



Half-Yearly

July

to

December 2023

Newsletter

# Narmada Landscape Restoration Project

Activity: Cleanliness Drive on River Narmada on World Environment Day





Officials Ms. Helena McLeod and Dr. Achala Abeysinghe with the NLRP field team travelled to M.P., India

## GGGI Officials Witness NLRP's Transformative Impact on the Ground

On November 23, 2023, a field visit was organized for the Narmada Landscape Restoration Project (NLRP), hosting GGGI's Deputy Director General, Ms. Helena McLeod, Director Asia, Ms. Achala Abeysinghe, and all members of the GGGI India Team. The two-day field visit commenced with the team's arrival in Mandu on the November 22, where a strategic meeting covering all GGGI India programs was scheduled. The second day of the visit was entirely dedicated to the NLRP site visit. The team engaged in interactions with women Self-Help Groups (SHGs) and actively participated in engaging with farmer-beneficiaries at the Bioresource Centre. The interactions highlighted the positive impact of NLRP initiatives on women's empowerment, sustainable agriculture, and community resilience. The primary objective of the visit was to showcase the potential and tangible impact of the project on the ground, emphasizing its transformative effects within the local communities.

## Madhya Pradesh's Forest Conservation Breakthrough; CSR Funds in Action

In line with the Government of Madhya Pradesh's commitment to leverage corporate social responsibility (CSR) funds for forest conservation, a tripartite agreement was signed in August 2023. The Memorandum of Understanding (MoU) between the Barwaha Forest Division, Dhabad Joint Forest Management Committee (JFMC) and Samaj Pragati Sahayog (SPS), is among the **first of its kind agreement that enables the JFMCs to actively use CSR funds for forest conservation**. This strategic accord is set to set an example in conservation practices by restoring 20-hectares of degraded forest land to begin with. This forest land and the prioritized interventions are part of the Forest Micro plan co developed with the forest department and forest dependent communities. NLRP has been strengthening the JFMCs in the project area to play a more active role in forest conservation while improving their livelihood opportunities, all of which will help NLRP achieve its project objectives of improved water quality and quantity in river Narmada tributaries. Currently, all remaining documentation formalities have been successfully concluded, marking a significant milestone in the process. The ongoing proceedings have

advanced, and the initiation of the first payment for forest landscape restoration is scheduled to commence in 2024. The team has identified all on-ground activities and is ready to begin implementation as soon as the payment processing request gets initiated by the JFMC.



Tripartite Agreement with Barwaha Forest Division, JFMCs and SPS

## IUCN-IORA Proposes Innovative PES Model for NLRP Water Security

IUCN-IORA have been entrusted to develop the PES model in NLRP and the team is constantly refining the model based on field data. IUCN-IORA members, led by Directors Ms. Archana Chatterjee and Mr. Swapan Goel, along with Ms. Madhu Verma, the environmental economist and known for her PES work, met the Indore Mayor, Mr. Pushyamitra Bhargav, to apprise him of NLRP's objectives and how it will ensure future water security for Indore. The team also visited NLRP project sites in Maheshwar on August 10 and 11, 2023. Following this IUCN-IORA team developed and submitted a PES model draft in November 2023. This draft introduces an Incentive-based Mechanism (IBM) to replace the existing Payment for Ecosystem Services (PES) model. The decision to choose IBM over PES was justified because planning and implementing market-based mechanisms require advanced preparation, which is difficult under the PES model. Under the draft, the team has proposed that the project interventions aim to encourage positive environmental behavior, and this objective is best achieved through the IBM.



IUCN team with Mayor of Indore, Mr. Pushyamitra Bhargav and the GGGI India Team.





Field visit with USAID and NTPC Ltd.

## USAID and NTPC Officials Laud NLRP's Impact; A Comprehensive Field Review

In October 2023, officials from United States Agency for International Development (USAID) and NTPC Ltd. visited the NLRP interventions sites to assess the project progress and impact. The 13-member visit team included 3 officials from USAID and 2 from NTPC Ltd. besides those from IIFM, GGGI and SPS staff. The visit included assessment of the project structures, interaction with the beneficiaries, and inauguration of dona-pattal machine among other activities. Project sites included Natural Resource Management (NRM) structures such as stop dams, check dam and loose boulder structures, along with demonstrations under organic agriculture like vermicompost and NADEP. The team witnessed how the NRM structures have been scientifically planned and constructed to stop the flow of rainwater. The team learnt about the impact these structures have had on the groundwater table of the nearby wells. The visiting team also observed livelihood initiatives like Bioresource centers for selling organic inputs and local Non-Timber Forest Products (NTFP), including Dona pattal and Lac cultivation. Positive impacts on water enhancement, women's well-being through smokeless chulha, and forest conservation through riparian afforestation and bamboo plantations were highlighted during interactions with the project beneficiaries. The visit aimed to showcase the tangible positive impact and practical benefits of NLRP activities on local communities over the last six months.



