

Final Evaluation Report

Your Details	
Full Name	Abhijit Dey
Project Title	Empowering indigenous communities to conserve Mahua trees, the 'Kalpavriksh' of Indian deciduous forests, by rejuvenating mahua-based sustainable livelihoods
Application ID	42933-2
Date of this Report	05 July 2025, updated on 03 Aug 2025

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
Exploring local socioecological history to understand the factors that impacted the distribution of mahua trees in the landscape			✓	I conducted in-depth interview of 15 key informants following purposive sampling technique and then additional 21 respondents following convenience sampling technique to confirm that all major information was captured.
Understanding the severity of mahua seed harvest		✓		I have completed the data collection and the analysis is in progress. Only after completing the analysis, we will get a clear understanding of the severity of the mahua seed harvest. It is planned to incorporate these findings into a forthcoming research paper
Estimating seed production of mahua trees (to estimate their growth rate later)			✓	<p>A total of twelve trees of different size-class were monitored for around a month (duration of the fruiting season) in the month of May-June 24.</p> <p>Estimated seed production varies as per the size-class of the tree: around 1-3kg of seeds estimated for trees with gbh (girth at breast height) >0.5m and <1m; around 30kg of seeds for trees with ≈ 2.5m gbh</p> <p>This is pivotal to note, in 2024, seed/fruit production was very much less in compare to previous year. [to put into perspective, for the above-mentioned size-class, in 2023, estimated production was around 5-10kgs and 150kgs respectively. The reason of this is however not sure, could be weather related]</p>
Conducting a training program for the community members to initiate a community-led venture to produce value-added mahua-			✓	

based products				
Preparing and launching the website about mahua			✓	
Communicating the findings		✓		This is an ongoing process. Achievements of and targets for this objective are detailed at point no. 6

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

a) Capacity building initiative for value-added mahua products led to an ongoing community-run local venture

A capacity-building program was envisioned to rejuvenate mahua-based livelihoods and to empower the communities with the help of this grants. We organised a week-long 'Training Program on value addition and marketing Mahua Products' in September 2024. We received an overwhelming response from the community members during the event. With the support of a local NGO, [Nature Mates](#), we trained community members, primarily women, from different villages. The participants were trained in preparing *laddu* (sweet ball), *peda* (fudge), mahua flower syrup and also roasted mahua flower.

There was a follow-up training, made possible with the partial support of another small grant (K2A). The continuing support and enthusiasm of the local NGO [Nature Mates](#) is noteworthy. They took a lead in preparing and selling the value-added mahua products. We will keep monitoring and mentoring the local team involved in this process in the coming days also. We are sure that they will be able to keep this momentum and sustain by themselves in the near future.

b) Unearthing the socioecological factors that shaped spatial distribution of mahua trees, offers management recommendations

We learned from the [1st Rufford Small Grant project](#) that the spatial distribution of mahua trees changes with the land cover. The adult trees are concentrated around human settlements, but the young trees are lacking. While the number of mahua trees is much lower and finding an old-growth tree is difficult inside the forest.

During this phase, we found that this pattern can be explained by a complex interaction of multiple historical and socio-ecological events – state control of forests during the colonial and post-colonial periods, clear felling of forest for timber harvest; in a later period, community involved forest management by the state; getting individual legal tenure of land by the local communities; and a mix of local customs that influence property consideration.

In summary – regeneration of mahua trees depends on the intersection of factors like legal and customary tenure considerations, harvest of resources from mahua trees, and ecological factors like tree fecundity, dispersion, etc. For example, in the forest land, the fate of a tree (will be felled or lopped or not) depends on individual ownership and not necessarily on the forest department. Overharvesting of seeds, fodder, etc., or felling for timber impacts the ecology of the tree and reduces regeneration. (A research paper is under preparation, building upon these findings, which will be difficult to elaborate on in this report.)

Policy recommendations: Considering the above facts, felling of a mahua tree needs to be regulated even in private property and prior permission is made mandatory. This should be achieved by taking the community into confidence. Community involvement is a must to check overharvesting of resources like seeds or fodder. Plantation of mahua trees (by the community and the forest

department) in the edges of the forest and habitation may help in seed dispersion in deeper forested areas.

c) A website is designed and published which dismantles the stigma associated with mahua, and curates and decimates the information hitherto scattered throughout the web

The mahua remains overlooked by mainstream communities and policymakers, perpetuating the impacts of colonial attitudes and social taboos. The homepage of the website (projectmahua.com) attempts to change this by highlighting and showcasing the mahua's rich natural history, significant socioeconomic values, and the critical importance of its conservation. Placing the indigenous communities' sentiment at the core, the website addresses the most intriguing components – that are – history of (colonial ban on) mahua liquor production and social taboos that had stigmatised the liquor and as a consequence, the indigenous people were also tainted as uncivilised. The website also discusses such social exclusions and the pros and cons of the recent rebranding of mahua liquor by the corporates as well as the governments. The website also explains the economic significance of mahua as food and medicine and how tradition and culture in this landscape are intricately linked to mahua.

