

Impact Assessment Report

KIA India Uphaar Programme

Implementation Partner:
Sankalptaru Foundation

Project Duration:
2022–2024



Contents

Abbreviations	05
Executive Summary	06
Chapter 1: Project Background and Overview	07
Chapter 2: Design and Approach for Impact Assessment	13
Chapter 3: Findings of the Impact Assessment Study	17
Chapter 4: Key Challenges & Learnings	44
Chapter 5: Impact Findings	46



Disclaimer

- This report has been prepared solely for the purpose set out in the Memorandum of Understanding (MoU) signed between Renalysis Consultants Pvt. Ltd. (CSRBOX) and Kia India to undertake the Impact Assessment of their “Uphaar Programme” for the financial years from FY 2022 to FY 2023.
- This report shall be disclosed to those authorised in its entirety only without removing the disclaimers.
- CSRBOX has not performed an audit and has not expressed an opinion or any other form of assurance.
- Further, comments in our report are not intended, nor should they be interpreted to be legal advice or opinion.
- This report contains an analysis by CSRBOX considering the publications available from secondary sources and inputs gathered through interactions with the team of Kia India, project beneficiaries, and various knowledge partners. While the information obtained from the public domain has not been verified for authenticity, CSRBOX has taken due care to obtain information from sources generally considered to be reliable
- Specific to the Impact Assessment of the project, funded through Kia India, CSRBOX has relied on data shared by the implementation team.

With Specifics to Impact Assessment, CSRBOX:

- Has neither conducted an audit nor due diligence nor validated the financial statements and projections provided by Kia India.
- Wherever information was not available in the public domain, suitable assumptions were made to extrapolate values for the same.
- CSRBOX must emphasise that the realisation of the benefits/improvements accruing out of the recommendations set out within this report (based on secondary sources) is dependent on the continuing validity of the assumptions on which it is based. The assumptions will need to be reviewed and revised to reflect such changes in business trends, regulatory requirements, or the direction of the business as further clarity emerges. CSRBOX accepts no responsibility for the realisation of the projected benefits.
- The premise of an impact assessment is the objective of the project, along with output and outcome indicators pre-set by the programme design and implementation team. CSRBOX’s impact assessment framework was designed and executed in alignment with those objectives and indicators.

Ethical Practices

Kia India upholds the highest ethical standards in research, ensuring transparency, respect, and participant well-being. The evaluation team followed strict ethical protocols, including informed consent, confidentiality, and sensitivity, to foster trust and responsible data collection.

- **Ethical Considerations in Data Collection:** As part of the qualitative and quantitative data collection process, the evaluation team adhered to fundamental ethical protocols by obtaining informed consent from all respondents before collecting their responses. Participants were clearly informed about the purpose of the study, the outcomes of data collection, and how their testimonials would be captured accurately and respectfully.
- **Sensitivity in Handling Personal Information:** The data collection process involved tools that gathered personal information, which could potentially impact respondents' sentiments if not handled sensitively. To mitigate this risk, the team conducted a sensitisation session for enumerators and other team members involved in the data collection process, ensuring they understood how to approach participants with care and empathy.
- **Assurance of Confidentiality:** Respondents were assured of the confidentiality of their personal information, with explicit communication that their data would be used solely for research purposes.
- **Photography Consent:** Additionally, consent was obtained from beneficiaries before taking photographs during interactions. Participants were informed that these images could be used in the Impact Assessment report, which may be made available in the public domain.

Abbreviations

Abbreviation	Details
BCC	Behaviour Change Communication
BRSR	Business Responsibility and Sustainability Reporting
CL	Community Leader
CSR	Corporate Social Responsibility
EC	Executive Committee
ESG	Environmental, Social, and Governance
FGD	Focus Group Discussion
FPO	Farmer-Producer Organisation
FY	Financial Year
IDI	In-depth Interview
NGO	Non-Governmental Organisation
IT	Information Technology
Kia	Kia India
KII	Key Informant Interview
MIS	Management Information System
MoU	Memorandum of Understanding
NAPCC	National Action Plan on Climate Change
NMSA	National Mission for Sustainable Agriculture
OC	Organic Carbon
OECD-DAC	Organisation for Economic Co-operation and Development – Development Assistance Committee
PH	Plantation Household
RLSP	Rural Livelihood Support Plantation
SDG	Sustainable Development Goal
SHG	Self-Help Group
SEBI	Securities and Exchange Board of India
tCO ₂ e	Tons of Carbon Dioxide Equivalent



Executive Summary

Executive Summary

Kia India, through its Corporate Social Responsibility (CSR) initiatives, implemented Project Uphaar to strengthen farmer livelihoods, enhance environmental sustainability, and promote climate resilience through fruit-based agroforestry. The programme facilitated the plantation of 1,58,614 fruit-bearing saplings across 15 states, covering over 1,000 acres and benefiting 288 small and marginal farmers.

The impact assessment evaluates the programme's contribution to livelihood enhancement, environmental restoration, and long-term sustainability using the OECD-DAC evaluation framework. The survey was done with 180 farmers across 9 states (60% of the states).

Key Outcomes :

74% of beneficiaries are selling fruits, indicating emerging market linkages

80% of fruit-producing households earn over ₹5,000 annually

54% of fruit-producing households reported more than 50% of their trees are yielding fruit

98% continue adopting tree-care practices, reflecting strong ownership

89% beneficiaries expressed satisfaction with programme support

Impact Created

Environmental

7,910.98 tCO₂e sequestered to date (from 2022 to 3/02/2026), with projected 14,229.85 tCO₂e over 30 years (from 3/02/2026 upto 30 years), contributing to climate mitigation and ecological restoration.
82% reporting an increase in environmental awareness post-intervention

Social

69% of beneficiaries reported improved household nutrition, while 72% reported increased participation of women in farm decision-making, reflecting enhanced well-being and inclusivity.

Economic

Enabled income diversification, productive land use, and creation of long-term livelihood assets, strengthening farmer resilience.

SROI

The programme delivers an SROI of 1:37, indicating that for every ₹1 invested, ₹37 of social, environmental, and economic value is generated



Chapter 1

Project Background and Overview

1.1 CSR Initiative of Kia India

Kia India has implemented a range of strategic Corporate Social Responsibility (CSR) initiatives aimed at driving sustainable development and inclusive growth across communities in India. The company supports environmental sustainability, climate action, healthcare access, livelihood generation, skill development, education, safety, and rural infrastructure, including water conservation and renewable energy.

Key focus areas include:



Kia India's CSR vision is to foster a greener, healthier, and more empowered society through community-driven, scalable initiatives that address environmental challenges and strengthen livelihoods. Project Uphaar contributes to Kia India's CSR vision by advancing environmental sustainability and climate action through large-scale agroforestry and ecological restoration.

1.2 About the Programme

Project Uphaar, implemented with SankalpTaru Foundation, promotes fruit-based agroforestry to support small and marginal farmers. Under the programme, 1,58,614 fruit-bearing trees have been planted across 15 states, covering over 1,000 acres and benefiting 288 farmers. Species selection is aligned with local agro-climatic conditions to ensure survival and long-term income generation. Meta-analyses show that agroforestry systems consistently **increase soil carbon stocks** relative to conventional agriculture, indicating significant potential for carbon sequestration and climate change mitigation when trees are integrated with crop production.¹

Fruit-based agroforestry systems have also been shown to **improve soil health, raise total carbon stock, and diversify food and energy production**, which supports both environmental sustainability and the nutrition and livelihood security of rural communities.² The programme strengthens livelihoods, enhances soil health and biodiversity, increases green cover, and contributes to measurable climate action aligned with the Sustainable Development Goals (SDGs).

¹Kiran Kumara, T. M., Pal, S., Chand, P., & Kandpal, A. (2023). Carbon sequestration potential of agroforestry systems in Indian agricultural landscape: A meta-analysis. *Ecosystem Services*, 62, 101537. <https://doi.org/10.1016/j.ecoser.2023.101537>

²Das, P., Dhara, P. K., & Panda, S. (2022). Fruit based agroforestry systems: Potential means for sustaining carbon sequestration, improving soil health and diet of community in red and lateritic zone of West Bengal, India. *International Journal of Scientific and Engineering Research*, 13(12), 832–842. <https://doi.org/10.14299/ijser.2022.12.03>

1.3 Need For Programme

Rural farming communities face rising livelihood insecurity due to climate variability, declining soil fertility, land degradation, and limited income diversification. Small and marginal farmers are especially vulnerable, relying on seasonal crops exposed to erratic rainfall and market risks. Underutilised land and low tree cover further drive soil erosion, groundwater decline, and biodiversity loss, while limited long-term assets constrain financial and nutritional security.

Despite national focus on agroforestry and climate-resilient agriculture, gaps persist at the grassroots level, including:



There was a clear need for a structured, farmer-centric intervention addressing livelihood risks and environmental degradation. Project Uphaar was designed to promote fruit-based agroforestry with capacity building and technical support, creating productive assets that strengthen income stability, soil health, and climate resilience

1.3.1 Project Geography

A summary of the concerned project activity undertaken under the project is mentioned below:

Project Name	Project Uphaar
Geography	- North (Rajasthan, Haryana, Uttar Pradesh, Himachal Pradesh) - South (Andhra Pradesh, Telangana, Tamil Nadu, Karnataka) - West (Maharashtra) - Central (Madhya Pradesh) - East (Odisha, West Bengal, Jharkhand, Bihar, Assam)
Beneficiaries Outreached	288 farmer beneficiaries covering more than 1,000 acres of agricultural land
Categories of Beneficiaries	- Small and marginal farmers and their households - Women farmer beneficiaries - Rural communities living in plantation villages - Local stakeholders engaged in agroforestry



Table 1-Project Geography

1.4 Theory of Change

Activities	Outputs	Outcomes	Impact
On-ground survey and farmer mobilisation	- Ground survey conducted across 15 states to identify suitable plantation sites - Baseline assessment of 288 farmers.	- Inclusion of small, marginal and women farmers - Identification of livelihood gaps	Long-term asset creation for climate-risk households
Distribution of saplings and orchard establishment	1.54 lakh saplings planted across 1,000+ acres	Increased green cover; productive land use	Long-term income generation, carbon sequestration & biodiversity gains
State-specific agroforestry interventions	Region-specific species mixes .	Diversified income sources, reducing dependence on single crops	Climate resilience and strengthened rural economies
Capacity building and technical support	Training on irrigation, pest management & agroforestry	Better survival and adoption of efficient practices	Improved income stability and reduced environmental stress
Digital tagging, monitoring and reporting	Geo-tagging and real-time tracking	Transparent and verifiable CSR tracking	Scalable and accountable CSR model
Women's participation and livelihood diversification	Targeted inclusion of women farmers	Increased confidence, skills and decision-making power of women	Greater household equity and social inclusion
Environmental awareness and SDG-linked engagement	Climate and sustainability awareness activities	Greater understanding of links between trees, livelihoods and climate resilience	Behavioural shift towards sustainable land-use practices



Chapter 2

Design and Approach of the Impact Assessment

This section outlines the study objectives, framework and methodologies employed while conducting the assessment. It details the data collection methods and sampling techniques utilised to gather comprehensive insights into plastic waste generation, collection practices, and community perceptions.

2.1 Objectives of the Study

Kia India collaborated with CSRBOX to conduct a thorough Impact Assessment of the Uphaar Plantation Project. The study aimed to achieve the following objectives:

To Assess the project outcomes based on the OECD-DAC framework parameters of Inclusiveness, Relevance, Effectiveness, Coherence, Efficiency, Impact and Sustainability.

