Impact Assessment Report

ITC Mission Sunhera Kal Horizon I

Prepared for: ITC Limited

Prepared by: CRISIL Limited

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Content

ITC's "Mission Sunehra Kal" drives social responsibility through collaborations, empowering marginalised communities with sustainable interventions and lasting impact.
ITC's Two Horizon approach focuses on empowering households, with focus on **women and marginalised communities**, through holistic and inclusive development. Recognizing that development is complex and dynamic, this approach adapts to the unique needs of each community. It consists of two interconnected components, forming a comprehensive strategy that drives transformative change.

Themes covered

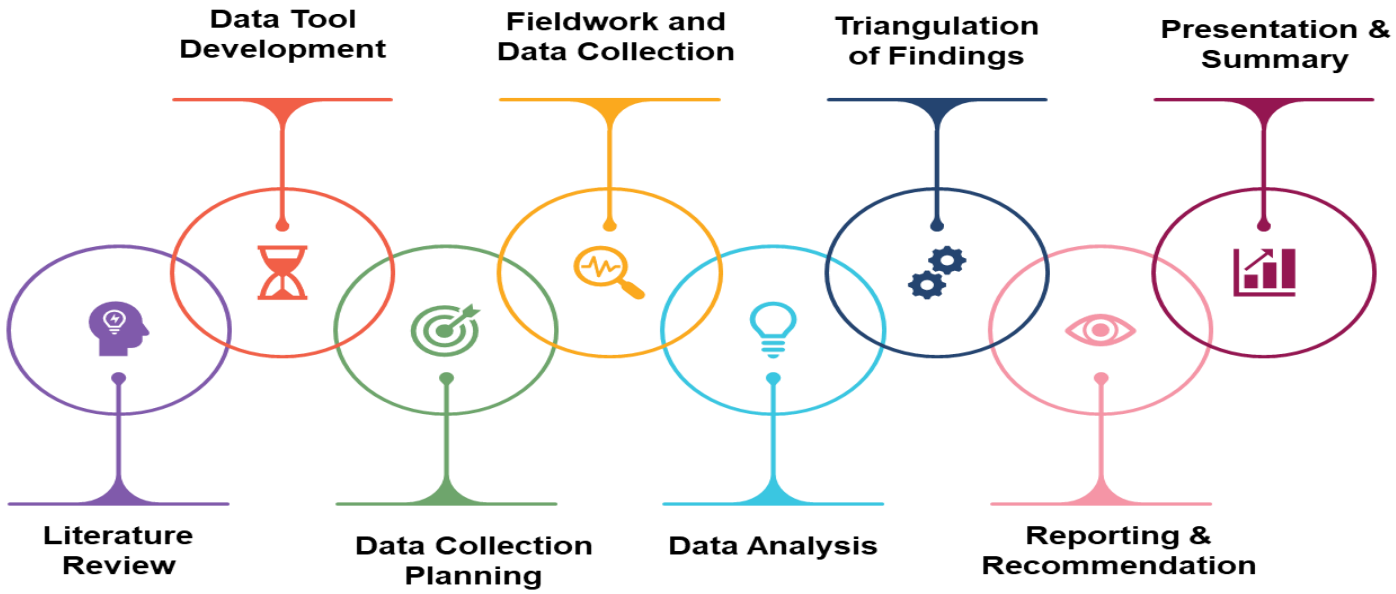
Horizon I: The current study covered the following thematic areas **Climate Smart Agriculture, Water Stewardship, Social Forestry and Integrated Animal Husbandry Program**

Study Methodology

Benefits of using a pre-post quasi experimental design:

- **Suitable for Evaluating Complex Interventions:** Particularly useful for evaluating multi-dimensional, community-based programs where outcomes unfold gradually
- **Allows for Realistic Control:** While not randomised, a comparison group (selected through matching or other techniques) can help control for external influences
- **Measures Change Over Time:** Helps attribute outcomes to the programme by establishing a “before-after” trajectory

The study uses a mixed-methods approach, combining quantitative and qualitative methods to evaluate programme changes. This approach allows to not only measure the extent of change, but also understand the underlying reasons, processes, and contextual factors that influence the program's success. The use of pre-post quasi-experimental design with counterfactual analysis to quantify the program's impact, and supplement this with qualitative methods, including interviews, focus groups, and case studies, to gain a deeper understanding of the program's effects and the challenges and opportunities that arise during implementation.



Data Collection Tools

The data collection consisted of both quantitative (structured survey questionnaires) and qualitative (focused group discussions and key informant interviews) to assess the programme level impact.

The key results from survey-based study are mapped and intersected with qualitative tools to connect the varied changes across interventions.

The stakeholders and data collection across each programme are provided in the table.

Sr. No.	Programme	Stakeholders	Data Collection Tools
1	Climate Sustainable Agriculture (CSA)	Farmers (Treatment)	Survey and Focused Group Discussions
		Farmers (Control)	Survey
		Agri Business Centres/ Krishi Vigyan Kendra/ Panchayat officials/ Agriculture dept. officials/ NGO partners	Key Informant Interview
2	Water Stewardship (WS)	Farmers (Treatment)	Survey
		Farmers (Control)	
		Water User Groups	Focused Group Discussions
		Panchayat officials/ Water resource dept. officials/ NGO partners	Key Informant Interview
3	Social Forestry	Farmers (treatment)	Survey
		Farmers (control)	
		Plantation committees	Focused Group Discussions
		Panchayat officials/ NGO partners	Key Informant Interview
4	Integrated Animal Husbandry Program	Cattle farmers (treatment)	Surveys and focused group discussions
		Cattle farmers (control)	Survey
		Pashu Sakhis/ Artificial insemination technicians/ Artificial insemination technicians/ NGO partners	Key Informant Interview

Programme Sampling

The treatment and control group sample are selected based on demographics, geographic locations, and relevant characteristics in alignment with the study objectives.

In case of quantitative assessment,

A quasi-randomization technique is adopted to enhance comparability between treatment and control group such as matching or stratification based on programs to control for potential confounding variables.

The sampling is calculated using **Cochran's formula** for large population study. The sampled population is divided across project districts in a state. The sample will be significant at 95% confidence level with 8% margin of error. This is done to ensure precision and confidence in results and minimization of type I errors.

In case of qualitative insights,

The study utilises a purposive sampling to ensure representation of diverse perspectives within the treatment groups based on program's objective. The selection criteria are developed on key characteristics (demographics, experiences etc.) essential for comprehensive exploration.

Based on the programme scope, a saturation point is estimated wherein additional participants will cease to provide new insights—This will guide the qualitative sample size.

Climate Smart Agriculture (CSA)

ITC's Climate Smart Agriculture (CSA) programme is a CSR initiative that aims to promote sustainable agriculture practices among farmers, enhancing their livelihoods and contributing to a climate-resilient food system.

