# Impact Assessment Study of Holistic Rural Development Programme (HRDP) Balod, Chhattisgarh – P0307


Prepared For:

**HDFC Bank Corporate Social Responsibility (CSR)**

Prepared By:

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# Table of Contents

# List of Tables

## List of Figures

# Executive Summery

The impact assessment conducted by Intellecap centres on measuring the impact of the Holistic Rural Development Programme (HRDP) of HDFC Bank that was implemented by Vrutti in the 12 villages of Balod district of Chhattisgarh during November 2019 to October 2022. The primary objective of this project was to improve the "wealth and resilience of 2,000 smallholder farmers in the selected village through sustainable agriculture based livelihood interventions, facilitating an effective entrepreneurship-led ecosystem, and sustained through farmer organisations. This impact assessment largely focused on understanding the overall process that the HDFC Bank and the implementing organisation undertook in carrying out the project interventions, the key milestones achieved, the impact created by these interventions, and the challenges faced. The framework used for the impact assessment was an adaptive version of the DAC criteria - Relevance, Effectiveness, and Sustainability. A comprehensive methodology, comprising both qualitative and quantitative primary data collection, was used for the assessment which was carried out in a participatory manner involving all the key stakeholders of the project. The quantitative study included a sample size of 420 beneficiaries as respondents from the 12 project villages.

Farmers received training and capacity building support to enhance crop yield and quality, including services like Farm Advisory, Farm Field Schools, and Capacity Building. Enterprise groups were created for interested farmers and labourers to develop skills in various activities such as poultry, goat rearing, mushroom cultivation, and handicrafts. Institution building began at the village level with the strengthening of Producer Groups (PG) and the formation of Farmers Interest Groups (FIG). Village Marketing Committees were set up to oversee project activities, and the **establishment of a Farmers Producer Company (FPC)** with 1210 farmers from 12 villages aimed to empower members and streamline produce management and market access.

The beneficiaries were introduced to new technologies such as micro sprinkler irrigation, which led to benefits such as efficient water usage, reduced expenses on irrigation, and increased productivity. Qualitative data showed a **25 percent decrease in water usage** and a shift to sustainable practices. Adoption of sprinkler systems **lowered cultivation costs by 20-30 percent**. This encouraged farmers to expand activities, utilizing previously unused land. Quantitative data revealed an **increase in irrigated land from 79 percent to 82 percent**, indicating successful adoption. Micro sprinkler irrigation proves effective in advancing agriculture and improving livelihoods.

The project promoted methodologies results in high-yielding paddy varieties, **cutting seed consumption by half**. Diversifying crops with Bengal gram, wheat, and maize improved soil health and decreased pest issues. Notable yield improvements were observed: **paddy increased by 33 percent to 2000 kg/acre, wheat by 54 percent to 462 kg/acre, and gram by 186 percent to 200 kg/acre.** Introducing vegetable cultivation for diversification, farmers expanded their crop cycles, leading to an average income of Rs. 8,000 to Rs. 10,000 per annum. **Earnings from bananas and papayas doubled from Rs. 5000 to Rs. 10000**. Mushroom cultivation, previously generating no income, now yields Rs. 5000. Floriculture experienced the most significant change, with income rising from Rs. 250 to Rs. 5000. **The agricultural sector saw a notable 46 percent rise in gross income and a significant 28 percent increase in net income**. These enhancements underscore the positive effects of improved agricultural practices on overall income generation within the sector.

Enterprise groups were formed to enhance farmers' entrepreneurial abilities and promote agri-allied activities, including the **establishment of mini rice mills, mushroom enterprises, spice**

**and masala making units, gram and millet processing units**, and more. With the initial efforts, these enterprises have started generating revenue but their average monthly income from these enterprises are remained unchanged as these are early stages of enterprises. Despite the initial setback, these enterprise groups hold promise for future growth and income generation as they continue to develop and expand their operations within the agricultural sector.

The HDFC Bank's enterprise development initiative showed significant benefits, with **61 percent recognizing the importance of business skill development**. **Starting new businesses and boosting income, reported by 59 percent**, indicated a strong interest in entrepreneurship. Stability and financial security were priorities, with **45 percent reporting regular income and 51 percent increasing savings**. Notably, aspirations for business growth were high, mentioned by 51 percent. However, only 22 percent emphasized additional household income sources.