As planned, the website also houses a library **containing** many curated publications of mahua that were spread across the web and other media. Soon, a blog section, an image gallery and a page for folk art born out of mahua will also be included in this portal.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

The primary objective of this project was the economic upliftment and social recognition of the mahua dependent communities. The project was planned in two phases – first, a capacity building program with the 2nd RSG support and second, post-training support (from procuring raw materials for preparing value-added products to selling the products).

For the second phase, a Kolkata (India) based NGO, [Nature Mates](#), pledged to provide funding and other logistics support to the communities to continue the work. Their involvement was generous though their funding capacity was limited, so the upscaling was rather limited. Having sufficient funding could have amplified the impact greatly. Anticipating this, I was on the lookout for more funds for better implementation of the project. Thankfully, I received K2A (Knowledge 2 Action) Small Grant (by Swissnex India). With the support of this additional fund and copious involvement of Nature Mates, I was able to run the program until June 2025.

To highlight that there lies an implicit challenge in such implemental works – once it starts to bear some result, more individuals want to be involved and put the plans of the work at jeopardy. We cannot go beyond the planned capacity of the project. We planned for around 15 individuals and had to be within the limit for efficient outcome. Our prolonged presence in the field and with the help of **our** long-time local collaborators, we could identify the community members who were really interested in the initiative and kept ourselves within the limit planned for.

Another anticipated issue that we have to deal with is the visibility or searchability of the website. The search engine algorithms take time to discover newly created websites and prioritise in search results. To resolve this technical issue, SEO (search engine optimization) of the website is in progress. SEO is a long-term process and builds upon itself over time. As more people engage with the website, the better it will perform. We also procured social media handles for the website. These will be useful for better SEO performance and with regular posts, it will inform the general audience about the website

and will add to the information on the web for the platform. There is also a plan to collaborate with other mahua-oriented platforms to increase the visibility of the website.

4. Describe the involvement of local communities and how they have benefited from the project.

The local communities were involved from the planning stage of the project. During the previous RSG work, the depreciating price of mahua flower was identified as a major social concern due to its impact on the local economy. So, the possibility of a training program to prepare value added products from mahua seeds and setting up community based small enterprises were planned to enhance the livelihood options of the affected people. This idea was presented to people and well accepted by them.

People's enthusiasm during the training program instilled confidence to us about the upcoming steps of the project. Around 15-20 members were trained and around 10-12 of them finally got involved in preparing the products. They were (organised to a small enterprise/SHG) and provided minimal sustenance supports, raw materials, fuel cost and marketing avenues (in nearby cities) – thus removing the barrier for them to get into this venture and infusing confidence. Now we are confident that his small enterprise is taking momentum and will continue these efforts. Realising the success of this group, we are sure similar enterprises will come up in other villages too.

5. Are there any plans to continue this work?

Yes, I am eager to continue and expand the work further. The more I got involved in the mahua-related work, the more my interest in the subject grew. Mahua, 'the Tree of Life' needs more attention – research, implementation and information dissemination.

There are many aspects that I want to explore in the coming days –

- i. To monitor the local community's performance, look for new avenues for marketing their products.
- ii. Set up more such small enterprises in other villages for the livelihood security of the mahua-dependent communities.
- iii. Scale up these activities to other parts of central India, where people depend on mahua for their livelihood.
- iv. To widen the scope of the website, add more components to it – showcase mahua-inspired folk arts, feature community-driven initiatives in different parts of the country, launch a citizen science program to systematically collect observational data for conservation of the species.
- v. Also explore its ecology – pollination, seed dispersion etc.

Before being immersed in these aspects of the mahua tree, I will focus on completing the impending tasks of communicating the findings through academic publications. This pause from fieldwork will provide time for the work done so far — whether research or community-led initiatives — to mature and take shape.

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

The findings are being shared through different avenues for different categories of audiences.

For the research community: I presented the results at AWS 2025 (annual institutional event) and CILS 2025 (conference in India). And journal papers are in preparation.

