Final Evaluation Report

Your Details	
Full Name	Nesha Ichida
Project Title	Understanding elasmobranch diversity and abundance in Rote Island, Indonesia through fish market surveys and Baited Remote Underwater Video Surveys (BRUVs)
Application ID	27675-1
Grant Amount	4,985
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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
Understanding the biodiversity and abundance of elasmobranch of Rote Island.			■	A total of 26 different species of elasmobranch have been recorded through fisheries dependent and independent surveys.
Conduct fisheries-dependent elasmobranch surveys at key fish landing sites in Rote			■	This survey was conducted from June 2019 - October 2020. A couple of local fishermen were hired after the project leader could no longer be in the field due to COVID-19 to continue the survey. We also conducted interviews with the local fishermen to understand the historical catch and the livelihood dependency.
Conduct fisheries-independent elasmobranch diversity surveys on the south and western side of Rote using BRUVs.			■	We successfully deployed 150 BRUV rigs but unfortunately only 137 recordings were viable. We have attempted to redeploy the failed BRUV drops, but unfortunately, they were still unsuccessful. 137 recordings have resulted in enough data to conclude the difference in abundance and diversity between the zonations.
Conduct meetings with local stakeholders and governmental MPA authorities to present our project findings and discuss future conservation actions.			■	Due to unforeseen circumstances from the Covid-19 pandemic, we were unable to conduct a physical meeting with the stakeholders. But thanks to a collaboration effort with another Rufford awardee from 2020, Danie Al Malik, whose work focuses on genetic connectivity of spinetail devil rays, we were able to conduct a live webinar with the different stakeholders in the Savu Sea region. Among the 600+ participants joining the webinar were students from the local university UNDANA, local NGOs, MPA management authority and local communities. We also did another separate

				presentation about the study results and our conservation work to local youths and governmental tourism department of Rote, who are interested in diving and the result of our study and our work. It was very well received and there was a surge of interest from the youths and tourism department to participate in conservation efforts and MPA management of the area.

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

- A couple of camera housings got flooded during the BRUV survey, damaging the cameras. We redesigned the rigs to protect and secure the cameras with fishing wire and extra metal bars on the rigs.

- Due to Covid-19 pandemic, meetings with the local communities had to be postponed until the end of October 2020 but we were able to present the results of the project in an online webinar with 600+ participants consisting of the MPA management authority, students from local universities in the region, local NGOs and multiple other stakeholders involved with the Savu Sea MPA.

- There were a small number of failed BRUV drops i.e., rigs landed upside down, camera stopped recording and incorrect camera angle upon landing. We had a chance to redo most of them in 2019 but 13 BRUV recordings remained unusable.

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

- Preliminary baseline data on elasmobranch diversity and abundance of the west and south Rote region was gained. A total of 26 different species of elasmobranch were recorded, in which only one was observed specifically through scuba diving before the survey began, and with 14 listed as threatened on the IUCN Red List. There was no difference in abundance and diversity between the traditional fishing and no-take zones, which is an important baseline data to provide to the MPA management authority. A potentially new endemic species of catshark has been identified in the region.

- Types of fishing gears and intensity of elasmobranch catch from the region were unveiled. The majority of elasmobranch landings were opportunistically caught by hand-line fishermen onboard mini purse seine boats. Elasmobranch catches were low priced and only a few species parts were exported out of the island i.e., wedgefish fins.

- The project results will be utilised by the MPA management authority to redesign the MPA zones and management plans. Study results will be used by the MPA management authority to ensure the MPA zonation redesign considers protections for Rote's vulnerable elasmobranchs and their habitat.

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

Local communities were highly involved in data collection for both the fisheries and BRUV surveys. Cooperation of the fishermen was needed on a daily basis for catch data collection at the harbour. A few local enumerators were also hired to continue catch data collection when the project team could no longer be in the field due to the Covid-19 pandemic. A couple of local fishermen and boat boys were also present to help conduct the BRUV surveys. The results of this study will be utilised by the MPA management authority in the redesigning of the MPA zonation. Moreover, we shared the results of our survey with the local community who were very excited by the new information about their own coastal zone and they were proud to learn about the unique and rare species that are found in their waters.

