

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 jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Deepak Dhyani
Project title	Conserving Lesser Known Wild Edible Biodiversity and Indigenous Traditional Knowledge of Locals in North Western Himalayas, India
RSG reference	14365-1
Reporting period	March 2014- March 2015
Amount of grant	£6000
Your email address	drddhyani@gmail.com
Date of this report	25 -07- 2015

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 understand major lesser known wild edibles present in main forest types of NW Himalaya, their consumption pattern and extent of usage.			√	Although, we have understand the diversity of wild edibles in the Himalayan forest and also worked on about 20 species, but we think there is a big possibilities to work for other wild edibles.
To generate awareness and build capacity among indigenous Garhwalese and Indo-Mongoloid Bhotiya tribal community for developing value added products and rehabilitation of degraded wastelands as many of them enhance soil Fertility.			√	We have conducted a series of workshops/ awareness programmes in the study area villages. In these workshops, awareness was generated and capacity was built among locals regarding importance of wild edible seed banks for conserving germplasm of traditional variety of seeds. Besides, the technical knowhow for local value addition of wild edibles for livelihood enhancement was also shared. Wild edible plants species those were available in and around the village periphery were selected to demonstrate the local value products. The experts from fruit processing institute were engaged for developing and demonstrating the products before the villagers so that they could early adopt it for their own consumption or as to earn economy for their livelihood.
To help local youth and children to explore their own forests for having a clear understanding of wild edible diversity and how they can ensure in-situ conservation of all these species.			√	Youth and children were directly approached in the schools. Some outstanding lectures were also given to the students not only in India's national language, i.e. Hindi, but also in the local dialect so that they could understand the issue with better sense.
To develop a seed bank of these lesser known wild edibles of NW Himalayas.			√	Seed germplasms of 20 lesser known wild edibles species were adequately stored in air tight jars inside a wooden Almirah at Village-Surainthota, Nanda Devi Biosphere Reserve, and

<p>To prepare reading material in local language that includes pamphlet, brochure and a small booklet for school going children. A small recipe book of indigenous and lesser known biodiversity not only for locals but also for all those who are interested in knowing about this dying wisdom.</p>		<p>v</p>	<p>Uttarakhand, India.</p> <p>Pamphlets, brochures and small booklets were published and distributed to the interested people of the study area. The reading materials mainly contain the basic background of the wild edibles including their traditional and modern value and uses. The small but informative booklet on studied wild edible plants was also prepared and distributed to the local people of the region. This small book is covered with comprehensive information of wild edibles, ethno-botany and other nutritional properties. The recipe book of indigenous and lesser known biodiversity was not fully accomplished due to various technical reasons including publishing fund (due to unavoidable circumstances the publishing fund was used in other project activities as due to adverse climatic conditions the activities work took more wages and other funds.) in other. However we have collected the raw data which is under editing and review. Besides, we have also not able to get photographs of various recipes during the bad climatic conditions which hamper out tour to other regions. Furthermore, a number of traditional foods are not in daily use practice and hence, the people needed to be aware one season before to document the recipe. However, we are working on it by gathering the required things during our visit to the respective areas.</p>
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

The project work was carried out in higher Himalayan region of Uttarakhand between 2200 m asl to 4200 m asl. During winter season particularly the snow fall period it was very tough to work on some altitudes. These places always been abandoned during the snowfall season with no man's land. It brought a lot of sufferings to us in accomplishing the project task. A few places were surveyed (for collection of fruits and seeds and photographs) without any shelter and proper food. We used to stay under the porches of abandoned houses. But, soon after coming back from this very first winter

trip we purchased a tent and sleeping mattress with sleeping bags for such harsh situations in future. Hence, this way we tackled the unforeseen difficulties and learned lesson to work with no difficulties in rest of the winter trips. Besides, the winter difficulties, the area of work got harshly affected by rains with lot of landslides and road blocks. It brought really tough situations for our team, we were not allowed to cross the landslides on foot. The road transport got struck as all the bus and taxi services got affected. We decided to hire taxi in double rates to accomplish the project activities. We had to book it many times firstly from our office station to the blocked site and next from other corner to the other blocked sites up to the final undamaged road/area. A number of areas were not surveyed due to heavy rains and landslides which affected our seed collection and photographs for some of the wild edible species.

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

- I. Wild edible Seed Bank:** Development of lesser known wild edible Seed Bank which is first of its kind in higher Himalayan region.
- II. Strengthening, linking and livelihood enhancement:** Strengthening and linking the wild bio resources to the marginal farmers as well as livelihood enhancement through awareness generation and practical application with clear understanding of ecological and economical value of wild edible plants.
- III. Publications and Awards:**
 - (a)** An article highlighting the project activities was also published in e-magazine of the World's Farmers plant breeding and Biodiversity. Issue n°28. Published by World Farmers' Organization "Let us understand and conserve lesser known wild edible Diversity" F@rmletter. Rome. Pp 16 (Submitted).
 - (b)** D. Dhyani 2015, Community Seed Bank: Conserving Wild Edible Diversity of Himalayas. In Ecowhisper Magazine, Vol. 2. Issue 1. Page 39-43 (Submitted).
 - (c)** 1ST prize in #IUFRO2014 Blog Competition organised by The International Union of Forest Research Organizations, 10 October 2014. (Submitted)
 - (d)** 2nd Prize: "Wild edibles fight poverty and provide food security" by Dr. Deepak Dhyani (Entry #6) <http://dialogues.cgiar.org/blog/wild-edibles-fight-poverty-and-provide-food-security/>. The entry received a voting score of 8,900 points.