To evaluate the Social Return on Investment (SROI) for the Project

To assess the contribution of tree plantation to green cover enhancement and climate resilience in target geographies

To evaluate the economic and livelihood benefits to marginalised farmers from fruit-bearing tree distribution.

To understand farmer's engagement and adoption of tree care practices to ensure long-term survival and yield.

Garner feedback and responses – both qualitative and quantitative – from various stakeholders associated with the projects about the performance and the processes involved.

Gather information on experiences and challenges faced, by the partner NGO during the implementation of the project

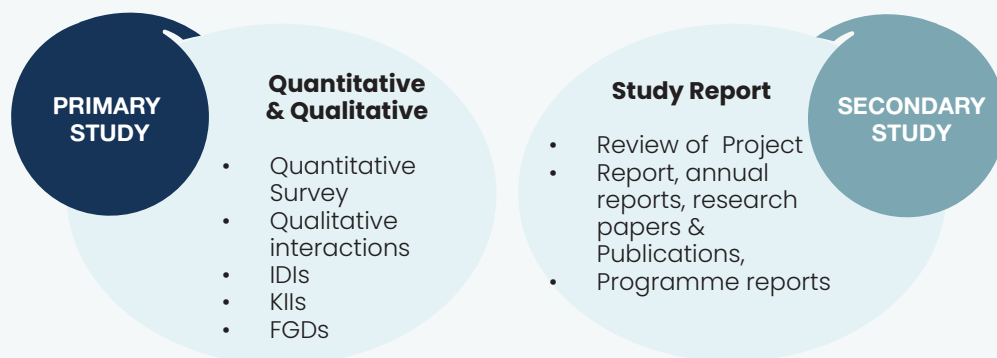
2.2 Approach, Evaluation and Assessment Framework



Given the objectives of the study and the key areas of inquiry, the method of evaluation focused on learning as the prime objective. This section presents the approach towards developing and executing a robust, dynamic, and result-oriented evaluation framework and design.

To measure programme impact, a pre-post evaluation approach was used, relying on beneficiaries' recall of conditions before and after the intervention. The comparison helped assess the programme's contribution to improving beneficiaries' living conditions, while acknowledging that some changes may also be influenced by external factors.

The study followed a **two-pronged research approach**, combining primary data collection and secondary review.



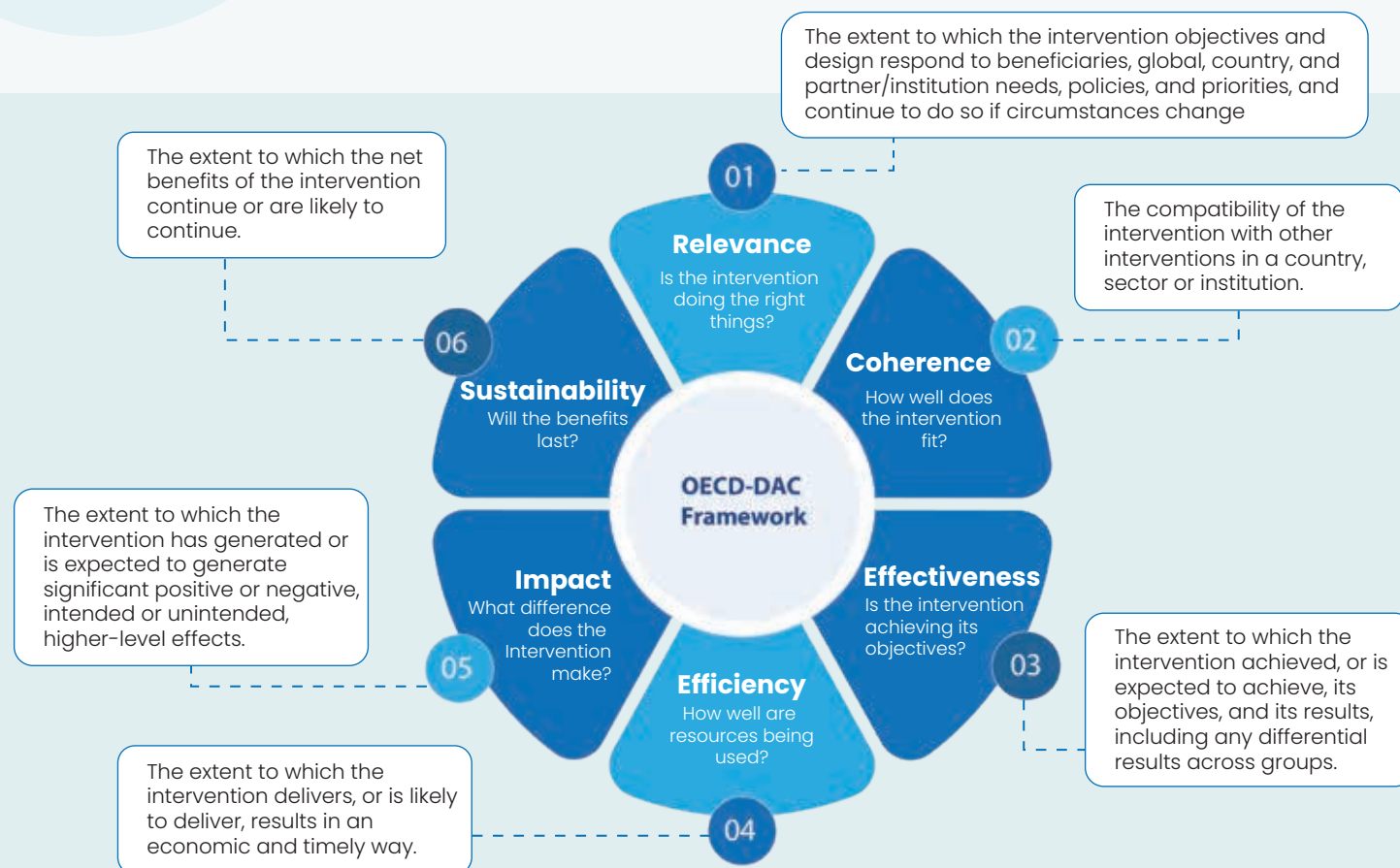
Primary research involved **quantitative surveys and qualitative methods**, including In-Depth Interviews (IDIs) and Focus Group Discussions (FGDs) with key stakeholders.

Secondary research included analysis of annual reports, project documents, and relevant literature to understand contextual conditions and implementation processes. Additional project documents and implementation records were also reviewed to understand activities undertaken and beneficiary coverage.

2.2.1 Assessment Framework

Given the study's objectives to determine the project's effectiveness, efficiency, impact created and sustainability, the evaluation has used the **OECD-DAC Framework**.

Using the criteria of the OECD-DAC framework, the evaluation has assessed Kia India's contribution to the results while keeping in mind the multiplicity of factors that may be affecting the overall outcome.



2.3 Sample Approach

2.3.1 Quantitative Sampling

A simple random sampling approach was used to ensure that the sample was representative of all the strata and divisions. The sample size was determined using a statistically significant methodology. Any impact reflected by the sample can then be safely assumed to be a reflection of the entire population.

Geography	Survey Locations	Rationale
15 States	Maharashtra; Rajasthan; Karnataka; Tamil Nadu; Uttar Pradesh; West Bengal; Jharkhand; Odisha; Andhra Pradesh	60% of the total states, i.e. 9 states, are covered

Table 3-Geography of Survey Locations

Primary Stakeholders	Mode of Data Collection	Universe	Target Sample	Acheived Sample	Rationale
Farmer	On-field	288	177	180	95% CL and 4.6% MoE (Approx. 69%)

Table 4-Qualitative Sampling Table

2.3.2 Qualitative Sampling

In addition to quantitative data collection methods, qualitative data were collected. The list of secondary stakeholders is mentioned below:

Stakeholders	Qualitative Tool	Mode of Data Collection	Number of Interactions
Panchayat/Village Development Officer	Key Informant Interview	On Field	4
Local Agriculture/Forest/Irrigation Department Official	Key Informant Interview	On Field	2
Implementation Team – Sankalptaru Foundation	Key Informant Interview	On Field	1
Total			7



Chapter 3

Findings of the Impact Assessment Study

The findings presented below are derived from primary survey data of the plantation programme and form the basis for evidence-led inferences and insights, and the OECD DAC standard parameters outlined in the study framework.

3.1 Demographic profile

This section outlines key characteristics of respondents, including gender, age, landholding status, and socio-economic background, to provide context on the beneficiary base reached by the plantation programme.



Age Profile

Beneficiaries largely fall within the economically active age groups (18–50 years), indicating participation from individuals actively engaged in farming and livelihood activities.



Gender Profile

The gender distribution reflects a **mixed participation of both men and women**, representing typical household involvement in agricultural practices and decision-making.



Educational Profile

The programme largely reached poor and vulnerable farming households with low or no formal education, reflecting its focus on supporting disadvantaged communities through agroforestry-based livelihood enhancement.



Primary Occupation

87% households are primarily dependent on agriculture, confirming programme relevance to farming communities.



Annual Family Income

Pre Intervention	Pre Intervention
66% of households earned below ₹1 lakh 11% earned above ₹2.5 lakh.	- Earning below ₹1 lakh declined to 53% - Increased to 20% earning above ₹2.5 lakh



Earning Members in Family

The earning-member profile shows that most households rely on one or two earning members, reflecting limited income diversification.



Image 1-Interaction with the Beneficiaries during Field Visit

3.2 Relevance

This section evaluates the extent to which Project Uphaar addresses beneficiary needs and local priorities. It assesses alignment with livelihood concerns, agro-climatic conditions, and broader rural development objectives, based on primary survey findings and field insight.

3.2.1 Primary Land Use Before Plantation

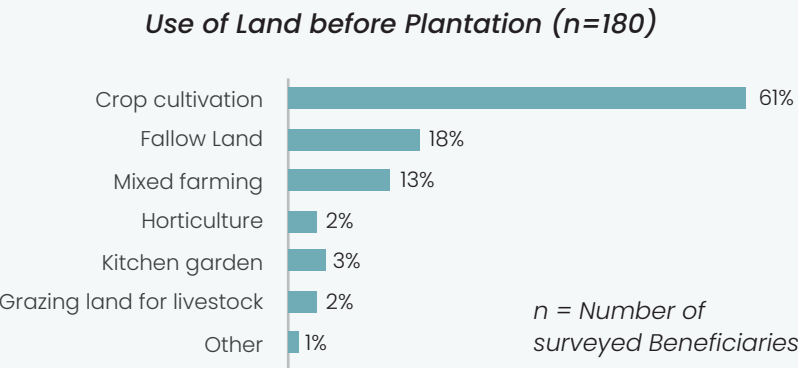


Figure 2-Land Use before Plantation

Pre-Intervention: Before, Land was primarily under crop cultivation (61%), indicating underutilisation and dependence on seasonal agriculture. The presence of fallow land reflects untapped productivity potential.

Post-Intervention: Shift towards mixed farming and agroforestry improved land utilisation and income diversification.