5. Are there any plans to continue this work?

We are continuing the fisheries monitoring survey in west Rote, along with planning to expand the elasmobranch survey to other sites in the Savu Sea. It is clear that data such as this are critical in helping the MPA management authority on decision-making. We also have plans to continue our community-based conservation efforts in Rote by developing an empowered local community ranger patrol to help enforce MPA regulations.

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

Results and survey updates have been shared throughout the project on various social media accounts. Results have also been shared on a couple of online webinars, where 600+ local stakeholders i.e., MPA management authority, NGOs, local university students and local communities from various islands in the Savu Sea had attended. We have also presented the result to the local communities and government of west Rote during the local community scuba diving training conducted by the tourism department. We are also planning to share the results in a peer-reviewed journal and in the upcoming 3rd Indonesian Shark and Ray Symposium.

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

The grant was used from June 2019 - November 2020, 5 months longer than expected. The main reason was due to the Covid-19 pandemic, we were unable to return to the field to redo any failed BRUV deployments, but we managed to present the results at a webinar conducted by a fellow Rufford awardee also working in the Savu Sea, along with presenting the result to the local communities of Rote at the

end of October 2020. The fisheries survey was also extended for several months as we had leftover funding from the transport.

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
Fisheries survey - Interviews - Enumerator - Local stakeholders meeting	192	815	+623	Due to COVID-19 pandemic, we were able to use the stakeholder meeting budget to extend the fisheries survey for four more months and expand the study. The stakeholder meetings were conducted virtually.
Local transport - Boat transport - Land transport	2840	1941	-899	Boat transport ended up being cheaper because we increased the number of BRUV drops per trip and had in-kind support from a few resorts, who only required us to pay for fuel and captain tip instead of rental price.
Equipment - BRUV rigs - Camera - BRUV rope - Buoys - Bait - GPS + depth sounder	1953	2229	+276	A few broken equipment during the survey needed replacing and fixing, including cameras that flooded and damaged BRUV rigs.
Total	**4985**	**4985**		**Local exchange rate: £1= IDR18,050 (18 June 2019)**

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

The next important step is to assist the Savu Sea MPA management authority in expanding the survey to other parts of the Savu Sea in order to provide them with similar critical elasmobranch data. Setting up proper fisheries monitoring in other landing sites around Rote will be critical in providing further data on threatened elasmobranchs. We will be including the results of the survey into the conservation education program for the community next year, in the hopes that it will bring pride to more local Rotenese.

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?

The logo was used on our outreach video showcasing the BRUV results, and on various presentations that we gave about the study.

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

Nesha Ichida, project leader
Her role was conducting the survey and analysing the data from the surveys, along with supervising the enumerators during the survey. Her role also involves presenting the results to the local stakeholders and reporting back to Rufford.

Anissa Megia Sari, project analyst
Her role was to help in creating the GIS map of the result and helping to write the peer reviewed scientific paper of the result.

Sarah Lewis, project supervisor
Her role was to supervise the project leader and be an advisor for the project. Her extensive knowledge in elasmobranch surveys has provided beneficial knowledge in conducting the project successfully. She is also the executive director of Thrive Conservation NGO, which has provided support funding on the ground during the study.

12. Any other comments?

This project would like to thank the MPA management authority (BKKPN) for allowing the study to be commenced and welcoming the data input for the MPA zone redesign. We would also like to thank Indonesian Manta Project (Thrive Conservation) for the immense on-the-ground support they have given, including salary, accommodation and flights. And last but not least, we would like to give our gratitude for the support of the local Ndao fishermen for being collaborative and cooperative, three local resorts who have given boat sponsors to conduct the survey and our amazing group of volunteers for helping to conduct the BRUV survey.

Photo 1: *Rhychobatus australiae* sighting on one of the BRUV drops at Rote Island. Credit: Nesha Ichida

Photo 2: Presenting the result to the local youths and governmental tourism department: Credit: Steffen Knobloch

Photo 3: Presented the study result in a live webinar on conservation of Mobula rays in the Savu Sea, attended by 600+ participants, ranging from students from local universities, local NGOs, MPA management authority and local communities. Credit: Danie Al Malik