

The Rufford Small Grants Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford Small Grants Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. 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. 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	Chittaranjan Dave
Project title	Understanding conflicts and conservation of Indian wild ass around Little Rann of Kachchh, Gujarat, India
RSG reference	47.09.08
Reporting period	2009-2010
Amount of grant	£6000
Your email address	
Date of this report	February 2010

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
i.				<p>Information on land and cropping pattern could only be obtained for coarse resolution (sub district level) from available literature and government reports. Salient ones are as follows: 1) Rapid development of infrastructure viz. roads, railways and canals can hamper the movement through corridor; 2) The spread of <i>Prosopis juliflora</i> (exotic invasive scrub) has intensified the crop raiding as it encroaches upon their feeding grounds; 3) Besides recent increase in number of surface water tanks to store rain water for irrigation functions as water holes for wildlife which probably attracts wild herbivores in the crop field resulting into intensive crop raiding.</p> <ul style="list-style-type: none"> Understanding the change in land use/crop pattern.
ii.				<p>Seasonal abundance estimation of all wild herbivores was carried out along with density estimates for two relatively abundant species i.e. wild ass (4.1 ± 1.9 and 5.6 ± 1.8 per km² in pre and post-monsoon seasons, respectively) and nilgai (3.7 ± 1.6 and 4.2 ± 1.2 per km² in pre and post-monsoon seasons, respectively) for the intensive study area.</p> <ul style="list-style-type: none"> Estimation of the relative abundance of wild ass and other wild ungulate
iii.				<p>On-site crop damage assessment revealed that: 1) extensive and chronic crop damage occurs during post- monsoon season by nilgai, wild ass and wild pigs in decreasing order; 2) Crop damage by wild ass is all along the corridor area up to 1 km from fringe of Rann area; 3) Maximum collective crop damage by all wild herbivores occurs between 0-500m distance; 4) If cash crops are better protected during latter stage of farming can keep check on damage; and 5) Since traditional means of thorny fence is not much effective against these large herbivores and wire fencing is unaffordable by most of the farmers, antagonism is rapidly spreading against these herbivore species in general.</p> <ul style="list-style-type: none"> Assessment of crop damage
iv.				<p>Assessment of nitrogen and phosphorus content in dung showed that nitrogen content was high during summer while phosphorus content was high during post-monsoon probably indicating high proportion of <i>Prosopis juliflora</i> pods while fresh growth of graminoids (including fodder and millet crops) during monsoon and post-monsoon seasons. Food content mostly monocots (except significant contribution of <i>P.juliflora</i> pods) and therefore better protection of reserved grasslands can provide ample forage and that is how crop raiding issues can be minimised.</p> <ul style="list-style-type: none"> Understanding the nutritional implications of spatio-

				temporal patterns of conflict.
				<p>A slight change in the traditionally conservationist peoples attitude towards wildlife in general was observed. The following is the factors emerging from this study: 1) The area is experiencing a change from traditional subsistence dry farming to intensive, mechanised farming of cash crops; 2) Increase in human population has caused decrease in the size of agriculture land to every household; and 3) People's attitude towards wild ass and other wildlife is neutral but further increase in crop raiding may create strong antagonism.</p> <ul style="list-style-type: none"> • Understanding attitude of local people towards wild ass and other wildlife
				<p>Compared to adults, school children showed more enthusiasm. Most of the adults were aware of wildlife around them but interactive workshops at village level made them aware of the uniqueness of their natural heritage especially wild ass. Compensation for crop damage and provision of the wire fencing can help safe dispersal of the species through this agro-pastoral landscape.</p> <ul style="list-style-type: none"> • Awareness activity and conservation workshops

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

Since the study area is close to India's international border with Pakistan, acquiring precise detailed topographic maps was impossible and therefore understanding geography of the area to implement pre-designed ecological data collection was difficult. Besides, the area is relatively remote and therefore arrangement of logistics (maintenance of field vehicle, fuel and field supply) was an uphill task. Some part of the landscape was inaccessible because of un-motorable tracks. Since most of the crop raiding incidences occurred at night and therefore following inability to move and watch at night affected crop damage assessment.

