

The Rufford Small Grants Foundation

Final Report

Grant Recipient Details	
Your name	Roshan Rai, Darjeeling Ladenla Road Prerna
Project title	Community-based mitigation of human-wildlife conflict around the Singalila National Park, India
RSG reference	8596-1
Reporting period	January 2011 to June 2012
Amount of grant	£5880
Your email address	dlrprerna@yahoo.com , darjeelingprerna@gmail.com
Date of this report	29 th June 2012

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. Understand the extent and intensity of Human Wildlife Conflict (HWC) in Singalila National Park(SNP)		Partially achieved		During the project period Human Wildlife Conflict (HWC) was mapped on a daily basis in Samanden Forest Village(FV), SNP over a period of 1 year. The data that were generated gives a very extensive picture of HWC which has not been done in the region before but at the same time as there was no baseline for HWC to compare with, the data stand alone. The data show that even though there is no mega-fauna, myriad of small animals inflicting crop and livestock damage making HWC in this mountain region a complex and core conservation issue requiring integrated management action plans. HWC was documented as a paper and in audio-video format and used to advocate for increased attention to HWC in the mountain regions.
ii. Identify and initiate community-based initiatives to reduce impacts of human wildlife conflict.		Partially Achieved		The traditional bamboo fences to prevent wildlife intrusion was strengthened with moats, pit traps and with the introduction of bio-fences. Various species (five species and more) were identified for the bio-fence(living) so that it evolves with multiple functionality. Tea was introduced as one of the species of bio-fence as none of the existing animals feed on it and also the possibility of livelihood options with the brand Darjeeling Tea. Medicinal plants as an alternate option was discussed and Forest Department support was solicited and offered especially for <i>Swertia</i> . With the high altitude agro-climatic conditions of Samanden FV the biological interventions takes much longer that the project period to take root for its full potential.

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

During the project period there was reduced wild boar depredation due to a bumper fruiting of *Lithocarpus* in the forest. With *Lithocarpus* and *Castanopsis sps* fruiting, it has meant plenty of easy food for the wild boars and bears reducing their raids on crops. *Lithocarpus* has a fruiting cycle of every alternate year and the project period was the fruiting

period. Some community representatives also pointed out that the fruiting was excessive in this project period. Thus, the data for crop depredation in the project is lesser than the previous year with chances of dramatic increase in the coming year as the excess fruiting could lead to a population increase of wild boar.

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

i. A HWC map was generated with extensive data of animal intrusion, crop damage and its impact on the lives of the community of Samanden FV. These data generated and the subsequent analysis shows significant HWC with nine small animals inflicting damage to crops and livestock in the project period. HWC impacts negatively forest fringe communities who are already marginalised. HWC discourse tends to be mega-fauna of the plains excluding HWC of the mountains. With Darjeeling Hills coming under the Eastern Himalayas, bio-diversity hotspot, has a large concentration of protected areas with the conservation interventions exclusive of communities. Thus, this data brings into light, mountain HWC as a core conservation issue.

ii. Possible HWC impact reducing interventions were studied and existing practices were strengthened. Existing bamboo fences were strengthened with moats for boars. Animal traps were also made as a deterrent to monkeys as once they fall into the trap and struggle to get out, the entire troop of monkeys stop coming that way for a long time. To strengthen the fence, bio-fence with multiple utility with different species was discussed and initiated. Tea was added to the fence with livelihood possibilities. Crops were diversified as well as medicinal plants as alternate options were discussed. Medicinal plant especially *swertia* was given approval and support promised by the Forest Department.

iii. The data generated was presented to the Forest Department who affirmed that HWC is a core issue and that HWC in the Hills do not get the necessary attention at the regional and national level. They suggested that preventive measures than compensative should be stressed. Suggestions were made and support offered for alternate livelihoods like medicinal plants and eco-tourism. It was reiterated that a long term action plan is required to revert back to broad leafed forest from an introduced conifer plantation forest.

