

K2A Small Grant (2024) project report



Submitted by

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1) Project title: Empowering indigenous communities to conserve Mahua trees by rejuvenating Mahua-based sustainable livelihood

2) Project location: Purulia district of West Bengal, India

3) Background: In the project location, [our research showed](#) that the loss of the economic value of mahua trees (*Madhuca longifolia*) in recent years has threatened the existence of trees that have high socio-economic and ecological significance. Due to altered social dynamics, the price of Mahua flowers — a crucial source of livelihood for local communities — has plummeted by nearly 75% in this region. Since most of the trees in this region are privately owned, as a consequence of this decline, many tree owners have resorted to felling Mahua trees for timber, posing severe repercussions for the local ecosystem, biodiversity and the livelihoods of those dependent on the trees.

As a solution to this pressing issue, our research has identified the production of value-added Mahua products as a means to bolster the economic viability of Mahua flowers and sustain both livelihoods and tree populations. This proposed initiative aims to implement a community-driven approach to rejuvenate the local Mahua economy in the Purulia district of West Bengal, India.

4) Project deliverables (with reference to the service agreement):

1. Capacity building program – a select group of 10-15 individuals will be trained to produce various value-added mahua products such as laddu, pickle etc.
2. Formation of self-help group (SHG) – Through the forming of SHG, trainees will be supported to acquire raw materials for the preparation of value-added products, cover fuel, packaging costs etc. and provide avenues to sell the products.
3. Preparation of learning/training module – The preparation of the products will be video recorded to create a learning module for wider dissemination through easily accessible platforms. The growing penetration of smartphones and internet access in rural India facilitates the creation of this learning asset.

5) Project duration:

- Service agreement duration – 30 June 2024 to 30 June 2025
- Actual project implementation – December 2024 to June 2025

6) Summary of the deliverables:

1. **Capacity building program** – around 15 community members were trained to produce value-added mahua products in February 2025
2. **Formation of self-help group (SHG)** – Around 12-14 community members (mostly women) who received the training along with a few new entrants (who showed interest later and eager to join) were employed to produce value-added mahua products. Raw material, fuel costs and a safe workplace were assured.

The end products were sold through the avenue provided by the partner organization [Nature Mates](#), Kolkata.

The positive response the products received ignited confidence within the community members about their work and the funding support broke the financial barrier for them to sustain this activity in the coming days. Unit cost has also been discussed and explained to them.

3. **Preparation of learning/training module** – Short recipe videos of four products (laddu, fudge, pickle and raisin) are prepared and in circulation within the community. They can refer to the recipes now at their convenience and need.

NOTE – The initial results of the project are positive and hopeful. We will keep monitoring and encouraging the people to check the long-term impact of the project.

7) A few snapshots of the deliverables:



1. Capacity building program





2a. A typical day of mahua-laddu production



2b. Sell of mahua-laddu in an urban fair organized by Nature Mates, Kolkata



3. Snapshots of mahua-product recipe videos

8) Statement of Expenditure:

A	Name of the Project	K2A small grant
B	Name of the Donor	Swissnex in India, Consulate General of Switzerland
C	Name of the Grantee Institute	Ashoka Trust for Research in Ecology and the Environment (ATREE)
D	Name of the Principal Investigator	Abhijit Dey
E	Sanctioned Amount	₹ 4,04,350 (INR equivalent of 5000 CHF)
F	Project Period	30.06.2024 to 30.06.2025
G	Reporting Period	30.06.2024 to 30.06.2025

Statement of Expenditure

A	Opening Balance of funds as on 30th June 2024	₹ -
B	Amount received	₹ 3,15,583
C	Expenditure (30th June 2024 to 05th June 2025)	₹ 4,03,694
D	Closing Balance of funds as on 05.06.2025	₹ -88,111
Place:	Bangalore	
Date:	05.06.2025	

Break up of Expenses

Budget Line item	Expenses (INR)
Lead Researchers Remuneration	100000
Field coordinator's (employee) field expenses	8500
Packaging and marketing	23800
Raw material procurement	62525
Remuneration for employees involved in production and selling	94800
Venue hire	6000
Video learning module	22000
Training program	45700
Institutional overhead 10%	40369.44
GRAND TOTAL	403694.4

9) Detailed status: The overarching objective of the project was to inform the people that there exists mahua laddu, pickle and other mahua-based products and build confidence amongst them that they themselves can prepare such products and sell them. And they can do it locally, by their own means, without relying on some continuous external input. With this motto, the project has been conceived and delivered.

