<b>Project title</b>	Spatial planning in Brazilian mangroves: promoting awareness of zoning strategies in protected areas using an ecosystem services approach
<b>RSG reference</b>	20310-1
<b>Reporting period</b>	January 2017 – February 2019
<b>Amount of grant</b>	£4900
<b>Your email address</b>	rebecca.borges@zmt-bremen.de
<b>Date of this report</b>	28 February 2019

**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
Participatory mapping with local users and other stakeholders				We were able to reach a large number of participants (ca. 150) who took part in the interviews and workshops.
Spatialization and analysis of participatory mapping				The analyses necessary for the production of the awareness-raising material have been completed. Further analyses are currently being performed as part of my (RBS) PhD project, and will produce, at the end of 2019, a policy brief directed to managers.
Production of outreach material based on the participatory mapping and interviews with local stakeholders				We produced brochures and a video about the protected areas. We had originally planned to prepare ppt presentations and flyers as well. However, we concluded, towards the end of the project, that flyers and presentations would not be so useful for our context. Flyers would be way too short, and ppts would have to be used by other researchers or managers, but we did not perceive interest from these groups. We had also planned to discuss the zones in the material. During our interviews, though, we noticed that most of the local stakeholders, especially the local users (fishers, e.g.), did not even have an idea about the geographical dimension of the protected area, so presenting the current zones would be too advanced for most of them. We discuss this point further down below.
Based on the results of the interviews and the				In 2017, we started the feedback interviews and workshops, where

selected recommendations, awareness material will be designed and printed for distribution and used in awareness events, including feedback interviews and workshops.				the material produced until then was evaluated and improved. We were able to officially launch the material during the XVI Congress of the International Ethnobiology Society (Belém, August 2018). Since then, we have been distributing the material to our research collaborators and local leaders. We could not, however, organize a final feedback workshop to explain the results and distribute the material, including the newly produced video, due to bad timing of the end of the project in relation to this time of the year, when managers are busy participation in the monitoring of the crab temporal closure. We plan to do it with the presentation of the policy brief next semester, provided we raise the necessary funds.
Feedback from local actors on spatialized results				We did a first round of feedback on the spatial results in 2017, but could not, as explained above, organise a final feedback workshop, where we would try to get together most of the participants to discuss the spatial results of the project.
Introductory GIS course for university students and other interested researchers				The course was conducted in November 2017. It was reported on in one of our updates.
GIS workshop for villagers				We chose not to perform this activity, because we noticed that most local users (villagers) do not have access to hardware (GPS devices or even smartphones), where they could apply the skills learned. We also noticed that there was no interest from the users in such a workshop.

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

Regarding the local perceptions about the protected areas, we had assumed that most people had basic knowledge about the nature of the reserves and about

what they actually mean. As expected, during the interviews and workshops, we learned that most collaborators, including professors and managers, had very little knowledge, if any, about the zoning that one of the protected areas already has. We came to realise, however, that most people had really no clue what this conservation strategy means, that the reserve has a geographic area (where some of them live!), the empowerment that the protected area (theoretically) provides, its instruments, and basic organisational structure.

We then thought that it made no sense to teach about one aspect of a whole, if most local stakeholders have very little knowledge about the whole itself. For this reason, we decided to first promote awareness about the reserve, so we had to redirect the focus from the zoning to the bigger picture of management and the reserve itself. Even though we did discuss the matter of the zoning, for the awareness-raising material we focused on showing the geographical aspect of the protected area, that it is an actual area, and not just a subsidy programme or a government aid project. (It might seem strange, because in English the term "protected area" clearly indicates the presence of an area in the mix. But, in this specific context, people know the reserve only by its acronym ("RESEX"), which "hides" the (very important) geographical aspect inherent to this conservation strategy.

Due to the national financial crisis in Brazil, it became harder to get free transportation from the university, on which we had counted for this project. For this reason, we had to either pay for some aspects of the transportation provided by the university (gas, driver, or washing) or to arrange some private transportation deals, such as asking a friend to drive for us (and paying for the gas and a daily allowance).

Still regarding the budget, we soon realised that the local university could not afford to buy some basic material for the project. For this reason, we had to purchase equipment and other material, which was donated to the local laboratory (LABPEXCA/UFGA) at the end of the project.

Despite our efforts to initiate the discussion on the protected area management, we doubt that action will be taken to apply the recommendations we make using the results of this project any time in the near future. This is due to the current political zeitgeist Brazil is experiencing, with a federal government that threatens the very existence of the protected areas and that has, continuing the strategy from the last government, systematically cut the budget for environmental conservation and research in the country. We hope to encounter a better implementation momentum in the next years, but that largely depends on the continuation or interruption of the current government's anti-environment measures.

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

1. The production of outreach material (the most simple and reader-friendly produced so far in the region). It can be easily reproduced, adapted, and further developed.