## Milestone Achieved! The 4<sup>th</sup> PSC Meeting Acknowledges NLRP's Progress

The fourth Project Steering Committee meeting was convened on October 13, 2023, at the Administrative Building, NTPC Thermal Power Plant, Selda, after the completion of the two-day field visit. The committee was presented with an overview of the project progress, including achievements against each target and discussed key points such as the review of the project schedule with an extension until November 2025, a reassessment of the project scope including a Third-Party Audit for the NRM structures, a soil biotechnology demonstration for wastewater treatment, and a carbon credit feasibility study under the forest DPR. The meeting concluded on a positive note, acknowledging the substantial progress achieved over the past 11 months. The key points discussed were taken into consideration to be integrated into the planning for the upcoming quarter.



Progress meet, conclusion of the fourth PSC meeting

## Organic Revolution, NLRP Farmers Achieve NPOP Certification



As part of NLRP's initiatives, which advocates for sustainable farming practices, a carefully selected group of 63 farmers underwent the official registration process for the National Programme for Organic Production (NPOP) organic certification. In August 2023, the ICS (Internal Control System) confirmed the successful registration of these farmers on the APEDA TraceNET portal through the Madhya Pradesh State Organic Certification Agency (MPSOCA). Subsequently, a third-party audit was successfully conducted in the month of November. The audit process involved a three-day visit to inspect the organic farms of the participating farmers. This thorough examination included checking all completed documents, such as field diaries, farm maps, ICS legal documents, and other relevant details. The farmers are now officially registered under the ICS of Shri Deep Jyoti Kisan Producer Company Limited and will adhere to the organic farming standards and practices.



# AGRICULTURE



## NLRP's Sustainable Agriculture Initiatives Bear Fruit

In the last six months, NLRP completed a total of 35 trial plots for Maize, 15 for Arhar, and 51 for Non-BT cotton as part of ongoing demonstrations. Additionally, the construction of 2 NADEP, 2 Vermicompost, and 2 Pakka Sanjivak units was accomplished. To promote sustainable agriculture among local farmers, the project distributed essential resources, including 100 plastic drums, 200 pheromone traps, 175 Decomposers, and 1060 Yellow and Blue Sticky Insect Traps. For this current Rabi season, a total of 230 farmers have been carefully selected to participate in sustainable agriculture demonstrations. 100 waste decomposers, 50 border crops seeds, and 100 each of yellow, blue sticky traps and pheromone traps were distributed to these farmers. The initial phase of distributing Banshi variety wheat seeds, accompanied by seed germination tests, has been successfully concluded with 18 farmers. Furthermore, an additional 32 farmers have received Banshi wheat seeds for their individual demonstration plots, benefiting a total of 50 farmers through this initiative. As part of the ongoing efforts, six cattle urine collection tanks and kaccha sanjivak units are scheduled for construction by the end of December. This multifaceted approach aims to encourage sustainable agricultural practices and provide necessary support to farmers within the project area.

**107**  
Trial Plots  
Established

**230** Farmers  
Demonstrations  
on Sustainable  
Agriculture

**1535**  
Distributions  
of Organic  
Inputs

## FPO in the Making under NLRP! NLRP Empowers Farmers with Knowledge

An informative exposure visit was arranged in August 2023 for 24 prospective farmers from both banks of the NLRP Project area. The primary objective was to educate them on a Farmer Producer Organization (FPO) and elucidate the roles of directors and promoters within this organizational structure. During the visit, industry experts imparted crucial knowledge pertaining to FPO formation, membership requisites, essential documents, anticipated challenges, and strategies for long-term management. Following this enlightening session, a strategic decision was made to select ten individuals from the group to serve as the Directors and Promoters of the new FPO. Their respective documentation has been compiled in preparation for the formal establishment of this farmer-producer organization. To expedite and streamline the registration process of this FPO, an external agency has already been engaged.



