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	Iding Achmad Haidir
Project title	Assessing Sumatran wild cat population and conservation status using a science-driven approach to conserve Sumatra's small cat
RSG reference	15258-1
Reporting period	Final (June 2014-December 2015)
Amount of grant	£5,000
Your email address	idroez.haidir@gmail.com
Date of this report	22 December 2015

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. Develop local capacity towards felids conservation and research: a. Field training in camera trapping and field survey b. Data analyses training			√ √ √	Project overarching goals mostly achieved during project implementation: a. On the job training of camera trapping survey and techniques for five local biologists, 10 national parks field staff and five undergraduate students from University of Jambi (3), University of Andalas (1) and Bandung University of Technology (1). b. We conducted series of data analyses trainings or mini workshops with various topics: - Monthly camera trap data tabulation-using free image processing (Exif/ metadata) each time team back from field; - Use and empower Microsoft excel to store, analyse, and present camera trap data; - Introduction to Quantum GIS, Map Source software and Picture Information Extractor. - Encourage share-learning process or horizontal learning amongst team members in various topics: field survey management, logistics and resources management, first aid and emergency actions, camera trap data analyses, land navigation and a refreshers training on non-invasive method in monitoring wild felid population using camera trap-led by project leader Iding Haidir.
2. Update information on target species, prey, forest habitat			√	Four study areas that were proposed have completely surveyed between June

and threats:
a. Camera trapping survey
b. Data analyses and mapping
			√
			√
				2014 and December 2015. Through camera trapping survey we recorded/ photographed target species, prey, and illegal human activities:
				a. All study areas have been completely surveyed using camera traps:
				  - Bungo, survey was conducted between June and November 2014,
				  - Sipurak, was surveyed between November 2014 and April 2015,
				  - RKE, we started the survey in April 2015 and finished in August 2015, and,
				  - Ipuh, the last study area was camera trapped between September and December 2015.
				In total we recorded 47 species belongs to 25 families with prominent result of detecting all felid species, the endangered Asiatic wild dog, newly photographed long-tailed porcupine, hog badger and the endemic Sumatran rabbit.
				b. At the end of project we conducted 3-day data analyses workshop and data screening to ensure that our project produces high quality data for high calibre publication. Thus

3. Promote up-to-date felids conservation status to authorized stakeholders:
a. Data dissemination
b. KSNP strategic planning meeting
			√
			
			√
			√
				Monthly meeting and quarterly report always been sending to Kerinci Seblat NP authority. On top of that quarterly progress report. In more details:
				a. We disseminate information and preliminary result of the project through:
				  - Lecture/ presentation at Andalas University, Padang West Sumatra;
				  - Lecture/ presentation at University of Bengkulu, Bengkulu
				  - General Lecture at Islamic University of Sungai Penuh, Jambi
				  - Presenter on Small Cats

| | | | | Conservation at Indonesia Tiger Conference, Bogor, West Java.
b. As part of KSNP Management Authority, project leader Iding Haidir, actively involved in KSNP strategic meeting. Through this Rufford RSG project, team and I have been importantly feed and supply data of species distribution, threats and with some advance analyses provide peer thoughts on what should management do to anticipate escalating threats, predict future trend of population and to forecast and mitigate illegal activities inside the park. |
|---|---|---|---|---|

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

Overall, we found no obvious difficulties apart from a normal bureaucracy of getting permit to do field survey which we feel is still under control. Other things is in the first study area-Bungo, as mostly team members were new, project leader should give intensive training and preparation prior to do the survey. After two trips of field survey and the on-the-job training of camera trapping and field survey techniques the team members have gained their skills and now they are having expertise in camera trapping and field survey.

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

Updated list of species detected in project's sites
Intensive camera trapping work has resulted a tremendous amount of photo data. Some obvious species that were recorded during the survey are: all felids (tiger, clouded leopard, Asiatic golden cat, leopard cat and marble cat) with capturing new phenomenon of clustered melanistic golden cat, Asiatic wild dog, hog badger, long-tailed porcupine, the endemic Sumatran rabbit. The following table is list of species that were recorded during the survey.

Table 1 List of species detected by camera trap

No	Family	IUCN Status	English Name	Scientific Name	Bungo	Sipurak	RKE	Ipuh
1	Canidae	EN	Asiatic wild dog	*Cuon alpinus*	-	-	√	√
2	Canidae	n/a	Feral dog	*n/a*	√	√	-	-
3	Phasianidae	LC	Red junglefowl	*Gallus gallus*	√	√	√	-

