

Final Evaluation Report

Your Details	
Full Name	Sheherazade
Project Title	Integrating conservation and local development program to support flying fox protection in Sulawesi, Indonesia
Application ID	31854-2
Grant Amount	£6,000
Email Address	sheherazade.jayadi@gmail.com
Date of this Report	8 February 2022

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>Flying fox population on Mantawalu Daka is fully protected by the local community.</p>				<p>The community has shown sense of ownership and pride to have flying fox colony in their areas. This is reflected by no hunting was recorded during monthly island patrol from August 2020 to December 2021. Community said no to visitors who want to hunt the bats and the reputation of flying foxes protected on this island has been widely acknowledged throughout the district.</p> <p>Due to this full protection, annual fluctuation of flying fox population has been maintained and the maximum number of bats that roost has reached up to 48,519 individuals in 2021 compared to 8,376 in 2018, 35,705 in 2019; and 35,160 in 2020. This population study indicates the nature of flying fox behaviour, which migrate seasonally because of food availability and presence of extreme weather on the island (<i>i.e.</i>, flying foxes move to another place when there were heavy storms and strong winds hit the island, at the beginning of every year). The temporary migration suggests that protecting flying fox population must be expanded to cover larger areas, comprising nearby flying fox colonies.</p>
<p>Children in the villages in and around flying fox population are educated about nature, particularly on the relationship between flying foxes and ecosystem services they have enjoyed.</p>				<p>A total of 90 kids (average 5-11 years old) have joined storytelling activities. Each of the kid has received an A3 poster about flying foxes that were hung in the wall of their houses. Kids who were active during storytelling received books about bats that were created and printed by us. We also gave these books as teaching materials to the teachers in elementary schools.</p>

<p>Youth in the villages in and around flying fox population and the subdistrict are empowered and trained to be actively involved in conservation through capacity building activities.</p>			<p>A total of 214 youths have joined capacity building activities. Training materials include: what, why, and how to do research and conservation; how to do sensing to understand problems and think through the right solutions; how to write proposals and create a budget plan; how to govern an organisation; how to organise an event; and how to initiate local conservation initiatives. Most of them were part of Nature Lover Group (<i>Kelompok Pecinta Alam</i>). Three groups have actively volunteered to do flying fox population, one group has led waste management, one has joined greening activities, and one established their own coral planting projects. Outcome of capacity buildings will be further assessed in the long-term.</p>
<p>Salu Village where the flying fox population belongs are clean and greener.</p>			<p>Two crucial locations in the village were identified as priority areas for waste management. These locations became the dumping sites by the locals, but they were left unmanaged. We cleaned these sites together with the local youth group and installed signboards to deter people from dumping their trash in the same sites again. At household level, organic waste was fed to cattle or buried, while non-organic waste was burned instead dumping them into the sea. This was temporary while working to talk with the village government on providing centralised and managed dumping sites. The discussion has not been successful because of the election of new chief of village during the program, and the village government was changed.</p> <p>We changed our plan to plant trees in the village to the island where the bats roost because there was an abrasion ongoing on the beach areas, which became more urgent than greening the village. In a total of 177 trees were planted. Based on our monitoring, 23% of them (40 trees) are now growing.</p>

