

The Rufford Foundation Final Report

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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Aadrean
Project title	The small-clawed otter (<i>Aonyx cinerea</i>) in a human-disturbed landscape: home range and conflict with fish farmers
RSG reference	17544-2
Reporting period	August 2015 – June 2017
Amount of grant	£4973
Your email address	a2drean@gmail.com
Date of this report	6 June 2017

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
To identify home range and habitat use of small-clawed otters.				We unsuccessfully trapped and tracked the animal. Therefore, currently we could not identify the home range. However, we could reveal latrine site use of small-clawed otter in rice field landscape.
To quantify conflict between fish farmers and small-clawed otters				We have collected data on conflict between fish farmers and small-clawed otters
To Educate and promote otter-friendly fish farming systems				We have educated fish farmers, and created guideline on how to protect fish ponds using otter-friendly methods.

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

The biggest unforeseen difficulties comes from radio telemetry activity.

We planned to trap otter using collaboration with fish farmers. Unfortunately, this method was not effective, because of very few visitations by otter to the fish ponds. To face this problem, we have tried to actively trap the otter on their latrine sites and checked it every day. Using leg-hold trap, only one individual was trapped. After trapped once, we could not get more individuals. It seems that other group member learned to avoid the traps.

In order to give the best facilities, we decided to bring the trapped animal to animal clinic of provincial husbandry department, in spite of veterinarian come to field with simple surgery equipment. The clinic is the most advanced animal clinic in West Sumatra.

The first trapped-otter died on surgery table when veterinarian was installing the transmitter. We evaluated this case, and concluded that the animal was in high level of stress and very tired because of the leg-hold trap. So we decided to use box-trap. We got another individual using the box-trap. But again, it seems they have learned to avoid it.

In addition, we also set up two camera traps to know visitation of otter to the latrine sites and in order to increase probability of trapping success. Our colleague (Wilson Novarino) lent us the camera traps. We successfully trapped second otter and

installed transmitter to the otter. However, we could track it for 2 days only. The radio signal was lost.

After project extension, we just looked forward otters trapped by fish farmers. Unfortunately, we still did not get more individuals. Because I am studying PhD and staying in Japan, I could not perform better efforts to get more individual. As consequence, until the end of project we could not perform radio telemetry successfully. Therefore, there is still remain money.

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

- Data on otter conflict
Our study collected the first systematic-data of otter conflict in the region. This data is very important for fishery department to evaluate and design their programmes.
- Materials of otter-friendly fish farming
We created leaflet on how to protect fish ponds from small-clawed otter, in printed and online version.
- Pictures and videos of camera trap
Although camera trapping was not our initial main activity, after project extension this method was successful to provide us important data. We have set up three camera traps for more than 6 months. We will analyse the data. A rapid look to the images and videos, we found the group member of small-clawed contain 10 individuals. The animal active dominantly as nocturnal. We recorded also juveniles and unique scent-marking behaviour. We will analyse the data.

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

- Fish farmer groups. We actively keep in contact with the fish farmers. We have conducted a training and focus group discussion about otter and fish ponds. They got new knowledge about otter and how to deal with the conflict.
- Fishery department. Fishery department support our project. They got data of otter conflict and material (leaflets) on how to face otter conflict.

5. Are there any plans to continue this work?

Yes, we would like to continue telemetry study using equipment of this project. We still have 11 implant transmitters. Currently, we keep trying to find otter by requesting fish farmer if they get incidentally trapped otter in their fish ponds.

Furthermore, we want to continue camera trapping. We have already three camera traps. We will find funds to continue the camera trapping.

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

- Peer-review articles. We have submitted one article to Ecological Research entitled "Small-clawed otters (*Aonyx cinereus*) in Indonesian rice fields: latrine-site characteristics and visitation frequency". The article have been reviewed and need to be major revised. We have revised and submitted the revision. Furthermore, we are writing other articles.
- Conferences. I will attend International Congress of Ecology Intecol 20-22 August 2017 in Beijing. I will give oral presentation. The topic is "Latrine site use of small-clawed otter"
- Online and social media. We have created website <http://berang-berang.com>. We created the website as a centre of otter information available in Indonesian language. The website also has its Facebook page <http://www.facebook.com/infoberangberang>. We already published and share the leaflet. In addition, we also share the leaflet in Facebook page of Supportive Environments for the Region's Otters (SERO) <https://www.facebook.com/seroberangberang/>. We will share it to various social media.