3.2.2 Key Reasons for Participation in The Uphaar Programme

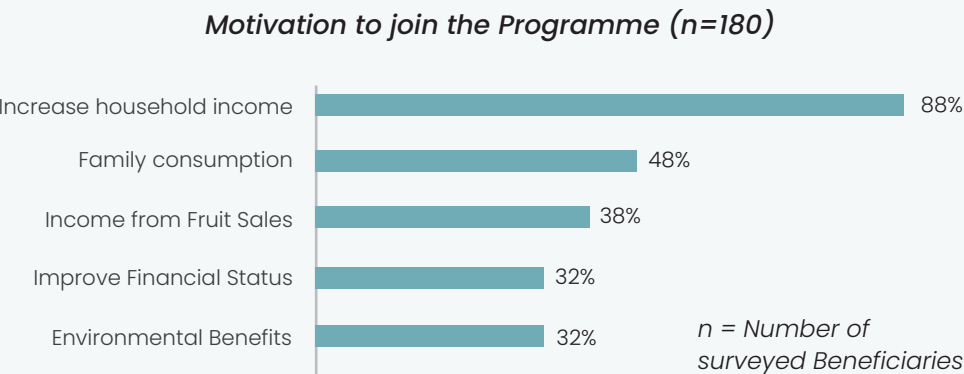


Figure 3-Motivation to join the Programme

The main reasons to join the programme:

- Increase household income and improved financial status:** Indicates strong livelihood need, with beneficiaries driven by income enhancement, as seasonal and uncertain returns from traditional crops led farmers to adopt fruit-based plantations as a more stable, long-term income source.
- Family consumption:** Households aimed to improve access to fruits to enhance dietary diversity and nutritional intake.
- Environmental benefits:** Strong livelihood-driven participation with emerging awareness of environmental benefits.

3.3.3 Total Saplings Provided to Beneficiaries

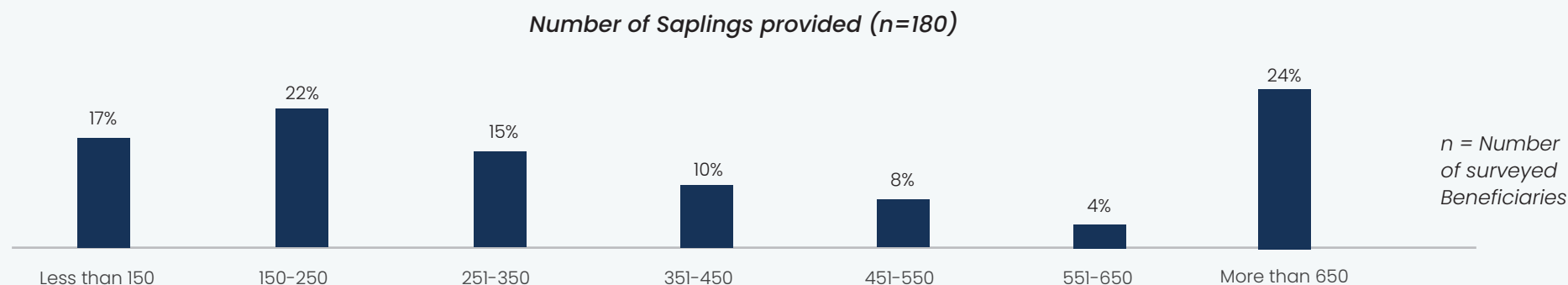


Figure 4-Number of Saplings provided to the Beneficiaries

- Sapling distribution varied based on landholding and plantation capacity, reflecting a need-based approach.
- Regionally suitable species such as coconut, mango, guava, and lemon further demonstrate the programme's relevance to local agro-climatic conditions and livelihood needs.

3.3 Coherence

Alignment with SDGs



Alignment with the main National Policies



3.4 Effectiveness

This section assesses the extent to which Project Uphaar achieved its objectives by examining plantation implementation, farmer adoption of practices, and early livelihood and environmental improvements based on field evidence and beneficiary feedback.



Image 2-Trees Bearing Fruits-Pomegranate, Lemon and Apple Ber

3.4.1 Status of Fruit growing plants

- 54 out of 180 beneficiaries reported fruiting.
- Among them, 54% reported more than 50% of their trees are yielding fruit, demonstrating early-stage success in plantation establishment.
- Going forward, strengthening plant care methods and periodic field monitoring can help ensure healthy tree growth and maximise fruit yield as plantations mature.

Percentage of Trees bearing Fruits (n=54)

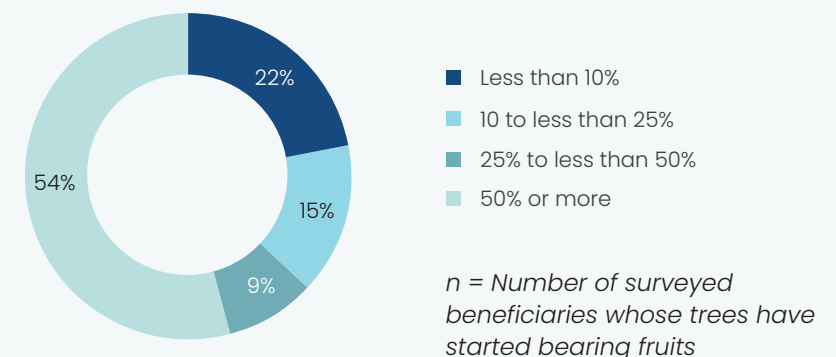


Figure 5-Trees Bearing Fruits

3.4.2 Annual Fruit Production

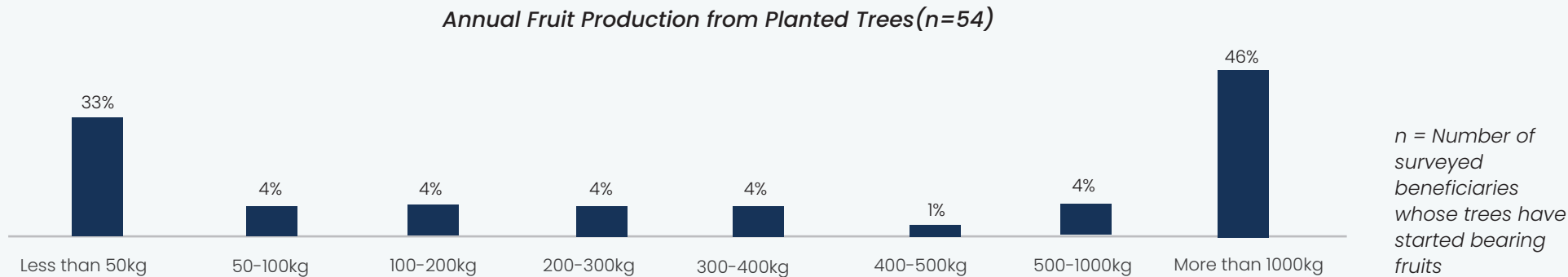


Figure 6-Annual Fruit Production

- Early-yielding fruits such as guava, lemon, pomegranate, apple ber, along with amla and custard apple, begin fruiting within 2–3 years, enabling early production and quicker income generation for farmers.
- The presence of a mix of early- and late-bearing fruits has enabled staggered production, ensuring gradual but continuous yield generation.
- As a result, 46% of beneficiaries (25 out of 54 farmers) reported annual production exceeding 1000 kg, reflecting early productivity driven by fast-growing fruit species.

3.4.3 Harvesting Patterns

- Harvesting occurs at staggered intervals, mostly every six months or annually, depending on the species and maturity of the trees.
- Regular harvesting indicates productive plantations, contributing to both improved nutrition and household income.

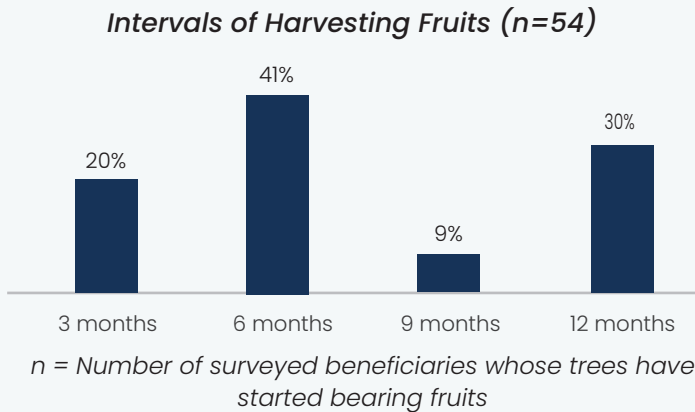


Figure 7-Harvesting Intervals of the Produce



Image 3-Farmers Harvesting Amla from their Fields in Rajasthan

3.4.4 Household Consumption of Produced Fruits

- Prior to the intervention, access to fruits was limited due to low availability and affordability constraints.
- 69% (37 out of 54) consume less than 25% of produce, as the majority of produce is market-oriented.
- Highlights a **dual benefit of improved household consumption and income generation** through market sales.
- Hence, by promoting balanced utilisation, better nutrition outcomes can be achieved.

3.4.5 Commercialisation of Produce and Livelihood Effectiveness

- Post-intervention, 40 out of 180 beneficiaries are selling their produce in the market.
- **65% beneficiaries sell more than 75% of their produce.**
- This demonstrates the **emerging livelihood potential of fruit-based plantations** among participating farmers.

Percentage of Produce sold in the Market (n=40)

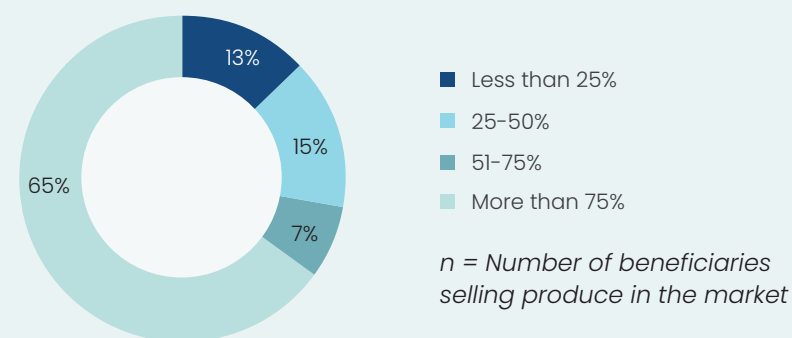


Figure 9-Fruit Produce sold in the Market

3.4.6 Market Engagement and Income Outcomes from Fruit Production

Quantity of Produce sold in a year (n=40)

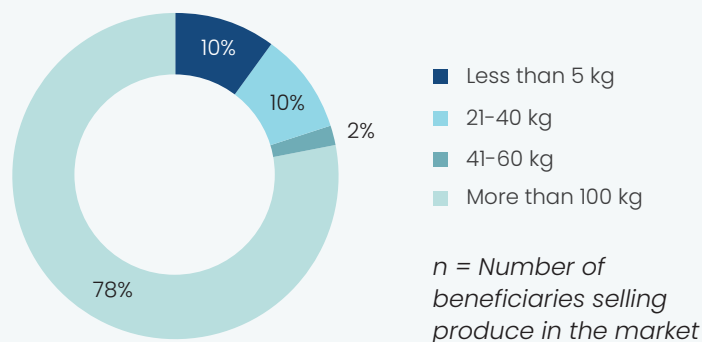


Figure 10 -Number of Fruits Sold in the Market, Annually

Market Price Range for Fruit Sales (n=40)

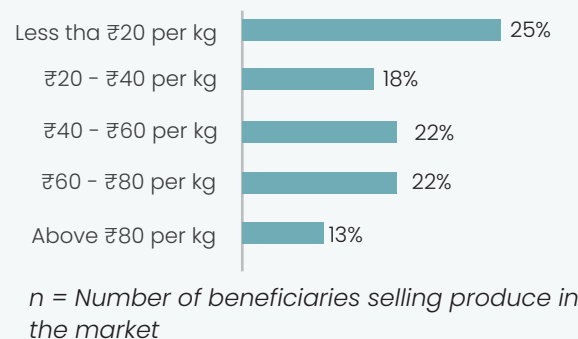


Figure 11 -Market Price for Fruits

- **78% (31 out of 40) beneficiaries sell more than 100 kg annually** due to early-yielding fruits (guava, lemon, pomegranate, apple ber, amla, custard apple)
- Price variation is driven by differences in fruit type, seasonality, and local market demand.
- Hence, to increase production, guiding harvest timing and produce grading can help beneficiaries capture better prices as fruit production increases.

