

## The Rufford Foundation Final Report

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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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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Grant Recipient Details	
Your name	Sena Adi SUBRATA
Project title	Civet coffee saves biodiversity: obtaining Civet's population data toward sustainable coffee production in Petungkriono forest, Indonesia
RSG reference	15675-1
Reporting period	2014-2015
Amount of grant	£4996
Your email address	adisubrata@ugm.ac.id
Date of this report	18/05/2016

**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
1. Identify species and individual of wild civet		v		Species was successfully identified using molecular technique. Individual identification needs more time (is still continuing).
2. Estimate of population size of the civet	v			It hasn't been successfully conducted because individual identification still in progress.
3. Disseminate civet population to the villager to improve motivation			v	Dissemination has been conducted by mean of small group and large group discussion.
4. Obtain data on civet coffee market		v		Only limited information can be obtained due to very small volume of civet coffee in market.

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

Regarding #1 objective:

We found only small number of signs, pictures, faeces and genetic material left by the civet. It roughly indicates that only small number of individuals of the Civet visit our forest and coffee plantation. Bad climate occurred during our survey has decreased coffee cherry productivity, therefore not many individuals of civet attracting to visit the forest. Even local people did not harvest their coffee cherry due to uneconomical reason. We tackled this difficulty by re-collecting samples in this year (2016) and continuing the individual identification of the civet using molecular technique.

Limited number of signs, pictures, faeces and genetic materials has made species and individual identification difficult. Our camera trap technique was capable identify species of occurred animal (including the civet, but not completely all animals) but failed to identify individuals. Therefore, we decided to leave camera trap technique and rely on molecular technique for species and individual identification. Using only limited number of faeces found, we successfully identified species of the faeces. This successfulness paved a way to individual identification. Only with species identification we can proceed to individual identification using molecular technique.

We prepared for collecting more faeces this year in order to accomplish the objective of population estimation. As predicted, population estimation of the civet will only be obtained accurately using molecular technique.

Regarding #2 objective:

Population estimation of the civet has failed because we could not identify individuals of the civet. As mentioned before, limited number of faeces sample collected from the forest hampered our effort. We tackled this problem by re-collecting faeces samples this year.

Regarding #3 objective:

We have disseminated our research result to the villagers. We conducted small group discussions to gather villager perception on biodiversity conservation using civet coffee as a tool. We found no difficulty in inferring this perception. Most villagers were welcome to our team and willing to express their perception.

Regarding #4 objective:

This objective was not explicitly written in our research proposal, but we conducted market survey after suggested by Rufford reviewer. The survey was not fully successful because villagers in surrounding research area sold only small quantity of civet coffee. Only a few people sell this commodity in small quantity. The people send it directly to collector. Therefore, the information was quite unreliable.

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

- We can identify species of the civet using molecular technique. Camera trap technique doesn't work well for identify species and individual. We are writing a scientific paper on these findings.
- We found that villagers are willing to manage wild civets in the forest (and it means the forest biodiversity will be saved) as long as the civets produce enough quantity of civet coffee to be sold.
- Villager knows wildlife species (a part of forest biodiversity) occurs in their forest as evidenced by pictures captured from camera traps. This is the first reliable information on biodiversity.

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

The local people has not been substantially involved in this project. So far, they posed as respondents of our social survey. We intended to involve local people after they are motivated to manage civet coffee production. Right now, they are still waiting for convinced information on economical aspect of the coffee production. They won't involve in managing civet coffee before we provide information on how much money they will get if managing civet coffee in the forest and how to sustain this coffee production. It means that we should estimate how many individuals of the civet occurred in the forest and how much the animals produce civet coffee.

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

Yes, there is. We are continuing our project this year to achieved first objective. The first objective is very important to motivate people saving forest biodiversity.

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

I have presented our project during International German Alumni Seminar in Aceh, November 2015. Although, our project has not fully completed, but it is important that many people know what I have done to save our biodiversity with support from Rufford Foundation. We have also created many posters in order to spread biodiversity information among villager and visitors (many tourists and researcher visit the village).

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

We received grant from the Rufford foundation in August 2014. However, we spent most of the money in May – August 2015 for field work (field work: May – July 2015) and laboratory work (September – October 2015). It was impossible to conduct field after August because the harvest time for coffee was over. During August – May 2014, we conducted project preparation in term of intensive communication with villager, local leader, and research permit authority. After fieldwork and laboratory work, we get the result of our research project in the end of 2015. Comparing to our planned research project, actually our activity was not on time. Now, we are continuing our project since our first objective has not been achieved.

**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.**

Item	Budgeted Amount	Actual Amount	Difference	Comments
<b>Travel</b>				
Car rental & gasoline	£ 96.77	£287.18	-£190.41	additional cost: we should rent motorbike for local transportation
Accommodation & subsistence	£1,443.55	£1,846.15	-£362.28	additional cost: extra personnel (2) to speed up field work; accommodation and daily subsistence were unified
<b>Field Equipment's</b>				
Camera trap fee - 30 units	£403.23		£403.23	we rent it for free for research purpose
Camera trap battery	£32.26	£64.52	-£32.26	additional battery was needed for securing data collection
GPS fee - 3 unit	£24.19		£24.19	we rent it for free for research purpose
Falcon tube 50 ml	£134.41	£134.41		as expected
Ethanol absolute	£45.70	£ 45.70		as expected
Parafilm	£3.44	£13.44		as expected
Glove	£5.38	£5.38		as expected
Large sample boxes	£48.39	£ 48.39		as expected

Stationery	£18.82	£18.82		as expected
<b>Laboratory work</b>				
Bench fee	£40.32	£40.32		as expected
Pipette tips	£48.39	£48.39		as expected
Tubes	£64.52	£64.52		as expected
Racks	£21.51	£21.51		as expected
Sample box	£25.81	£25.81		as expected
Glove	£5.38	£5.38		as expected
Masker	£2.69	£2.69		as expected
<b>Chemicalia</b>				
DNA extraction kits	£739.25	£1,092.31	£-353.06	need extra kit due to difficult analysis
PCR kits - 200 prep	£387.10	£387.10		as expected
Agarose	£26.88	£26.88		as expected
Buffers	£40.32	£40.32		as expected
Oligo without dye	£241.94	£241.94		as expected
Oligo with dye	£107.53	£107.53		as expected
Sequencing	£86.02	£129.03	£-43.01	extra sequencing is needed due to difficult analysis
Fragment analysis	£806.45	£403.23	£403.23	not all sample were processed
<b>Meeting</b>				
Village meeting	£88.71	£88.71		as expected
<b>Total</b>	£4,998.92	£5,189.62	£-150.37	£ 1 Rp 19,500.00

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

The most important thing is re-collecting faeces samples and continuing molecular analysis to estimate civet population in the forest. After that we can provide convincing information on the economic aspect of wild civet coffee production. This information will motivate people to save forest biodiversity.

### 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?

Yes. We used Rufford logo in posters we created. I also present the logo when I acknowledged financial support during my presentation in International German Seminar Alumni.

### 11. Any other comments?

We need more time to accomplish all objective we have proposed.