

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. 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	Ambika Pd. Khatiwada
Project title	Ecology and Conservation of <i>Cuon alpinus</i> (Asiatic Wild Dog / Dhole) in Kangchenjunga Conservation Area, Nepal
RSG reference	8939-1
Reporting period	November 2010 to December 2011
Amount of grant	£5969
Your email address	ambikakhatiwada9@gmail.com
Date of this report	December 2011

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
Status and distribution		Partially Achieved		Prior to this study there was not confirmed record of dhole presence in Kangchenjunga Conservation Area (KCA). Ten camera traps were deployed during this study to confirm the presence dhole in KCA. Three pictures of dholes were caught on camera trap at 3759 m elevation. From the interview survey, group discussions and sign survey- we come to know that dholes are distributed through out KCA. The lowest altitudinal record that the dholes were sighted is 1900 m and the highest altitude where we found dhole scat is 4350 m elevation in KCA. Dholes are distributed in pasture lands of Yamphudin, Tapethok, Lelep and Wolangchung Gola. They are also distributed in neighbouring villages of KCA. We are going to conduct detailed camera trapping survey to evaluate status and distribution of dhole of KCA in 2012.
Habitat preference			Fully Achieved	Habitat preference of dhole was identified on the basis of camera trapping information and sign recorded locations. Most of the dhole signs were recorded in 3000 m to 4000 m elevation. 53 plots of 10 m radius were laid out as habitat use plots (where dhole sign recorded). We found the dholes sign mostly in human/grazing trails and edge of the mountain. Although, we will collect more information regarding habitat preference through camera trapping survey in 2012.
Habitat overlap			Fully Achieved	50% of the dholes' signs were found in isolated areas where no sign of other animals were found. Dhole signs were found along with livestock, Yak/Cow (28%), Goat/Sheep (3%) and carcass (3%). The wild animals overlapped the habitat with dholes were Himalayan

				<p>black bear (5%), Ghoral/Tahr (2%) and Birds (9%)</p> <p>The camera trapping survey which is going to be held on 2012 will produce more information regarding habitat overlap.</p>
Map out the distribution and potential habitat		Partially Achieved		<p>We identified some locations of dhole distribution but we are going to conduct detail camera trapping survey in 2012. This survey will helpful to produce distribution map of dhole in KCA.</p>
Assessment of human-dhole conflict			Fully Achieved	<p>Kangchenjunga Conservation Area Management Council (KCAMC) and Kangchenjunga Conservation Area Project (KCAP) have initiated Livestock Insurance Scheme (LIS) in support of WWF-Nepal to reduce human-snow leopard conflict. According to the record of Snow Leopard Conservation sub-committee (SLCC), 87.5% livestock depredation in Yamphudin villages was by dholes during the period of 2006 to 2011. The herders reported more livestock depredation by dholes in and around KCA but there is lack of data as all the herders did not list their livestock in LIS and there is no provision of LIS for goat and sheep. SLCC started to distribute relief fund (NRs 2500 per kill) for dhole depredation as well in Yamphudin. The SLCC monitor the depredation site and confirm the kill either that is of dhole or snow leopard before relief fund distribution.</p>
Perception of locals and school students towards dhole conservation			Fully Achieved	<p>Most of the school students were unaware regarding dhole. Some of them listen that the dhole kills livestock in pasture lands. Among the interviewed villagers 81% knew about wild dogs and only 19% were unknown about it. The herders, local conservation leaders and teachers were knowledgeable, but the porters and a few villagers with agricultural occupations were not knowledgeable about the wild dogs. The wild dog has several names at the local level. They recognized it as <i>Jangali Kukur</i> (Forest Dog), <i>Milke</i> (Very fast</p>

				<p>moving animal) and <i>Thada Kane</i> (The ears always erect) but 90% respondents were unknown about its name “Dhole”. To know the perception of local people - the statement “I support dhole conservation even if my livestock are killed” was asked. 52% respondents were disagreed with this statement and 39% were neutral.</p>
Investigate diet condition of dhole through scat analysis		Partially Achieved		<p>20 scats of dhole were collected in 2011. We are planning to collect more scat following scat collection protocol and will do DNA test before analysis in 2012</p>
Launch conservation awareness to change the attitude of locals towards dhole conservation		Partially Achieved		<p>Village and district level workshops have been conducted. School teaching program and essay competition has been carried out in secondary and lower secondary schools of KCA. We are consulting knowledgeable individuals for better design of poster and notebook with dhole conservation message and will publish it within February 2012. We also would like to conduct dhole conservation awareness around neighbouring villages of KCA in 2012.</p>
One day talk program was organized in Kathmandu Forestry College on the occasion of Nepal’s 16 th wildlife week 2011			Additional event (more than proposed)	<p>We organised a 1-day talk programme at Kathmandu Forestry College (KAFCOL) on the occasion of Nepal’s 16th wildlife week on 20 April 2011 in collaboration with KAFCOL and Alumni Association for Conservation and Development (AACD). We presented about dholes of Kangchenjunga at the program. Moreover, other four scientific papers regarding wildlife research were presented by university professors and wildlife researchers. Around 150 students of KAFCOL and faculties were present in the programme.</p>
Conservation Awareness through cycle rally			Additional event (more than proposed)	<p>We supported two young and energetic intermediate science (I. Sc.) forestry students (Mr. Gopal Khanal and Mr. Dipendra Nath) of Institute of Forestry, Pokhara. They conducted Mahakali – Mechi cycle rally for biodiversity</p>