3.4.4 Household Consumption of Produced Fruits

- Prior to the intervention, access to fruits was limited due to low availability and affordability constraints.
- 69% (37 out of 54) consume less than 25% of produce, as the majority of produce is market-oriented.
- Highlights a **dual benefit of improved household consumption and income generation** through market sales.
- Hence, by promoting balanced utilisation, better nutrition outcomes can be achieved.

3.4.5 Commercialisation of Produce and Livelihood Effectiveness

- Post-intervention, 40 out of 180 beneficiaries are selling their produce in the market.
- **65% beneficiaries sell more than 75% of their produce.**
- This demonstrates the **emerging livelihood potential of fruit-based plantations** among participating farmers.

Percentage of Produce sold in the Market (n=40)

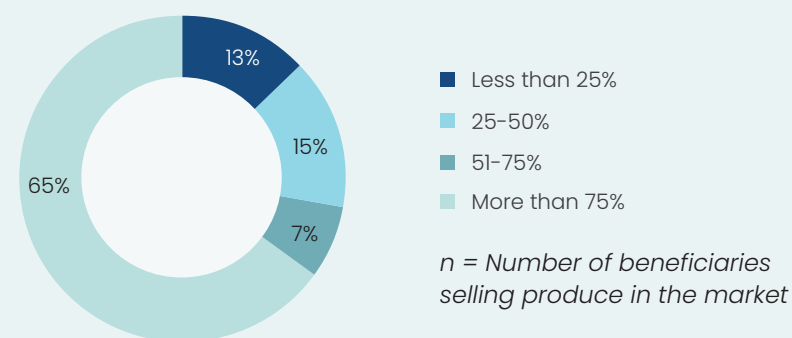


Figure 9-Fruit Produce sold in the Market

3.4.6 Market Engagement and Income Outcomes from Fruit Production

Quantity of Produce sold in a year (n=40)

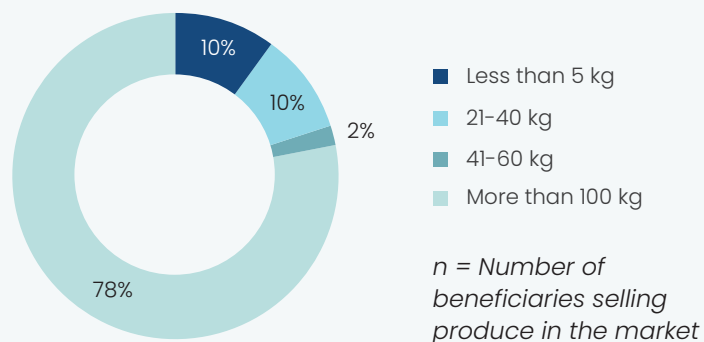


Figure 10 -Number of Fruits Sold in the Market, Annually

Market Price Range for Fruit Sales (n=40)

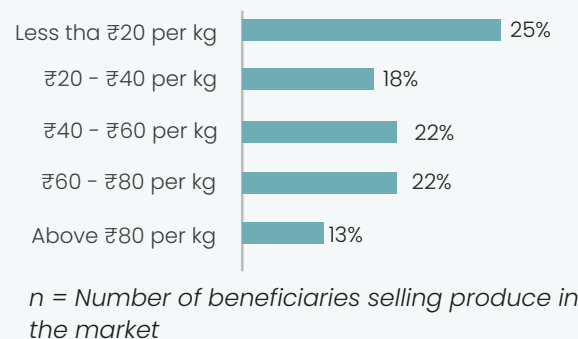


Figure 11 -Market Price for Fruits

- **78% (31 out of 40) beneficiaries sell more than 100 kg annually** due to early-yielding fruits (guava, lemon, pomegranate, apple ber, amla, custard apple)
- Price variation is driven by differences in fruit type, seasonality, and local market demand.
- Hence, to increase production, guiding harvest timing and produce grading can help beneficiaries capture better prices as fruit production increases.

3.4.7 Income Generation from Fruit Production

- 80% (32 beneficiaries) reported earning over ₹5,000 annually from fruit sales.
- This strengthens income diversification and reduces dependence on traditional agriculture.
- With continued guidance and improved market access, beneficiaries can enhance income as plantations mature and yields increase.

Income Generated from selling Fruits Annually (n=40)

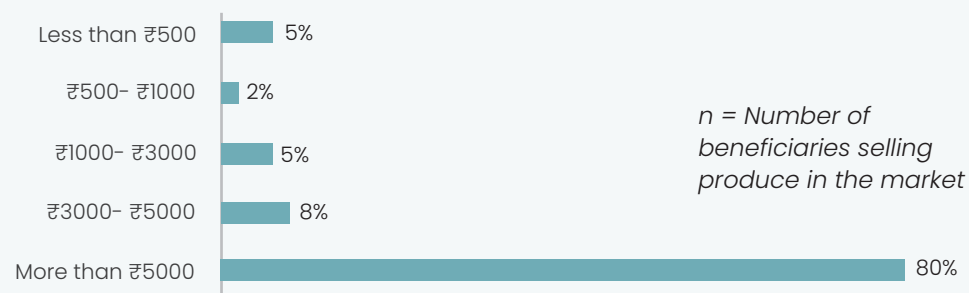
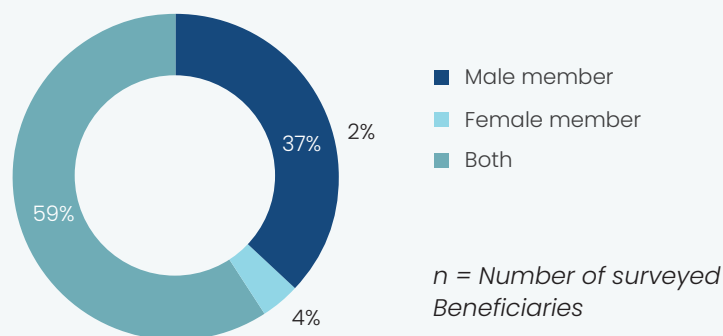


Figure 12-Monetary value generated from selling Fruits

3.4.8 Household Roles in Income Control and Plantation Management

Primary Caregiver for Planted Trees (n=180)



Control over Income from Fruit Sales

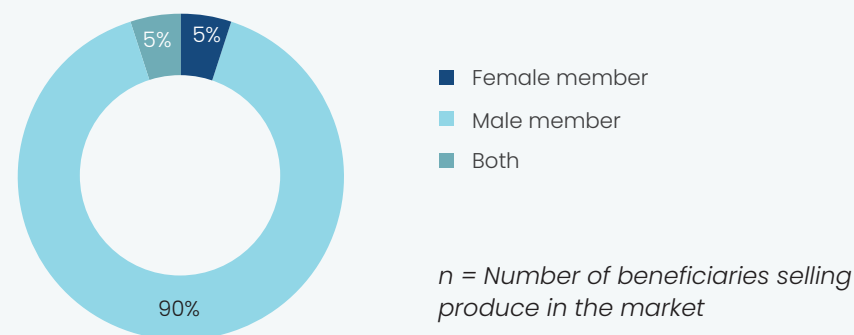


Figure 13-Family Member Responsible for taking care of the Trees, and Family Member Controlling the Income from Fruit Trees

- Plantation care and maintenance are undertaken through a combination of joint and individual household participation.
- A gender gap exists in financial decision-making as it is largely handled by male members due to traditional roles and greater involvement of males in rural areas.
- This suggests that increasing women's participation in financial decision-making and market interactions through targeted capacity building on financial literacy can promote more balanced household involvement.

3.4.9 Market Linkage Facilitation Provided to Beneficiaries

- Out of 180 beneficiaries, 80 beneficiaries reported receiving market linkage support.
- Improved market access has enabled fruit sales; however, beneficiary engagement remains limited due to the maturing stage of plantations and is expected to grow over time.
- Building on existing support, strengthening structured market linkages can further enhance and scale beneficiary sales.

Types of Market Support Provided (n=80)

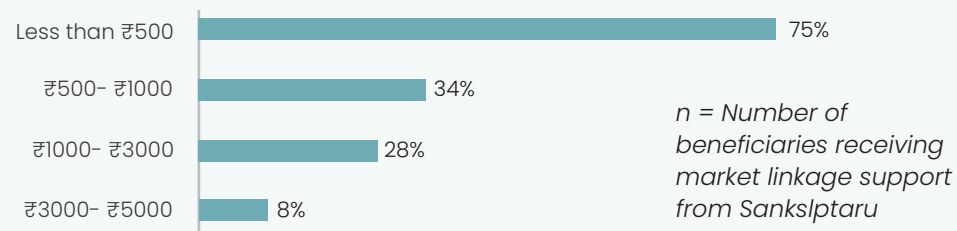


Figure 14 -Types of Market Linkages Provided



Image 4-Picture showing Farmers Packing Fruit Produce for Selling in the Market

3.4.10 Reported Survival of Trees and the Reason for Mortality

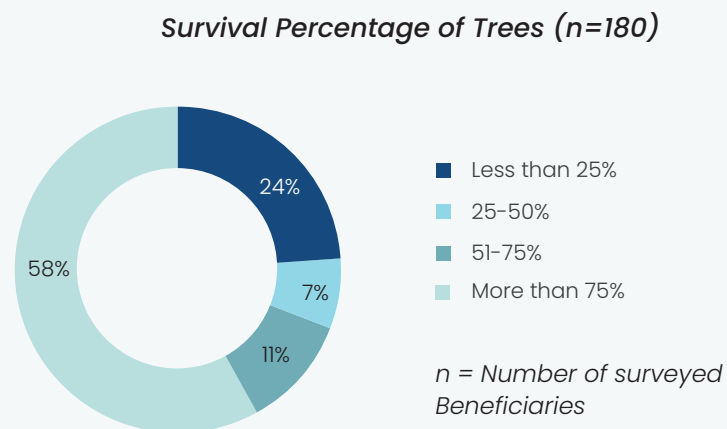


Figure 15-Survival Percentage of Trees told by Beneficiaries

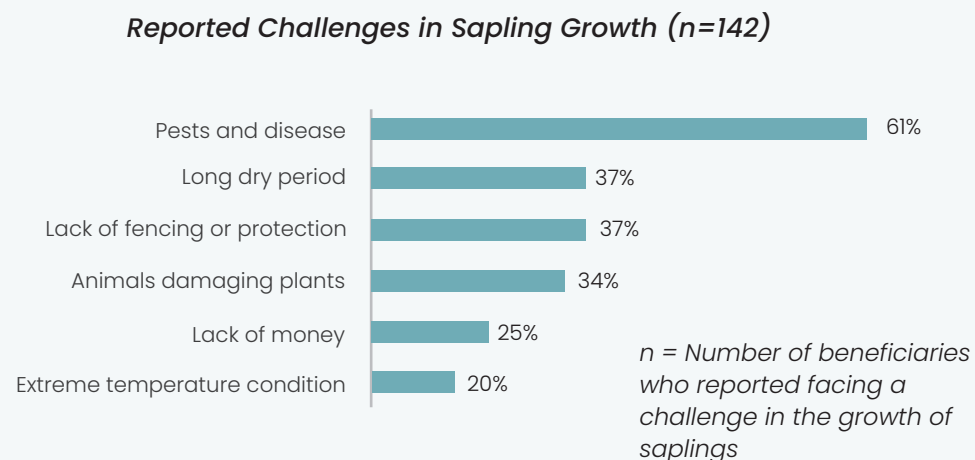


Figure 16-Observed Challenges in Sapling Growth

- 58% (104 out of 180) beneficiaries reported that more than 75% survival of trees indicates effective plantation establishment and maintenance.
- However, key challenges include pests and diseases, long dry periods, lack of fencing, and animal damage.
- This suggests that while the programme has been effective in establishing plantations, external factors are influencing sapling survival in certain locations.
- To enhance survival outcomes, it is recommended to strengthen pest management practices, adopt water-efficient techniques, and implement protective measures such as fencing.