4	Suidae	LC	Wild boar	*Sus scrofa*	√	√	√	√
5	Mustelidae	NT	Hog badger	*Arctonyx hoevenii*	√	-	√	-
6	Suidae	LC	Bearded pig	*Sus barbatus*	-	√	√	√
7	Ursidae	VU	Malayan sun bear	*Helarctos malayanus*	√	√	√	√
8	Cercopithecidae	LC	Pigtailed macaque	*Macaca nemestrina*	√	√	√	√
9	Varanidae	LC	Monitor lizard	*Varanus salvathor*	√	-	-	√
10	Viverridae	VU	Binturong	*Artrictic binturong*	√	√	-	√
11	Turdidae	LC	Shiny whistling-thrush	*Myophonus melanurus*	-	-	√	-
12	Accipitridae	LC	Crested serpent eagle	*Spilornis cheela*	√	-	-	-
13	Viverridae	LC	Small-toothed palm civet	*Arctogalidia trivirgata*	√	-	-	-
14	Felidae	CR	Sumatran tiger	*Panthera tigris sumantrae*	√	√	√	√
15	Bovidae	VU	Sumatran serow	*Capricornis sumatrensis*	√	√	√	-
16	Tragulidae	LC	Lesser mousedeer	*Tragulus kanchil*	√	√	√	√
17	Pteropopidae	VU	Sunda fruit bat	*Acerodon mackloti*	√	-	-	-
18	Cervidae	LC	Southern red muntjak	*Muntiacus muntjak*	√	√	√	√
19	Cervidae	DD	Sumatran mountain muntjac	*Muntiacus montanus*	-	-	√	-
20	Phasianidae	LC	Bronze-tailed peacock-pheasant	*Polyplectron chalcurum*	-	√	√	-
21	Phasianidae	NT	Great argus	*Argussianus argus*	√	√	√	√
22	Felidae	VU	Marbled cat	*Pardofelis marmorata*	√	√	√	√
23	Felidae	NT	Asiatic golden cat	*Catopuma teminckii*	√	√	√	√
24	Felidae	LC	Leopard cat	*Prinolurus benghalensis*	√	-	-	√
25	Hystricidae	LC	Malayan porcupine	*Histryx brachyura*	√	√	√	√
26	Prionodontidae	LC	Banded linsang	*Prionodon linsang*	√	√	√	√
27	Felidae	VU	Sunda clouded leopard	*Neofelis diardi*	√	√	√	√

28	Viverridae	LC	Common palm civet	*Paradoxurus hermaphroditus*	-	-	√	√
29	Viverridae	VU	Banded civet	*Hemigalus derdyanus*	-	-	√	√
30	Viverridae	LC	Masked palm civet	*Paguma larvata*	√	√	-	
31	Mustelidae	LC	Yellow throated marten	*Martes flavigula*	-	√	√	√
32	Tragulidae	LC	Greater mouse-deer	*Tragulus napu*	√	-	-	√
33	Phasianidae	LC	Red-billed partridge	*Arborophila rubrirostris*	-	√	√	√
34	Cervidae	VU	Sambar deer	*Rusa unicolor*	√	√	√	√
35	Phasianidae	NT	Salvadori's Pheasant	*Lophura inornata*	√	√	√	√
36	Cercopithecidae	NT	Sumatran surili	*Presbitis melalophosmelalophos*	√	√	√	√
37	Leporidae	VU	Kelinci Sumatra	*Nesolagus netscheri*	-	-	√	-
38	Tapiridae	EN	Malayan tapir	*Tapirus indicus*	√	√	√	√
39	Muridae	VU	Hoogerwerf's Sumatran Rat	*Rattus hoogerwerfi*	√	√	√	√
40	Manidae	CR	Sunda pangolin	*Manis javanica*	√	√	-	-
41	Tupaiidae	LC	Common tree shrew	*Tupaia glis*	-	-	√	-
42	Tupaiidae	LC	Large tree shrew	*Tupaia tana*	√	√	-	-
43	n/a	n/a	Unknown people	*n/a*	√	√	√	√

Figure 1: Important species photographed by camera trap during survey period

Asiatic golden cat (melanistic form) (NT)	Sumatran tiger (CR)
Clouded leopard (VU)	Javan pangolin (CR)
Hog badger (NT)	Asiatic wild dog (EN)

Develop team members' skills and knowledge

Developing skills and knowledge of team members is one of core aims of the project. A series of training both on field skills and analytical (simple) skills have been conducted during the project period. Here are detailed of trainings and mini-workshops that we held for the sake of improving team members skills:

1. Field skills (on-the-job training), covers jungle orientation, map and GPS reading and operation, track/pugmark identification, threats recording and other relevant camping skills that frequently needed in the field.
2. Data management training focusing on how to use free image extractor information software, Microsoft excel and basic GIS software training (using QGIS).
3. Presentation and public communication training, emphasises basic understanding of public communication skills and the use of power point presentation.
4. Basic IT and field photography training, is to improving skills on basic knowledge on email communication and field photography in supporting field activities documentation.