Farmer Producer Organisations in the process



Distribution and Demonstration of Decomposers



## FIG Meetings Drive Sustainable Landscape Practices in NLRP Villages

Regular Farmer Interest Groups (FIG) meetings are systematically organized every quarter, providing a crucial platform for farmers practicing sustainable organic agriculture. These meetings serve as channels for discussions, learning sessions, and the implementation of sustainable practices tailored to the specific needs and knowledge requirements of the farmers. In July, FIG meetings were successfully conducted in all 19 villages. The team has proactively shared a revised schedule to conclude all FIG meetings by January 13, 2024. Notably, in this quarter, the team has already conducted comprehensive meetings in several villages, including Pipalgone, Bhagyapur, Khamlay, Jhirbar, Jamniya, Julwaniya, Arsi, and Dhabad. The commitment to these regular interactions underscores the project's dedication to continuous learning, knowledge dissemination, and the ongoing support of farmers in adopting sustainable agricultural methods.



Demonstration of Yellow Sticky Traps

## Organic Certification Audit Completion

A comprehensive three-day audit, conducted by a third party through Madhya Pradesh State Organic Certification Agency (MPSOCA), took place from November 22 to November 24, 2023. The audit process was structured, commencing with an introductory meeting on Day one, and was focused on facilitating the project orientation with the Auditor. The second day involved a field visit to project villages, facilitating interactions with farmers and collecting the-ground evidence of the actual implementation of organic agriculture. Day three was dedicated to addressing queries raised by the Auditor. To ensure the resolution of all concerns, the PMU Senior Project Agriculture officer submitted all required documents for a positive response. Currently, the team is in anticipation of the results from the agency.



Social Audit with locals from catchment community

## BRCs and Organic Certification, NLRP Nurtures Agro-Economic Growth

Under NLRP, 7 farmers from both the South Bank and North Bank villages participated in exposure visits to three well-established Bio-Resource Centers (BRCs) at Dewas, in August 2023 where they learned about manufacturing and selling of liquid manures & bio pesticides. The farmers interacted with BRC operators to understand the details of the business. NLRP is committed to offering technical and logistics support to assist them in establishing their BRCs. Currently, the project has successfully established four fully functional BRCs, with two located in the North Bank villages and two in the South Bank villages.



Exposure visit to Bio-Resource Centers



# FORESTRY



## JFMC Strengthening and Riparian Buffer Plantation: NLRP's Forest Focus

With the formalization of the tripartite agreement, there is a pressing need to empower and enhance the capabilities of the Joint Forest Management Committees (JFMCs) operating within the NLRP project area, enabling them to assume a more substantial role in forest conservation. Continuing the series of capacity-building initiatives, three JFMC strengthening training sessions have been organized so far for both North and South bank existing JFMCs. The intention is to conduct tailored training sessions for these forest communities' members to deepen their comprehension of forestry principles and the JFMC's integral role in promoting forest conservation.



### RIPARIAN BUFFER PLANTATION:

Riparian buffer plantation is a strategic land management and ecological restoration approach focused on planting and maintaining vegetation along the shores of rivers, streams, lakes, and other water bodies. As part of NLRP, a tree planting initiative was executed along the banks of Nalas in both the North and South Bank in July and August of 2023, involving the planting of approximately 3700 saplings. To promote awareness about afforestation and forest conservation, a rally was also organized by the school students in North Bank village Bagdara. Participation from the Forest Department, JFMC representatives, residents, teachers, and the NLRP team members was the highlight of the program. But, in an unexpected and devastating turn of events, several districts in Madhya Pradesh, including Khargone and the NLRP project villages, experienced severe flash floods, causing extensive damage in various areas. The floods not only left a severe impact on the agricultural fields in the area, but the plantation efforts around the riparian buffer were also disrupted during these destructive floods. Following the flash floods, a survey was conducted, revealing that approximately 1500 saplings were left for growth out of the 3700 planted due to the challenging conditions.