3.4.11 Access to Training and Technical Guidance

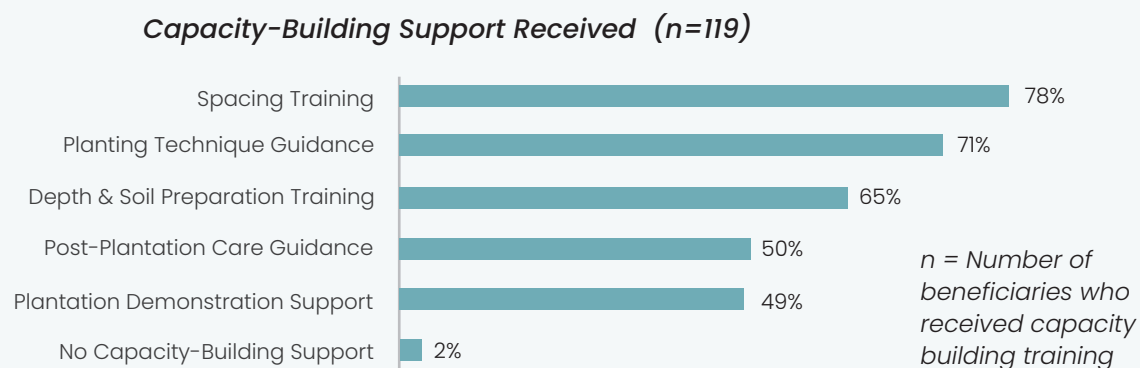


Figure 17-Capacity Building Training Received by Farmers

- A large share of beneficiaries reported receiving [training on spacing, planting techniques, soil preparation, and post-plantation care](#).
- [Strong capacity-building support has enabled the adoption of key plantation practices](#), though gaps remain in pest management
- By strengthening pest management practices by aligning targeted trainings with key challenges, such as pests and water stress, supported through practical demonstrations and regular follow-ups.

3.5. Efficiency

This section assesses how efficiently the programme translated its inputs into results, focusing on plantation establishment, adoption of agroforestry practices, and early livelihood and environmental outcomes based on beneficiary surveys and qualitative insights.

3.5.1 Service Delivery Under Programme

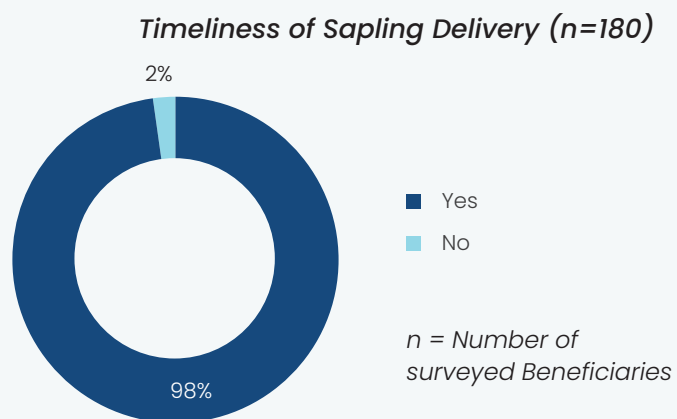


Figure 18-Timely Sapling Delivery

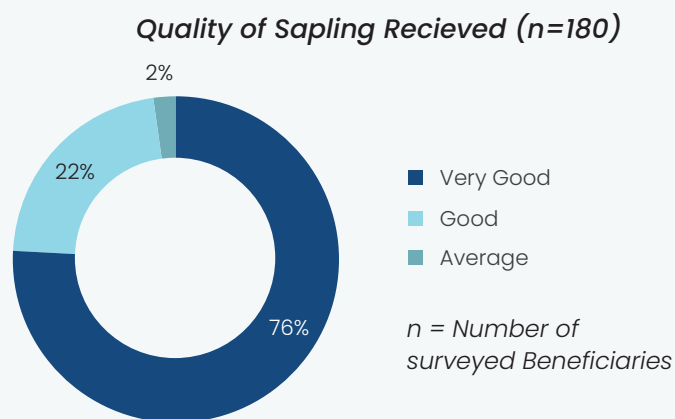
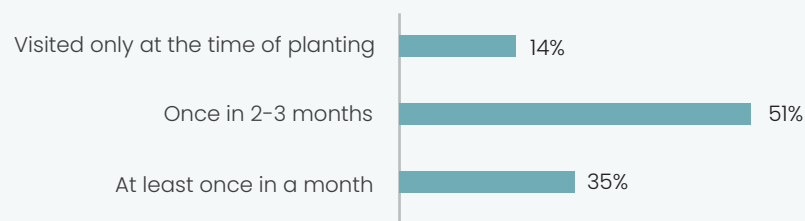


Figure 19-Quality of Sapling Provided

- [98% \(176 out of 180\) beneficiaries reported timely sapling delivery, and 76% \(137 out of 180\) rated sapling quality as very good](#)
- The timely delivery of saplings and positive feedback on sapling quality indicate [efficient service delivery under the programme](#), supporting smooth plantation establishment and early-stage growth.

3.5.2 Frequency of Field Visits and Technical Support

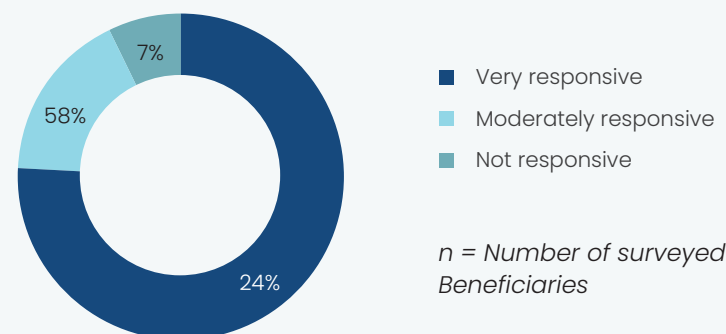
Frequency of Field Visits by Implementation Partner (n=180)



n = Number of surveyed Beneficiaries

Figure 20-Field Visits by Implementing Partner Post Intervention

Implementation Team Response to Beneficiary Queries (n=180)



n = Number of surveyed Beneficiaries

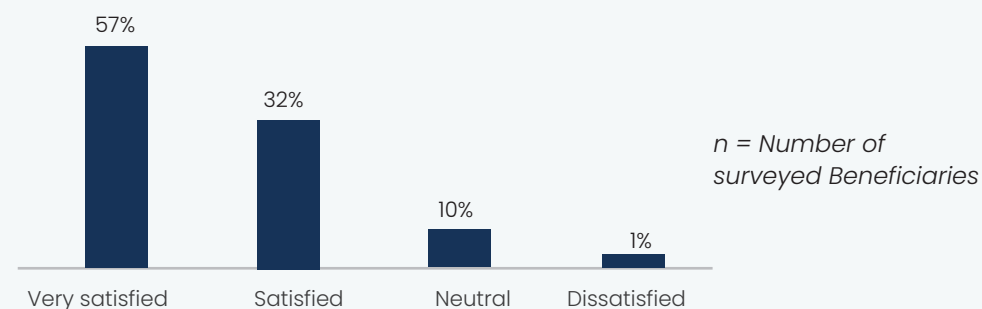
Figure 21-Implementation Team Support to Beneficiaries

- 86% (155 out of 180) beneficiaries reported visits by implementation team at least quarterly, indicating regular field engagement.
- It is suggested to increase the frequency of visits to monthly intervals to further strengthen plantation management and survival outcomes and further improve responsiveness.

3.5.3 Beneficiary Satisfaction with Project Support

- High satisfaction (89%=160 beneficiaries) is driven by timely sapling delivery, good quality inputs, regular field engagement, and practical guidance, which supported smooth plantation establishment and early benefits.
- It is suggested to further strengthen regular field visits, ensuring timely support, and addressing gaps in pest management, irrigation, and market linkages which will enhance satisfactions levels.

Rating Satisfaction Level with the Support Received (n=180)



n = Number of surveyed Beneficiaries

Figure 22-Beneficiaries Rating their Satisfaction with Support Received

3.6 Impact

This section assesses the broader, long-term changes resulting from the plantation intervention on beneficiaries' livelihoods, environment, and community well-being.

3.6.1 Improvement in Household Nutrition Reported by Beneficiaries

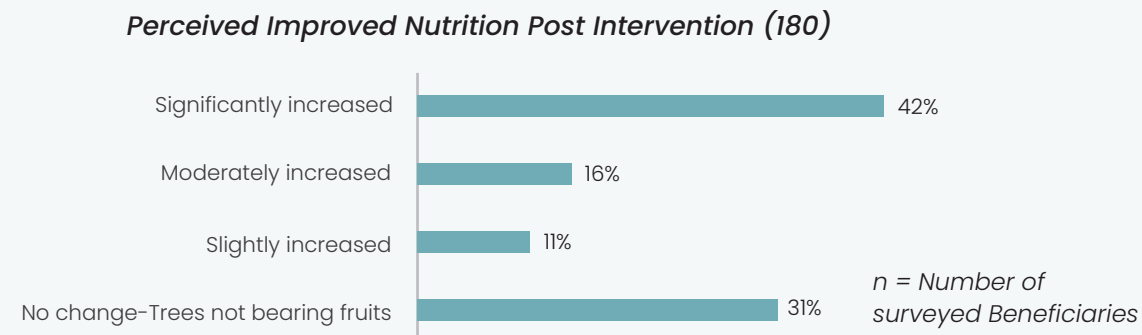
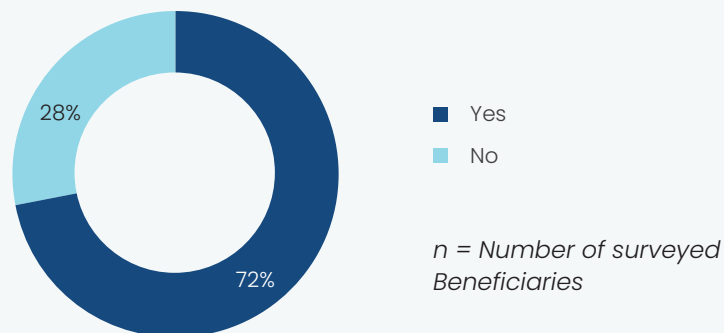


Figure 23-Nutrition Improvement Post Intervention

- While a large share of produce is market-oriented (69% consuming less than 25%), 69% of beneficiaries (42% + 16% + 11%) still report improved nutrition, indicating that even limited self-consumption is contributing to dietary benefits.
- Beneficiaries reporting no change are primarily linked to plantations still maturing, suggesting nutrition outcomes will improve further over time.