<p>Flying fox conservation program is integrated with the village development agenda.</p>		<p>We have discussed with the representatives from village and sub-district government. They welcomed and have always supported flying fox conservation as part of village programs. This was not formalised yet because the election of new chief of village during the programme, and the village government was changed.</p>
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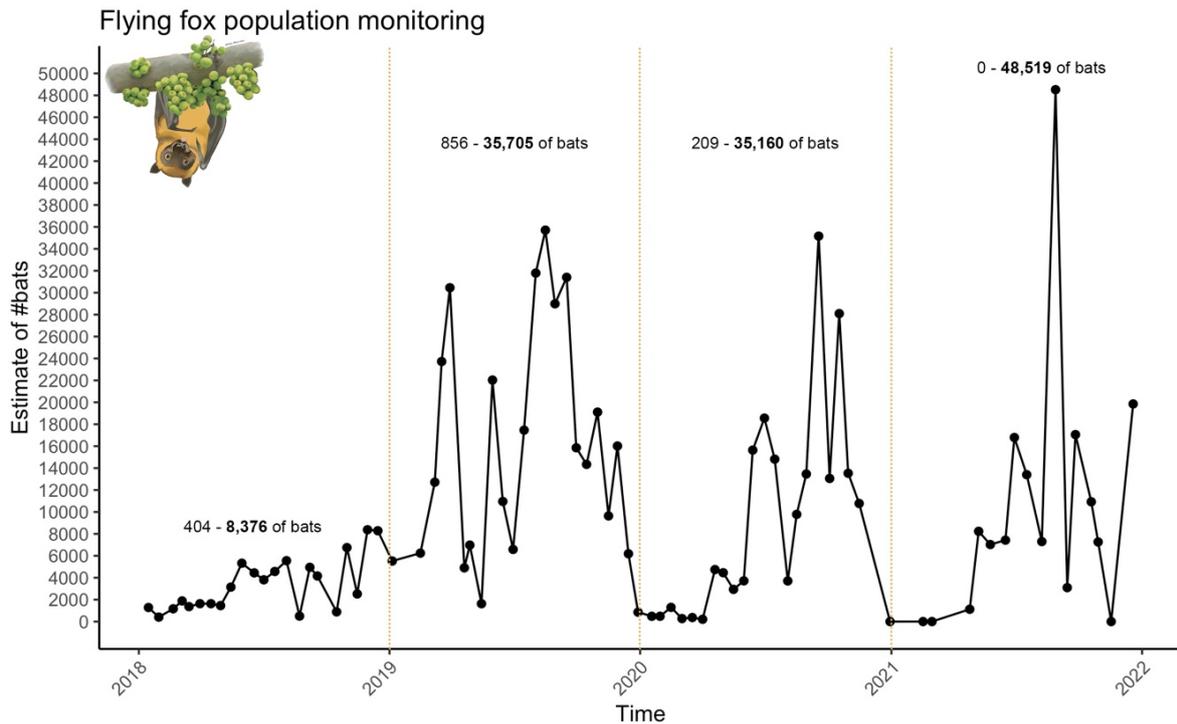
2. Please explain any unforeseen difficulties that arose during the project and how these were tackled.

a) COVID-19 pandemic has disrupted and delayed our activities that involved people, such as outreach, capacity building, and community-based environmental activities (e.g., greening and waste management). We stopped our activities completely during Indonesian peak COVID-19 due to delta variant from July to October 2021, but before and after this time, we still conducted the activities by implementing strict health protocols, such as doing COVID test before coming to the village. Because of our connection with the local community, the local youth groups still counted and monitored flying fox population twice per month during COVID-19 pandemic. This reiterates the importance and sustainability of long-term conservation where local community is empowered, trained, and trusted, and become equal partners.

b) Election of new chief of village. This is a strategic position in Indonesia, and thus the election is often political. We need to be careful to show the community that we are neutral and not involved in the politics. Therefore, we slowly approached the village government, and decided to halt any discussion before the new chief of village was selected in the end of 2021. To maintain the conversation going, we reached out to the secretary of village who served longer than the chief and was not elected by the people directly, and to the head of sub-district to introduce about conservation, gain support, and later to formally integrate conservation into village development agenda.

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

a) Flying fox has been fully protected by the community, which resulted in the maintenance of flying fox population fluctuated annually (revealing its seasonal migration) and increase of the maximum number of flying foxes on the island.



b) Educated children and empowered youth groups in villages and sub-district in conservation programmes (outreach, flying fox research and island patrol) and community-level environmental activities (waste management and greening).

c) Flying fox conservation was endorsed by the community as their icons to be proud of and supported by the village and sub-district government to be later formally integrated to the local development agenda.

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

Local communities have been our partners to do flying fox research and conservation. Flying foxes become the icon of their villages and island has been prepared as a tourist destination sites (postponed due to pandemic). They will get benefit economically from the tourism activities, but we want to highlight the more important benefit which was the sense of pride and connection at personal level between the team and the community. More specifically, local youth groups were empowered and trained, in which at least five groups have joined and led flying fox monitoring, outreach, and their own initiative to protect nature.

5. Are there any plans to continue this work?

Yes, we have received funding from Stiftung Artenschutz (Species Conservation Foundation) in Germany to support our whole programmes and operational costs. Because of this was shared with our other programmes, the funding was not

adequate for flying foxes. We intend to apply for Rufford Grant for the third cycle for the main co-funding to support:

- a) Protect other nearby flying fox colonies. Flying foxes on the island migrated seasonally to other locations. We did survey to ask the local community on other nearby flying fox colonies especially when the flying foxes were gone from the island. We found that there were two other temporary colonies, where the flying foxes on our island flew to during extreme weather, which was Toiba Village and Lobu Village. In these areas, unfortunately flying foxes were hunted and not protected, and thus we plan to expand our works to these two villages, providing full protection of flying foxes in their larger distribution and empowering more community to be proud of their nature and give added value into their development agenda.
- b) Study landscape use and movement of flying foxes to enlighten more about their behaviour, ecology, and which foraging habitats are important to be protected. It is required to further fill knowledge gap about this understudied animal, as well as to enrich outreach materials, contribute to the development of science especially regarding scientific information about wildlife from the Global South, and advocate protection of nearby forests which is now threatened by mining for nickels.