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

The best part of this project was that it was related not only to the ecological conservation but also with the livelihood enhancement of the local peoples. The stakeholders/ villagers/ farmers involved in a significant way, with very fruitful actions. These tribal folks were totally involved in the project several ways as they are the only medium of communicating their traditional and indigenous knowledge with us. Besides, the tribal peoples were also a part of our in-depth surveys in all high altitude forests and alpines of the studied area. The local tribal community people were engaged in organising and participating in all training and workshops. The reading materials were also given to Local stakeholders and school going children which will definitely help them to learn and understand more about the role of wild edibles in ecology and economy.

They have benefitted by training programme and workshops on local value addition of wild edible plants for livelihood enhancement. Some of them also adopt it for their own consumption or as to earn economy for their livelihood. Besides, the local people also got monetary benefits from the project as the project funds were also used in hiring local people's taxi, porters, cook and guides to accomplish the project objectives.

5. Are there any plans to continue this work?

Definitely yes, this is a golden opportunity to carry forward this interesting work. Till now we have developed a seed bank in a higher Himalayan village of Uttarakhand, India with documentation of some lesser known wild edible plants. Although, we have also provide training workshops for local value addition of some prominent wild edibles, but there is a huge potential of working for its commercialisation which will not only enhance local's livelihood but also provide health benefits.

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

We have already shared our work by publishing articles in some environmental/ science magazines. Besides, our work also got international recognition by winning prizes in competition organised by IUFRO (The International Union of Forest Research Organizations) and CGIAR (Consultative Group for International Agricultural Research). We are in progress to develop a research article for some peer reviewed journal. Besides, we have many times shared our work through various social media pages including our COPAL (<https://www.facebook.com/copal.org>) facebook page.

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

The RSG was used to support the project from March 2014 to March 2015. There was no significant difference in the anticipated and actual length of the project.

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
Baseline Data collection	100	120	-20	Harsh climatic conditions hiked the wages and days of surveys. (Additional amount was used within budgeted amount.)
Setting Up Seed Bank for Lesser known wild edible plants	1000	1095	-95	Market price varied for various items used to develop seed bank. (Additional amount was used within budgeted amount.)
Awareness generation, Capacity Building programmes along with field trips (10 in a year)	1500	1690	-190	People participated in big number as well as the pre arrangements and coordination task needed more time and expenses than

				planned. (Additional amount was used within budgeted amount.)
01 Booklet for school going children in local language (20 pages) 100 copies	500	480	20	We bargain with the print house to reduce the amount.
01 Pamphlet for general circulation among youth (200 copies)	200	200		Successfully distributed among the stakeholders.
01 booklet on indigenous cuisine from lesser known wild edibles (20 pages) 100 copies	500	-	500	Due to some photographs related technical and unavailability of raw materials due to off seasons we could not utilised the amount to print it. However, we are in process to make it very soon.
Travel	1000	1220	-220	Unfortunately, the uncontrolled heavy land slides hiked the hiring price of taxi and other conveniences. (Additional amount was used within budgeted amount.)
Consumables	700	700	-	The amount utilized for consumables helps in smoothing the project activities.
Contingency	500	500	-	The amount utilized for consumables helps in smoothing the project activities.
Total	6000	6005	5	

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

- This project will still continue either by self funding or other sources of small funds, as I have done my 12 years of research in this region and have good cooperation with local people concerned about plant and seed conservation.
- I would like to apply for a second RSGF to develop and implement more activities related to the conservation of wild edibles.
- Adoption of such pilot seed bank model and approach is significantly necessary for conserving the dying wisdom of lesser known wild edible plants as well as the forgotten traditional agriculture crop varieties.
- Our next step would be to include the forgotten and rarely cultivated traditional agriculture crops/cereals/millet etc.
- Besides, we will continue with the process of the data, to publish its results and to keep sharing information in events and symposiums.

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

Absolutely yes, the Rufford Foundation logo was used in all campaign and reading materials, such as posters, pamphlets, training programme/ workshop banners, booklet etc. Besides, all the project work related publications were will be also acknowledged and highlighted with the Rufford Foundation and its logo.

11. Any other comments?

I, with my team members sincerely thank the Trustees, Director and staff of Rufford Small Grants Programme on behalf of Society of Conserving Planet and Life (COPAL). Besides, I am very thankful to Dr Jane Raymond for prompt replies and acknowledgements of periodical updates/reports.