The farmers producer companies have greatly influenced the local economy by maintaining stagnant fertilizer prices. The pricing tactics employed by the FPC have benefited both the company and farmers. Consequently, there has been a decline in the availability of informal credit from local shopkeepers, indicating a shift in financial dynamics. The FPC's provision of financial services is expanding, reshaping the local credit landscape and solidifying its role as a vital supporter of farmers in the community.

The programme aimed to broaden income sources by promoting livestock management across 12 villages, establishing 15 poultry units, 24 goatery units, 3 piggery units, and 3 beekeeping units, with necessary support provided. Despite support, goat rearing income declined from Rs. 20,000 to Rs. 17,500, a 12 percent decrease, while poultry income increased from Rs. 13,500 to Rs. 15,000, an 11 percent rise. However, total income notably decreased from Rs. 20,000 to Rs. 15,000, a 25 percent decline. The income variance can be attributed to new farmers joining the intervention, lacking experience, thus impacting earnings. These emerging enterprises are still transitioning, with many yet to optimise their earnings. Although median data shows decreases in goat rearing and total income, mean income displays a positive trend, indicating some enterprises perform well, contributing to the overall mean income increase.

The sustainability plan lays out objectives and activities to strengthen the prosperity and resilience of smallholder farmers through agricultural interventions led by the Balod Hareli Farmers Producer Company Limited. Before expanding into new villages, the FPC should focus on consolidating its presence in existing ones, involving a greater number of farmers to tap into the considerable growth potential within these communities. Addressing the issue of management support costs, currently covered by Vrutti through various projects, is crucial to prevent over-reliance on external funding and ensure long-term sustainability. A phased approach to gradually reduce this support, starting with full reimbursement and then scaling back gradually, would promote greater self-sufficiency. Integration of the mini rice mill with an oil expeller and feed production unit can efficiently cater to local demand for cattle and pig feeds by extracting rice bran oil and producing feed from rice husk. Similarly, transitioning masala and spice making units to more commercial settings, exploring opportunities in marketplaces or government buildings, can boost earnings. Additionally, technology solutions like project management software or mobile applications can streamline tasks, improve communication, and enhance progress tracking. Comprehensive reviews and needs assessments are essential to identify challenges and opportunities, facilitating the implementation of suitable interventions to enhance effectiveness and accuracy of outcomes. This holistic approach ensures sustainable growth and development within the FPC and its associated projects.

# 1 Introduction

HDFC Bank's Corporate Social Responsibility (CSR) initiatives encompass a comprehensive approach to rural development. A flagship programme under this initiative is the "Holistic Rural Development Programme" (HRDP), which provides support to non-governmental organisations (NGOs) nationwide to implement development interventions. The programme aims to create sustainable, socio-economically and ecologically developed communities that are happy and prosperous. The HRDP is currently being implemented in 12 selected villages situated in the Balod district of Chhattisgarh. In this area, the community is struggling to access better and remunerative market opportunities. Though the area is close to district headquarters, the struggle for irreversible livelihood is quite high. The low use of technology, better management practices, knowledge and skills within the community is hindering the achievement of better production and prices. The selection of villages for the project was carried out in collaboration with HDFC Bank's local team members. These villages were chosen based on their socio-economic disadvantage and the need for development interventions being of the people.

## 1.1 About HRDP

The primary objective of HRDP is to support skill training and livelihood improvement with comprehensive rural development. It also aiming to improve the lives of rural populations through sustainable socio-economic change and organic development. This approach addresses diverse needs, with a focus on developing human capital to empower individuals for personal and professional growth. HRDP emphasises economic independence through skill-building initiatives and creating sustainable livelihood opportunities to reduce dependency and promote self-sufficiency among rural populations. Additionally, it aims to enhance living conditions by addressing the broader socio-economic landscape and providing tools for self-improvement, seeing a positive transformation in the quality of life for rural individuals. Serving as a catalyst for positive change in rural India, HRDP aligns with HDFC Bank's commitment to corporate social responsibility by establishing a sustainable and inclusive model for rural development that extends beyond immediate needs and contributes to the long-term well-being of these groups.