				conservation and climate change awareness in 2010. They displayed dhole conservation poster with conservation message throughout the rally. They meet 10 secondary school, 15 higher secondary school, 5 eco-clubs and 22 community forest users during their rally from Western Nepal to Eastern Nepal.
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

It is very difficult to work in high altitude. October to March supports severe cold and is difficult to conduct any field activities like sign survey and camera trapping in the pasture lands above 2000 m. June to August supports high rainfall and need to be careful from landslides, rivers and streams. The research team faces many difficulties during the field study viz. altitude sickness, fell down from steep slope and passes through difficult land slide. The research team was accompanied by very supportive local team and did not get severe injuries. We had first aid box and necessary common medicine which was very useful. Water proof shoes, jackets, bags, mattresses are essentials. Tents, sleeping bags, cooking stove and sufficient food material or in general, sufficient resource is essential while working at high altitude.

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

Since history of the time local people were reporting livestock depredation by dholes in KCA but there was not confirmation of dholes' presence in KCA. This study confirms the dhole presence through camera trapping record. Three pictures of dholes were caught on camera trap at 3759 m elevation. In 2009 there was a sighting report of two dholes in a nearby village (1,900m) and dholes had killed two cows at *Banduke Dada* of Yamphudin-2 (2,586m) in 2007 (C. Sherpa, T. Lama pers. comm.). In KCA a pack of up to 11 dholes was reported by herders. The highest elevation that we found dhole scat was 4,350m above sea level at site name *Mathaba Bhanjung*.

The dhole is found to be the main predator in Yamphudin village of KCA. 87.5% livestock depredation was by dholes in the period of 2006 to 2011. Only 12.5% depredation was by snow leopard in the area. Yet, there are more reports of livestock depredation in and around KCA by different wild predators. Dhole, snow leopard, common leopard, Himalayan black bear are found to be the predators in and around KCA. Habitat fragmentation due to slash/burn practice, unsustainable forest products collection and human-dhole conflict are current threats to dholes in KCA. The local people regard dhole as threat to their livestock because of their livestock killing behaviour. Sometimes, the herders secretly use poison against dholes to reduce the loss of their livestock in the pasture lands, which is causing an increased threat to dhole survival in KCA.

Participatory conservation awareness program was launched organising community meetings/workshops and school teaching programmes. Snow leopard conservation sub-committee, community based anti-poaching unit, conservation area management committees and overall, the KCAMC involvement was highly appreciated. Now the awareness level of the community has

increased regarding the ecological importance of dhole in its nature as the dholes are major regulator of herbivore population, which are raiding crops heavily in and around KCA.

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

This project has been conducted in close coordination with Kangchenjunga Conservation Area Management Council (KCAMC) and the community based organizations. Schools of KCA and local leaders were involved actively in conservation awareness programs. We received strong collaboration of herders and local leaders to conduct this project in KCA. The KCAMC, herders and local people of KCA were directly benefited by this project. They were planning to study dholes since long time back in KCA but there was lacking human and financial resource to carry out the study. There was not confirmed record of dhole presence and that was hindering KCAMC to make some institutional decisions for the conservation of dholes in KCA. Now the herders are positive and anticipating some relief orientated conservation programs for the dhole kills. KCAMC and other concern conservation authority can make decision to include dholes in livestock insurance scheme and can do something officially for the dhole conservation in KCA. WWF-Nepal/Kangchenjunga Conservation Area Project (KCAP), National Trust for Nature Conservation (NTNC), Department of National Parks and Wildlife Conservation (DNPWC), Alumni Association for Conservation and Development (AACD) provided valuable institutional support. We are continuously working with them for conservation endeavours and anticipating their support in future as well. This project provided the first hand information for dhole conservation in Nepal.