9a. The stepping stone

The action of informing the people that there lies a bigger potential of mahua flower which they were not aware of started during the final phase of our research work in the project location – way before applying for the project.

We conducted meetings in the villages, took interviews, wanted to know how they are looking at the problem of the plummeting economic value of mahua flower. What we realised was that they were not aware of value-added mahua products, though they traditionally used to have different dishes, sweets etc. made of mahua flowers. They didn't imagine with a little bit of tweaking, it would be possible to prepare sellable products that may have consumers. So, when we proposed the idea, they were sceptical.

This scepticism in a way helped us to have a small group of interested people to deliver the training and try out the production.

9b. Capacity building program

Around 15 community members, including women, came forward for the training program. We conducted the training program in February 2025 (before the mahua flowering season in March) in one of the villages where we had our presence for the pre-project research program.

Four products of mahua flower – laddu, fudge, pickle and raisin – were selected for training. Out of these, laddu became the most popular amongst the trainees. They enjoyed the training program to the fullest, took their produce home for their loved ones, and most importantly came back the subsequent days for training.

In addition to the above mahua flower-based products, we also discussed the possibility of mahua seed oil. [Mahua seed oil has high medicinal value](#) and is extracted and used by the community. But value addition is difficult for mahua seed oil, so the idea didn't proceed further.

Key learnings –

- Important to discuss any intervention thought for the community before conceiving it. Even if they are not fully convinced of it, looping them during planning is a key factor.
- The venue of training needs to be familiar to the people and closer to their villages if not in their village.
- Young married women may miss the chance to avail such training if they have kids. An inclusive capacity-building ambience where they can come with their toddlers can extend women's participation.

9c. Mahua flower collection

Traditionally, mahua flowers are picked up from the ground where the juicy flowers acquire dust particles and then sun-dried by spreading in the yard. But to prepare edible products, the collection and drying need to be clean – the flower thus collected is referred to as 'food grade' mahua.

Nets are tied below the canopy to collect the flowers and dried similarly. We provided nets to five mahua collectors to try out this method and it worked.



Later, for producing mahua products, we bought the flowers from them at around 80-100Rs/kg which is much higher than the average price (maximum 30-40Rs/kg) they do fetch. Per unit cost calculation shows that even after this pricing of mahua flowers, the selling price of mahua products earns a profit.

Mahua collectors will be able to use the nets for a few more seasons if they take care of the nets. That will adjust the investment cost.

Key learnings –

- Direct monetary benefit has more value than non-monetary asset support. Providing nets (non-monetary asset) which is removing their investment for food grade mahua flower collection is not useful if they don't get an avenue to sell their collection. Therefore, it was important to buy the flowers from them.
- Non-monetary voluntary engagement from the people reflects their intention or conviction in the process. We provided the nets, rest of the cost (bamboo, labour etc.) to install the nets was borne by the collectors voluntarily (except for one individual who didn't install the net but didn't return it either). Overall, this voluntary engagement shows their acknowledgement, oneness and ownership of the intervention and also sieves out the people who are not committed.

9d. Self-help group and mahua product preparation

We started producing mahua products in the month of April, after the collection of fresh mahua flowers in March. Based on a few factors (fudge is very delicate, shelf life is only a few days and the other two products are easy to prepare), it's been decided to focus on mahua laddu.

Laddus are being produced in batches. Each batch was of 5 days and on average 6 persons worked in each day, thus producing around 30 person-days in each batch. We had two, three and one batch(es) in April, May and June respectively.

