

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	Nishant Maragowdanahalli Srinivasaiah
Project title	The Apolitical Elephant: Assessing elephant ranging patterns across a political boundary in a human-dominated landscape, Eastern Ghats, India
RSG reference	15985-1
Reporting period	October 2014 – March 2016
Amount of grant	£5000
Your email address	msnishant@gmail.com
Date of this report	22 nd May 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. Mapping the spatio-temporal patterns of elephant distribution and human-elephant conflict in areas along the state boundary between Karnataka and Tamil Nadu.			X	Based on the interview and ground truth surveys, detailed mapping of the spatio-temporal distribution and intensity of land-use types, human activity, habitat use by elephants, human-elephant conflict levels and the use of current mitigation measures has been carried out. Most of these maps have been included in the final project update submitted to the Rufford Foundation
2. Assessing the perceptions of local stakeholders towards elephants with specific reference to elephant movement and conflict across human-dominated areas.			X	A total of 75 forest department staff and an equal number of villagers from five most human-elephant conflict affected talukas were interviewed with the purpose of understanding the land of the elephants and people. Most people opined that mitigation measures, especially solar fencing has helped in reducing the conflict level.
3. Identifying elephant movement patches in the landscape and sharing baseline information to facilitate inter-state, coordinated elephant management and conflict mitigation strategies.		X		With the aid of maps generated through this study and in consultation with local stakeholders, two new elephant corridors across the state border have been identified. Through rapid-response teams and improved co-ordination between local forest staff across administrative divisions conflict mitigation and improved patrolling in areas identified as sensitive regions in the landscape, preventing both human and elephant deaths, is being experimented.

Cont.			Improved inter-division and inter-state coordination on monitoring of threats to both humans and elephants and their effective reduction and development of strategies to mitigate human-wildlife conflict in the region through regular interactions with forest staff across the state border is underway. A high-level inter-state meeting to discuss the management of elephants in the landscape has not been possible.
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

Elephant Migration towards the end of the study period: The movement of identified individual elephants across the state border usually occurs around September each year. However in 2015, it occurred a bit late, in November. This was also at the end of the twelve month period of the study. Since we were keen to establish the movement path of identified elephants over multiple years (2014 and 2015), the period of study had to be extended by five months. This request of ours was kindly accepted by the Rufford Foundation which allowed us to follow the elephants well into the month of March. This helped us map the to-and-fro movement of elephants across the state border twice.

Inter-governmental meeting: An inter-state meeting between the two state forest departments and other line departments was planned during the month of June 2015 and January 2016. However, due to the busy schedule of the respective forest department officials and other government duties (state elections), the meeting to discuss the inter-state movement of elephants could not be held. And therefore the third objective remains partially fulfilled. We are very hopeful that this meeting will be held in the near future and our study will help guide policy decisions at the highest level.

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

Determinants of elephant occurrence

1. Elephants occurred at higher levels in areas where more than at least two natural land use types are present.
2. With the first showers, movement of elephants towards bamboo patches in the elevations between 700 to 1100 m above msl was observed.
3. However, since their habitat is highly fragmented, especially towards the northern parts of the PA and in the human-dominated areas, their occurrence seems to be also influenced highly by the presence of crops in the region.
4. This is also driven mostly by the tendency of a number of male elephants in the region to use the human-dominated landscape to feed on both subsistence and plantation crops almost throughout the year.

Variation in behavioural strategies between the sexes

5. Even between the two sexes, females and therefore largely herds seem to use a risk averse strategy. Their occurrence and duration of stay is limited to habitats with the best available natural resource areas, least fragmentation and best connectivity.
6. The males on the other hand do occur across the spectrum of land use and anthropogenic activities and do show risk taking behaviour. All-male groups were seen more in the highly fragmented regions with poor connectedness and high human-densities.
7. When specifically assessed for human activities such as crop guarding that may expose the elephants to dangers of being injured or even death and historical poaching which is targeted towards males specifically, we found that male elephants do occur in higher numbers in areas with crops (high gain and therefore higher risk as well).
8. Some of the strategies were quite obvious, such as crop raiding at night in the cover of darkness and when human activity is at its lowest.