At the Indian Mountain Initiative Sustainable Mountain Development Summit 2 in Gangtok, Sikkim on 25th and 26th May, 2012 (<http://imi-smds2.com>), theme Community and Forests, the HWC paper(WWF India, Sikkim and DLR Prerna - joint paper) was endorsed by the house and supplemented by representatives of other mountain states. Similar instances of HWC were described, with similar species and impact on the lives of forest fringe communities. The issue of HWC in mountain areas not being reflected in regional and national debates which is mega fauna dominant was reiterated. It was also discussed that global and national agendas of good intention of biodiversity conservation is coming at the cost of fringe communities who are not acknowledged, included nor compensated. The need for integrated and innovative action was called for at the policy and implementation level. Mr. B. M. S. Rathore Joint Secretary, Ministry of Environment and Forests who was chair of the theme, took upon himself to take the issue forward at the National Ministry level.

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

HWC as a core issue came about with discussions with the community during the period of 2008 to 2011 when the proponent was undertaking a project strengthening civil society organisations for conservation through sustainable natural resources management supported by CEPF. During this period HWC was not addressed within the project. The community undertook the mapping of HWC along with DLR Prerna the proponent. They undertook planning exercises for mitigation measures of alternative livelihoods, strengthening fences for bio-fences. They also took initiatives of diversifying their crops and initiating the bio-fence.

The community benefited with HWC discussion, crop diversification and bio-fence. These initiatives brought the issue to the forefront of community discussion and action which led to the initiation of mitigation measures. These mitigation measures over a period when the bio-fence becomes compact and alternative crops are sown will greatly reduce the impacts of HWC.

With advocacy, the issue and policy gaps were acknowledged by critical departments like Forest Department which over time will enable a favourable policy environment benefitting mountain forest fringe communities.

5. Are there any plans to continue this work?

Yes, the work has just been initiated with more interventions needed before it becomes a self sustaining initiative. At the community level the alternative livelihood options; medicinal plants, apiary, livestock, ecotourism, that were evolved at community discussion and discussions with stakeholders need to be continued and the support and linkages offered explored and taken forward to make it a reality. The bio-fence needs to be invested upon and made compact over a period of time. Ultimately these initiatives need to be expanded to the 17 forest villages around SNP and also other forest villages in Darjeeling. DLR Prerna the proponent will continue its intervention on HWC and the lessons learnt in the project forward within its resources and with other stakeholder partnerships. These initiatives have reflection in other mountainous regions including neighbouring Sikkim, East Nepal and Bhutan.

The data collection needs to be continued, so that a strong reliable study can be presented to highlight and advocate the issue of HWC especially in the mountain regions. The existing partnerships and linkages with the community and other groups both civil society and governmental will be continued for improving the data bank.

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

A report is prepared and along with the audio-visual document will be shared with the Community, Forest Department(Darjeeling), Ministry of Environment and Forests, Civil Society and Media so that a larger support and solidarity is built.

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 over 15 months but the community data collection was restricted to 13 months with initial preparation and post analysis taking the rest of the project period. Thus even though 13 month data collection cycle was used the need to continue the collection is felt.

The mitigation measures post community planning especially bio-fence and diversifying agro-biodiversity had a very brief intervention period as Samanden FV gets a short planting period due to its agro-climatic conditions. Thus a number of these interventions have to be undertaken post project period.

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.

SL.No.	Objective/Activity	Budgeted Amount (£)	Budgeted Amount (INR) @69.63	Actual Expenses (£)	Actual Expenses (INR)	Difference	Comment
A	Program Cost						
1	Understand the extent and intensity of HWC in SNP.						
1.1	Conduct surveys for primary data collection to understand the extent and dynamics of HWC in the SNP fringe villages.	300	20,889.00	300	20,889.00	-	-
1.2	Collect secondary data from experts, forest department and literature about patterns and causes at landscape level.	250	17,407.00	250	17,407.00	-	-
1.3	Prepare a HWC map for the project site	300	20,889.00	300	20,889.00	-	-
1.4	Draw critical lessons from other communities and initiatives in the region and look at possible mitigation strategies for the site.	500	34,815.00	500	34,815.00	-	-