3.6.2 Increase in Women's Involvement in Farm Decision-Making

Women Involvement in Decision Making Post Intervention (n=180)



Extent of Increase in Women's Participation (n=130)

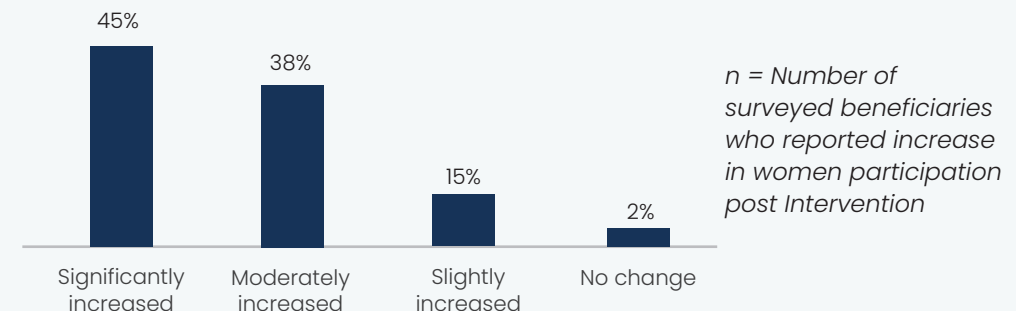


Figure 24-Increase of Women's Participation in Decision-Making Post-Intervention

- Perception of **increased women's involvement in farm decision-making post-intervention**, indicating greater participation in plantation management and household farming decisions.
- This reflects improved awareness and shared engagement within households in managing agroforestry activities.
- Further encouraging women's participation through targeted capacity-building and leadership roles in plantation management can strengthen inclusive decision-making.



Image 5-Interaction with the Women Beneficiaries of the Programme

3.6.4 Awareness about Environment Benefits- Pre and Post Intervention

Awareness about Environment Before Intervention (n=180)

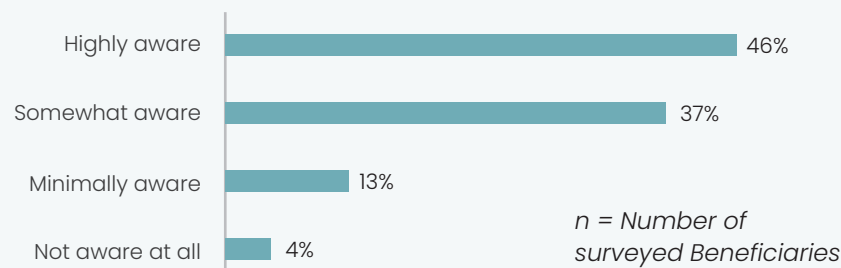


Figure 25 -Environmental Awareness-Before Intervention

Awareness about Environment After Intervention (n=180)

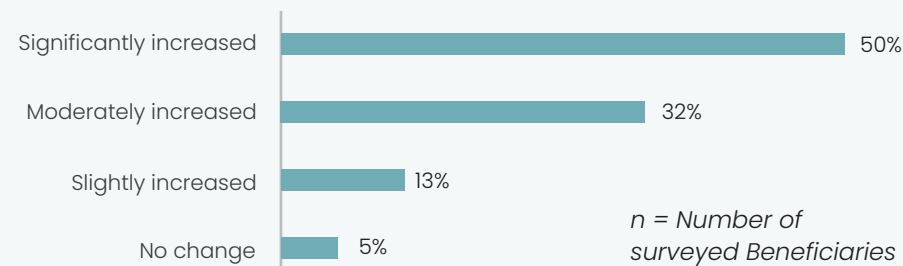


Figure 26-Environmental Awareness-After Intervention

- **Pre-intervention**, 46% (83 out of 180) were highly aware about environmental benefits.
- **Post-intervention**, 82% (148 beneficiaries) reported a significant to moderate improvement in awareness. There is a clear shift towards higher environmental awareness among beneficiaries.
- Thus, continued awareness-building through regular engagement and community-driven activities to sustain behavioural change.

3.6.5 Changes in Environmental Conditions After Plantation

- Beneficiaries reported observations of increased vegetation cover, better soil retention, and enhanced biodiversity in plantation areas.
- These perceptions suggest that the Plantation activities are contributing to visible improvements in local ecological conditions.
- Continuing plantation expansion and community awareness on sustainable land management can further strengthen environmental outcomes.

Enhanced Biodiversity Observed After Plantation Initiative (n=157)

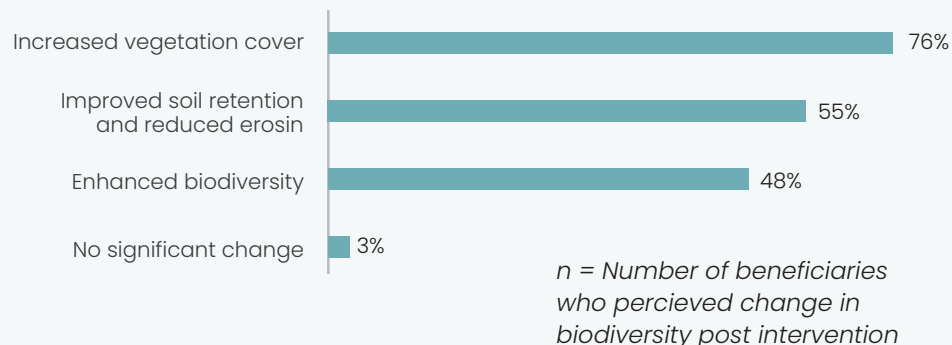


Figure 27-Increase in Biodiversity Post Intervention

As Panchayat Sahayak Brahamdev Saw observed, "Farmers' awareness has increased significantly. As benefits became visible, more people showed interest in plantation and environmental conservation."

-Panchayat Sahayak Brahamdev, Jharkhand

3.6.6 Community Perception And Replication Interest After Plantation Activity

Satisfaction Level among Community Members Post Intervention (n=180)

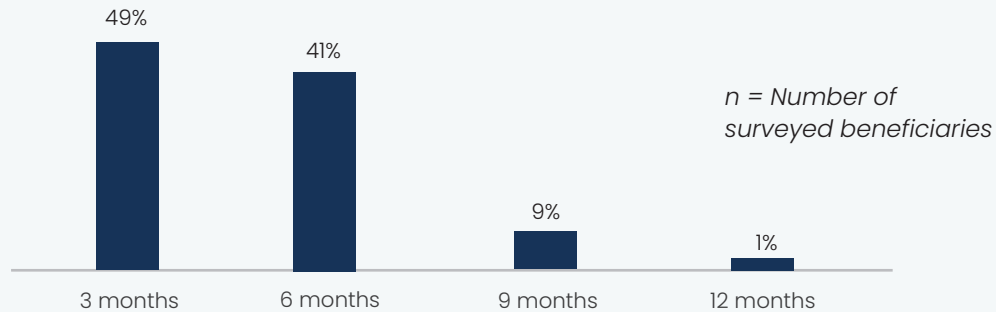


Figure 28-Beneficiaries Rating their Satisfaction Level with Programme

Behavioural Change in Community Members Post Intervention (n=180)

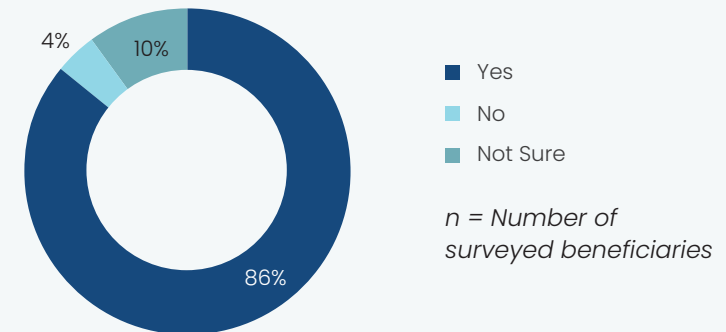


Figure 29-Change in Community Behaviour

- **Satisfaction Level:** High satisfaction (90%, 162 out of 180 beneficiaries satisfied/very satisfied) reflects positive community perception driven by visible environmental improvements and programme benefits.
- **Behavioural Change:** 86% (155 out of 180) reported positive behavioural change, reflecting increased willingness to adopt plantation practices and replicate the intervention.
- The widespread interest among non-beneficiaries in planting trees further demonstrates strong positive spill-over effects and social acceptance of the intervention.



3.6.7 Perceived Benefits from Tree Plantation

Benefits Received from Planted Trees (n=180)

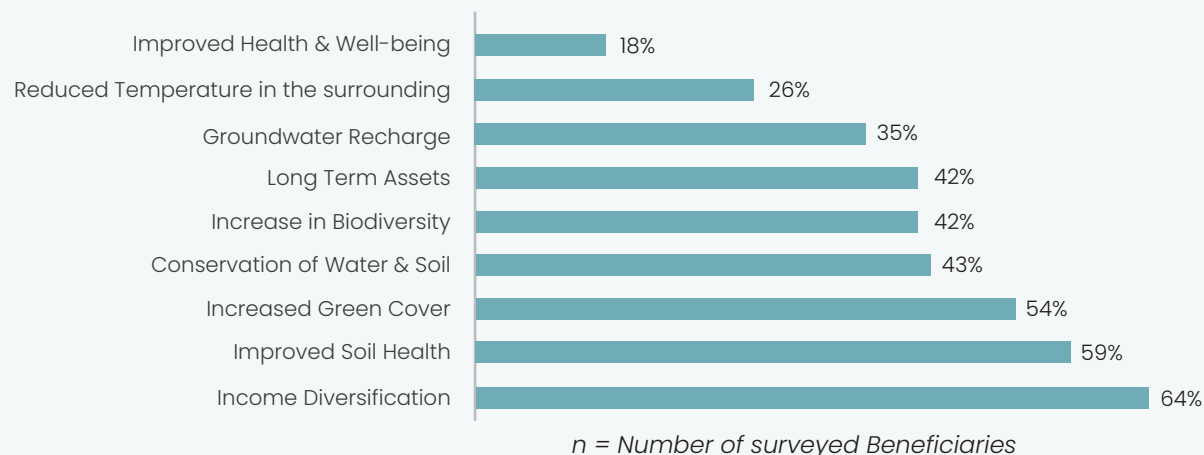


Figure 30-Benefits from Tree Plantation

- The intervention has **strengthened livelihoods through income diversification while improving soil health and increasing green cover.**
- It has also **contributed to ecological restoration** through enhanced water conservation, biodiversity, and the creation of long-term natural assets.
- Going forward, strengthening integrated support across livelihood and environmental practices can maximise long-term programme impact.

3.6.8 Fulfilment of Beneficiary Expectations from the Programme

- **86% (136 out of 159) rated fulfilment of expectations as high (Rating 4 & 5).**
- The high ratings provided by beneficiaries for fulfilment of programme expectations indicate strong satisfaction with the intervention and its outcomes.