## 1.2 Objectives of Impact Assessment

The impact assessment aims to understand

- The overall process undertaken for implementing HRDP activities
- Key milestones achieved
- Impact created by HRDP activities
- Challenges faced and how they were managed

The guiding philosophy behind this assessment is to add value by showcasing successful initiatives and recommending possible ways to address existing challenges. It seeks to:

- Critically and objectively evaluate implementation and performance
- Determine reasons for certain outcomes or lack thereof
- Derive lessons learned and good practices
- Provide evidence-based findings to inform future operational and strategic decisions while planning and funding partner organisations

This assessment was also an opportunity to assess the on-ground relevance and effectiveness of the project.

## 1.3 About the Project

This report, conducted by Intellecap, a third-party entity, has evaluated HDFC Bank's HRDP implemented in the disadvantaged region of Balod district as part of the *Parivartan* initiative. The programme, executed by Vrutti, the implementing partner in this district, spanned from Nov 2019 to October 2022, covering interventions in twelve villages. The primary objective was to facilitate the sustainable development of marginalised rural communities by enhancing the capabilities of individuals and institutions. The assessment study, which took place from 8th Jan 2024 to 17th Jan 2024, provides insights into the programme's impact and effectiveness in uplifting the targeted communities.

## 1.4 About the Implementing Partner

Vrutti is a non-profit organisation registered under the Karnataka State Societies Registration Act 1960, founded in 2002 by two graduates from the Institute of Rural Management, Anand. Over the past 22 years, as part of the Catalyst Group, Vrutti has positively impacted the lives of more than a million poor and marginalised individuals and households in the social impact space. Their primary goal is to eradicate poverty, marginalisation, and foster wealth creation while enhancing resilience for small-scale producers. Functioning as social entrepreneurs, they tackle challenges with entrepreneurial spirit, business expertise, and a commitment to innovation, constantly challenging conventional methods. Their focus on scalability emphasizes reaching and influencing communities across various levels, ensuring sustainability and depth in their efforts to effect change. Vrutti's solutions are designed for widespread adoption, integrating them into community practices, markets, or public policies rather than settling for localised interventions. They emphasize impartial measurement, self-assessment, and continual learning, employing tools for result-based planning, performance evaluation, impact assessment, and cost-effectiveness analysis, leveraging technology to enhance their efforts. Through an ecosystem approach, Vrutti delivers comprehensive services aimed at empowering small-scale producers to break free from poverty and uncertainty, aiming for a threefold increase in profitability.

Vrutti, with support from HDFC Bank CSR *Parivartan*, has executed the HRDP in 12 selected villages in Balod district, Chhattisgarh, from November 2019 to October 2022. Encompassing sustainable agriculture-based livelihood interventions and fostering an effective entrepreneurship-led ecosystem supported by farmer organisations, the initiative focuses on Natural Resource Management, Farm/Non-Farm Skill Development, and Institution Building. Its goal is the holistic development of the community, aimed at fostering positive growth and progress.

# 2 Research Design and Methodology

The impact assessment used a mixed method that includes both qualitative and quantitative methods to access the impact of the project interventions. The impact assessment process was carried out in a consultative manner engaging with key stakeholders involved in the project design and implementation that includes HDFC Bank and Vrutti.

## 2.1 Criteria for Assessment

The project activities completed by the Vrutti were identified from their project documents, reports and Management Information System (MIS) submissions to the HDFC Bank. The impact of those activities was assessed using the following criteria:

- Relevance and Convergence
- Impact and Effectiveness[1]
- Sustainability

Under the criterion of **relevance and convergence**, the team assessed whether the design of the project interventions was:

a) Aligned with the State's plans and priorities for rural development.
b) Relevant to the local needs of the most vulnerable groups.
c) Convergent with (and making use) of the government's existing resources.
d) Enabling different stakeholders to work together to achieve the intended outcomes of the programme.

To assess the **impact and effectiveness** of the project, the team established the values of outcome indicators for the interventions. The findings were assessed against these values through identifying qualitative evidence and analysis of project outcomes (in light of variables identified in consultation with HDFC Bank), the team tried to understand whether and how the project impacted the lives of community members in the project areas. The findings from primary quantitative data were substantiated by the information gathered from discussions with the communities/ beneficiaries,

For the criteria of **sustainability,** the team studied the primary data to understand if the project has worked on strengthening the community's capacity, positioned appropriate institutional mechanism to ensure sustainability, and if any of the activities or strategies adopted have been or could be replicated.