The programme focuses on improving crop productivity, water management, and soil health, while reducing greenhouse gas emissions. ITC's CSA programme is a testament to the company's commitment to sustainable development and environmental stewardship, aligning with its mission to create a more sustainable future for all stakeholders.

ITC through its partner organizations implements its CSA programme under Mission Sunehra Kal.

The current assessments maps the impact of the programme undertaken across states of Assam, Bihar, Himachal Pradesh. Madhya Pradesh, Maharashtra, Odisha Punjab and Rajasthan.

States	Treatment group	Control group
Assam	598	111
Bihar	148	29
Himachal Pradesh	149	28
Madhya Pradesh	599	112
Maharashtra	149	28
Odisha	150	30
Punjab	148	29
Rajasthan	611	113
Total	2,552	480

State	Districts	State	Districts
Assam	Baksa, Barpeta, Darang, Goalpara	Maharashtra	Pune
Bihar	Lakhisarai	Odisha	Malkangiri
Himachal Pradesh	Solan	Punjab	Kapurthala
Madhya Pradesh	Indore, Sehore, Vidisha	Rajasthan	Baran, Bundi, Kota, Pali

Climate Smart Agriculture (CSA) Impact on Inclusivity and Community

The Climate Smart Agriculture programme has positively impacted the livelihoods of farmers, particularly women, and contributed to a more sustainable and resilient agricultural sector.

- 20% of programme participants are women
- 76% of beneficiaries are part of farmer institutions, gaining access to markets, credit, and financial services.
- The practice of soil testing, germination tests and seed treatments was at 47%, 56% and 62% in TG. It was limited to 15%, 26% and 30% in CG.
- The program's sustainability is evident in its ability to reduce financial stress for households, with 90% of the respondents agreeing that their financial stress has reduced post-intervention
- **Direct Impacts -** Increase in yield of wheat, paddy and soyabean in TG by 15%, 13% and 26% from baseline. It was 28%, 4% and 9% higher than CG respectively. Improvement in water management practices with 78% adopting water-efficient technologies in TG. This was limited to 38% in CG.
- **Cascading Impact -** 63% of the TG farmers are earning above INR 1 Lakh per annum, compared to 47% in CG. Due to higher income, around 73% of the respondents were able to save money post-intervention, and reduced migration, with 46% of the beneficiaries feeling that their tendency to migrate has reduced. Additionally, the programme has had a positive impact on social aspects, such as household financial planning, community discussions, and leadership, with 71% of the beneficiaries' reporting improvements in these areas.

Climate Smart Agriculture (CSA)

Demography and Socio-Economic Status

The sample comprised 2,552 farmers within treatment group (TG) and 480 farmers within control group (CG). The average age of respondents is 45 years, with the majority falling between 36-50 years.

- **Household structure:** In TG, kutcha household residents reduced by 17%, indicating a shift towards semi pucca and pucca houses. CG still shows 26% kutcha house residency.
- **Livelihood source:** Most households, 94% of TG and 95% of CG primarily depend on agriculture.
- **Income:**

  Pre and Post Intervention TG Comparison

  - For almost all households, agriculture was the major source of income.
  - As a result, after the intervention, the proportion of households earning more than INR 1.5 lakh increased from 27% to 46%.

  TG and CG comparison

  - At baseline, both TG and CG had similar income distribution with majority earning between INR 60,000 to INR 1 lakh annually.
  - After intervention, TG's income improved significantly with 22% earning more than INR 1.5 lakhs annually.

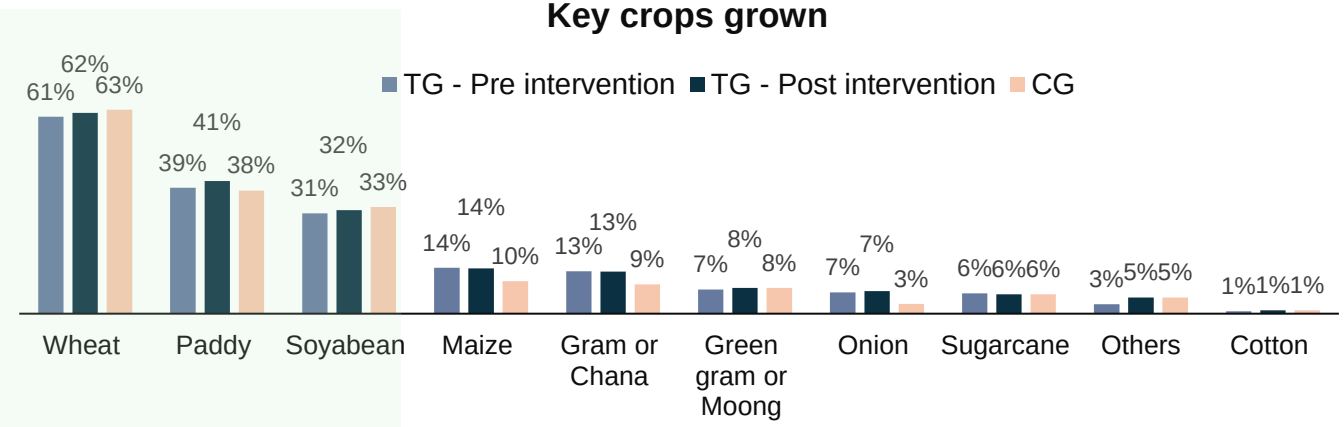
Agriculture: Land size and Irrigation

- **Owned land:** Average land owned by TG and CG farmers was 5.75 acres and 4.42 acres respectively.
- **Leased Land:** 21% and 18% of TG and CG farmers leased 2.54 acres and 1.73 acres of land respectively.
- **Irrigated Land:** 99% of land area was irrigated within TG, in comparison to only 86% within CG.
- **Source of water for irrigation:**
  - High reliance on groundwater (borewells/open wells) for both TG and CG farmers at 95% and 98% respectively.
  - The other significant sources for TG & CG are river (33% & 26%), rainwater harvesting structures (16% & 7%), canal (14% & 8%) and ponds (9% & 11%).
- **Irrigation facilities used:**
  - Post intervention, TG adopted more efficient irrigation techniques– sprinkler (+26%), drip (+12%), and furrow (+11%).
  - Compared to CG, the use of sprinkler and drip irrigation was 19% and 20% higher, respectively.

Irrigation facilities used	Pre TG	Post TG	CG
Drip irrigation	39%	51%	32%
Sprinkler irrigation	25%	51%	31%
Furrow irrigation	15%	26%	12%
Surface irrigation	28%	32%	20%
Manual irrigation	26%	22%	46%

This indicates a shift towards modern, water saving techniques within TG due to improved awareness and infrastructure.

