

The Rufford Foundation Final Report

Congratulations on the completion of your project that was supported by The Rufford 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 <u>jane@rufford.org</u>. Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details					
Your name	Suraj Upadhaya				
Project title	Sustaining Ophiocordyceps sinensis and Community's Livelihoods: Understanding the Economic & Ecological Impacts of Cordyceps Harvesting in High Mountain, Nepal.				
RSG reference	20002-1				
Reporting period	June 2016-August 2017				
Amount of grant	£ 4950				
Your email address	surajupadhaya99@gmail.com				
Date of this report	December 23, 2017				



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
To assess socio-economic impacts of yarchagumba collection on livelihoods of local people.				150 local people were surveyed to understand the socio-economic impacts of O. sinensis collection.
To assess ecological impacts of yarchagumba harvesting on the fragile high-altitude ecosystem.				I was able to survey three pastures. To get a clear picture, I need to do a survey on at least 10% of total pastures of Dolpa.
Examine the yarchagumba collection and management practices at the local level, trade route and community-based management approach as well as traditional and indigenous management practices.				I interviewed businessmen, stakeholders in Dolpa and Kathmandu to understand the trade route and collection patterns and management approaches.
Conservation awareness (School program and community outreach)				School conservation awareness programme was successfully conducted in three schools and two communities.
Biodiversity Conservation radio programs (9 episodes)				Radio programmes were aired from Dunai, Dolpa.
Production and distribution of biodiversity conservation poster and calendars (1000 pcs)				Calendars and posters were distributed to school students, local people and conservation stakeholders where awareness program was conducted.

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

The project was completed successfully despite of several unforeseen situations. Local elections were being held all over Nepal, and all local people were involved in political activities. The ongoing political situation and the environment were not quite appropriate for conducting surveys and conservation awareness activities. Apart from political scenarios, severe weather condition pushed our project little bit behind than projected time period.



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

We quantified the socio-economic impacts of yarchagumba (Opiocordyceps sinensis) on livelihoods of local people in Dolpa. The majority (more than 80%) of respondent's livelihood depends upon the income from harvesting of these resources.

Similarly, we also assessed the impacts of harvesting practising on the ecology of high altitude ecosystem. We were able to survey three different pastures to see how the harvesting practice is affecting the ecology of the area. The result shows that the biodiversity in the high altitude areas is at risk due to the overflow of people during harvesting seasons. The pollution created by these harvesters is the major issue towards sustainable conservation of biodiversity.

Also, we identified that the production of yarchagumba had gone down compared to 3-5 years ago. To create awareness on local people, we conducted the conservation awareness programmes.

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

The involvement and support of local communities were remarkable during the field work. Although the participation of local people was voluntary, in every step of field work, their participation was overwhelming. The local people were sensitised on impacts of *O. sinensis* collection and importance of sustainability. From the discussion, we found that local people have been experiencing the decline in the production of *O. sinensis* for 3-5 years. Due to which they were very curious about the research. We interviewed local and medium businessmen and their concern is more on sustainability. They were excited about our research. Through radio programmes and poster/calendar prints, we were able to disseminate the importance of yarchagumba, high altitude ecosystem and how people can get benefited from other alternatives such as ecotourism then depending highly on yarchagumba.

5. Are there any plans to continue this work?

This project is a continuation of a larger research project. I am planning to continue this work in future. I intend to conduct the similar survey on other pastures in and around Dolpa. Also, I like to carry out the study to the landscape level and try to understand the overall impacts of harvesting on biodiversity of larger landscapes. The overall landscape level understanding of ecological and economic impacts will be very important to prescribe the sustainable management of this species and conservation of the fragile high altitude ecosystem.

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

The results of this work are shared through various means of communication such as publishing scientific journals, popular media and outreach. I am preparing two manuscripts for publication in international peer-reviewed journals from the data collected from Dolpa. Although my paper was accepted for presentation at the



Student Conference for Conservation Science (SCCS), Bangalore, India, I could not attend the conference because of my PhD qualifying exam. The research output was aired on local FM radio station. The national media covered this research (https://tinyurl.com/yanvskj4 (https://tinyurl.com/yanvskj4 https://tinyurl.com/y7g2rte8). Three presentations (general talks) were given. Similarly, we conducted the interaction with local politicians on the issue of sustainability of Yarchagumba in the region.

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

I spent the Rufford Foundation grant for entire research project period, June 2016 to August 2017. A big chunk of the grant was spent during the field research. Field accommodations, travel and community outreach were massive amounts spent during the research 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.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Field Accommodations	1620	1620	0	One investigator, one staff and two colleagues spend time in the field for collecting data, awareness program.
Travel (Airfare Kathmandu-Nepalgunj-Dolpa and return Local Travel	900	1000	-100	The airport was closed in Dolpa because of which we used alternate of the aeroplane to travel.
Community Outreach (Radio Program, Calendars Print, Poster Print)	1600	1780	-180	We planned for four episodes but aired nine episodes of the radio program.
Consumables	460	160	+300	PI's personal GPS, photographic equipment were used.
Supplies/ Report preparation	370	390	-20	
Total	4950	4950	0	

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

This research helped to understand the socio-economic impacts of Yarchagumba (O.sinensis) collection on livelihoods of local people. We were also able to record some ecological impacts of harvesting. This research will provide empirical evidence



about the impact of Yarchagumba harvesting on the ecology of the fragile high altitude ecosystem, and the next step would be to conduct the research, conservation awareness, more outreach, and policy recommendations on the larger landscape.

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

Yes, name and logo of RF were used in each and every communication and publication related to this project. Similarly, I mentioned RSGF name to my peers as a potential funding source for their research. Some of them successfully got the grants to work in Mexico and Nepal.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Team Member Description		Role				
Suraj Upadhaya Principal Investigator		Project design, implementation, and report writing				
Beeju Poudyal	Research Assistant	Helped in data analysis and report writing				
Suman Thapa	Field Assistant	Helped on field work and data management				
Ananda Singh	Field Assistant	Helped on field work and data				
Rawal		management				
Rashmi Subedhi	Manager	Handle funds, human resources				

12. Any other comments?

I would like to thank you once again for the kindness of you and the committee in providing the fund without which this integrative research could not have taken place. The flexibility on reporting progress was commendable. I would like to express my gratitude for providing me some extra time for reporting.



News article

