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Final Evaluation Report

Your Details	
Full Name	Reshu Bashyal
Project Title	Rethinking our actions around species identification in conservation intervention
Application ID	39263-1
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1. 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 the extent of species identification issues amongst key stakeholders	NA	NA	Fully achieved	We interviewed 40 key stakeholders (22 enforcement officials at the district level and 18 local harvesters, traders, and community forest user group members at the local level). We had a combination of structured questions categorised into two parts (general information on species ID capacity and psychological match-mismatch experiment conducted with the help of images). Another part included open-ended questions for more qualitative information on conservation importance and ID capacity training needs.
To train key stakeholders on species identification	NA	NA	Fully achieved	We conducted a half-day training (two in each district - one at the sub-division level and another at the division forest level) to capacitate the enforcement officials (n=45), and harvesters and traders (n=35) on species identification of selected taxa and the implication of their misidentification. We reached more people than our proposed plan (n=40). In training, we invited a plant taxonomist to share plant ID-related site-specific information.
To assess the effectiveness of plant species identification training to a range of stakeholders	NA	NA	Fully achieved	We reassessed the species identification capacity of 16 enforcement officials of key stakeholders. We intended to interview the same 36 people we interviewed before training, but four officials were unavailable because they had moved to another division forest office. We still interviewed all 36 people but we are using data of 16 officials and 18 locals during our analysis as we want to assess their enhanced species id capacity

2. Describe the three most important outcomes of your project.

a). We engaged at least one Division Forest Office and Sub-Division office from the project site to organise the consultation. This helped us to obtain buy-ins and trust from enforcement officials who participated in our programme. We also engaged different experts and heads of the district-level plant conservation agencies, which helped participants understand the real case misidentification difficulties.

b). Results of our survey are very important and novel as this includes an assessment of the species identification capacity of enforcement officials and community people (both pre- and post-surveys) including training in between. These results have the potential to indicate training needs and the type of resources required to facilitate enforcement activities and demotivate illegal trade. We are preparing a species ID handbook and publishing a manuscript targeting different audiences.

c). This project helped us to identify areas that need intervention and species that need the most focus in terms of capacity development. We found that the species parts whose similar parts are in trade (e.g. tuber, roots, rhizomes) can be mixed to evade enforcement so future intervention could focus on those areas and species.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.
We did not experience any notable difficulties in impacting the proposed activities. However, we had a challenge to identify a training date at one of the Division Forest Offices due to the frequent changes in Division Forest Officers and a few officials from that district. Our project had a research component that included pre-/post-assessments of the same officials who attended pre-surveys and training at an interval of 3 months that we wanted to stick to our plan. We had to shift the "3 months" idea to "4 months". Additionally, due to the shifting of officials, we had to plan for hybrid questionnaire surveys (online and in-person surveys). There were 105 sets of questions in our survey yet the officials from the Division Forest Offices and local stakeholders were eager to participate in the surveys and trainings.

4. Describe the involvement of local communities and how they have benefitted from the project.
We had two project districts Makwanpur and Gorkha. The key stakeholders were the Division Forest Office officials, Wildlife Crime Control Bureau officials, local-level plant harvesters, traders, and community forest user group members from both Makwanpur and Gorkha districts. We identified project sites and participants considering the frequent cases of species misidentification and the sites are centers of Nepal's commercial wild plant harvest, as reported in the literature (e.g., Subedi et al., 2013;

Pant et al., 2018), our prior work and confirmed during our consultation during project development. As proposed in the project proposal in *Activity 1*, we identified (n=20) harvesters and traders and involved them to collect their responses on the id capacity and implication of species misidentification and trained them to identify species properly. It was important because local communities were involved in the harvest of illegal species because they did not know which species and parts were illegal to harvest. Likewise, enforcement officials, had challenges in identifying trade parts as there were very few resources. These stakeholders benefitted due to improved id capacity and knowledge.

Similarly, the 10 species we selected for our study represent the mostly traded identified through traditional medicine market surveys and interviews with central-level traders and literature. The species have high medicinal value, often used locally and exported for their use in different medicinal traditions (e.g., Ayurveda in India, Traditional Chinese Medicine in China, and Amchi/Tibetan medicines in Tibet as well as high Himalaya in Nepal), most of them are protected plants grappling with the issues of illegal and unsustainable harvest and trade. Our deliverables, research outputs, and species id guide will be relevant to both identify areas to target in the future to improve enforcement capacity and support proper identification through ID guidebook.

5. Are there any plans to continue this work?

I plan to continue the work on medicinal plant conservation. I have these immediate plans 1) develop species-focused projects, in particular on *Dactylorhiza hatagirea* and *Pleione praecox;* 2) conduct routine training and monitoring of capacity in other areas, especially far west region and central level; 3) develop and implement species conservation plan for certain species; 4) expand the id guide for more species and train enforcement on that.

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

We are sharing our project results from Greenhood Nepal's social media platforms regularly. Recently, we shared key findings with the local stakeholders through a small consultation programme.

We have prepared a species id guidebook by working with a botanical illustrator and senior taxonomist that we will disseminate in-person to certain stakeholders (who participated in our training and assessments), submit it to forest offices, and through Greenhood Nepal's website. We are also working on research publications and talking to environmental journalists to explore the potential for publication of key results.

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

The important next steps are to capacitate law enforcement officials to identify the plant parts in trade so they can enhance their performance. At the local level, it is important to design project activities that aim to share species identification knowledge as well as the importance of conserving protected plants and facilitating legal and unsustainable trade. Additionally, for the most traded and endangered species like *Dactylorhiza hatagirea*, it is important to prepare a species conservation action plan; and for species like *Pleione praecox* that are still not much researched, it is crucial to undertake a detailed ecological and socio-economic study.

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

Yes, we used the Rufford Foundation logo and mentioned it during all our presentations, awareness programmes, and field surveys, wherever relevant. We shared our project activities, key highlights, and glimpses from the awareness programs to a wider audience through Greenhood Nepal's social media platforms and website. All our publication materials and peer-reviewed publications will also mention The Rufford Foundation.

9. Provide a full list of all the members of your team and their role in the project.

Reshu Bashyal, Prakash Poudel, and Sanish Dhungana are key team members of this project. We also involved local resource persons, field support, and experts whose names and roles are indicated below.

Reshu Bashyal: Project Lead who led and managed all the project activities including field surveys, awareness programs, data entry, analysis, and publications.

Prakash Poudel: Plant taxonomist who worked closely with the team on overall project activities. He coordinated with field stakeholders to identify list of plants and organize id training. He also assisted PI in designing and conducting surveys, and publications.

Sanish Dhungana: Finance and field support who managed financial and admin-related activities of the project. He also joined the team in supporting project activities.

Local resource person and field support
We involved at least one to two early career researchers and at least one local resource person in all our field and awareness programs. This includes researchers Arina Kharel, Rajan Upadhya, Pushpa Pokharel, and Mathis Diggard. The local

resource persons included forest officials and community forest chairs from respective districts.

Experts and advisors
Botanists Kamal Maden and Neera Joshi were involved in designing the illustration identification handbook. Dr. David Roberts and Dr. Jyoti Das were our project advisors who were involved as relevant, especially in developing strategies, survey tools, and results.

10. Any other comments?
We are happy with the response we received from our project sites and study results.