Climate Smart Agriculture (CSA)



- **Adoption of hybrid seeds in TG rose** from 82% to 98% post-intervention; CG remains at 76%
- 21% of **farmers diversified crops**, and 46% added **new crops added.**

Responses of farmer on how the programme has helped them address the challenges listed

Particulars	To great extent	To some extent	To no extent
Unusual and unpredictable climatic conditions	49%	47%	4%
Water scarcity	30%	57%	12%
Small land ownership challenges	35%	57%	9%
Soil degradation	34%	54%	8%
Quality of seeds	45%	49%	6%
Pest and disease outbreak	40%	54%	6%
Excess usage of chemical pesticides/fertilisers	41%	53%	6%
Lack of awareness on package of practices	41%	53%	6%
Inadequate accessibility to advanced farming techniques/equipment	43%	53%	4%
Difficulties in accessing market	33%	53%	9%

CSA Practices Adopted

- TG's reliance on own farm saved seeds decreased from 76% to 52% after the intervention, while the use of certified seeds increased from private (26% to 40%) and government companies (21% to 40%). The CG's (58%) reliance on own farm saved seeds is higher than the TG's, and their use of certified seeds is lower.
- 76% of the TG changed their practice of sowing post intervention. Use of machines increased to 70% from pre intervention TG and CG of 43%, followed by seed drills (46%), Tilled soil (46%), raised soil beds (44%), wide spacing (35%) and transplanting from nursery to field (19%).
- In the pre-seeding stage, there has been a substantial increase in seed treatment (62%), germination test (56%), and soil testing (by47%) in TG compared to pre intervention percentage of 37%, 26% and 18% respectively. The adoption of practices by CG stood sub 30% level.
- Apart from chemical fertiliser the TG group post intervention has also started using organic nutrients. The use of farmyard manure for TG increased from 27% to 43%, while the use of biofertilisers increased from 25% to 51%. While the number for CG stood at 28%.
- The intervention has improved the usage of machines among TG from 68% pre intervention to 86% post intervention as against usage of 64% among CG.
- 78% of the TG has expressed interest in using more machines after understanding the impact that machines do have on productivity.
- Currently usage of water efficient technologies adopted by TG stand at 78% from earlier 52%, a staggering 26% improvement and a penetration which is more than double as compared to the overall penetration of 38% among CG.
- 77% of TG respondents received training on climate-smart agriculture practices.

Climate Smart Agriculture (CSA)

Crop Yields and Production:

The data indicates an increase in yields (quintal/acre) for all three crops following the intervention.

Wheat: Yield increased by 15% post intervention compared to baseline. It was also 28% higher in comparison to control. Profit per acre rose by Rs. 4,608 from pre-intervention - Inflation Adjusted (IA) and it was Rs. 7,270 higher in comparison to control.

Rice: Yield increased by 13% post intervention compared to baseline. It was also 4% higher in comparison to control. Profit per acre rose by Rs. 4,020 from pre-intervention (IA) and it was marginally higher in comparison to control.

Soyabean: Yield increased by 26% post intervention compared to baseline. It was also 9% higher in comparison to control. Profit per acre rose by Rs. 6,767 from pre-intervention (IA) and it was Rs. 5,416 higher in comparison to control.

Across all three crops, common factors that may have contributed to the yield increases include **improved farming practices, enhanced soil health** and **climate-resilient varieties.** Farmers can explore ways to reduce costs, such as using alternative fertilizers and pesticides, and optimizing labor costs.

Other support areas

- 72% of TG farmers were part of farmer's WhatsApp group in TG in comparison to 33% in CG.
- 74% of TG farmers were enrolled in Kisan Vikas Kendra, in comparison to 28% in CG.
- TG respondents reported higher usage of weather-based mobile applications, m-kisan registration and linkages with agro-advisory services.

Crop economics	Wheat			Rice			Soyabean		
	Pre-intervention (IA)^	Post intervention	Control Group	Pre-intervention (IA)^	Post intervention	Control Group	Pre-intervention (IA)^	Post intervention	Control Group
Production per acre (Quintal)	13	15	12	11	12	12	5	7	6
% change in production per acre		**15%**	**28%**		**13%**	**4%**		**26%**	**9%**
Cost of production per acre (in Rs.)	11,802	11,744	12,189	17,493	15,773	16,095	7,771	10,788	11,312
% change in cost per acre		**-0.5%**	**-4%**		**-10%**	**-2%**		**39%**	**-5%**
MSP*	2,275	2,275	2,275	2,300	2,300	2,300	4,892	4,892	4,892
Value of total produce on MSP per acre**	29,575	34,125	27,300	25,300	27,600	27,600	24,460	34,244	29,352
Profit/Loss based on MSP per acre (in Rs.)	17,773	22,381	15,111	7,807	11,827	11,505	16,689	23,456	18,040

*MSP rates for pre-intervention and for post-intervention and control is taken at 2024-25 levels to remove influence factor of MSP increase, and understand the impact on profitability, as a result of MSK intervention

**Value of produce is the value derived on total production

^Pre intervention IA column highlights the **inflation adjusted cost of production scenario.**

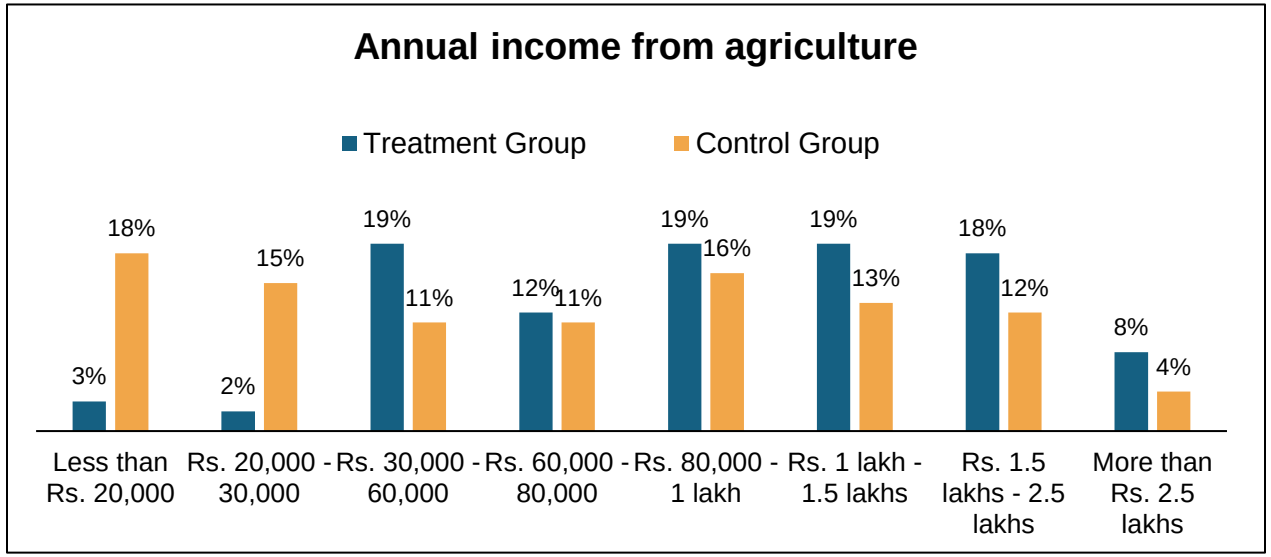
We have used Wholesale Price Index (WPI) of Wheat, Rice and Soyabean for inflation adjustment. WPI reflects actual wholesale/mandi prices making it directly relevant to input price fluctuations.