As the project is finishing and in order to evaluate team members skills and knowledge, we conducted mini workshop that emphasise share-learning process serving as refresher training that led in turn, by our project members themselves:

1. Camera trapping survey: preparation, planning, preliminary survey, logistics and administration, and human resource for conducting research using camera, led by Sabirudin.
2. First aid and emergency: general introduction, diseases and incidents in the jungle, first aid kit and medication, led by Yosse Hendra.
3. Jungle navigation: resection and intersection, GPS-maps and coordinate, map reading and field orientation, led by Ridwan.
4. Camera trap data tabulation and management: use picture information extractor (exif/ metadata), pivot table, detection matrix and temporal activity pattern, led by Kariyanto.
5. Survey logistics and resources: nutrition need for field workers, logistic and equipment and survey management, led by Redhi.

Support young/ undergraduate students' skills and knowledge improvement

Five undergraduate students from University of Jambi, University of Andalas-Padang West Sumatra and Bandung Institute of Technology have been joining our project since March 2015. Each student has chosen their topic of study and already presented their proposal within their university department as well as at KSNP HQ. Name of students and topics of study are:

1) M. Royhan, University of Jambi, studying clouded leopard density and prey abundance correlation in RKE;
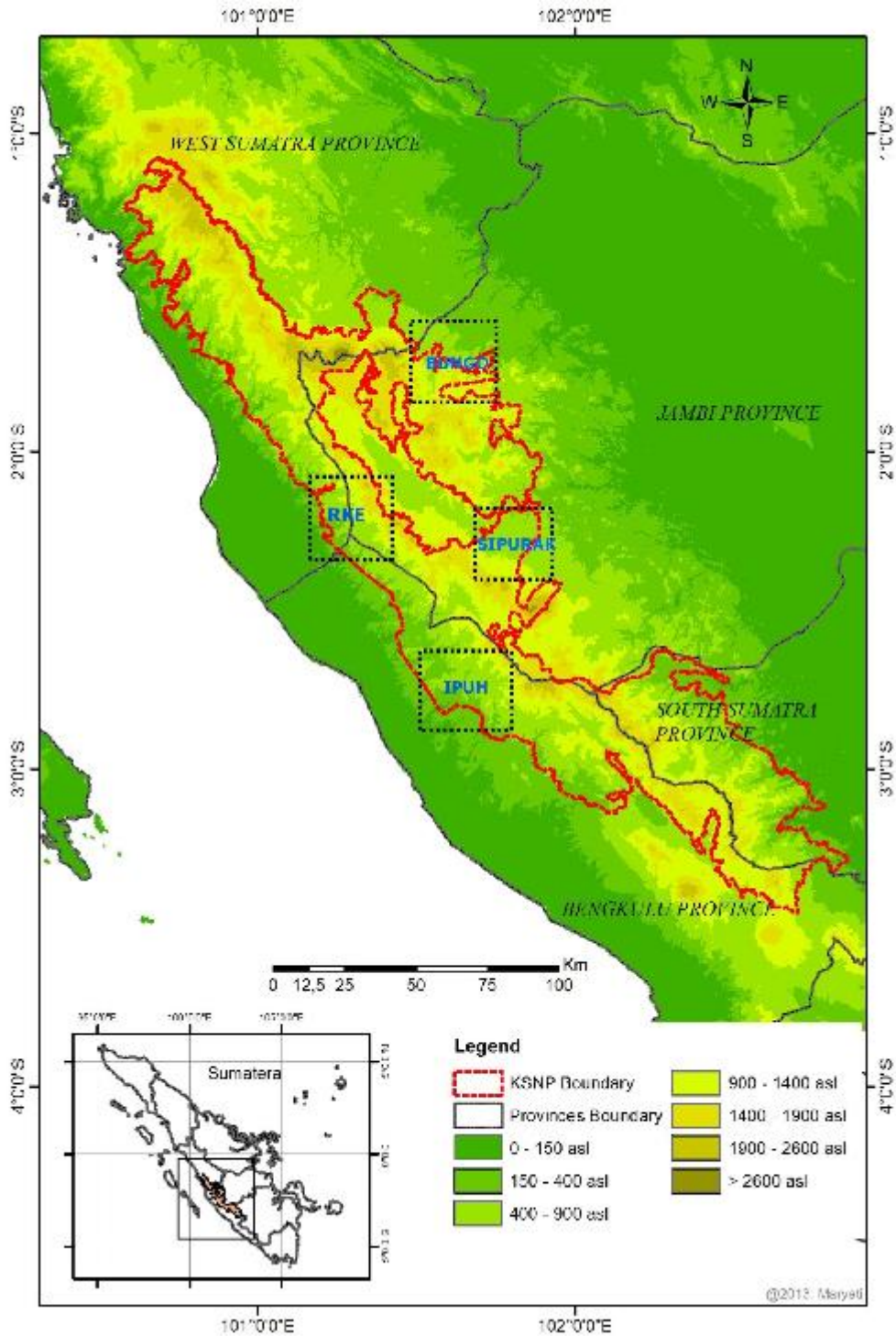2) Ester L. Nababan, University of Jambi, studying clouded leopard local abundance and habitat characteristics in RKE;

3) Ardika D. Irawan, University of Andalas, studying carnivores' abundance in different elevation-based types of forest.
4) Ibnu Nur Fikri, student of Bandung Institute of Technology, studying clouded leopard occupancy and co-habitation with other wild cats, and prey in Ipuh;
5) Sasmita Apriyani, student of University of Jambi, studying golden cat and their prey occupancy and general habitat characteristics in Ipuh.