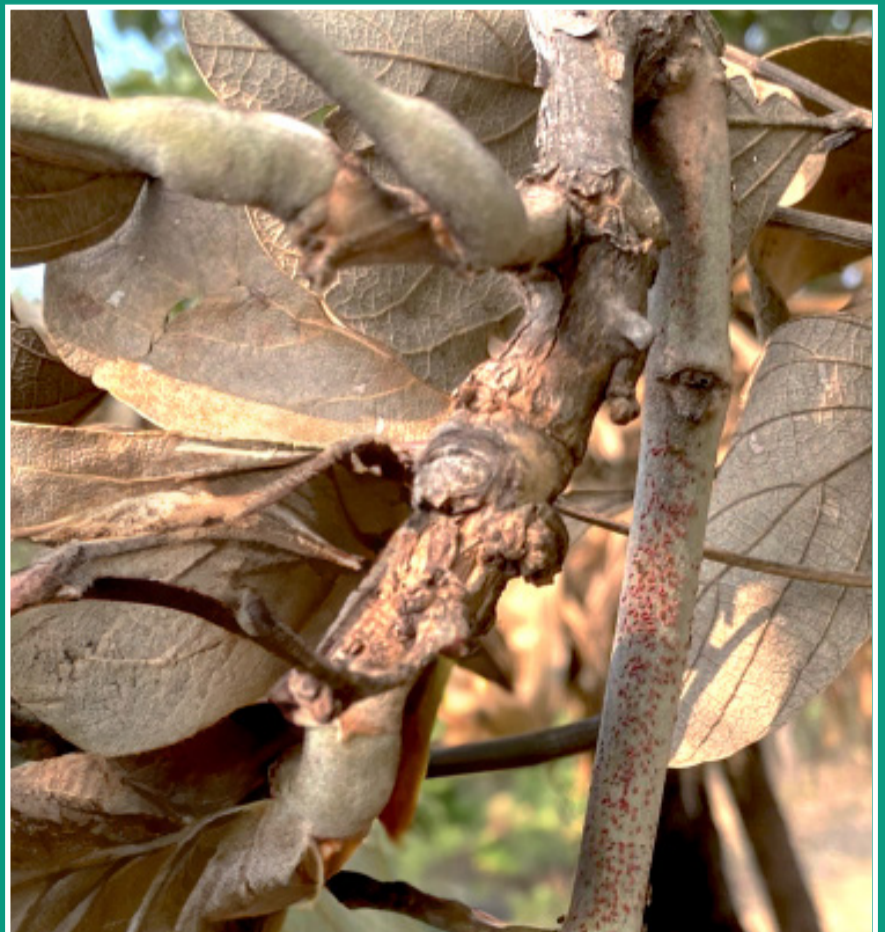


### LAC UNIT VISIT:

Significant progress has been made this quarter in the NTFP demonstration activity. Seeing the potential of the area, lac cultivation has been initiated for the spring cycle. 10 demonstration plots, comprising 30 to 40 palash trees each, had been selected and around 300 kgs of lac seed was distributed to these farmers. Following this, on December 24, 2023, ten farmers from our project villages were taken on a visit to Janmakhari Gram in Sivani district, where they visited the Lac Purification Center and Lac Storage Center. Mr. Basant Rangdale, the resource person (Master Trainer, Unit Secretary), conducted training on processing raw lac using machines in the center, where they produce lac in three grades with prices ranging from 1100 rupees to 1200 rupees per kilogram. The resource person highlighted that the price of raw lac is approximately 300 to 400 rupees per kilogram. The unit processes lac from various states in India, and the processed lac is bought. The Lac Committee assured our farmers that they would take responsibility for its purchase. Detailed information about the unit's operations was also provided to the farmers.



IUCN team with Mayor of Indore, Mr. Pushyamitra Bhargav and the GGGI India Team.







### FIELD VISIT AND WOMEN’S GROUP MEETING:

These ten farmers had a meeting with the women’s Self-help group (SHG) , Mahalakshmi, established in 2002 and located in the village of Malara. Comprising of 10 tribal women members, the group shared their experience of taking a loan from a local organization to purchase lac seeds and leasing 20 to 25 acres of land from the panchayat for palash trees. The lease is currently valued at 5000 rupees per year. Currently, they are now earning an annual income of 8 to 10 lakh rupees. The female members shared information about the group’s formation, status, lac cultivation, and various activities of the group. This meeting served as motivation for our farmers to explore lac production.

### DONA PATTAL WORKING UNIT:

Under the forest NTFP value-added chain, the team facilitated the establishment of a Dona Patal Working Unit, establishing two Dona Patal making units, one in each bank. Preceding this, thorough training on safety precautions and machine operation was imparted to unit members. The units are fully functional, producing good quality Donas (Leaf made Bowls) and Patal (Leaf made plates), since these plates are experiencing high demand in the area, it is expected that these units will be sustained in the future and provide a substantial livelihood to the communities, especially women.



Donna Patal Units



Farmer Exposure Visit to Incense Units

### INCENSE STICK UNIT VISIT:

The third station visit for these 10 farmers was conducted at a unit where incense sticks are made from the Tundra Bus species. Information about the machines in the unit was provided. The unit is relatively new and in progress. It adds as an additional opportunity for the beneficiaries to learn of the NTFP value chains associated with Lac.