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

a) We shared the results of our works at the national and international levels. First, we presented the works at the Wildlife Ecology, Conservation and Management conference in November 2021, held by the Universitas Gajah Mada and Indonesian Ministry of Environment and Forestry. Second, we presented the works at the Association for Tropical Biology and Conservation conference in July 2021. Two were conducted virtually and attended by hundreds of participants from all over Indonesia (first conference) and world (second conference).

b) We shared our works and activities regularly on Instagram, reaching Sulawesi and Indonesian audience, and recently presented the works on bats in TEDx Talk Jakarta on 29 January 2022, attended by 200 people. This video will then be available online and watched by larger national and international audience.

c) We are now writing a manuscript about flying fox research and community-based conservation to be published in peer-reviewed journals to reach international audience and contribute to the development of literature from the Global South, particularly Indonesia, that is still lacking.

d) After we publish the works in the peer-reviewed journals, we will write popular articles published in Sulawesi, Indonesia, and international news platform.

e) We plan seek for funding to support one of the local youths to present the works during International Bat Conference in Austin, Texas, in August 2022.

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

The grant used for 1.5 years. It was intended for a year (August 2020-August 2021), but we asked for extension until December 2021/February 2022 because of the COVID-19 pandemic situation from July to October 2021 in Indonesia.

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
Stipend for local assistants	400	524	+124	There were more young people in the village who were interested to join, and thus we used more for the stipend.
Field supplies	1017	912	-105	Few field supplies (e.g., mist net) were still in good condition.
Flying fox monitoring and island patrol	2500	1667	-833	In the budgeted amount, 2500 was for transport and meals, but these were difficult for us to separate the two for each activity. Thus, we re-arranged the budget to depict how much was spent for each activity. The difference was big because of the pandemic, our movement were limited, and thus the cost was reduced.
Outreach	300	808	+508	We printed more flying fox books.
Capacity building activities	1000	679	-321	Because of the pandemic, our activities that involved people were also reduced, and thus the cost was reduced.
Greening	150	422	+272	We planted more trees not only in the village, but also on the island where the flying foxes roost.
Waste management	200	359	+159	We worked together with more local youth groups and more dumping sites needed to be worked on.
Training for flying fox monitoring and	433	629	+196	We have more young people in the villagers in and around the flying

conservation				colony who were interested to join the training.
Total	6000	6000		We have received IDR 114,453,774 or equal to £6,000.

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

The important next steps are to expand our flying fox programme to work with other community to protect nearby flying fox colonies, to study flying fox behaviour and ecology, and to share our works and lesson learn to support growing use of science-based conservation and inspire others to protect threatened yet overlooked wildlife in Sulawesi and Indonesia.

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, Rufford Foundation logo was put in the children's books that were used during our outreach activities. Logo was also used in every presentation at formal and informal settings, and Rufford Foundation was mentioned in our social media post on Instagram and Sheherazade's personal Twitter and Instagram accounts.

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

Sheherazade, designing and implementing the programs, and monitoring and evaluating the success. She oversees the scientific components of this program, doing statistical analyses, giving scientific presentation, and writing manuscript about the works to be published in peer-reviewed journals. In addition, she is in charge of grant reporting and communication with donors and look for funding to sustain the sustainability of the programs in the long term.

Asnim Alyoihana Lanusi, implementing outreach and coordinating youth capacity building activities, as well as coordinating community-based activities. She oversees the community components of this program.

Zulfikar H. Matorang, assisting Sheherazade to implement the whole programs and becoming the champions and local coordinators of all activities.

Local youth groups, including GERSAL, PETA, and GAPURA, assisting our team to implement the whole programs and encouraging other young people in the village to contribute to the conservation programs.

12. Any other comments?

1) We have received Luis F. Bacardi Advances in Tropical Conservation Award 2021 for our works with community-based conservation for bats.

2) We installed a welcoming gate to the flying fox site together with the local youth groups.

3) We would like to highlight that lesson learned from flying fox conservation and involvement of local communities have been used and replicated to expand our works in Sulawesi to protect other threatened yet overlooked species, such as Forsten's Tortoise in Central Sulawesi in 2020, Talaud Cuscus in North Sulawesi in 2021, and more in 2022 to protect endemic freshwater fish and unexplored ecosystems of Sulawesi rainforest. The impact of this project is substantially larger than expected, empowering us a team also to expand our works and partner with other communities in different areas of Sulawesi to initiate locally led conservation.
 More: www.progressulawesi.id.