2. We started a relevant discussion on the zoning of the two protected areas, both for the update (Bragança) and for the creation of the new zoning plan (Tracuateua).
3. We collected innovated data with participatory mapping and GPS tracking of fishers' movements in and in-between the two protected areas, which can be used to tackle emergent spatial conflicts among users.

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

Since the conception of the PhD project, the needs of local communities have been heard and matched to my (RBS) expertise and research needs raised by academia, both locally and worldwide. We also filtered down our actions based on the 2016-interviews with local organisations, including the managing agency (ICMBio) and the city hall, besides, interviews with local users and researchers. Throughout the activities, we were always involving local stakeholders, communicating about the methods and the results, but also listening to further needs and concerns that will help shape the future developments of this project, both in terms of applications for management and the continuation of the spatial research.

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

Yes. We would like to both continue to push for an integrated spatial planning and management and continue to raise awareness about the protected areas and the need for (better) zoning strategies. I (RBS) will now take a break to finish my PhD and will be able to return to the activities of this zoning project next year (2020). We now plan to advance with the research and aim for implementation in a couple of years, when the political momentum will (hopefully) be more welcoming of pro-environment measures, especially those that focus on "more sophisticated" spatial planning strategies (those that go beyond the mere creation of protected areas and expand to areas that would help combat the so-called "paper parks"), which is actually the ultimate goal of this project.

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

Three publications are being prepared on the results of this project. We plan to publish them in open-access journals, with the help of a special funding by ZMT and the University of Bremen. After the completion of my (RBS) PhD, I will also prepare a policy brief to decision makers, with the help of the Office for Knowledge Exchange at ZMT. Plus, the very essence of this project, awareness raising, involved sharing the results with local stakeholders with the help of the outreach material.

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

Our project took 2 years, according to the original plan.

**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.**

Exchange rate used obtained from oanda.com for January 6<sup>th</sup> 2017:

1 GBP = 1.17 EUR

1 GBP = 3.96 BRL

1 EUR = 3.38 BRL

The amount received on the 6<sup>th</sup> of January 2017 in my (RBS) bank account was **5418.91** euros, which is equivalent, according to the exchange rate presented above, to **4627**.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Printing services	2000	577	1423	We were offered to use some extra budget left in a ZMT project to print a lot of material in 2017, which helped us save money in this item and reallocate it to other aspects of the project.
Material design	350	625		We decided to produce a high-quality, longer video about the protected areas. That is why our budget was higher than initially calculated.
Assistance	1300	1548	248	The field work and some of the data analyses demanded help from local university students. We re-distributed the money saved on the printing to this area.
Transportation	1250	1353	103	We also had to spend slightly more than initially estimated on transportation because of the cuts in university-funded transportation.
Purchases		794	794	The laboratory lack office and field work material, ranging from pens, notebooks, voice recorder, GPS devices, etc., which we needed for the field work, so we had to reallocate some of the budget to this category.
<b>TOTAL</b>	<b>4900</b>	<b>4897</b>	<b>-3</b>	

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

It is important now to add alternative methods to participatory mapping. We already started the GPS tracking, which is innovative and extremely relevant for the

region, considering the dominance of small-scale fisheries. We would now like to move on to drone mapping, which would also contribute to producing awareness-raising material, but mainly to understanding finer scales processes and activities going on in the mangroves.

We also see the need to implement the proposed integrated approach also to this project, expanding it in next steps to the immediately connected mangrove areas (two protected areas to the east and a soon-to-be-declared area to the west).

In terms of implementation, it is important to now push for changes in the current regulations, based on the final policy recommendations we will make in a few months. This will take some degree of lobbying with the local management structures: myriad meetings, material, and even further research, which will be likely suggested by the managing body.

**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, we included the logo in all produced material, including magnets, t-shirts, and mugs, besides the brochure and video produced.

**11. Any other comments?**

I am looking forward to being able to continue with this project. The new regulation, however, whereby applicants have to present an organisation's bank account, will likely be an extra challenge to further developing the activities, because it will require partnering up with an external organisation which will, on its turn, of course, request that part of the budget be used for activities that meet the interests of the organisation itself, which might not necessarily entirely match this project's goals. Especially considering the small amount of the grant, this re-allocation of budgetary items in order to accommodate an organisational partner will not only reduce the project's ability to meet its own goals, but also increase the complexity of the project logistics, and possibly even reduce the main applicant's autonomy to steer the project activities in a way that he or she can develop project management skills, as I believe I did during the execution of this small project.

Indeed, to me (RBS), this project was a great opportunity to develop leadership skills, besides all the managerial aspects of my work that I had to develop. I hope other early career scientists and conservationists also get the chance to acquire this valuable experience in conducting conservation projects and in contributing to environmental conservation.