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

A first time systematic study on the population status, distribution and relative abundance of three major wild herbivore species in the potential corridor area for last surviving population of the Indian wild ass.

A first time attempt to identify and quantify the conservation issues pertaining to the safe dispersal of this endangered equid species.

This project has initiated the process of understanding and quantifying the crop damage caused by large herbivores especially wild ass; and hopefully either government or some non-governmental organizations would design and implement the compensation scheme along with giving subsidies for wire or mesh fencing the area with intensive and extensive crop raiding incidences.

Sensitizing local community especially school children has already been initiated now it just needs to be carried forward to spread the message across the society. This would help secure long term conservation of wild ass in particular and other wildlife in general.

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

Local people were found to be quite instrumental and enthusiastic from the project perspective. Since the study area was a human dominated landscape, they happily helped during field data collection and arrangement of conservation workshops. Several persons from different villages who stayed in association for the entire project duration came to know about the conservation importance of wild ass and other endangered wildlife of the landscape. Eight conservation awareness workshops gave extra opportunity to involve more local people and help establish long term rapport to further conservation and research efforts in this area.

5. Are there any plans to continue this work?

I wish to test the efficacy of different herbivore repellent devices experimentally to bring down the crop raiding incidences which would eventually help this species re-establishing itself in it's former range. Besides a rapid survey along the periphery of the Little Rann of Kachchh to understand the spatial mechanism of the wild ass dispersal.

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

A detailed technical report will be submitted to The Rufford Small Grants Foundation. Report copies will be sent to the Gujarat Forest department, local NGO's, state university departments and colleges working on the similar aspects, as well as to the library of the Wildlife Institute of India, Dehradun as a part of the knowledge sharing. Moreover, the findings of the study will be published in a reputed journal very soon.

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

February 2009 - February 2010 as originally proposed.

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	Expenditure	Difference	Comments
Field equipment, one GPS and digital camera	£ 400	£ 467	+£ 67	Because of the difference in exchange rate between proposed received fund (79.68 vs. 68.33)
Travel and fuel for 200 days field work	£ 1200	£ 1200	0	
Educational materials and workshop expenses	£ 1800	£ 1600	-£200	Necessary arrangements were made by locals voluntarily.
Base camp expenditure	£ 800	£ 900	+£ 100	Because of the difference in exchange rate between proposed received fund (79.68 vs. 68.33)

Daily wages for two assistants @ £ 3 /-300 days and per diem to 4 volunteers 20 days (£140)	£ 900	£ 1050	+ £ 150	Could not cut down on daily wages as it was minimum as per government rule. Besides, logistic for volunteer added into.
Report writing	£ 300	£ 250	- £ 50	Tried to cut down on stationary and DTP work
Per diem for the leader @ £ 3 /-200days	£ 600	£ 533	- £ 67	At last, difference was settled from the leader's per diem
TOTAL	£ 6000	£ 6000	00	Local exchange rate used: 1£= Rs 79.01

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

- ii Intensive monitoring of the crop raiding issues by wild ass and other wild herbivores in both, resource poor and rich seasons. Besides, detailed food habit study of Indian wild ass in this agro-pastoral landscape as well as in the protected area to understand the nutritional ecology of the species for developing subsequent conservation measures.
- iii Experimentally check the efficacy of the ungulate repellent devices to ensure better crop protection by farmers and to reduce the conflict level.
- iiii Survey other areas adjacent to the Little Rann of Kachchh to understand the crop raiding issues by wild ungulates especially wild ass and subsequent conflict magnitude.

10. Did you use the RSGF logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?

Logo was used in the banner of education programme, t-shirts and stickers.

11. Any other comments

Financial support from The Rufford Small Grant Foundation not only help budding wildlife researchers to enhance their research career but more importantly help initiate the long term landscape level conservation programmes.