In the first batch, the production was very low. The majority of the raw materials either got wasted or produced very low-quality products. In the second batch, things improved. In the third batch, their performance was hopeful.

The laddus produced were distributed locally, within the community people, in a local primary school. This was planned and very much needed. It was important to have confidence within the community at large. Since mahua is still looked down upon as a consequence of [its long history](#), the

mahua-people (people associated with mahua) [lost their pride](#) in it. It was very much needed to get their pride back into their tradition – righting a historical wrong. It was an achievement for the project to see proud smiles when at the local tea stall people celebrated mahua laddu – an experience beyond any scale of measurement.

In the fourth batch, the people showed much improvement. This was the first time, their performance was such that the unit cost showed profit. This calculation was informed to them.

A good percentage of laddus produced in this batch were sold in May at an urban fair. A few boxes were gifted for feedback. The remaining boxes were sold through a few stores in Kolkata and a few more probably are still waiting to be sold. The responses we received thus far are very encouraging. We are hopeful to have a corpus fund (after taking care of all expenses) that will be used for the same purpose in the future.

It is crucial to note that regularity is a major contributor to individuals' performance and hence the success of the effort.

After the fourth batch, we decided to expand – to include a few new eager entrants from a different village. Keeping two of our already experienced laddu-makers, we involved a couple of new hands. Our experience was similar to what we had in the initial batches, however, it reaped results as it spread the effort.

Key learnings –

- Not all community members are alike. The success of projects like this depends a lot on a handful of community members who are keen to try out something new, without being overburdened by the prospect of the attempt.
We are thankful to our key players in the field – Rekha Rani, Shefali, Pratima, Saraswati, Mongol, Bhokto to name a few.
- Elevating a sense of pride in what these front runners are trying for and gaining acceptance of the larger social sphere is a pivotal motivator.
- The regularity and sincerity of the participants make them efficient, upon which the fate of such intervention relies.
- Not to measure their involvement strictly on a monetary term. It would be erroneous to measure the payments on a strict performance or hourly basis. Allowing them flexibility in terms of hours per day, offering room for making mistakes and learning builds up a reliable relationship – a much-needed social capital – which is expected to pay off in the coming days when they stretch themselves voluntarily.
- Acknowledgement of the people is equally important if not more than monetary benefit. In the label of laddu-boxes, we mentioned the names of the individuals who produced the laddus with a lot of effort and care.
- Educating customers is not a market trick, it is value-laden. Clearing the negative notion around mahua is a key responsibility of this project. We used the label of laddu-boxes for the same.

মহ়য়ার নাডু

মহ়য়ার মজা কি শুধু মদ্য? আরও ম্যাজিক আছে যেমন, মহ়য়ানাডু। নেশা নয়, পুষ্টিতে ভরপুর! মহ়য়া ফুলে প্রচুর পরিমাণ ভিটামিন (C, B1, B2, B6, B9), খনিজ পদার্থ (ক্যালশিয়াম, পটাশিয়াম, আয়ারন) আর প্রোটিন আছে। অ্যান্টি-অক্সিডেন্ট, অ্যান্টি মাইক্রোবায়াল, অ্যান্টি-ইনফ্লামেটরি গুণ আছে মহ়য়া ফুলে। পুরুলিয়ার যে মানুষেরা স্থানীয় উৎপাদন দিয়ে নিজের হাতে এই নাডু বানিয়েছেন তাঁরা হলেন, মঙ্গল ঘাটুয়াল, ভক্ত সরদার, বেখা মাহাত, প্রতিমা মাহাত, সরস্বতী মূর্তা। প্রশিক্ষণ দিয়েছেন লিটিল আর্থলিং, উদ্যোগ- কেটু এ গ্রান্ড, নেচারমেটস। নাডু বানাতে ব্যবহাত হয়েছে মহ়য়া ফুল, আটা, আখের গুড়, ঘি, সাদা তিল, মুগডাল, চিনেবাদাম আর অনেকটা আন্তরিকতা।



Label of mahua laddu box. The highlighted section shows the names of our dedicated and skilled laddu-makers. Additionally, we informed the customer about the nutritional value of mahua flowers and told them the flowers are not a raw material of liquor but a food indeed.