Source: https://dfpd.gov.in/msp-for-wheat-and-rice/en
Press Release: Press Information Bureau

Climate Smart Agriculture (CSA)

Overall Impact

- **Financial Stress**: 90% of TG respondents reported a reduction in financial stress.
- **Savings**: 73% of TG respondents reported an increase in savings.
- **Time Saved**: 53% of TG respondents reported a significant reduction in time spent on agriculture activities.
- **Physical Labor**: 89% of TG respondents reported a reduction in physical labor.
- **Food Security**: 65% of TG respondents reported an improvement in food security.



76% of the TG earn more than INR 60,000 per year as compared to 56% of the CG

Social Influence

- **Knowledge Sharing**: 66% of TG respondents share their knowledge about climate-smart practices with other farmers.

Harwinder Singh, a progressive farmer from Kapurthala, has revolutionised his farming practices with innovative approaches. With a strong educational background in Food Science, he adopted sustainable methods like Alternate Wetting and Drying (AWD) and Direct Seeded Rice (DSR). These techniques have improved his yields, reduced water usage, and minimised environmental impact. Harwinder's journey began with AWD, which reduced irrigation frequency by 5-6 cycles and improved crop growth. He then transitioned to DSR, achieving yields of 29-30 quintals per acre. His success has inspired neighboring farmers, contributing to a larger movement towards sustainable agriculture. With technical guidance from ITC Mission Sunehra Kal, Harwinder has become a model for other farmers, demonstrating the importance of innovation, technical support, and community engagement in promoting sustainable agriculture practices. His story showcases the positive impact of sustainable farming on yields, environment, and community.

Water Stewardship (WS)

The Water Stewardship Programme, initiated under ITC's Mission Sunhera Kal, aims to promote responsible water usage and management among farmers and stakeholders in the agricultural sector. This initiative focuses on water conservation, efficient resource utilization, and the adoption of sustainable farming practices to enhance water quality and long-term availability.

The current study seeks to assess the programme's impact across various states, including Assam, Himachal, Madhya Pradesh, Maharashtra, Odisha, Punjab and Rajasthan.

Location	Treatment sample	Control sample
Assam	55	20
Himachal Pradesh	99	20
Madhya Pradesh	461	80
Maharashtra	99	20
Odisha	120	20
Punjab	30	20
Rajasthan	422	80
Total	**1,286**	**260**

Assessment districts:

- ✓ Assam: Darrang
- ✓ Himachal Pradesh: Solan
- ✓ Maharashtra: Pune
- ✓ Madhya Pradesh: Indore, Sehore and Vidisha
- ✓ Odisha: Malkangiri
- ✓ Punjab: Kapurthala
- ✓ Rajasthan: Baran, Bundi, Kota and Pali

Water Stewardship (WS) impact on Inclusivity and Community

Gender-inclusive decision-making: Women are involved in water management decisions, ensuring equitable and effective decision-making. This promotes a balanced approach to water resource management.

Empowered community institutions: Water User Groups (WUGs) manage and maintain water resources, promoting community ownership and self-reliance. This builds capacity and reduces dependence on external agencies.

Sustainable water use: The programme promotes efficient water use, reducing waste and conserving resources. This ensures water availability for future generations. 50% of TG respondents believing that the water structures will last many years without issues.

Direct Impacts:

Improved water availability: The programme increases water availability for households, farms, and other users. This meets basic needs and supports productive activities.

Increased crop yields: Farmers have access to reliable water, enabling them to adopt productive farming practices. This increases incomes and improves livelihoods.

Enhanced livelihoods for farmers: The programme supports farmers with water, training, and services, improving their productivity and incomes. This reduces poverty and improves well-being. 84% of the respondents reported a reduction in financial stress.

Cascading Impacts:

Improved food security: The programme increases food availability, reducing hunger and malnutrition. This improves health and well-being, especially for vulnerable groups. 73% of respondents reporting improved food security and better nutrition.

Reduced poverty: The programme increases incomes and improves livelihoods, reducing poverty and improving living standards. This has a positive impact on education, health, and well-being. 54% of respondents reported reduced migration

Increased resilience to climate change: The programme promotes climate-resilient water management, enabling communities to adapt to changing climate conditions. This ensures long-term sustainability of water resources.

Water Stewardship (WS)

The TG and CG had similar demographic characteristics, with an average age of 45 and 44 years, and a majority belonging to the Other Backward Castes (OBCs) category. groups had similar education levels, with an average family size of 2 males, 2 females, and 1-2 children, and socio-economic status, with a high reliance on government-sponsored food security programs.

There is a notable shift in the income band of the TG post intervention. Earlier there were around 32% of the TG earning less than INR 60,000. Now the percentage has dropped to 25%. The TG saw a significant increase in household income after the intervention, in households earning INR 3-4 lakhs, from 5% to 10%. The intervention has been successful to shift a significant population to higher band of income.

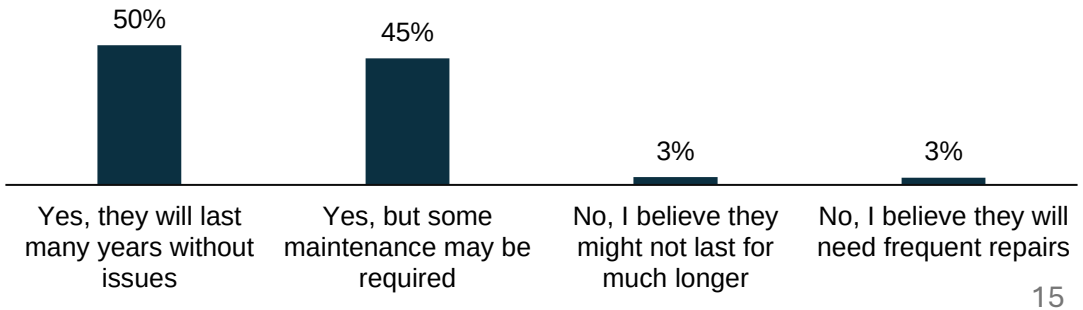
In contrast, the CG had a higher income range, with 33% of households earning INR 1-1.5 lakhs and 16% earning INR 1.5-2 lakhs, indicating a positive impact of the intervention on the TG's economic situation.

Water Harvesting Structures:

Farm ponds were the dominant structure, accounting for 71% in the target group followed by trench cum bunding (24%), and loose boulder structure (17%). The state of Rajasthan had a significant percentage of check dams (49%) and percolation tanks (23%), while the state of Madhya Pradesh had a significant percentage of trench cum bunding (26%) and loose boulder structure (18%).