Beneficiary Rating on Fulfilment of Programme Motivation (n=159)

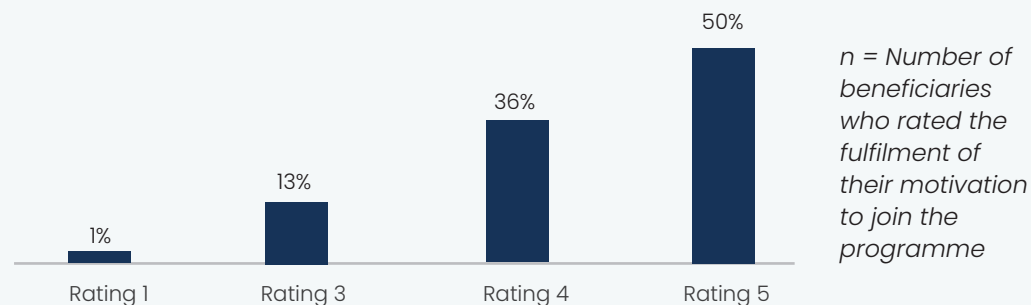


Figure 31-Rating for Programme Motivation

Gaps in Fulfilment of Beneficiary Expectations (n=21)

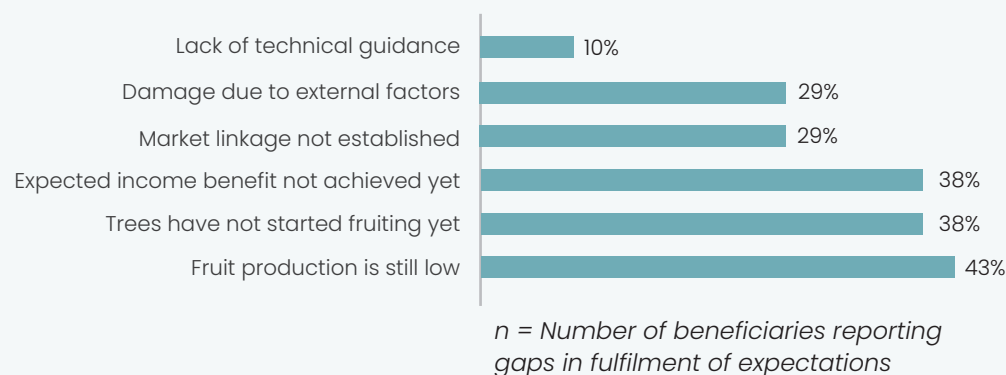


Figure 32-Gaps in Beneficiary Expectation from Programme

- Out of 180 beneficiaries, 21 reported gaps. Among them, this mainly includes low fruit production (43%), trees not yet fruiting (38%), and expected income not yet realised (38%).
- While expectations are largely met, gaps are primarily linked to the early stage of plantation maturity.
- Moving ahead, strengthen support for production, market linkages, and technical guidance to address current gaps and enhance outcomes.

3.7 Sustainability

This section assesses the long-term continuation of benefits from the plantation intervention, focusing on sustained adoption of tree care practices, beneficiary ownership, and the potential for continued livelihood and environmental gains.

3.7.1 Continued Adoption of Plantation Care Practices

- 98% (176 out of 180) beneficiaries continue to follow tree care practices.
- The continued adoption of tree care practices by the vast majority of beneficiaries post-intervention reflects strong ownership and sustained engagement, indicating positive prospects for long-term survival and benefits of the plantations.

These trees are now our responsibility, when we care for them, we know they will support our families for many years to come.

-Farmer, Maharashtra

Tree Care Method Followed Post Intervention (n=180)

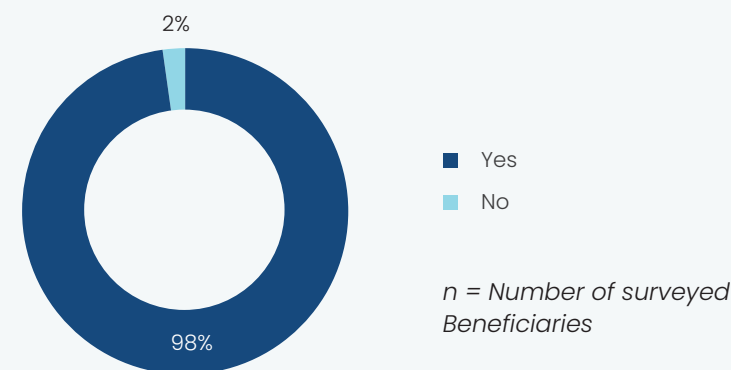


Figure 33-Beneficiaries Following Tree Care Methods Post Intervention

3.7.2 Expected Future Benefits from Tree Plantation for Beneficiary Households

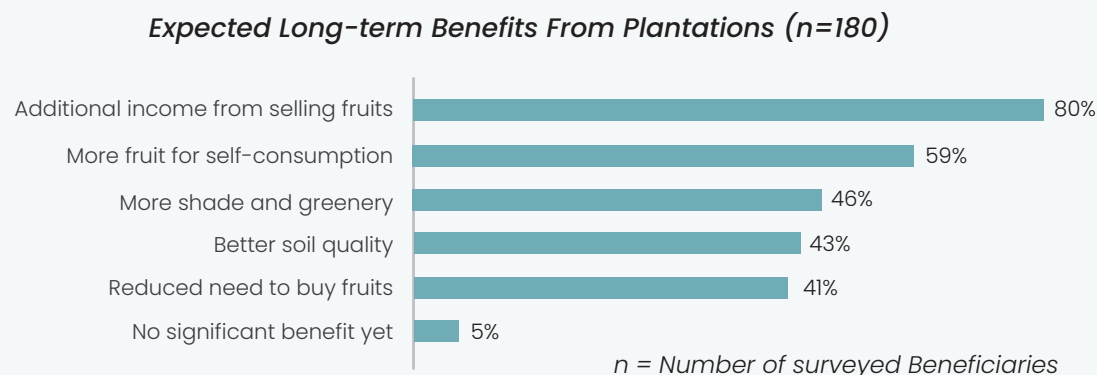


Figure 34-Future Benefits Expected by Beneficiaries

- 80% (144 out of 180) expect additional income from fruit sales.
- Beneficiaries have strong expectations of both livelihood and environmental benefits.
- The expected long-term benefits reported by beneficiaries reflect strong confidence in plantations as sustainable livelihood and environmental assets.

3.7.3 Independent Adoption of Tree Plantation by Beneficiaries

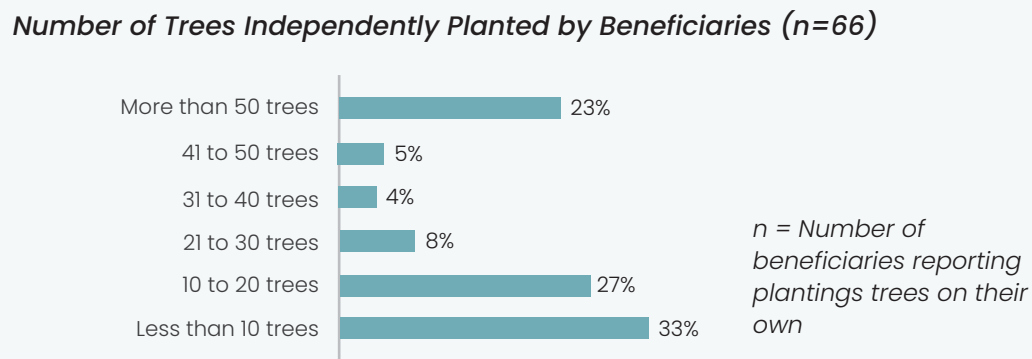
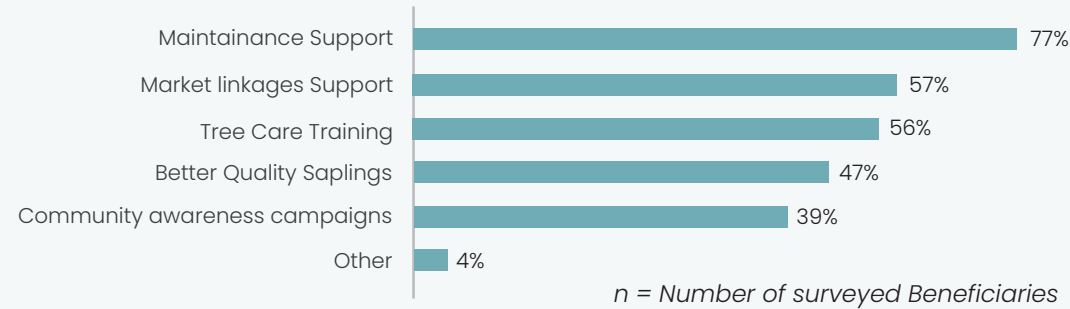


Figure 35-Trees Planted by Beneficiaries on their Own

- 66 beneficiaries out of 180 have independently planted additional trees, with 23% planting more than 50 trees. Reflects growing confidence and voluntary adoption beyond programme support.
- Hence, programme benefits can be enhanced through encouraging and supporting independent plantations through continued guidance and incentives.

3.7.4 Beneficiary Suggestions for Strengthening Programme Impact and Expanding the Programme

Additional Support Needed to Sustain the Programme (n=180)



- Beneficiaries seek continued support, particularly in maintenance and market access to fully realise long-term livelihood benefits.
- By strengthening maintenance support, market linkages, and capacity building to improve programme impact.

Figure 36 –Additional Support Required by Beneficiaries

Carbon Sequestration

Carbon sequestration refers to the removal of atmospheric CO₂ and its storage in plant biomass and soils, making tree-based agroforestry systems effective nature-based climate solutions. Under Project Uphaar, 158,614 fruit-bearing saplings across 17 species were planted during 2022–23, with species selection aligned to regional agro-climatic conditions to maximise survival, productivity, and long-term carbon potential.

Carbon sequestration varies by species, plantation age, survival rate, and local environmental conditions. Based on species-specific growth patterns and survival rates, the programme has sequestered an estimated **7,910.98 tCO₂e to date**, with an average of **23.15 tCO₂e per acre**. Higher sequestration was observed in states with larger plantation coverage and better survival rates, including Tamil Nadu, Andhra Pradesh, and Karnataka.

As plantations mature and biomass accumulation increases, total carbon sequestration is projected to rise significantly over time, reaching approximately **11,571.07 tCO₂e in 10 years**, **13,248.57 tCO₂e in 20 years**, and **14,229.85 tCO₂e in 30 years**, demonstrating strong long-term climate mitigation and ecosystem restoration potential.

The table below represents the carbon sequestered by the planted trees in the surveyed location:

State	tCO ₂ e/acre	tCO ₂ e total
Uttar Pradesh	0.37	6.14
Maharashtra	14.57	320.04
Jharkhand	0.79	9.11
Andhra Pradesh	23.01	1319.74
West Bengal	4.88	32.29
Rajasthan	1.83	80.13
Karnataka	21.49	499.44
Tamil Nadu	137.13	3419.97
Odisha	4.30	40.75

Table 6-Carbon Sequestration Calculation of the Surveyed Locations

Overall Projection for 15 States	Total carbon sequestration achieved till date (tCO ₂ e) overall project	7910.98
	Total carbon sequestration achieved till date (tCO ₂ e) overall project	7910.98
	Potential carbon sequestration in the next 10 years (tCO ₂ e) overall project	11571.07
	Potential carbon sequestration in the next 20 years (tCO ₂ e) overall project	13248.57
	Potential carbon sequestration in the next 30 years (tCO ₂ e) overall	14229.85

Table 7-Overall Carbon Sequestration Potential

***Note:** Using a logarithmic growth function in Excel, the carbon sequestration potential of the project was projected over a 30-year period. The analysis estimates that, beyond the **7,910.98 tCO₂e** sequestered to date, the project has the potential to sequester approximately **11,571.07 tCO₂e** over the next 10 years, **13,248.57 tCO₂e** over 20 years, and **14,229.85 tCO₂e** over 30 years.