9e. preparation of learning module

When we ended the last batch, we enquired if they were confident to prepare mahua laddus in the coming days without external involvement. Their response was affirmative but 'a little support of the various steps involved would be welcome'. The idea of preparing a learning module (short recipe videos) was anticipated for this situation. Thanks to the growing penetration of smartphones and internet access in rural India this learning asset is created. This will also be helpful for any new individual to learn from these learning modules and try their own.

Key learnings –

- A little bit of handholding (even passive) always helps. Other than making available a crucial piece of information, this rouses a feeling of being with the people – again a very important social capital.

10) Limitations: One primary factor upon which this project was conceived is that this place is a famous tourist spot in the winter (Oct-Nov to Feb-Mar) which provides a great opportunity to sell the products in situ.

- We couldn't utilize this ready avenue of sale due to the project timeframe. We had to take the produce to a nearby city (Kolkata) for selling which added to the cost. Thanks to this seed grant and the involvement of the partnering organization Nature Mates, the ex-situ testing was possible. This boosts our confidence in getting success for in-situ selling as well. However, we have to wait for this to happen in the coming winter. That will only confirm the long-term impact of the project.
- The cost calculation is only profitable if the production and selling are done locally, by the locals. To explore the ex-situ market, more investment is required.

11) SDGs addressed: We envisioned to address five SDGs (12, 8, 5, 15 & 13) through this project. The first three are direct and were assured during project implementation. The latter two can only be realized in the long term.

- SDG 12 (Responsible consumption and production) – Mahua flower harvest is an age-old practice and doesn't bear any negative ecological impact as only the flowers fall naturally from the canopy, without bearing in the fruiting of the tree. The use of a net for flower collection didn't interfere with the ecology of the tree.
The raw materials for preparing the products are locally sourced, and production is at a household level without heavy machinery ensuring a responsible way of production.
Additionally, the packaging boxes were also paper-made, thus negating plastic pollution.
- SDG 8 (Decent work and economic growth) – By enhancing their culinary skills, we strived to equip them with a meaningful and dignified employment opportunity within their villages, fostering economic growth and social cohesion within the community.
During the implementation, the daily wage provided to them was more than the average they generally fetch locally and also the price paid for mahua flowers was 2-3 times higher.
Further to add – a few of our women employees came to the workplace with their toddlers – proving they not only find the work decent but also the workplace decent and safe.
- SDG 5 (Gender Equality) – For mahua product preparation, we tried to employ as many women as possible. We had around 2/3rd of women employees during the project. They are our skilled asset now. Both women and men were paid equally, which is a departure from the local norm – women are generally paid lesser amounts though they do put the same effort.
- SDG 15 & 13 (Life on land & Climate action) – Mahua plays a great role in supporting biodiversity, and ecosystem services outside protected areas. We are hoping with the success of this project the economic value of the mahua flower and the tree will continue to sustain. Which will eventually revert the tendency of felling the tree for timber for one-time cash income.

12) Future plans: We will keep monitoring the dynamics around mahua in the villages where we worked, keeping this group of men and women in the center. How things unfold in the coming winter will be a telling of the project. Will they be motivated enough to prepare the products, will they be able to 'market' it properly (because there still lies an inhibition about mahua), will the tourist like it – many questions to be answered.

Getting long-term success with a short-term intervention is a difficult one, so the plan is to be engaged with the community to maintain confidence even if we stumble at some initial roadblocks.

With the learning module handy, nets for flower collection available, trained and enthusiastic locals and a small corpus fund built – all thanks to the K2A grant – we have sufficient resources to strive for one more year (flowering in March and tourist season in Nov-Jan) at least.

NOTE – outside the purview of K2A grant, an effort to launch a website for mahua is in progress. This platform, we believe, will help to educate general people about mahua and create a positive air around it. The recipes will be very much a part of this website.