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

Initially, the project was planned as 13 months activities, started from August. However, this project delayed 1 month to be started, because it took more time to prepare equipment and field team.

After 14 months, we could not get enough individual to tracking. We requested extension and propose to do camera trapping. We got extension of the project until June 2017. Therefore, total time range for this project is 22 months.

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.

The following table is the breakdown of expenditure. Below, we separated the detail for budget of project extension

Item	Budgeted Amount	Actual Amount	Difference	Comments
Stationary	53	53	0	
Presentation and research permit	53	53	0	
Data and report printing	53	53	0	
Printing questionnaire	21	21	0	

Questionnaire distribution	5	5	0	
Receiver and antenna	0	0	0	
Transmitter	1188	1813	-625	rate of USD increased + unpredicted customs and courier fee
Soft catch trap	105	105	0	
Digital camera	106	106	0	
Temporary cage	106	106	0	
Immobilize cage	53	0	53	This cage type is available in animal clinic
Trapping fee and food	286	238	48	Because only two individuals of otter were trapped
Veterinarian fee	689	0	689	Because for these two otter, veterinarian did not come to field. The fee was already included as drug expenses
Drug and etc. for installing transmitter	351	59	292	Because only two individuals of otter were trapped
Transportation and food for veterinarian	494	53	441	Because only two individuals of otter were trapped. Actually this is an expense of transportation to bring otter to/from animal clinic.
Transport, fuel and food for radio tracking	780	93	687	Because only two individuals of otter were trapped
Surveyor fee	416	74	342	Because only two individuals of otter were trapped
Education project, visiting fish farm	108	108	0	
Conducting FGD	106	106	0	
After Project Extension				
Camera traps	0	313	-313	
Batteries	0	16	-16	
External hard disk	0	34	-34	
Other accessories	0	22	-22	
Camera-trapping surveys	0	224	-224	
Web site hosting for berang-berang.com	0	12	-12	
Total	4973	3046	1306	

In this report we use 1 GBP as 20,848 IDR. Actually, in initial proposal we used 1 GBP as 19,000 IDR. However, we received the fund in 20,848 IDR as the exchange rate. Therefore, we calculated actual amount as received exchange rate.

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

- To continue this study. We would like to continue camera trapping. We are also trying to find an alternative way to measure home range and habitat use of otter.

- To engage more attention from local communities, we want to do monitoring and data gathering using citizen science. We would like to use website berang-berang.com as the medium and centre of the information.

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?

- I used RSG's logo in leaflet of "How to protect fish ponds from small-clawed otter".
- I already gave oral presentations and acknowledge RSG in my slide:
 - International Otter Congress in 3-8 July 2016 in Singapore.
 - Annual meeting of Japanese Society of Limnology 3-6 November 2016 in Okinawa Japan
 - Annual meeting of Ecological Society of Japan 14-18 March 2017 Tokyo, Japan
- We acknowledge RSG as a sponsor in website berang-berang.com. Many articles and documents provided in the website are result of current and previous RSG's projects.

11. Any other comments?

Although the telemetry study was not successful, we have learned many things. This project is the first telemetry study for small-clawed otter. The project is also the first telemetry study for otter in Indonesia. This experiences are very valuable for us. We are writing a paper explaining our efforts on telemetry. We planned to submit it to IUCN OSG bulletin. For the future, we need to find better method for telemetry research on small-clawed otter and for Indonesia condition. Furthermore, this is the first telemetry equipment available in our department in Andalas University. We are using this equipment to teach our student also.

Rufford Foundation has been supporting us since the first otter projects in West Sumatra. Thank you very much Rufford Foundation.