- All TG villages had water harvesting structures, whereas only 28% of control group (CG) villages had them, with structures in CG built by farmer groups, NABARD, and the government.
- The TG showed higher community involvement in watershed management 81% compared to the CG (70%). TG's approach emphasises accountability, with community members responsible for both fund collection and structure maintenance, promoting a sense of ownership and responsibility.
- The majority of Treatment Group (TG) respondents reported a significant increase in water availability. TG respondents (59%) reported a higher increase in water availability compared to Control Group (CG) respondents (53%). Top factors indicating increased water availability included rising water levels in wells, longer water retention in ponds, and consistent water supply for irrigation, with Maharashtra and Madhya Pradesh having the highest values in TG, and Himachal Pradesh and Punjab in CG.
- 95% of TG stated that the water structures are sustainable– around 45% of these stated that continuous maintenance will be required.

Assessment of water structure sustainability



Water Stewardship (WS)

Impact on Irrigation

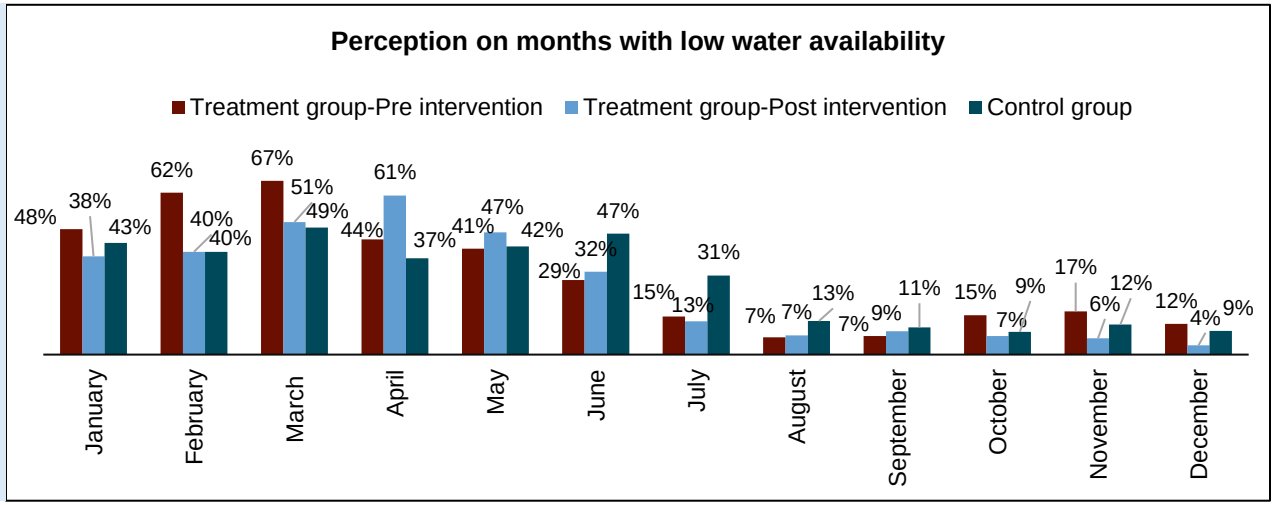
- The intervention had a positive impact on irrigation practices, with a decrease in manual irrigation and an increase in the adoption of irrigation facilities. Specifically, the use of furrow irrigation increased from 28% to 30%, and sprinkler irrigation increased from 14% to 22%.
- However, the use of surface or sub-surface irrigation decreased, and drip irrigation remained stable. The percentage of farmers not using any irrigation facility also decreased from 5% to 3%, indicating a significant improvement in irrigation practices among the TG.

TG respondents reported higher utilization of water structures for irrigation in comparison to CG respondents.

Specifically, usage of farm ponds increased from 9% to 28%, rainwater harvesting from 23% to 31%, and open wells from 18% to 26%. In contrast, the reliance on river water declined, while canal and borewell usage remained stable or increased.

Impact on Water Availability

- As per TG respondents, the intervention of ITCs has significantly improved water availability, reducing the duration and severity of water shortages from 6-9 months to 0-3 months. This has enhanced the overall water security of the respondents.
- In contrast, the control group still faces significant water shortages, with most respondents experiencing shortages for 3-6 months. The intervention has shown potential in addressing water scarcity and improving community resilience to climate change, highlighting its importance for the livelihoods and well-being of the respondents.



Water Stewardship (WS)

- The TG respondents reported a decrease in water challenges, with a reduction in lack of water during critical growth stages from 30% to 17%. The intervention had a positive impact on reducing water challenges for the TG respondents, in contrast, the CG reported higher frequencies of water-related problems.
- Studies showed improved water availability has significantly impacted cropping patterns, enabling farmers to introduce new crops, expand cultivation, and adopt better farming techniques, leading to increased income and improved livelihoods.
- TG respondents paid fees mainly to receive water (76%) and maintain structures (66%), while CG respondents paid to receive water (50%) and maintain structures (50%).
- In TG, WUGs operate democratically with leaders elected (54%) or assigned, whereas in CG, leadership is often based on land ownership (50%) rather than democratic selection. The role of the TG WUGs have a more formal and equitable system, while the CG WUGs may have a less fair and less sustainable approach to water management.
- Overall, the WS programme has yielded profoundly positive outcomes for the Treatment Group (TG) respondents, resulting in notable enhancements to their economic and nutritional wellbeing. Specifically, a substantial majority of respondents reported improvements in their family's income (53%), as well as increases in both the quantity (50%) and quality (57%) of their food consumption. This positive indication suggest that the programme has met the participants' expectations and has been well received.

Charanjit Singh, a progressive farmer from Kapurthala, has transformed his farming practices with innovative approaches. With guidance from ITC Mission Sunehra Kal, he adopted sustainable methods like Alternate Wetting and Drying (AWD) irrigation, reducing water usage by 12% and minimizing environmental impact. Charanjit's journey began with AWD, which decreased irrigation frequency and improved crop growth. He achieved a yield of 29 quintals per acre, while also reducing costs and promoting soil health. His success has inspired neighboring farmers, contributing to a larger movement towards sustainable agriculture. With technical support, Charanjit has become a model for other farmers, demonstrating the importance of innovation, technical guidance, and community engagement in promoting sustainable agriculture practices. His story showcases the positive impact of sustainable farming on yields, environment, and community.

Water Users Groups (WUG):

- ❖ About 44% of the Treatment Group (TG) were part of Water User Groups (WUGs), compared to only 5% in the Control Group (CG). The WUGs in both groups exhibited similar meeting frequencies, with 32% of TG and 28% of CG respondents stating that the WUGs meet at lesser frequencies, such as quarterly, half-yearly, or annually.
- ❖ Approximately 54% of WUG members in TG confirmed the existence of maintenance funds within their groups. In CG, only 29% of the respondents were aware of such a fund.
- ❖ The fund collection for WUG in TG varied across different rates between INR 50 to INR 500 per member.