5. Are there any plans to continue this work?

We are going to conduct some intensive camera trapping survey of KCA for dholes. The camera trapping survey will be carried out in close collaboration with local community and the project anticipate local people support and monitoring for long term dhole conservation in KCA. We are planning fifty camera traps for at least 2 months. This is slightly an ambitious project and need more resources to accomplish it. We secured some funding and still looking for co-funding for this project.

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

The result of the project has been shared among university students and academics, organising talk programmes in Kathmandu Forestry College and Institute of Forestry, Pokhara in Nepal. The article entitled "Asiatic Wild Dog (Dhole) Conservation in Kangchenjunga Conservation Area, Nepal" has been published in Biodiversity Conservation Efforts of Nepal, special issue which was published by Department of National Parks and Wildlife Conservation (DNPWC), Nepal on the occasion of 16th wildlife week 2011. FM radios and Nepali national daily the "Kantipur" has published the news regarding dhole study in KCA. Poster presentation has been done at Student Conference on Conservation Science (SCCS)-Bengalore in September 2011. The result of the study will be shared among scientific community, publishing peer reviewed scientific article in international journals.

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

We planned this project in June/July 2010 and received support from RSG in December 2010. Project has run up to the end of 2011.

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
Dhole presence/absence survey	1671	1990	+321	The researcher was accompanied by 3 local supporters for this purpose
Household and key informant survey	557	790	+233	The researcher was accompanied by two assistant researchers
Food and Accommodation	895	1350	+455	Arranged for three local supporters and 3 researchers
Research tools preparation and literature	157	157	00	
Transportation	301	1150	+849	Camera traps, batteries and research team transportation round trip-four times
Diet analysis	151	00		The project is extended and analysis will be carried out in 2012 after DNA test
Conservation awareness programmes and awareness material publication	1556	1900	+344	Two important additional events (more than proposed) had been carried out to raise dhole conservation awareness
Communication	59	105	+46	Telephone, email/internet, we interviewed some key informant through telephone during the project
Camera traps and SD cards	00	2500		Kind Support from National Trust for Nature Conservation (NTNC) / Biodiversity Conservation Centre (BCC). The camera traps were returned to NTNC/BCC after completion of the project
Camera traps batteries	00	250	+250	60 pair D size camera trap batteries purchased
GPS, binocular, sleeping bags, digital camera	00	1700		Kind support from NTNC/BCC and Alumni Association for Conservation and Development (AACD). The instruments were returned after use
Remuneration to principal investigator and reporting	622	622	00	Principal investigator has been paid this amount
Total	5969	12514	2498	The amount 1017 has been covered from Russell E. Train fellowship, NTNC/BCC and Idea Wild. Remaining 1481 is

				requested to AACD
Exchange rate £1=NRs 113				

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

Evaluation of the status and distribution of dholes through systematic camera trapping survey will be important for long term dhole conservation actions. Sufficient sample collection of scat, DNA test and diet analysis will be helpful to know the prey species of dholes in KCA. Moreover, keeping engage of KCAMC, herders, school students, and local people in and around KCA will be important scheme for dhole conservation efforts in and around KCA.

I feel the strong need to study dholes in other protected areas of Nepal to know the national status. I surely have planned to study dholes in other areas as well in future.

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?

RSGF logos have been used in dhole conservation awareness banner, talk program banner, and will be used in poster and notebooks. Logo was used during bicycle rally from Mahakali to Mechi and acknowledged RSGF in several dhole presentations in and outside Nepal.

11. Any other comments?

I am thankful to Rufford Small Grants Foundation for major funding. RSGF support makes me able to study the elusive dhole first time in KCA! I owe my sincere gratitude to Dr. Keshav Datt Awasthi, Dr. Krishna Pd. Devkota, Mr. Buddi Sagar Poudel, Dr. Shant Raj Jnawali, Mr. Naresh Subedi, Ms. Kate Jenks, Mr. Khagendra Phembo and Mr. Baburam Lamichhane for their valuable support. My gratitude goes to Russell E. Train fellowship, National Trust for Nature Conservation (NTNC)/Biodiversity Conservation Centre (BCC), Alumni Association for Conservation and Development (AACD), Idea Wild, Kangchenjunga Conservation Area Management Council (KCAMC), WWF-Nepal/Kangchenjunga Conservation Area Project (KCAP), community based organizations of KCA, Schools of KCA, all students and local people who involved and supported this project. I am thankful to Ms. Sushila Thing, Mr. Majij Upadhyaya, Mr. Mohan K.C, Ms. Nitu Kafle, Mr. Sonam Lama and Ms. Chungla Sherpa for their kind support to this project. I am unable to take the name of all individuals who supported me directly or indirectly to accomplish this project. I sincerely acknowledge all of you and anticipate your support in future as well for the conservation endeavours.