### GRASSLAND SITE IDENTIFIED:

Grassland development is one of the essential activities when it comes to land restoration. The quick growth of grass species and its ecosystem values make it an important tool to conserve the lands. It was observed during the rigorous field survey that maximum of the hillocks in the project area are barren and degraded. These hillocks are conceptualized as grassland sites that not only improve the overall quality of the soil in the area but also provide fodder for the local livestock. Till now, huge support from villagers has been experienced for the activity. This activity is planned to be implemented in the next quarter.



Grassland Identification at Gulwad and Bagdara



# WATERSHED



## Water Management Triumphs as NLRP's NRM Structures withstood Severe Floods!

The ongoing Natural Resource Management (NRM) initiatives within the NLRP witnessed the successful completion of 17 NRM structures in the previous quarters. Notably, these structures demonstrated resilience during severe floods in September 2023, earning positive feedback from local farmers who expressed satisfaction with their functional efficacy. At present, the completion of two additional farm ponds and a new stop dam in Gulawad village (North Bank) marks significant progress. In Kanapur village, two gabion structures have been successfully finished, and ongoing efforts are directed toward farm bunding work in Lachora village (South Bank). Further enhancing the water management infrastructure, construction has commenced on additional new structures including a stop dam, Loose Boulder Structure (LBS), and gabion.



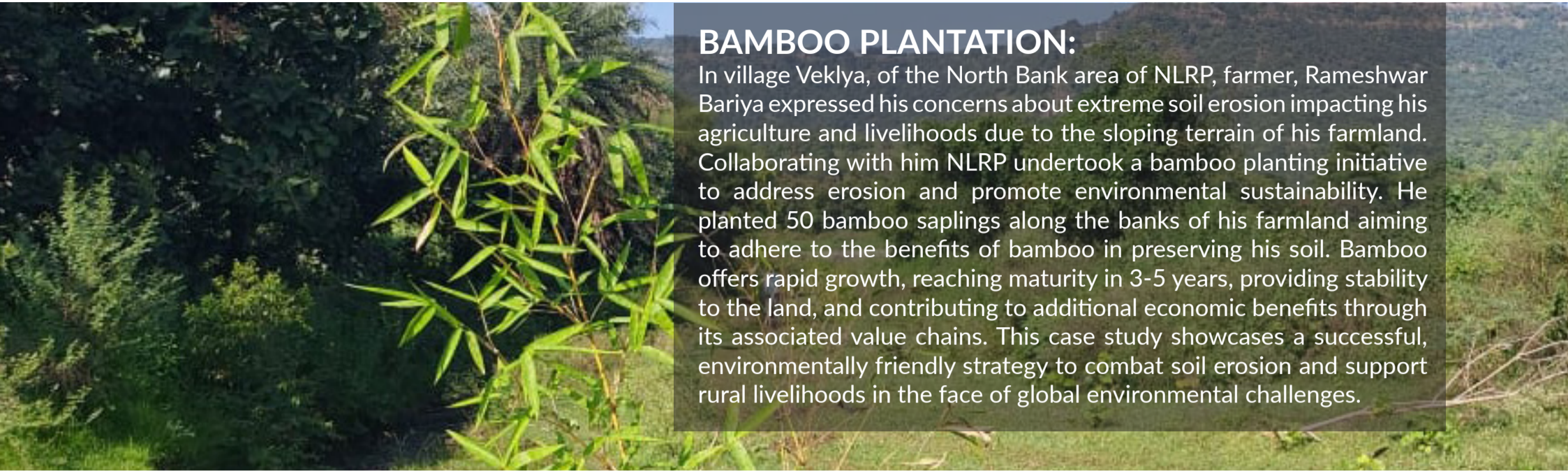
## NLRP Concludes Post-Monsoon Sampling For Surface And Groundwater, Emphasizing NRM Impact On Aquifer Recharge

The post-monsoon water sampling has been completed for 17 surface water quality sample sites. The collected samples have been submitted to the PHED laboratory for analysis. Additionally, groundwater assessment for the 68 wells has also been conducted. To demonstrate the impact of the construction of NRMs on water quantity, new wells within the periphery of 200-300 meters from the structures are being assessed. This assessment has been done based on the report shared by ACWADAM to monitor their impact on the aquifer recharge zone.