For the general audience: Writing popular articles is an effective way. A popular article on mahua products authored by me is [published in Mongabay-India](#). Another one is in the pipeline with [Round Glass Sustain](#). I will inform the Foundation once it's available on the web. In the previous year, My work has also been featured in a [news article](#) and in a [documentary movie](#).

In the coming days, along with writing popular articles, the website and its social media handles will also be used to reach out to the general audience.

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

At this stage, broadly, I think it is very important to connect with the general audience to evoke their interest in mahua. New business initiatives are budding around mahua and content on mahua in social media seems to grow compared to what it was a couple of years back. However, the downside of social media is the lack of credibility of available information, for which sound research is the way out. So, more reliable research is also needed.

Being specific to this project, it is crucial to observe how the newly set community initiative performs. They have end-to-end know-how (from preparing products to selling with an understanding of unit cost calculation), their confidence has been built – now it is to see if they can retain their interest and sustain their own livelihood.

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, I acknowledged the generosity of the Foundation in my poster presented at the conference (CILS 2025 and AWS 2025). On the website ([projectmahua.com](#)), the Foundation's logo is used to highlight the grant support.

The communication team of ATREE also thanked the Foundation when I received the grant and after conducting the training program on ATREE's social media pages. I also expressed my gratitude to the Foundation in my LinkedIn profile.

During the capacity building program, the Foundation's support was acknowledged by using the logo in the banner.

I am going to talk about mahua and the website in the coming July in a conference where I will again acknowledge The Rufford Foundation's continuous support for the work.

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

Joydeep Chakraborty – Joydeep is my field assistant, who has been assisting me from the beginning of my PhD fieldwork. His ideas, skills, and familiarity with the landscape and the people turned out to be invaluable for the project.

Arijit Sarkar – Arijit helped me as an intern for two months. He joined the team just before the fruiting season and shared our workload. He also accompanied us while conducting interviews for oral history documentation.

Nimai Kumar and Mongol Ghatual – Nimai and Mongol are my local field guides, long-time collaborators. Nimai (43yrs), a non-tribal and Mongol (52yrs), a tribal – share similar backgrounds. Both of them are first-generation learners of their family and this region. Their in-field skills, scientific temperament, knowledge about local flora and fauna, and acceptance within the community made the work possible and successful.

Dr Priyadarsanan Dharma Rajan – Being my PhD supervisor, Dr Priyadarsanan kept a keen eye on the project. Not only did his academic guidance, but his moral support also helped me to stand difficult field situations. He is now guiding me to design journal papers out of the work done.

Dr Arpita Ghatak – Arpita has >8 years of industry experience in rural entrepreneurship, especially involving women. Her input was noteworthy when it came to connecting with the women, assuring them a safe and homely training venue and working space.

Arjan Basu Roy – Arjan heads the NGO [Nature Mates](#) and came forward with financial, logistics and marketing support for the product. Without his or the organization's involvement, it would be difficult to market their product. They organized an event in the metro city of Kolkata where people not only bought the products, but also loved them.

10. Any other comments?

Here, I'd like to provide a few points about the actual **expenses made** (with reference to the ANNEX – Financial Report).

The final amount I had received (5,62,628 INR) after fund transfer and all deductions was around 10.75% less than what I budgeted (6,00,000 INR)

This shortage has been managed substantially by spending less on Outstation travel for the researcher. Also, the field component was estimated for 6 months, which was completed successfully in 5 months, thus saving roughly one month's field expenses.

Other relevant information is provided in the ANNEX – Financial Report.

Below, a few images of different activities are attached –




During the capacity building event






Post training mahua product (*laddu* or sweetball) preparation and sell in an urban fair


projectMahua


Purpose History Special Segments Featured Articles Repository

"Mahua is not a tree, it's our way of life. If mahua survives, Munda survives. But, alas, you know it only as low quality booze"


Natabar Singh Munda,
a Munda Adivasi in his mid-seventies




The same sentiment resonates among all the Adivasi communities of dry forests of India. Project Mahua is a humble attempt to explore the world of Mahua and her people.


projectMahua

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Desi daru, Inglis name
- Phorum Pandya



Mahua liquor is witnessing a rebrand, but legal framework protecting tribal rights across India is needed
- Abhijit Dey


'Mahua' Is Still Policed Through Excise Laws
- Zoya Hussain



Tradition, Oppression and Resilience is in Every Pour of this Indian Spirit
- Amrita Amesur


1 2

Supporting Organization(s)



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Screenshots from the website projectmahua.com

ANNEX – Financial Report

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