Adopting lifestyles that are compatible with elephant use of the area

9. Regular monitoring of elephant movement and activity through direct observations by forest staff and local community members as elephant occurrence in the region and hence, its associated threats vary over space and time.
10. Identification of human activities incompatible with elephant use of the region and identification of locations particularly vulnerable to conflict
11. Redressal of incompatible activities through land-use planning during the development of villages and towns as well as improved farm-based practices through increased awareness among local stakeholders and identification of their activities detrimental towards elephants and their habitats
12. Informed use and disuse of direct and indirect mitigation measures in elephant management, modifications in agricultural and other practices, such as cropping patterns and other related activities while living with elephants

Training, improved communication and identification of corridors

13. Capacity building of local forest department staff, personnel of local organisations and other community stakeholders in the monitoring and early detection of conflict, prevention of human and elephant deaths, and reduction of crop losses
14. Creation of rapid-response teams and improved co-ordination between local forest staff across administrative divisions to manage conflict and improved patrolling in and protection of areas identified as sensitive regions in the landscape, preventing both human and elephant deaths
15. Improved inter-division and inter-state coordination on monitoring of threats to both humans and elephants and their effective reduction and development of strategies to mitigate human-wildlife conflict in the region
16. Identification of new corridors for elephant movement between the two states across the political boundary

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

Training has been imparted to local conservation groups, the Forest Department staff and villagers of affected villages in managing elephants in conflict situations through three stakeholder meetings and workshops

The participating key stakeholders in the capacity-building exercises included:

1. Nature and Wildlife Conservation Committee (NWCC), Nirantara Foundation, Vanodaya, Asian Nature Conservation Foundation (ANCF) and National Institute of Advanced Studies (NIAS) – Local Organizations
2. Karnataka and Tamil Nadu State Forest Department staff and officers
3. Villagers from the five most affected Talukas along the state border

The select groups, showed commitment to work towards the larger goal of the project and to help build capacities, not only of their own staff but also of other stakeholders that they interact with regularly during the course of their work. This helps in effectively spreading the techniques taught to the participating stakeholders to a larger audience at the grassroots-level and is likely to be sustainable in the long term. During the course of the project, we identified and include more stakeholder groups in these capacity-building exercises.

We held three consultation meetings with farmers, and the state forest departments to explore the feasibility of working together across the borders to facilitate free and easy movement of elephants without any barriers, either passive or active while ensuring minimal conflict with people

Three village level awareness programmes were also conducted in collaboration with the state forest departments apart from training the local stakeholders in conflict mitigation and conservation activities. A total of 75 forest department staff and an equal number of villagers from five most human-elephant conflict affected talukas were interviewed with the purpose of understanding the land of the elephants and people.

5. Are there any plans to continue this work?

It is important to note that increased awareness among the stakeholders through workshops and meetings across the divisions, and continued monitoring of elephants in the region along with protection of habitat is essential to address the issue relating to conflict and conservation of elephants in the landscape. It is vital that elephant occurrence across the study area is looked at beyond the divisional boundaries and at the landscape level. Our effort in this study has been to showcase that even though the levels of threats and resources differ across the political boundaries, it is the same population of elephants and at times the same individuals displaying behavioural adaptability in response to stimuli. Hence, a landscape level elephant management action plan would be vital in order to follow the best and uniform management practices across the landscape with least impact on elephant

ecology and behaviour in order to conserve these elephants through the anthropocene epoch. Keeping this in mind we hope to continue our work not just in this specific geographical region but also expand it to areas with similar issues of elephant conservation and management across the country.

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

We have shared our findings in the form of reports with both the state forest departments. We have had detailed deliberations and discussions with the farmer communities and ground-level staff of the forest department during the mapping exercises to understand the landscape, elephants and the perceptions of people. We are also in the process of making a documentary on human-elephant conflict showcasing the do's and don'ts in local languages with the help of footage taken by local organizations and individuals.

We have delivered close to ten lectures at the village level meetings and school awareness camps conducted across the study area and beyond during the course of the study to educate and inform people of issues plaguing elephant conservation in 21st century Asia with specific reference to their region.