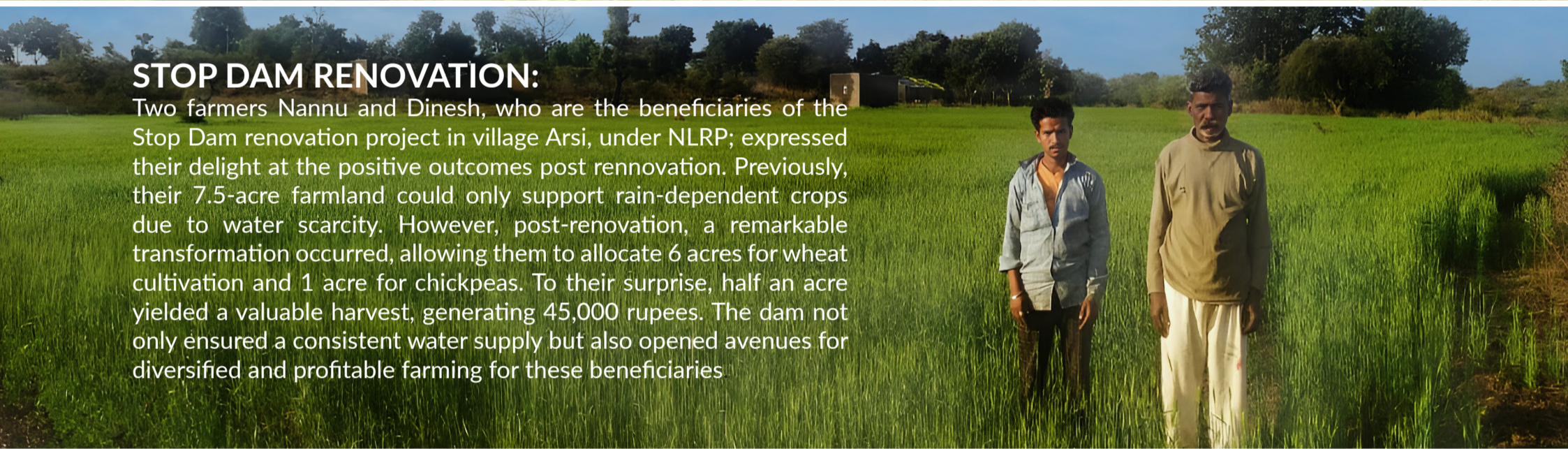


# SUCCESS ON THE GROUND!



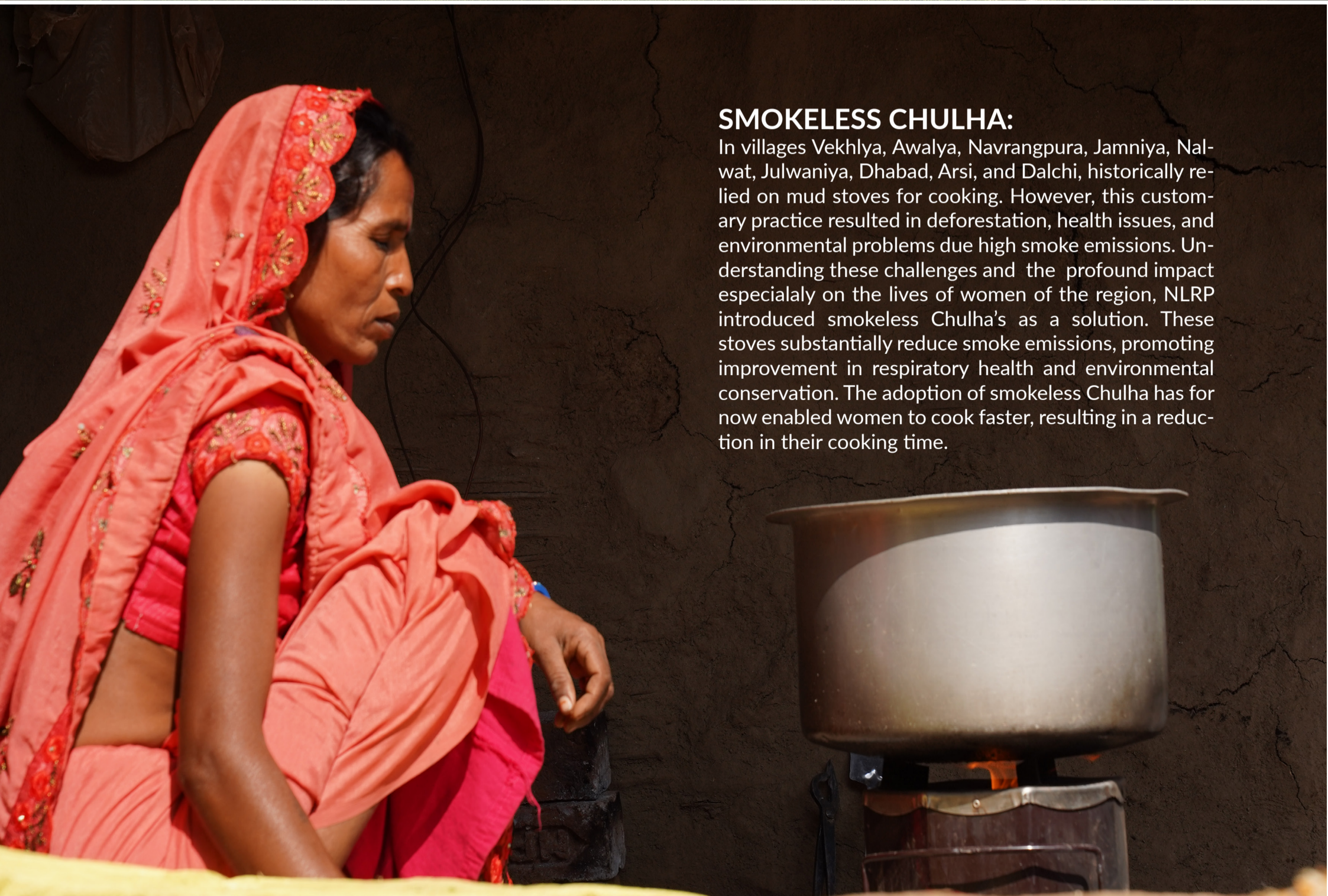
## **BAMBOO PLANTATION:**

In village Veklya, of the North Bank area of NLRP, farmer, Rameshwar Bariya expressed his concerns about extreme soil erosion impacting his agriculture and livelihoods due to the sloping terrain of his farmland. Collaborating with him NLRP undertook a bamboo planting initiative to address erosion and promote environmental sustainability. He planted 50 bamboo saplings along the banks of his farmland aiming to adhere to the benefits of bamboo in preserving his soil. Bamboo offers rapid growth, reaching maturity in 3-5 years, providing stability to the land, and contributing to additional economic benefits through its associated value chains. This case study showcases a successful, environmentally friendly strategy to combat soil erosion and support rural livelihoods in the face of global environmental challenges.



## **STOP DAM RENOVATION:**

Two farmers Nannu and Dinesh, who are the beneficiaries of the Stop Dam renovation project in village Arsi, under NLRP; expressed their delight at the positive outcomes post renovation. Previously, their 7.5-acre farmland could only support rain-dependent crops due to water scarcity. However, post-renovation, a remarkable transformation occurred, allowing them to allocate 6 acres for wheat cultivation and 1 acre for chickpeas. To their surprise, half an acre yielded a valuable harvest, generating 45,000 rupees. The dam not only ensured a consistent water supply but also opened avenues for diversified and profitable farming for these beneficiaries.



## **SMOKELESS CHULHA:**

In villages Vekhlya, Awalya, Navrangpura, Jamniya, Nalwat, Julwaniya, Dhabad, Arsi, and Dalchi, historically relied on mud stoves for cooking. However, this customary practice resulted in deforestation, health issues, and environmental problems due high smoke emissions. Understanding these challenges and the profound impact especially on the