

Final Evaluation Report

Your Details	
Full Name	Priscillia Miard
Project Title	Promoting Non-Protected Areas as Biodiversity Hotspots for Ecotourism Programs with a Training for Wildlife-Friendly Research and Animal Spotting in Sabah
Application ID	37092-1
Date of this Report	22/04/2024

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
<p>To conduct transects in different site in the west coast of Sabah to update the population distribution of nocturnal mammals both inside and outside protected areas.</p>				<p>We surveyed 10 sites: Crocker range, Crocker range inobong, Hutan Lipur Kawang, Kinabalu park, Klias forest reserve, UMS Campus, Kampung Padas Damit, Kampung Kawang, Kota Belud, Kionsom. These include five protected and five non-protected areas.</p> <p>Three publications are planned from this field work:</p> <ul style="list-style-type: none"> - UMS campus biodiversity and impact of human activities on wildlife activity pattern. - Promoting Non-Protected Areas as Biodiversity Hotspots for Ecotourism: A case study of Sabah West Coast. - Nightjar population assessment in the west coast of Sabah.
<p>To identify areas of high conservation values suitable for ecotourism activities outside of protected areas</p>				<p>Only two sites have been identified as highly suitable for ecotourism activities: UMS Campus and Kampung Kawang. Biodiversity even in protected areas was low and in certain villages almost non-existent due to high hunting pressure. The two sites identified have a particular background, one being a university campus and the other</p>

				one a Muslim village where hunting does not occur. A follow-up study is needed in the area with a focus on social sciences and villagers local knowledge of wildlife before the development of new ecotourism products. UMS campus on the other side will become a pilot site for a new tourism product involving nocturnal forest walk and student training.
To compare real detection of mammals using red light and thermal imaging				Using pure red LED instead of a red filter on a white light has shown a 100 % first detection by eyeshine compared to a thermal camera versus 65% when a red filter was used. This can be explained by the reduced light intensity and distance of effective field of vision. This has implication for mammal sightings both for research and tourism purposes.
To conduct training workshops with local tour guides and stakeholders including theoretical and practical training as well as discussion to fit the need of the community				We have conducted two training workshops, one at the Rainforest Discovery Centre in Sepilok (22 nd - 23 rd March 2023) and one at the Rainforest Borneo Lodge in Danum Valley (15 th -17 th March 2024). The first workshop was attended by 30 people from nine different agencies. The second one was attended by 14 tour guides from the resort.

2. Describe the three most important outcomes of your project.

a). In term of research, we have a first assessment of nocturnal species on the west coast of Sabah. We have collected data on at least 18 species of mammals and nocturnal birds. Most research in the state is conducted on the east coast due to the presence of many protected areas. When I first told people I will do research on this

side of Sabah the first comment I got was there is no wildlife in Kota Kinabalu area. Which I rapidly proved people wrong, and this again is only due to a lack of awareness but also the availability of ecotourism product in this part of the state. One of the main interesting results was the low biodiversity record in some protected areas indicating either a high hunting pressure or that wildlife has adapted to living closer to people in areas such as plantations, farms and villages.

b). Ecotourism training and new product development

With our partnership with the Rainforest Discovery Centre (RDC) for the workshop on nocturnal tourism practices we have achieved another important outcome. The RDC will become a compulsory red-light place for nocturnal activities starting April 2024. This will be enhanced by a reduced group number of five people maximum compared to 10-20 before and an increase in prices. This increase in prices is important to support the guide and their personal development as well as an enhanced experience for the guests. This is probably a first in the world at this scale and a positive outcome.

After our workshop at the Borneo Rainforest lodge, the management has agreed to shift all their activities to red light soon.

Another product in development is a night tourism activity package at UMS campus involving UMS green campus and the local student. This will be developed as a training programme for students with credits for the course focusing on nocturnal research methods but also with an ecotourism and financing part in it. Putting a value on nature activities is a way to teach the students the value of their work and to have other people value it too.

c). Conservation.

As a side outcome of this project, we have seen more guides starting to use red light on their own which is a good start. They still will need training on how to use it properly as they still use both red and white light together. One impact that we discovered of night tourism using bright white light is that some animals were seen to have substantial eye damage due to their exposition to it every night. The shift to red light for those activities will enhance certain species health condition and inherently help their conservation. We are working on a follow up project to quantify this eye damage impact and inform ecotourism practices.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

The main unforeseen difficulty for this project was the start of the field work as the weather was bad and we had to delay for 3 months. This was not a major issue as timing was still OK to conduct the rest.

Another difficulty was to get in touch with government offices regarding conducting tour guide training. A discussion was started but it never happened due to a lack of response from them. This was tackled by contacting major places already conducting night walk to organise workshop training and activities. Even if this project is finished the training will still be ongoing.

4. Describe the involvement of local communities and how they have benefited from the project.

During our field study we had three students joining us at different time or places to conduct the transects. Through hands-on involvement, they learnt about efficient surveying techniques and how to spot nocturnal mammals without negatively impacting them with white light. They can later apply their knowledge to their future studies. I have also recruited a local master's student and a final year degree student for a follow up study on the impact of white light. We also had over 60 participants in our two workshops and follow ups are being conducted.