Currently we are working on a manuscript to be submitted to a peer-reviewed journal reporting the findings of the study. We also plan to publish popular articles in local languages and in English to help people appreciate the work and the issue better.

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

October 2014 to March 2016. The anticipated length of the project was from October 2014 – November 2015. However an extension of five months was required due to unforeseen circumstances (see section 2).

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 No	Notes to Budget	Budgeted Amount	Actual Amount	Difference	Comments
Fellowship and wages					
1	Wages for 2 field assistants @ GBP 45/month/assistant for 1 year	1080	1346	-266	Additional wages was paid for the services obtained during the extension period of six months of the study
2	Fellowship for 1 researcher @ GBP	1800	1800	0	The fellowship was paid by NIAS and FERAL as budgeted

Item No	Notes to Budget	Budgeted Amount	Actual Amount	Difference	Comments
	150/month for 1 year				
Capacity building					
1	Three training workshops and public meetings with stakeholders @ GBP 200/meeting	600	535	65	
Equipment for documentation in situ					
1	Two GPS units @ GBP 100/unit	200	200	0	Procured through NIAS and FERAL as budgeted
2	10 topography sheets @ GBP 1/sheet	10	10	0	Procured through NIAS and FERAL as budgeted
Transportation					
1	Rent for one 4-WD field vehicle @ GBP 100/month for 10 months	1000	1000	0	No additional rent was charged for the extension period
2	Fuel supply for one vehicle @ GBP 100/month for 10 months	1000	1200	-200	Additional fuel was used during the extension period
3	Vehicle maintenance for one vehicle @ GBP 10/month for 10 months	100	150	-50	Vehicle maintenance was carried out once during the extension period of the work which was unforeseen
Accommodation and provisions					
1	Provisions @ GBP 40/month for 1 year	480	300	180	Food was generously provided by the local farmers and forest departments on a number of days and hence we were able to save on the food expenses
2	Accommodation @ GBP 40/month for 1 year	480	300	180	Accommodation was generously provided by the local farmers and forest departments on a number of nights and hence we were able to save on the accommodation expenses too
Information dissemination					
1	10 copies of final report of the project @ GBP 5/copy	50	50	0	
Consumables and communication					
1	Field gear, torches, batteries and other consumables @ GBP 25/month for 1 year	300	300	0	Paid by NIAS and FERAL
2	Communication	300	300	0	Paid by NIAS and FERAL

Item No	Notes to Budget	Budgeted Amount	Actual Amount	Difference	Comments
	(telephone, telefax. internet, stationery) @ GBP 25/month for 1 year				
Medical costs and contingencies					
1	Medical expenses @ GBP 5/month for 1 year	60	60	0	Used for buying medicines and first aid kit for on-field emergency
2	Contingency expenses @ GBP 300 for 1 year	150	140	10	Incidental costs paid to local volunteers and field staff
Total Cost Project Cost		7610	7691		
Total Cost Rufford Foundation		5000	5081	81	Additional costs was paid for by NIAS and FERAL

Conversion rate: 1 GBP = 98.08 INR

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

In the immediate:

- a. The inter-state meeting to discuss issues related to the movement of elephants and their management across the state border hopefully will be held soon.
- b. Protecting and improving the status of the newly identified elephant corridors to facilitate movement of elephants
- c. Translating the important findings from the study into policy and implementation for on-ground results.
- d. Developing an elephant management action plan for the landscape

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?

We have used the Rufford Foundation Logo extensively and acknowledged the funding support in all the official reports submitted to the state Forest Departments (2 interim reports and two final reports). The same has been mentioned in all the public talks (10 lectures), at meetings (3 in number) and in the workshop.

We have mentioned the funding support received from Rufford Foundation to all the participating volunteers (10 volunteers), non-governmental (3 NGO's) and governmental organizations who participated in the study.

We further plan to use the logo in all the publications, media and outreach material relevant to this study that would be brought out in the near future.

11. Any other comments?

We would like to thank the Rufford Foundation for not just supporting this study but also for being patient with us and providing us with the necessary extension of five months in order to bring the project to an interim logical end. We do look forward to

Field work and watching elephants



Maps and Graphs generated using QGIS and Excel