lives of women of the region, NLRP introduced smokeless Chulha's as a solution. These stoves substantially reduce smoke emissions, promoting improvement in respiratory health and environmental conservation. The adoption of smokeless Chulha has for now enabled women to cook faster, resulting in a reduction in their cooking time.



## Successful Implementation of Social Audits Ensures Accountability and Aligns Activities with Community Expectations

The PMU team in the previous quarter approved a SOP for conducting social audits for all the interventions and activities completed under NLRP to date. Currently, two social audits have been conducted by the team. A social audit program took place at the Radha Swami Ashram in Navrangpura village on December 20, 2023. This event focused on assessing the conditions of plastic drums provided for input support in organic farming. The audit involved the participation of male farmers, female farmers, a primary school teacher, an Anganwadi worker, a ward member from the Panchayat, and others. The review process encompassed all documents related to the provided material. The second audit meeting was conducted on December 26, 2023, in the village of Awalya. The meeting was attended by female farmers, male farmers, the village sarpanch, the principal of the middle school, and the Asha worker as categorized in the SOP. In front of everyone, discussions took place on documents related to bio-culture, yellow and blue sticky traps, pheromone traps, waste decomposers, and the bills and activity reports.

During the audit, feedback on the utilization of inputs in the organic activities associated with the project was gathered from all present individuals. The team is currently in the process of planning and conducting additional audits in the upcoming quarter. This feedback and audit process contribute to our commitment to transparency, ensuring that the activities align with the goals and expectations of the community and stakeholders involved in the project.



