

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	Rabindra Parajuli, Bishnu Timilsina and Obindra B. Chand
Project title	Positive Interactions in the Alpine Plant Community: Implicatio Conservation in Langtang National Park, Nepal.
RSG reference	31.06.09
Reporting period	October 2010 – March 2011
Amount of grant	£4078
Your email address	rabindraparajuli2@yahoo.com
Date of this report	03.03.2011



1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not	Partially	Fully	Comments
	achieved	achieved	achieved	
a. Explore positive interactions and interdependencies among high altitude Himalayan plant communities and understand the role shrubs play in species diversity maintenance.		Yes		Ecological sampling (pair-wise systematic- random method with 1m ² quadrat) has been done in both Langtang-Kyangjing valley and Gosaikunda sector covering an altitude from 3600 m asl to 4650 m asl. Two dominant shrubs i.e. <i>Berberis</i> sp. and <i>Rhododendron anthopogon</i> as well as a cushion species <i>Astragalus strictus</i> , were sampled. Juniper couldn't be sampled because of its unavailability in patchy (prerequisite for pair wise sampling) form in feasible areas (in terms sampling). Pair-wise sampling technique helped us to understand the difference in species richness and composition between shrubland habitat and open areas. Statistical analysis showed that species richness is higher in shrubland in comparison to adjacent open areas and several herbaceous plants are specifically canfined to shrubland habitate.
b. Raise awareness among local people regarding positive plant interactions and biodiversity conservation through educational programmes and observational field visits.			Yes	Publication of brochures (both in Nepali and English), pamphlet, flex prints greatly helped to raise awareness among different level of audience. Active involvement of local people, lamas, schoolteachers, students, local conservation activists, national park field staffs etc., made the awareness education programmes highly successful. Apart from the programme attendants, we tried to aware as many local people as possible by conducting door-to-door awareness campaign. Photographs reflecting shrubby plants protecting other plants, different kinds of threats to biodiversity and landscapes showing plant association, helped to give real picture of field which made awareness programmes highly interactive and effective. Local people told us that our programme helped them better understand their observation with scientific explanation



			which - in their word - will be never erased from their memory. Several extra awareness programmes were also carried out among the pilgrims visiting Gosaikund Holy Lake located in Gosaikund sector of Langtang National Park. This helped to minimise the unusual and temporal destruction of highly threatened resources (like <i>Dactylorhiza</i> , <i>Sassurea</i> sp. etc). Observation field visit coincided with festival became helpful to empower local people on biodiversity conservation. The participants were committed to share their experience with other villagers too. Unfortunately, we couldn't include school students because of their busy school schedule.
c. Workshop conduction for the awareness of policy makers, local administration, national park officials and conservationists regarding positive interaction and interdependencies among plant communities and it's implication in biodiversity conservation		Yes	Both the workshops conducted in local and national level became highly successful due to grand participation of people from different sector. The research findings and activities were well appreciated by national park authorities, political parties, park securities, local administration, journalists, conservationist, different stake holders including FECOFUN (Federation of Community Forest User's Nepal), conservation academicians (professors from Tribhuvan University) and local peoples. News highlight about research and workshop in weekly news paper (Rasuwa Khaber Weekly) widened the coverage of the workshops. National park authorities made oral commitment of considering positive interaction and role played by shrub in maintaining plant diversity during the formulation of National park management plan among all participants of the workshop.

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

Local festivals that people were highly engaged in made to shift the awareness programme in their favourable time. In addition to this peak tourism period also had to be considered. These rendered



the pre submitted schedule to readjust. Regular contact and communication with local people was maintained to readjust the schedule.