Social Forestry (SF)

programme background

The Social Forestry programme, implemented by ITC Limited, aims to promote sustainable forestry practices, improve livelihoods, and enhance environmental conservation. The program's key objective is to create a thriving forest ecosystem that benefits both the environment and local communities.

The key components of the programme are:

❖ Community-led forestry management

❖ Large-scale plantation and afforestation

❖ Environmental conservation through forest protection and restoration

❖ Capacity building of local institutions and community members

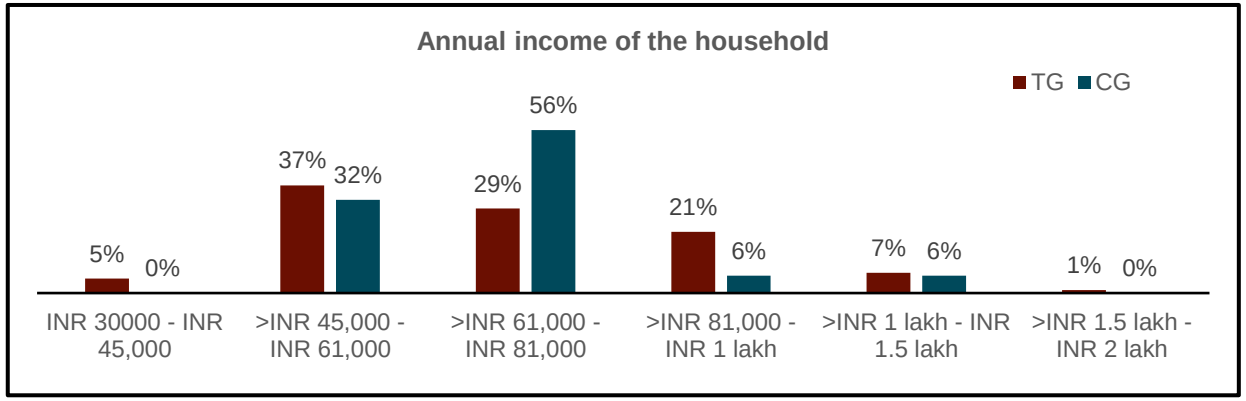
The current assessments maps the impact of the programme undertaken in Malkangiri district of Odisha. It is to be noted that the location of Malkangiri faces significant logistical challenges due to its remote and rugged terrain, hindering its access to various livelihood opportunities. As a result, the relevance of this project is high.

Location	Treatment sample	Control sample
Malkangiri, Odisha	109	16

The programme promotes sustainable forestry practices, improves livelihoods, and enhances environmental conservation, while addressing the needs of local communities and demonstrating the importance of partnership and collaboration in achieving sustainable development goals.

Demography

- The age range of the farmers was 30-50 years, with 76% in TG and 56% in CG falling within this bracket.
- 99% of the farmers in TG and 100% in CG belonged to the Scheduled Tribe (ST) category.
- The education level of the farmers was limited, with 37% in TG having no formal education and 20% studying up to the 9th-10th standard.
- The average household size was 6 members, with 2 male and 2 female members above 18 years, and 1 female and 1 male member between 5-17 years.
- Home ownership was universal, but the type of housing varied, with 25% of TG respondents living in traditional houses, 22% in semi-pucca houses, and 53% in pucca houses.
- Access to modern amenities was limited, with only 3% of TG respondents having LPG stoves and none in CG.



- 29% TG farmers earning 81,000 INR and above per annum as a result of income from plantation

Social Forestry (SF) impact on Inclusivity and Community

Gender Inclusivity: The programme promotes gender-inclusive decision-making, ensuring women's participation in forestry management. However, the survey reveals a significant skew towards male farmers, highlighting the need to address societal norms limiting women's involvement.

Empowered Community Institutions: The programme has also empowered community institutions, such as self-help groups and farmer producer companies, to take ownership of their forestry practices, with 97% of farmers reporting that they have never earned a large lump-sum from previous agricultural activities, highlighting the program's potential to provide a significant financial boost.

Programme Sustainability: The initiative has shown promising results, with 78% of farmers exhibiting uniform growth in their plantations and 85% of farmers cultivating crops only during one season, indicating a positive trend in their development. The direct impacts of the programme include improved livelihoods, with 47% of farmers reporting a slightly higher income from tree sales compared to their previous agricultural earnings, and enhanced environmental conservation, with 92% of farmers having plantations nearing the harvest stage.

Direct Impacts: The programme has a direct impact on farmers' livelihoods, providing income-generating opportunities and improving economic stability. The survey reveals a significant increase in farmers' earnings from tree sales, with 47% reporting higher income than usual.

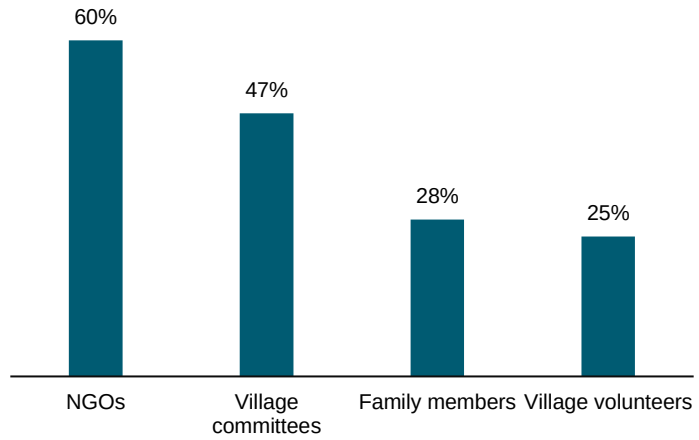
Cascading Impacts: The programme has indirect cascading impacts on the environment, including soil conservation, water recharge, and biodiversity conservation. The survey reveals that 81% of farmers reported knowing the current price of eucalyptus or timber, indicating increased market awareness and access.

