

## The Rufford Small Grants Foundation

### Final Report

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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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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#### Grant Recipient Details

<b>Your name</b>	Yash Veer Bhatnagar
<b>Project title</b>	Markhor conservation in India: understanding and tackling competition with livestock
<b>RSG reference</b>	15.05.09
<b>Reporting period</b>	July 2009 to November 2010
<b>Amount of grant</b>	£5968
<b>Your email address</b>	<a href="mailto:yash@ncf-india.org">yash@ncf-india.org</a>
<b>Date of this report</b>	April 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
Identify impact of livestock grazing on the markhor		X		We have assessed pressures exerted by the herders on the pastures of Kajinag and identified the areas with the highest impact. The actual impact on the vegetation however remained incomplete. This was primarily because during the entire summer insurgency and counter terrorism operations were going on which curtailed access and the time available for the work.
Assess the dependence of local communities on markhor habitat for grazing and other natural resources			X	Use of each and every part of Kajinag by herders was mapped to determine their dependence on local pastures. This has given a very good record of spatio-temporal spread of pressures and provides an ideal layer to study interactions with markhor and other wildlife.
Based on above information, develop a management plan that promotes markhor conservation while safeguarding the interests of the local communities		X		We now have a clearer idea of the extent of grazing pressures in the area, critical areas for markhor and the response of markhor to these pressures. Based on this we have made recommendations to the Wildlife Department for regulating grazing. Apart from this we are committed to help the department prepare a full management plan for the area, which is now officially proposed as a national park. There are some issues within the department that need to be resolved and is causing some delay in this assignment. Hopefully we should be able to sort them out and begin working on the management plan soon.

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

As explained earlier, and in the proposal too, the study area happens to be on a volatile disputed border between India and Pakistan and there are other issues of insurgency in the region too. The Army thus has to be tough with allowing free movements by anybody in the region. Our team did

have to face delays due to this, but we overcame the difficulties to some extent by constant and open communication with the Army units of the region.

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

A general description of habitat use by markhor is already presented in the earlier submission to RFP (Bhatnagar, Y.V., Mishra, C., Ahmad, R., Trivedi, P., Raghunath, R and Kaul, R. (2008). Conservation of markhor in Kashmir. Final report submitted to Rufford Foundation, UK and NCF, Mysore). Further, this project has generated the first good datasets on the other two endangered species of the region, the musk deer and goral.

1. Use of Kajinag by the migratory *bakkarwal* herders has changed and intensified over the years. There were few herders (6-8 groups, with 8000-10000 stock) visiting the area till the 1980s, which declined sharply when militancy began in 1989, but has since 2004 grown to 15-20 groups with c. 15,000 stock. There are 3-4 pastures, especially in the alpine areas, which receive intense pressures. Some campsites receive pressures equivalent to almost 96,000 sheep-goat days (c. 1600 sheep goats multiplied by 60 day stay at these camps).
2. Markhor clearly avoid these higher altitude areas in summer in spite of better quality forage and remain in lower rugged patches through the summer season. On the contrary valleys with lower livestock pressures had significant use of the alpine areas by markhor. Markhor also avoided any other forest patch that was intensely grazed by livestock during summer.
3. We have found at least two sites that are important for markhor during parturition but face threats due to livestock movements. Further, we have identified about three sites that are important for markhor during the critical winter period. These sites are being suggested as priority sites for working with the community to reduce livestock grazing pressures.

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

This was not relevant in this study. The primary purpose of the project was to understand a pressing ecological threat to markhor in the Kajinag area (livestock grazing by migratory herds) and help with designing better and inclusive management options. The involvement of the community was thus primarily in the context of semi-structured meetings to understanding their resource use and dependence on the pastures. The project also hired three local research assistants through the entire period of 3 years of the project, while some five to eight others were employed on a temporary basis at different times, thus providing some benefits to a section of the population.

### **5. Are there any plans to continue this work?**

Yes. There are important threats to markhor and the Kajinag region in general. These are from migratory herders, armed forces and from some local people. We hope to encourage the government (J&K Wildlife Department) to prepare a management plan for the area and we will play a pivotal role in it with the information and insights we have gained during the current project. Efforts are on for this process to begin.

In particular, we are continuing to involve in documenting biodiversity in the area (rare pheasants), emerging crop damage related conflicts with black bear and livestock depredation by brown bear. Much of this work is in partnership with WTI and the Wildlife Department.

We are also working on preparing informative kits on markhor and its conservation for an important stakeholder in the region, the Indian Army. We are aware that any such kit should be adapted to inform the frequently changing Army units on facts about the rarity of markhor and the uniqueness of Kajinag in this context. We have seen that even such simple facts have an important impact in controlling poaching and other detrimental activities.

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

We have already been presenting the work in many academic and popular forums. Some popular articles are already out in national magazines, newsletters and blogs. But importantly, at least four scientific articles are in the pipeline along with a PhD dissertation. We are thus reaching a very wide cross-section of national and international audience.

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

We obtained the RSG in August 2009 and were to use it over a year. We however used it for our field programmes for three more months, until November, 2010.

**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
<b>Per diems and wages</b>				
Per diem for two investigators@ £4.05 per investigator per day for 350 man-days *	1,068	1,068	0	
Assistance@ £60.81 per month for 12 months (four people)	1,946	1,946	0	
Casual labour	473	473	0	
<b>Travel &amp; Accommodation</b>				
Air Travel (to Srinagar and back) - c. 5 trips	473	473	0	
Vehicle hiring@ c. £80 per trip for 10 trips	454	454	0	
Accommodation/ Rent	338	338	0	
Pack animal hiring/porters	473	473	0	
<b>Consumables</b>				
Provisions/rations	203	203	0	
Field Consumables	338	338	0	
Photography and media	68	68	0	
Report publishing	119	119	0	
<b>Total</b>	<b>5,953</b>	<b>5,953</b>		

We have been successful in utilising the entire funds received from RSG due to good planning and prolonged periods of fieldwork

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

As mentioned in item # 5 above, we propose to have a clearer role in helping the wildlife department manage the vexed issue of migratory herders. While a drastic reduction in livestock pressures in the entire area is an ideal situation, we realise that it may not be possible due to both socio-political and ethical reasons. Our study has however suggested some priority sites (e.g. lambing sites and wintering sites) where the pressures need to be reduced immediately.

Contributing to the preparation of a management plan is an important overall goal that can help prioritise areas, tackle threats, generate awareness and explore alternative sources of income for the people. We are striving to enable this management planning process to begin.

**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?**

We have acknowledged RSGF in all the presentations we made, where the logo was also used. In the upcoming manuscripts RSGF finds a very significant place.

**11. Any other comments?**

The project has been completed under extremely fragile geopolitical conditions where keeping schedules and meeting our own expectations was difficult. Under these conditions, the resources available from RSGF have provided critical support for the project to achieve what it has.