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

- a. Finding showed that many of the plant species preferred to grow inside the shrub (*Berberis, Astragalus strictus* and *Rhododendron anthopogon*). Among the sampled shrub Berberis found to be good facilitator providing microhabitat to highest number of other plants species.
- b. Local people were organised and sensitised on the matters of plant positive interaction and biodiversity conservation. The local group members showed their enthusiasm in biodiversity management through implication of plant interactions. Sensitisation of students was highly successful as proven by the essays they wrote.
- c. Positive response from the participants of the workshops which includes national park authorities, political parties, park securities, local administration, journalists, conservation activist, conservation academicians and local peoples as well as the commitment from national park authority to consider research finding during formulation of national park management plan were important accomplishment of the project. Media coverage of the event widened the audiences and it is our additional achievement.

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

Local people showed their active participation with high enthusiasm in awareness programme. Being inspired with landscape approach of conservation and considering plant interaction the group of local conservation activist reorganized and revitalized to act in the sprit of interdependencies among plant communities. The communities we worked with use many plants in cultural ceremonies and rituals. Our approach strengthened the understanding of local people in conserving plants of their concern by considering interactions and interdependencies of the plant community.

5. Are there any plans to continue this work?

We used ecological sampling to explore positive interactions and the role shrub play in species diversity maintenance. But we could not conduct field experiments using technological tools to explore detail mechanism of positive interactions. Therefore, we want to continue the project for the exploration of detail mechanism using technological tools.

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

We conducted workshops, published brochure, pamphlets and flex prints, awareness programmes through door to door visit and group sensitisation. Our work is also published in weekly newspaper of Rasuwa district. We will send our technical report to concerned institutions and organisations including Langtang National Park and Department of National Park and Wildlife Conservation (DNPWC). We are planning to share our finding in broad scale by publishing our paper in online International Journal(s).



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

The RSG was used for 14 months though it was anticipated for 12 months. The grant release was delayed by 2 months more than we had expected. By that time flowering was already over and we had to wait for next flowering season. This delayed the anticipated time by 2 months.

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 ¹		Actual Amount ²	Difference	Comments	
	inc	In NRs.	in £	In NRs.			
Field Expense							
Transportation	260	31720	175	20300	85	Though the number field visits were increased, cost minimised using public vehicle	
Local Assistant	405	49410	405	46980	0		
Food and Accommodation of research team	1890	230580	1983	23000 0	-93	Because of the decline in exchange rate	
Conservation education	conduc	tion					
Stationery	150	18300	158	18300	-8	Because of the decline in exchange rate	
Printing	200	24400	276	32000	-76	Published different education materials, flex, brochures and posters in large number to cover higher number audience	
Refreshment	100	12200	130	15000	-30	Because the number of participants was higher than we expected	
Prize distribution	55	6710	69	8000	-14	We also donated sports material to schools too	
Observation visits				-			
Food & accommodation	343	41846	340	39440	3	Used this amount in other deficits	
Per-diem	105	12810	105	12180	0		
Workshop conductions							
Hall rentals	50	6100	25	2900	25	Got student discount	
Stationery	50	6100	53	6148	-3	Declined in exchange rate	

¹ Budgeted exchange rate 1f=122

² Actual Exchange Rate 1f=116



Refreshment	50	6100	61	7076	-11	Because the number of
						participants was higher than
						planned
Equipment						
Projector Rental	50	6100	21.5	2500	28.	Provided by WWF Nepal for
					5	Dhunche workshop
GPS Rental	90	10980	0	0	90	Managed from the University
Camera Rental	180	21960	180	18560	0	
Report communication	100	12200	100	11600	0	
and Stationery						
Total	4078	497516	4081	47330	-3.5	
			.5	4		

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

- 1. Publication of the research findings.
- 2. Follow up with the National Park Authorities during the formulation of Management Plan for considering positive interaction and the role of shrub in protecting other plants.
- 3. Continuation of the research work and field experiments to better understand the mechanism of positive interaction.

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?

Yes, we used RSG logo in every material we produced for awareness program. We also used it during workshop in PowerPoint slide and invitation letter.

11. Any other comments?

For plant sampling, it has to be done during the summer season (flowering season). Delay in decision making about the grant might lead to waiting until next flowering season. Therefore, timely decision making would help to effectively conduct the program in reference to the time frame proposed.

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