Videos and photos can be viewed in our Social media:

Workshop In RDC in Sepilok: <https://www.facebook.com/reel/1153337862769630>

<https://www.facebook.com/NightSpottingProject/posts/pfbid02fFHBytG6cyjHp9c93GtGogyQZRYacceVaYnC63MjUJonRtjMriKsA659FTNo8Qs9I>

Field work:

Kinabatangan: <https://www.facebook.com/reel/995908635166286>

UMS campus:

<https://www.facebook.com/photo/?fbid=249293957788083&set=a.186194577431355>

<https://www.facebook.com/reel/1087396505295013>

Kota Kinabalu: <https://www.facebook.com/reel/5496155870484349>

<https://www.facebook.com/reel/817674076181653>

Kinabalu park:

<https://www.facebook.com/photo/?fbid=191030376947775&set=a.186194577431355>

Crocker range:

<https://www.facebook.com/photo/?fbid=191518006899012&set=a.186194577431355>

Besides, I have been collaborating with the rainforest discovery centre for a long-term study site and we hired a long-term research assistant from the local community. One of the students who just started his master's, Sahlan bin Salam, was helping us for field survey and decided to join us for his own project.

We organised some outreach events there:

<https://www.facebook.com/NightSpottingProject/posts/pfbid034nxBxFDotJtirdUfBa4NQmvp1YGebTvcEHRZNBRe1Q2sxmD5YPakZLk2CT6Yhiunl>

Junior ranger night walk:

[https://www.facebook.com/NightSpottingProject/posts/pfbid02KkdPEu8V42Yq991d7sLPS4CaUPnjYoNtieVVPd5qT2Pf9ekio4\\$jycxgzGUN3tUl](https://www.facebook.com/NightSpottingProject/posts/pfbid02KkdPEu8V42Yq991d7sLPS4CaUPnjYoNtieVVPd5qT2Pf9ekio4$jycxgzGUN3tUl)

We have also conducted an eco-week on Langkawi Island in partnership with the Darulaman Sanctuary

<https://www.facebook.com/photo/?fbid=891255486339295&set=a.506403564824491>

5. Are there any plans to continue this work?

Yes, the long-term aim for this project under the Night Spotting Project (NSP) is to establish a guideline for nocturnal activities in the state of Sabah as an example that we hope will be followed in other places worldwide. We are also planning a book publication with Springer on the topic of nocturnal research, conservation and tourism that should be published in 2026. I am now personally employed as a senior lecturer in the Universiti Malaysia Sabah which would allow me to continue this work.

We have also established a long-term project at the rainforest discovery centre in Sepilok where we hope to extend our work to multiple species and aspects.

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

I have been sharing project updates on the NSP Facebook page (<https://www.facebook.com/NightSpottingProject/> with now 1.9K likes as of 20th March 2024) and Instagram page (<https://www.instagram.com/nightspottingproject/> with now 1140 followers). Most people expressed strong interest about our work at night and impact of light used. I hope that through direct interaction with the public during public workshops, road shows and exhibitions I will attract even more people to be interested in this topic.

As mentioned above we are working on a book but also three publications from this project:

- UMS campus biodiversity and impact of human activities on wildlife activity pattern.
- Promoting Non-Protected Areas as Biodiversity Hotspots for Ecotourism: A case study of Sabah West Coast
- Nightjar population assessment in the west coast of Sabah

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

The important steps for this project in the future are based on the following:

1. Research. Expand the research to more study species and getting more local students and volunteers involved in nocturnal research and application for tourism and conservation.
2. Nocturnal activities training. Provide more training workshop and awareness programme to local residents and also create more educational materials for university students and tour guides. Continue to collaborate with more institutions for more engaging workshops.
3. Conservation. We hope to play a vital role in Sabah conservation of nocturnal mammal species through updated knowledge and practices for both research and ecotourism activities.

8. 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?

No as we did not create or print materials as part of this project but we used The Rufford Foundation logo in the below materials:

- Slides presentations during talks and workshops.
- Poster presentations at conferences.

9. Provide a full list of all the members of your team and their role in the project.

My team consist of the following members:

- Prof Henry Bernard who is a lecturer and Associate Professor at the Institute for Tropical Biology and Conservation, Universiti Malaysia Sabah working on multiple species in Sabah and topics such as distribution, effect of deforestation and mammal behaviour. He is an expert in mammals and helped us in the study design and contacts as a local collaborator.
- Interns:
 - 1) Harry Donneli, Final year degree student, University of Kent (UK). Helped with the field data collection.

- 2) Sahlan bin Salam, Master student, Universiti Malaysia Sabah (Malaysia). Helped with the field data collection and workshop in RDC, Sepilok.
- 3) Siti Anisa binti Abdul Nasser, Final year degree student, Universiti Malaysia Sabah (Malaysia). Helped with the field data collection.

10. Any other comments?

I am incredibly grateful for the support provided through the Rufford 1st Small Grant. This grant has been instrumental in launching our project and enabling us to accomplish significant milestones in a relatively short period of time.

With the resources provided, we have been able to conduct vital research, engage local communities, and initiate sustainable eco-tourism activities, all of which contribute to the preservation of biodiversity and the wellbeing of local communities.