

## Final Evaluation Report

---

Your Details	
<b>Full Name</b>	Indira Angela Luza Eyzaguirre
<b>Project Title</b>	Socio-ecological knowledge network of mangrove forests to access conservation opportunities for the strengthening of communities in marine protected areas
<b>Application ID</b>	28236-1
<b>Grant Amount</b>	1st Rufford Small Grant (£6,000)
<b>Email Address</b>	indira.eyza@gmail.com
<b>Date of this Report</b>	30/10/2021
<b>Project Bio</b>	<a href="https://campsite.bio/mangrovenetwork">https://campsite.bio/mangrovenetwork</a>

**1. 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
i) the preferences and motivations of stakeholders that manage those resources and influence to human well-being				Participatory methodologies were able to be applied in fieldwork.
ii) participatory identification of the mangrove ecosystem services				This goal was achieved even though there was a setback caused by the pandemic.
iii) social networks and relationships among the stakeholders				The results of this objective are in the process of elaboration and analysis of the collected data.
iv) socio-environmental training for students (plus)				Training for students and other partners is a seed that was left behind by this project.
v) Project outreach material (plus)				Communication is one of the most powerful tools for environmental education, but the results of this project were disseminated in different media (communication report).

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

Fieldwork in Brazil was planned for 2020 but the pandemic paralysed all activities. Therefore, this was the main difficulty for the execution of activities and continuation of the project, delaying the delivery of the final report. In fact, it is an unexpected situation but the project was not affected as far as the deliverables and objectives were achieved, the same ones that were achieved fulfilling the proposal's goals. In fact, this time was necessary not only to plan the field in the best way but also to produce extra materials and plan other ideas to continue future projects based on this one.

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

The first connections of the socio-ecological knowledge network were made possible and this was relevant to further understand the social-ecological system of

mangroves in marine protected areas (MPAs) in Peru and Brazil. Thus, in order to strengthen access to conservation opportunities for mangrove guardians, the following results were obtained:

**Environmental representation to manage ecosystem services:**

Scientific and traditional knowledge are important to define conservation strategies, since from the representation of the different actors that work in the environmental governance of the mangrove, it is possible to know and identify the ecosystem services. For example, participatory mappings were needed to identify ecosystem services from traditional knowledge, and online questionnaires were applied to identify services from scientific knowledge with mangrove researchers. The results are relevant and can be included in MPA management plans.



Figure 1. Participatory mapping, Peru, 2020



Figure 2. Participatory mapping, Brazil, 2021

**Social networks for environmental governance:**

Knowledge of the functioning of social networks of actors involved in MPAs is the first step to define conservation strategies, since through participatory methodologies it is possible to know the relationships, preferences and motivations of key stakeholders who manage the mangrove resources.

**Communication for conservation:**

Educommunication is a tool recently applied to the environmental area, it is undoubtedly a relevant step in the construction of a participatory conservation strategy that includes the community. The training for students was relevant to raise awareness and motivate them to do research related to the social-ecological system, in addition the materials produced in this project will support the construction of a larger educommunication project in the near future. These materials can be replicated and serve as a basis for other conservation projects in

other ecosystems.

**4. Briefly describe the involvement of local communities and how they have benefited from the project.**

The constructed networks are important because they were bridges that linked scientific and traditional knowledge, and this is an important fact for this research, since without this link it is not possible to think or plan conservation strategies for mangroves. In this sense, the network of key stakeholders, in the communication report of this project (policy brief), indicates the actors involved throughout this constructive process, such as the government for the administration of MPAs, local municipalities for access to information about the communities (open government), the academy for the access and inclusion of key researchers, in addition to the involvement of the community in the applied participatory methodologies. All key stakeholders were benefited in some way, through access to information about mangroves, which led to awareness about their conservation, access to technical results, access to training in participatory methodologies and in the benefit of the families that participated in this project. There is no doubt that access to information on topics such as ecosystem services is extremely important for the future planning of the MPAs involved.

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

Yes, there are plans to continue this work, with scientific dissemination projects, audio-visual media production and even research projects that continue to work towards the conservation of the mangrove's social-ecological system. In fact, this first small grant was the seed planted that shed light on the way to continue other actions, it was the basis for defining a working framework and it was a great opportunity to think about participatory projects based on the results obtained in the study areas extending to other study areas in the same ecosystem. The first result of the continuity of the project is the toolkit with virtual outreach material: <https://campsite.bio/mangrovenetwork>

Another result is audio-visual materials, two videos about social-ecological knowledge of Peruvian and Brazilian mangroves. Both videos will be allocated on YouTube of the future project: "Observatory mangrove" project with the aim to give visibility to mangrove voices that involve in environmental governance.