Social Forestry (SF)

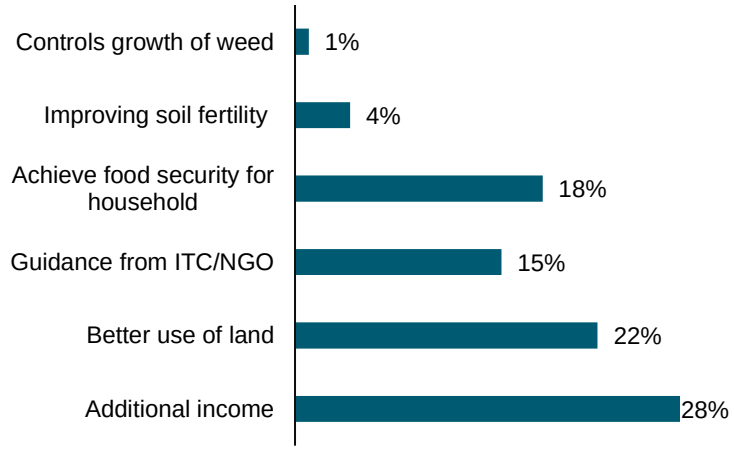
Key takeaways from the implementation of program

- The programme has seen significant participation, with 60% of participants in the Treatment Group (TG) learning about the programme through NGOs, 47% through village committees, and 28% through family members.
- The primary motivations for joining the programme were the promise of income from trees (83% in TG), environmental benefits (71% in TG), and guidance from ITC officials (61% in TG). Also, motivation for taking up intercropping is depicted in the second graph given beside.
- In contrast, only 6% of the Control Group (CG) were aware of the programme, highlighting a significant knowledge gap.
- The programme has been successful in terms of sapling distribution, with a 75-80% survival rate for eucalyptus and 60-65% for fruit trees in the TG.
- The programme has had a positive impact on farmers' earnings, with a significant increase in income after participating in the programme, whereas the CG farmers' income remains relatively low.
- However, farmers in the TG still face challenges in selling their timber, including high transportation costs (91%), low market prices (58%), and lack of direct buyers (30%).
- Overall, 92% of TG plantations are nearing harvest stage, and most farmers prefer to sell to ITC due to trust in their procurement system.

Sources of information



Motivation for taking up intercropping



Training sessions

Topics were covered during the session	To great extent	To some extent
Economic benefits of planting trees	64%	36%
Farming benefits of planting trees	54%	46%
Knowledge around the spacing of trees	36%	64%
Knowledge around planting of trees	25%	75%
Knowledge around maintaining trees	15%	85%
Knowledge around time for harvest	25%	75%
Knowledge around sales of timber/fruits	5%	93%

Guidance on plant spacing provided by ITC

Recommended standard spacing for eucalyptus spacing	98%
Advised wider spacing for intercropping feasibility spacing	74%
Suggested closer spacing for higher wood yield per acre spacing	69%
Provided guidance basis soil type, moisture availability	19%

Social Forestry (SF)

ITC's Social Forestry programme has positively impacted the livelihoods of farmers, particularly marginalised communities, by increasing income, improving financial stability, and promoting environmental benefits. The programme has empowered farmers, especially women and scheduled tribes, through access to markets, knowledge, and skills.

Overall Impact

- **Job creation:** 42% of farmers reported an increase in employment opportunities, with 35% reporting an increase in income from tree sales.
- **Market access:** 79% of farmers reported an improvement in market access, with 71% reporting an increase in sales of tree products.
- **Improved livelihoods:** 85% of TG farmers reported an improvement in their livelihoods, compared to 44% of CG farmers.
- **Profit generation:** Income creation from wood harvest for farmers impacted by SF from 2018-2020 was significant. The average annual profit generated was in the range of Rs. 20,000 – Rs. 25,000 per acre from eucalyptus plantations.
- **Environmental conservation:** 81% of TG farmers reported a positive impact on the environment, compared to 56% of CG farmers.
- **Empowerment of farmers:** 94% of TG farmers reported feeling empowered, compared to 62% of CG farmers
- **Improvement in green cover**: 81% of TG farmers reported a positive impact on green cover, compared to 56% of CG farmers.
- **Soil conservation**: 85% of TG farmers reported a reduction in soil erosion, compared to 50% of CG farmers.

Sustainability

- **Community-led management**: 94% of TG farmers reported a sense of ownership and control over the programme, compared to 62% of CG farmers.
- **Capacity building**: 85% of TG farmers reported an increase in their knowledge and skills, compared to 50% of CG farmers.
- **Market linkages**: 79% of TG farmers reported an improvement in market linkages, compared to 44% of CG farmers.

From Struggle to Stability: Enka Jodi's Agroforestry Success

Enka Jodi, a 43-year-old tribal farmer from Odisha, India, was struggling to make ends meet due to limited land cultivation and financial constraints. However, after adopting agroforestry practices in 2022, his life took a dramatic turn. He started earning a net income of ₹52,000 per year from intercropping, improving his economic stability and enabling him to support his family. Enka Jodi's success has inspired other farmers in his community to explore sustainable agricultural practices, making him a beacon of hope for rural development. His journey is a testament to the positive impact of agroforestry on rural livelihoods, demonstrating its potential to improve economic stability, family well-being, and community development.

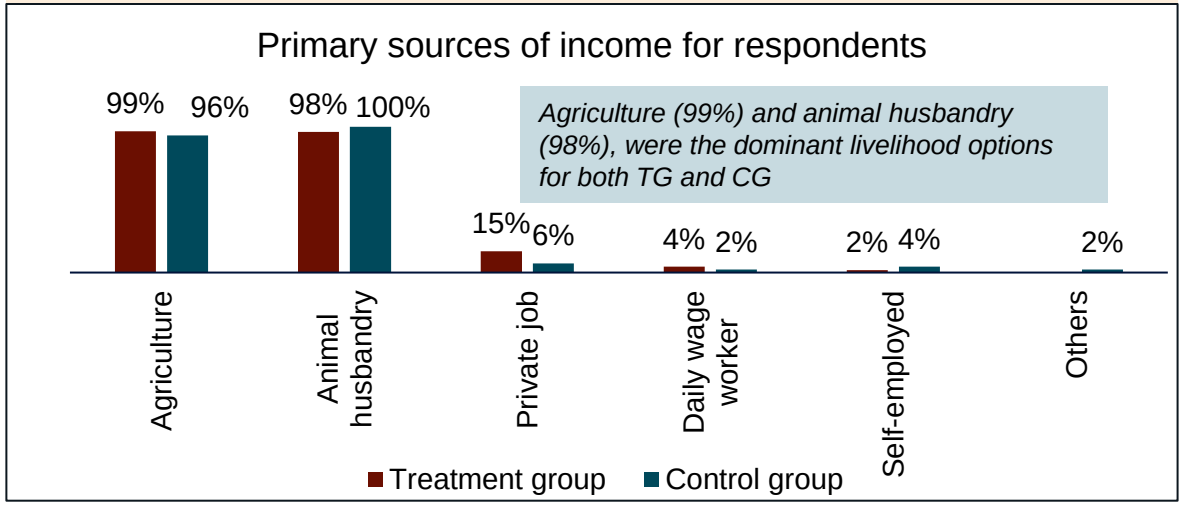
Integrated Animal Husbandry Programme (IAHP)