It is important to note that these figures are **projections based on model assumptions and inherent limitations**, and should not be interpreted as exact values. Rather, they provide an indicative estimate of future potential and can be used for planning and decision-making, with the understanding that actual outcomes may vary.

Survival Rate For The Surveyed Location

State	Total Plantation Area (acres)	Survival Rate(%)	Total Carbon Sequestration (tCO2e)
Andhra Pradesh	57.36	75.23%	1319.74
Jharkhand	8.32	79.11%	9.11
Karnataka	23.24	81.24%	499.44
Maharashtra	26.37	91.54%	320.04
Odisha	9.48	82.29%	40.75
Rajasthan	41.64	99.28%	80.13
Tamil Nadu	31.96	90.86%	3419.97
Uttar Pradesh	8.07	92.11	6.14
West Bengal	6.31	61.9%	32.29
Average Survival Rate(%)		86.46%	

Table 9-Mortality Percentage of the Surveyed Locations

The plantations demonstrate a strong overall survival rate of 86.46%, indicating effective implementation across most states. Higher survival rates in states such as Rajasthan, Uttar Pradesh, Maharashtra, and Tamil Nadu have positively influenced carbon sequestration outcomes, especially in areas with substantial plantation cover. Tamil Nadu and Andhra Pradesh contribute significantly to total carbon sequestration, driven by both scale and survival. While most states perform well, relatively lower survival in West Bengal suggests scope for targeted improvements. Overall, sustaining high survival rates remains critical for maximising carbon sequestration potential.



Image 6-Measuring Height,Circumferenceof Trees for Carbon Sequestration

Soil Testing

Soil testing was conducted in two intervention locations, Jharkhand and Maharashtra, selected to represent different agro-climatic and geographical conditions within the project areas. The analysis was undertaken to generate indicative insights into soil health, nutrient status, and conditions supporting plantation growth. The findings provide a directional understanding of soil quality across plantation-supported sites under the programme.

Parameters	Adequate Values	Jharkhand	Maharashtra
PH	6.5–7.5	6.98	7.43
Electrical Conductivity (EC) (dS/m)	0–2.0	0.0948	0.05
Organic Carbon (OC) (%)	0.20–1.0	0.37	0.32
Nitrogen (kg/ha)	>280	784.0	238.34
Phosphorus (P) (kg/ha)	14–21	11.0	18.86
Potassium (K) (kg/ha)	150–300	—	176.91
Copper (Cu) (mg/kg)	>0.2	0.125	—
Iron (Fe) (mg/kg)	>4.5	6.70	8.00
Manganese (Mn) (mg/kg)	>2	4.381	1.12
Zinc (Zn) (mg/kg)	>0.6	0.054	0.64

Table 8 –Soil Test Report

Soil Health Interpretation and Key Findings:

- **Soil pH Level:** The soil pH in both locations falls within the optimal range, indicating favourable conditions for nutrient availability, microbial activity, and efficient nutrient mineralisation, which support healthy plant growth and soil productivity.
- **Electrical Conductivity (EC):** Electrical conductivity values at the sites are well within the safe range, indicating low salinity levels. This ensures favourable soil conditions for root development, nutrient absorption, and overall plant health.

- **Organic Carbon (OC):** Organic carbon levels in both locations fall within the adequate range, indicating good soil organic matter content. This supports improved soil fertility, enhanced microbial activity, and better nutrient retention, which are essential for sustainable plantation growth.
- **Macronutrients (Nitrogen, Phosphorus, Potassium):** Nitrogen levels were observed to be relatively high, indicating good nutrient availability for plant growth. Potassium levels were within the recommended range in Maharashtra, while phosphorus levels were adequate in Maharashtra but slightly below the recommended range in Jharkhand, suggesting some variation in nutrient availability across locations.
- **Micronutrient Availability (Fe, Mn, Zn, Cu):** Iron levels were found to be adequate across both locations, supporting plant metabolic functions and chlorophyll formation. However, certain micronutrients, such as copper and zinc in Jharkhand and manganese in Maharashtra, were observed to be slightly below the recommended range, indicating minor micronutrient variability across sites.

Based on the soil test results from the two plantation locations, the findings indicate generally favourable soil health conditions for plantation growth. While several key parameters fall within the recommended range, a few nutrients show minor deviations, suggesting the need for location-specific nutrient management to further enhance soil fertility and plantation productivity.



Image 7-Collecting Soil for Soil Testing

SROI (Social Return on Investment)

Social Return on Investment (SROI) is both a process and a method used to quantify the social impact of projects, programmes, and policies. It provides funders with insight into the monetary value of the social and environmental benefits generated by the initiative. Going beyond standard financial measures of economic return, SROI captures both social and financial value. Here, the value has been computed based on the actual outcomes of the project. The data has been sourced from the primary survey and secondary references.

Indicator	Rationale	Proxy Estimation	Source
Increased Income from Fruit Production	Fruit trees generate additional income for households.	Average annual income earned by beneficiaries from fruit production under the project.	Primary Research
Carbon Sequestration from Trees	Trees absorb CO ₂ , contributing to climate mitigation.	The social cost associated with carbon sequestered from the total trees planted under the project.	Secondary Research

Social Return on Investment			
Year	FY 2022-2023	FY 2023-2024	FY 2024-2025
Inflation Rate in India (IMF Report, 2024) ³	6.70%	5.40%	4.40%
Discounted Rate Considered	5.50%		
Total Input Cost	₹ 2,47,50000		
Total Net Impact	₹ 96,90,13,426.6		
Net Present Value (NPV)	₹ 91,84,96,139.00		
SROI	₹ 37.11		

Table 9-SROI Calculation

³<https://www.imf.org/external/datamapper/PCPIPCH@WEO/OEMDC/ADVEC/WEOWORLD>

Kia India's Project Uphaar has achieved an estimated Social Return on Investment **(SROI) of 37.11**, indicating that for every ₹1 invested, the initiative is projected to generate ₹37.11 in social, environmental, and economic value.

The primary drivers of this high SROI include the project's strong focus on rural livelihood enhancement, the strategic selection of fruit-bearing tree species, and the targeted inclusion of poor and marginalized farmers as beneficiaries. Additionally, the shift in land-use patterns toward more productive and sustainable practices, along with significant contributions from carbon sequestration, further amplifies the overall value created by the project.

These integrated parameters provide Project Uphaar with a distinct advantage over conventional tree plantation initiatives, which often focus narrowly on either social or environmental outcomes. By adopting a holistic approach, the project effectively delivers both livelihood support and ecological benefits.

Based on the assessment findings and the calculated SROI, Project Uphaar can be regarded as a high-impact initiative, well-aligned with and responsive to key social, economic, and environmental challenges.





Chapter 4

Key Challenges & Learnings

The impact assessment findings indicate that while the programme has established productive agroforestry systems, certain environmental, technical, and operational factors have influenced plantation outcomes and beneficiary experiences:

Limited protective measures for saplings:

Inadequate fencing led to damage from grazing animals and external disturbances.

Water scarcity in certain regions:

Irrigation constraints in water-stressed areas affected plant growth and survival.

Pest and insect infestation:

Pest and disease attacks highlighted the need for stronger preventive support.

Limited post-plantation monitoring and technical follow-up:

Beneficiaries require more frequent field visits and technical guidance.

Uneven distribution of saplings across beneficiaries:

Variations in allocation affected uniform plantation scale and benefits.

Challenges in beneficiary mobilisation and coordination:

Field-level coordination challenges led to delays in beneficiary coverage during assessment.

Addressing these challenges through strengthened technical support, protective measures, and improved coordination will further enhance plantation survival, productivity, and long-term programme impact.



Chapter 5

Impact Stories

1. From Uncertain Income to Long-Term Livelihood Security

Beneficiary: Small Farmer, Location: Jharkhand

For years, farmers in Phatha village relied on seasonal crops that provided limited and uncertain income due to climate variability and declining soil fertility. Through Project Uphaar, fruit-bearing saplings such as guava, mango, and lemon were planted on their land, transforming underutilised plots into productive agroforestry systems. Today, several farmers have already begun harvesting fruits for household consumption and local sale. The plantations are expected to provide sustained income over the next 5–7 years, reducing financial uncertainty and strengthening livelihood resilience.

2. Strengthening Farmer Confidence and Expanding Agroforestry Adoption

Beneficiary: Coconut Farmer, Location: Madurai, Tamil Nadu

In our village, farming mostly depended on rain-fed crops, which made income uncertain. When we learned about Project Uphaar, we felt hopeful because coconut suits our land and climate well. Through the programme, I received coconut saplings and guidance from the Farmer-Producer Association and project team on proper planting, spacing, and care.

Coconut trees provide income throughout the year, as we can regularly sell coconuts and produce value-added products like coconut oil. This plantation has given me confidence in my future, as my farm has now become a long-term asset that will support my family and has also inspired other farmers in the village to plant more trees.

“Project Uphaar has helped us strengthen our livelihoods and make our farming more secure and sustainable.”



3. Environmental Restoration and Improved Farming Conditions

Beneficiary: Farming Community, Location: Rajasthan

Farmers in Sawai Madhopur had been facing declining soil fertility, erosion, and climate stress, which affected crop productivity and income. Under Project Uphaar, the introduction of fruit-based agroforestry with trees such as amla and guava has helped improve soil moisture retention, soil health, and reduce erosion. Local Agriculture Supervisor Anil Kumar also noted improvements in soil carbon levels and microclimatic conditions, with farmers gradually adopting more organic practices. These changes are contributing to better farming conditions, ecological restoration, and greater climate resilience.

4. Improved Nutrition and Household Well-Being

Beneficiary: Rural Farming Household, Location: Maharashtra

Earlier, our family depended on buying fruits from the market, which we could not always afford. Farming was limited to seasonal crops, and we did not have a long-term income source from our land. Through Project Uphaar, I received mango and guava saplings and planted them with guidance from the project team. As the trees began growing and producing fruits, my family started consuming fresh fruits from our own farm, improving our nutrition and reducing household expenses. As production increases, I expect to sell fruits and earn additional income to support my children's education and healthcare. These trees have become a long-term asset that will support our family for years to come.

"This plantation has improved both our health and our financial stability, and I feel more secure about our future."

"As Farmer Producer Association leader Manimaaran noted, "These trees will provide income throughout the year. Farmers now see plantations as a reliable and long-term economic asset."

-Farmer-Producer Association leader, Manimaaran, Tamil Nadu



5. Behavioural Change and Community-Wide Environmental Awareness

Beneficiary: Village Community, Location: Uttar Pradesh

Before Project Uphaar, awareness of agroforestry and environmental conservation was limited in many rural communities. The introduction of fruit tree plantations created visible changes in the landscape, increasing green cover and improving environmental conditions.

Farmers became more engaged in protecting and maintaining trees, and village-level committees were formed to support plantation care. As plantations began to grow, other farmers in the community showed interest in adopting similar practices independently.

The visible success of the plantations has created a ripple effect, promoted environmental awareness and encouraged wider adoption of sustainable agroforestry practices across the community.





CSRBOX & NGOBOX

Swati Trinity, Applewood Township,
A-404, Shela, Sarkhej-Okaf,
Gujarat 380058