Figure 2: Activities during the project

River crossing, Sipurak	Project become a headlines news on Tribun News Jambi newspapers (March '14)
Iding Haidir, checking camera trap (Ipuh)	Monthly meeting/ presentation at KSNP Office

Media trip from SCTV for TV programme called POTRET	Student (Jambi Univ) measuring tree diameter

Figure 3: Map of study areas: Bungo, Sipurak, RKE and Ipuh

Legend

▢ KSNP Boundary	▢ 900 - 1400 asl
▢ Provinces Boundary	▢ 1400 - 1900 asl
▢ 0 - 150 asl	▢ 1900 - 2600 asl
▢ 150 - 400 asl	▢ > 2600 asl
▢ 400 - 900 asl	

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

Our project fully involved local community members. Project core team members, five people, are three people from Curup (Bengkulu) and two people from Kerinci (Jambi). This also means that clearly project field guides and porters were from surrounding village near study areas. Project's core members have been joining the project since of the beginning. Strong involvement in project implementation, its complexity, they become more be acquainted with procedures and protocols, made them have robust understanding on how to run or develop field work in regards felids conservation and research. Through this process, I am sure that they will be having more strong involvement, and possibly more responsibility in running such project In the future.

5. Are there any plans to continue this work?

Apparently yes, further conservation actions cemented from current research is greatly needed. Findings of new record of particular species in particular study areas, high hunting pressures, massive threats to wild felids and strong evidence of decreasingly tiger population in some areas are strong enough to say that we need concrete actions. Several basic ideas of up-scaling existing conservation actions: strengthening forest patrol unit, increase front-liners presence in the areas, working with local communities as well as to improving their knowledge or, perhaps, their incomes through various livelihood intervention programmes. Other aspect of well-trained field members from this project. It would be more beneficial for both: future project and the team themselves, if they could be part and continue working for wildlife conservation in this Park.

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

Through RSG website, publication on newspapers, TV programme and reports.

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 carried out the project for 18 months started in June 2014 and has just completed in 15th December 2015.

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
Logistics and meals	1,800	2,000	-200	Uncalculated cost as we needed more manpower to set cameras especially when the survey was in

				RKE.
Field work travels	1,800	1,800	0	
Training and workshop	500	400	100	We saved some amount of money that was allocated for training onto camping equipment and field gears.
Camping equipment	500	600	-100	
Result dissemination	400	200	200	A couple of meetings and presentations were subsidise by local host such as in University Bengkulu, University of Andalas and Islamic University in Sungai Penuh.
Total	5,000	**5,000**	0	

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

Crucial further actions/ steps, could be:

a. Analyse and publish data from the very first intensive camera trapping work ever conducted in Kerinci Seblat National Park (in Sumatra, perhaps) in international peer-reviewed scientific journals.
b. Disseminate results to young conservationists, students and other stakeholders through attending scientific meetings or popular discussions.
c. Develop further actions to tackle and combat threats towards wild felids population through strengthening existing anti-poaching units, create more human-conflict mitigation units and start an independent and well managed education units.
d. Create more opportunities for young biology/zoology, forest conservation students to get involved in such project to broaden their network, open their mind, and challenge their interest in working/ dedicating their time towards wildlife conservation.

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?

Definitely yes. We acknowledge Rufford Small Grant and Rufford Foundation in every presentation/ lectures, new covered in local/ national media, and we put RSG logo on photos of animals photographed by camera trap.

11. Any other comments?

Currently through intensive "on-the-job training", we have at least five well-trained field members. They are very diligent, reliable and trustworthy. I do believe that they can be very useful both their skills and knowledge, for working in this field. Working with enthusiastic people made your hard

work is worthy-that's what I felt working with my team. I therefore highly commend what my team members have been doing for this project. If, there're any chances for me to do further project supported either by RSG or any other funding agencies, I would not hesitate to take them joining my team. My gratitude to RSG for the generosity granting money to conduct my research, my supervisors: Professor David Macdonald and Dr Matthew Linkie, my team members: Sabirudin, Kariyanto, Redhi, Yosse Hendra and Ridwan and all undergraduate students who have been working with me within project period.