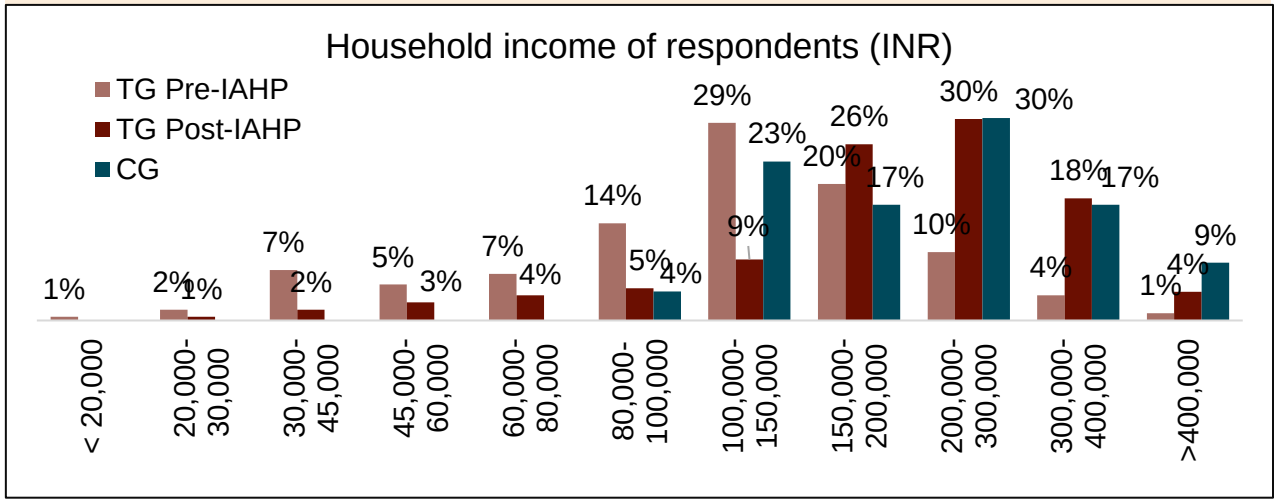
Key Demography

- The TG sample consisted of 189 respondents with 160 from Sehore and 29 from Vidisha. The CG consisted of 47 respondents with 32 from Sehore and 15 from Vidisha . Both samples consisted of men with no female respondent
- In both TG and CG majority of the respondents belonged to marginalised castes with the control group having a slightly lower socio-economic status based on their ration card analysis
- Majority of TG (74%) and CG (97%) stayed in pucca houses
- TG sample had a higher percentage of working male population (62%) as compared to female at 38%. In Vidisha, the gap was a little lesser with working male population at 58% and working women at 42%

Impact of IAHP on income

- 64% beneficiaries earned INR 1 lakh and above pre-IAHP which increased to 87% post-programme.
- 1% earned above INR 4 lakh pre-IAHP which went up to 4% post
- Cropping patterns varied amongst TG and CG affecting income, where CG grew more cash crops resulting in higher agricultural income
- 99% respondents in TG and 100% in CG highlighted the irregularity of income from agriculture given the uncertainty of rainfall, lower irrigation and varying crop yield
- To mitigate this, post-IAHP, TG beneficiaries were able to increase income from animal husbandry operations with better yields and higher selling price of milk due to improvement in quality





Integrated Animal Husbandry Programme (IAHP)

Details

IAHP

- ITC's Integrated Animal Husbandry Programme (IAHP) provides an opportunity for farmers to de-risk their primary dependence on agriculture through animal husbandry
- The programme aims at quantitative as well as qualitative improvement in livestock production systems and includes capacity-building of household members
- 98% of beneficiaries became aware of IAHP through NGOs/ITC
- 79% joined this programme in 2022 and received training mainly from ITC staff (100%)

Training sessions

Best practices were covered during the session	To great extent	To some extent	To no extent
Breed Improvement (Artificial Insemination, cross breeding etc.)	100%		
Feed and Fodder management	98%	2%	
Housing and Cleanliness	95%	4%	1%
Healthcare and vaccination	96%	3%	1%
Disease prevention and control	90%	9%	1%
Biogas setup	39%	17%	44%
Linking with markets and cooperatives	76%	19%	5%

Impact

- Post IAHP 100% TG respondents provided Artificial Insemination (AI) to their livestock against 81% CG
- 1.57 attempts were required for successful AI insemination for TG livestock
- 99% of TG reported the birth of a cross breed post AI conception
- Pre-IAHP, 93% of TG respondents reported inadequate fodder supply, with most using fodder from their own farms
- Post-IAHP, beneficiaries adopted various practices to improve the fodder quality and quantity resulting in several benefits
- 77% of beneficiaries kept their livestock in proper cowsheds post-IAHP with concrete floor as opposed to only 7% pre-programme and 40% in control group
- Due to adoption of recommended practices, 88% beneficiaries reported no health issues for their livestock (control 15%), 90% stated their veterinary expenses reduced
- ~56% increase in average milk production (cows and buffaloes) from 8.6 litres per day to 13.4 litres, post the IAHP programme

- Pre-IAHP, only 32% of respondents vaccinated their livestock which post-IAHP went up to 100%.
- IAHP reduced livestock mortality with 89% respondents indicating zero mortality post-intervention from earlier 11% per year, control (26%)
- 82% of TG farmers earned above Rs. 7,000/- per month per household from livestock, against 34% in CG

Integrated Animal Husbandry Programme (IAHP)

Cascading impact of IAHP

Treatment group	Sehore	Vidisha
Better income	88%	86%
Increase in quantity of food consumption	44%	38%
Improvement in quality of food consumption	57%	24%
Increase in technology products at home	46%	24%
Change in home ambience due to better maintenance ability	56%	45%
Selection of comfortable transport options for travel	41%	41%
Comfortable celebration of festivals	45%	55%
Education support to sibling	44%	38%
Access to better healthcare facilities	43%	52%
Paid/paying off existing loans	51%	52%
Others	2%	3%

Journey of progress Bhagwat Singh Parmar

Bhagwat Singh Parmar, a small farmer from Rafiqgunj village in Sehore, Madhya Pradesh, witnessed a transformational journey post his association with the IAHP programme. From a household income of Rs 20,000 per month, primarily from selling milk, with the right intervention and guidance from ITC, he was able to double it to Rs 40,000 per month. He increased milk output and quality with addition to livestock, and by using several best practices he learnt in the IAHP like artificial insemination, vaccination and the right feed and housing.
Today, Bhagwat's farm is a thriving enterprise, with 12 cows, 4 chilled females, and 2 chilled males. The farm's animal waste is utilised, and the family's income has increased significantly. The new cow sheds, constructed with the knowledge gained from ITC, are a testament to Bhagwat's growth and prosperity. As he looks to the future, Bhagwat is filled with a sense of hope and optimism, knowing that his family's well-being is secure.

Impact on women empowerment

Higher level of involvement in cattle rearing, selling milk and managing dairy finances

Impact on income

From being unable to save pre-intervention to
able to save post-intervention

Impact on livestock diseases

Reduction in diseases and veterinary expenses with improvement in housing conditions and improved feed

Impact on sustainability

It promotes environmentally friendly practices and empowers local communities