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

The results are being disseminated in two ways: 1) in academic circles with a technical language based on the scientific publications that are being prepared, the same ones that will be published at the end of doctoral studies still early in 2023; and 2) in artistic circles from educommunication with elaborated materials, such as a booklet on mangroves and their ecosystem services, policy brief on MPAs in favour of access and democratisation of information available to decision makers and other key stakeholders. The materials were delivered on the personalised USB flash drives produced by the project to key stakeholders. In addition, a workshop was held on the importance of ecosystem services, MPAs and their conservation in communities in Brazil with support from key stakeholders such as the Mangues da

Amazônia project that has been taking place in Brazil. Likewise, previous results and dissemination results (maps) were delivered to community leaders in Brazil (See more in the communication report).



Figure 3: Rufford in number (see more in communication report)

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

The schedule of the work plan in Peru was fulfilled as per the proposed schedule but the work in Brazil had a retraction as a result of the pandemic, the objectives were successfully met. The subsidy was used in two periods, the first period comprised fieldwork in Peru (2020) and the second period comprised fieldwork in Brazil (2021).

**8. Budget: 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. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.**

Item	Budgeted Amount	Actual Amount	Difference	Comments
Compensation	1145	1621	+476	Includes participation of community assistants and practitioners in Peru and Brazil.
Equipment	1244	1186	-58	Price on offer of some equipment, although purchase freight price has been included. The values changed due to the previous request for the acquisition of high-powered statistical software. The camera included in the budget was removed but a smartphone with a good quality camera was purchased.

Food	1467	818	-649	Food for activities, contract with a group of women from the community. Purchase of food in supermarkets and local stores.
Travel	2144	2376	+232	Transport in Peru includes the local assistant pass and transport in Brazil, price increase caused by the pandemic.
<b>TOTAL</b>	<b>6000</b>	<b>6001</b>	<b>+1</b>	

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

I loved doing the project, it was a spectacular experience that The Rufford Foundation gave me. The next steps are to give continuity to this line of conservation project, working with citizen science based on traditional knowledge is really interesting and necessary for the conservation of ecosystems and their ecosystem services. For this reason, I am going to work with comparative projects in more socio-ecological systems in other Latin American countries and who knows in the future in other developing continents. Apart from this, I will give continuity to other socio-environmental projects through the Laboratório de Ecologia de Manguezal (LAMA), the Sarambuí Association in Brazil and also in Peru through the Resiliencia Innovadora Association.

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

Yes, I used the logo in the distributed materials, such as USB flash drive, certificates, programmed lectures and dissemination products, apart from other publications on the Internet (for more information see the project communication report).

**11. Please provide a full list of all the members of your team and briefly what was their role in the project.**

The work team in Peru was five graduate students in logistical support for fieldwork in Peru. The work team in Brazil consisted of two researchers who supported the logistics of fieldwork. Furthermore, the logistics not working in the field have support from the Laboratório de Ecologia de Manguezal (LAMA - <https://campsite.bio/lama>) and the Mangues da Amazônia Project (<https://linktr.ee/Manguesdaamazonia>).

**12. Any other comments?**

This was definitely a nice opportunity for me, the work they do supporting conservation projects is incredible. I would like to register my thanks to The Rufford Foundation, to the communities I visited and to the people I met, to all the institutions that were involved in Peru and Brazil, to the entire team that accompanied me in the field, to my advisor and friend Marcus Fernandes for always believing in me and giving me the motivation to immerse myself in science, research and projects, to my mother, my brothers and my friend Rebecca Borges who made me know many new tools and even recommended this grant to me. I am very

happy to have carried out this project.

**Contact Details**

**E-mail:** [indira.eyza@gmail.com](mailto:indira.eyza@gmail.com)

**Personal Website:** <https://campsite.bio/indiraeyzaguirre>

**Project Bio:** <https://campsite.bio/mangrovenetwork>

**Institutional website:** <https://campsite.bio/lama> <https://campsite.bio/sarambui>