Social Audit under NLRP

### IIFM Interns Uncover Key Insights: from Adoption of Smokeless Chulhas, Impact of NRMs on Water, and Paving the Way for Robust Policy Framework on Clean Drinking Water through Ecosystem Services (PES)!

Between the months of October and December, three interns from IIFM (Indian Institute of Forest Management), Bhopal was employed to carry out a research studies focused on different aspects of the NLRP initiatives ranging from adaptability of smokeless chulha to NRM interventions on water quality and quantity as well as the implication we as policymakers should take into consideration while implementation of Payment for Ecosystem model (PES) on the ground.

## 1 ADAPTABILITY OF SMOKELESS CHULHAS

Adoption of the energy-efficient chulha by the rural community is a key to the success of this intervention. To drive deep into the subject, Aayushi Jain from PFM 2023, IIFM Bhopal, conducted a study on the usage of the chulha by rural communities, challenges in using the EE chulha, and its associated benefits. The study also captures the energy efficient (EE) chulha's impact on adjacent forest landscapes. The findings show that more than 90% of beneficiaries were satisfied with chulha and were eager to buy it on their own if the distributed chulha would not be functional in the future. The challenges observed associated with the EE Chulhas were the unsuitability to cook local food items such as corn-flour-made chapatis and their non-availability at the nearest local market. On the social aspect, gender disparity is another major hurdle to expand such initiatives to their full extent. Based on the challenges and observations, the study suggests that if the EE chulhas can be customised according to the local delicacies, particularly for staple food items, the impact of such activities will be manifold. Women groups such as SHGs play an important role in creating awareness about the associated benefits of the EE chulhas and institutionalize women empowerment in these regions.



On the other hand, a significant reduction is observed in the fuelwood collection time by the beneficiaries, and fuelwood requirements in their daily meal preparation. These results signify the potential of the intervention for improvement in the forest landscape. It concludes that if EE chulhas are distributed in a concentrated manner, covering a significant proportion of a village, the impacts will be significant on the ecosystem. It also addresses the importance of the continuous usage of the EE chulhas (more than 5 years) to get the optimum benefits from this perspective.



## 2 IMPACT OF NRM INTERVENTIONS ON WATER QUALITY AND QUANTITY

During the same period Gokul Gopal Iyer conducted a research study to assess the influence of the NRM structures on water quality and quantity. During his study, he conducted Focus Group Discussions (FGDs) and interviews with the project beneficiaries. The results demonstrated a notable impact, visualized through an InVest Nutrient Model, highlighting reduction in nitrates concentration in water quality. The positive outcomes for the water quantity were linked to the elevation of the groundwater table resulting from the construction of NRM structures. The study also discussed the time-fold availability of water in these structures during months of the Rabi cropping season.



## 3 POLICY FRAMEWORK FOR PAYMENT FOR ECOSYSTEM SERVICES (PES) TO ENSURE CLEAN DRINKING WATER IN INDIA

Aditya Singh Sengar, one of the interns delved into a crucial area of study, focusing on the policy approach for Payment for Ecosystem Services (PES) aimed at ensuring clean drinking water. The comprehensive research encompassed various dimensions, including a Needs Assessment for a PES policy on clean drinking water in India. The intern meticulously reviewed existing policies related to water and river governance, as well as those pertaining to agriculture, forests, and allied sectors. Furthermore, an in-depth exploration of international best practices in the domain was conducted to glean insights applicable to the Indian context. The analysis extended to assessing the economic and ecological costs associated with water pollution and scarcity, providing a holistic understanding of the challenges and opportunities. As a critical component, the intern worked on defining the payment mechanism, integrating an appropriate legal framework, and designing incentives that align with the goals of promoting clean drinking water through ecosystem services. This multifaceted approach aimed to contribute valuable perspectives for the formulation of effective policies in the realm of water resource management.



## Youth Cadre Empowers NLRP: Retraining and Community Engagement

NLRP is empowering the youth with knowledge of maintaining sustainable landscape practices in the long run. Out of the 100 members, 63 are recognized as participants in the youth cadre under NLRP as of now. The re-training program, conducted by these youth participants for the village beneficiaries, has been successfully concluded for the South Bank participants. The remaining training, to be conducted by the 19 youth members from the North Bank villages, began in December. Furthermore, to achieve the target of 100 participants, the team has identified 25 new participants from forest fringe villages, and the process of scrutinizing their eligibility has begun. This initiative aims to empower and engage a diverse group of individuals in the project, ensuring community involvement and sustainable practices



Empowering Youth through Youth Cadre Workshop

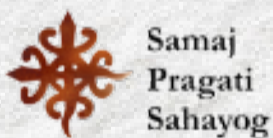




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