1.5	Advocate for compensation and more participatory management systems by sharing information collected with the forest department and local media	200	13,926.00	200	13,926.00	-	-
	Subtotal	1550	107,926.00	1550	107,926.00	-	-
2	To identify and initiate community-based initiatives to reduce impacts of human wildlife conflict.						
2.1	Organise a series of community consultations to identify appropriate mitigation strategies	250	17,407.00	250	17,407.00	-	-
2.2	Organise a series of community consultations to identify appropriate mitigation strategies	1800	125,334.00	1800	125,334.00	-	-
2.3	Organise policy level interactions with the Forest Department for feasibility, acceptance and partnership/ownership	200	13,926.00	200	13,926.00	-	-
2.4	Document the information collected, experiences and lessons learnt and share with relevant stakeholders.	300	20,889.00	300	20,889.00	-	-
	Subtotal	2550	177,556.00	2550	177,556.00	-	-
B	Program Support costs						
3	Professional Service costs						
3.1	Technical back up from experts	200	13,926.00	200	13,926.00	-	-
3.2	Field Assistants 2 * 6 months @ 60	720	50,133.60	720	50,133.60	-	-
	Subtotal	920	64,059.60	920	64,059.60	-	-
4	Daily sustenance and travel						
4.1	Land travel for project personnel	250	17,407.00	250	17,407.00	-	-
4.2	Sustenance during travel	200	13,926.00	200	13,926.00	-	-
	Subtotal	450	31,333.00	450	31,333.00	-	-
5	Communication and Reporting						
5.1	Communication	-	-	-	-	-	-
5.2	Stationery	-	-	-	-	-	-
	Subtotal	-	-	-	-	-	-
6	Salary of project personnel						
6.1	Salary of DLR staff	-	-	-	-	-	-
6.2	Salary of community animators	-	-	-	-	-	-
	Subtotal	-	-	-	-	-	-

	Total Program Costs (A)	4100	285,482.00	4100	285,482.00	-	-
	Overhead 10% of program costs (A)	410	28,548.30	410	28,548.30	-	-
	Total Program Support Costs (B)	1370	95,393.10	1370	95,393.10	-	-
	Grand total (A+B)	5880	409,423.40	5880	409,423.40	-	-

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

- i. Securing support to take the lessons learnt from the pilot project to strengthen the existing interventions as well as to expand it to other 17 fringe villages in SNP and other protected areas in Darjeeling and neighbouring states.
- ii. Leveraging and actualising support for medicinal plants, apiary, eco-tourism, tea, bio-fence through the Forest Department and linking these livelihood options to the market.
- iii. Continue to advocate for HWC redress in mountain regions by strengthening data base and developing strategic networks and partnership of like-minded organisations and individuals.

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?

The RSGF logo was used in the paper presented at the Indian Mountain Initiative Summit II and in the audio-video document. The logo was also used in DLR Prerna 2010-2011 Annual Report.

11. Any other comments?

The fauna documented in the study period are under different schedules of The Indian Wildlife(Protection) Act 1972

	Common name	Scientific name	Protection status (WLPA Schedule)
1.	Common leopard	<i>Panthera pardus</i>	Schedule I
2.	Himalayan black bear	<i>Selenarctos thibetanus</i>	Schedule II
3.	Barking deer	<i>Muntiacus muntjak</i>	Schedule III
4.	Rhesus macaque	<i>Macaca mulatta</i>	Schedule II
5.	Assamese macaque	<i>Macaca assamensis</i>	Schedule II
6.	Wild boar	<i>Sus scrofa</i>	Schedule III
7.	Yellow throated marten	<i>Martes flavigula</i>	Schedule II
8.	Himalayan crestless porcupine	<i>Hystrix hodgsoni</i>	Schedule II
9.	Eurasian Jay	<i>Garrulus glandarius</i>	Schedule IV
10.	White-throated laughingthrush	<i>Garrulax albogularis</i>	NA
11.	Eagle		**
12.	Jungle rat		**
13.	Squirrels		Schedule II*

*All species of the genera *Bulopetes*, *Petaurista*, *Pelomys* and *Eupetaurus*; not identified at species level

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