## 2.2 Primary and Secondary Data Sources

Primary research included a quantitative household survey that was conducted by the survey team consisting of 6 enumerators and 1 supervisor, with backstopping by one field coordinator. The primary quantitative data were collected using Computer Assisted Personal Interview (CAPI) method where a mobile application was developed to collect data. The qualitative research included In-Depth Interviews (IDIs), Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs) with project beneficiaries and secondary stakeholders such as the team members of Vrutti, the HDFC Bank Programme team from the project area etc. IDIs were

[1] While from an evaluation perspective impact and effectiveness are two different aspects, in the report, these are used interchangeably.

conducted with the specific individuals who were beneficiaries of the project. The qualitative data collection was conducted by the research team of the study.

**Figure 1: An FGD in Progress**

Secondary data sources included HDFC's CSR Policy, Programme Log Frame (Logical Framework Analysis), Rapid Rural Appraisal Reports, Programme implementation timelines, Communication, and Documentation products, and other relevant reports/ literature related to the project.

The outcome mapping and result chain development were undertaken in consultation with the HDFC Bank team. Standardised key outcomes and indicators were identified for the interventions. Based on the standardised list of outcomes and outputs, the questionnaire was developed.

## 2.3 Sample Size and Distribution

Beneficiaries for the programme in the 12 villages of Balod were selected using purposive random sampling, drawing upon a list of beneficiaries provided by Vrutti. Since the selection of beneficiaries was conducted independently for the interventions, it was possible for multiple beneficiaries to be chosen from a single household. Furthermore, instances occurred where a single beneficiary received support in several intervention areas. The target sample size was set at 400 for the 12 villages, with a total of 420 sample respondents being reached. The coverage of the sample varied across the villages. (see **Error! Reference source not found.**1).

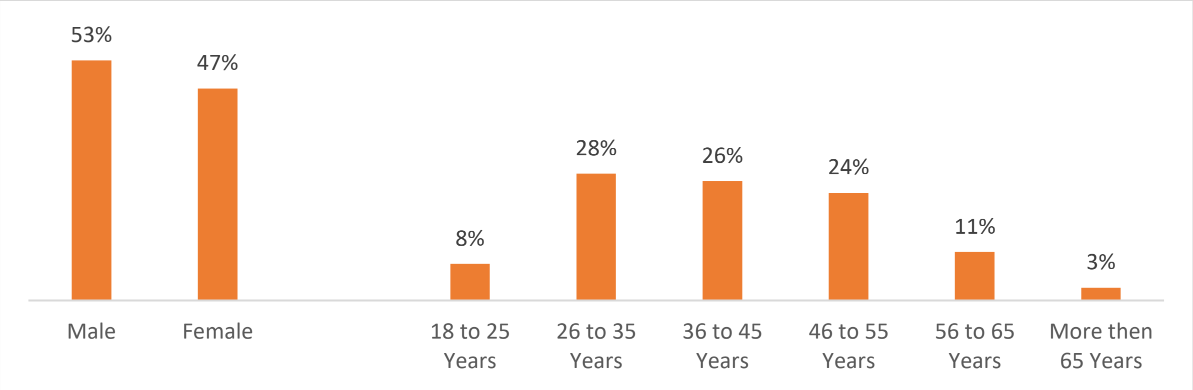
**Table 1: Sample Distribution Village-wise as per the Proportion of the Activity (N=420)**

| Village Name | Sample |
|---|---|
| Belmand | 29 |
| Tekapar | 36 |
| Latabod | 42 |
| Piari | 44 |
| Mongari | 33 |
| Saloni | 38 |
| Dearbhat | 40 |
| Jagatara | 28 |
| Jamaruwa | 39 |
| Jamgaon | 30 |
| Parreguda | 31 |
| Karihabadar | 30 |
| Total | 420 |

During the course of the study, interviews were conducted with a broad spectrum of stakeholders, including paddy farmers, vegetable farmers, livestock owners, papaya and banana cultivators. Additionally, FGDs were facilitated among diverse groups, namely mini rice mill, mushroom enterprise, spice and masala making enterprise, Village Marketing Committee (VMC), and Farmer Producer Organisations (FPOs). KIIs were also carried out with pivotal figures and a staff member associated with the project's implementing body.

The total sample comprises 53 percent male and 47 percent female, reflecting the gender distribution of the sample. Similarly, the majority of the sample (86 percent) represented youth aged 18-55 years, distributed across different age groups. The remaining 8 percent of the respondents were more than 55 years of age.

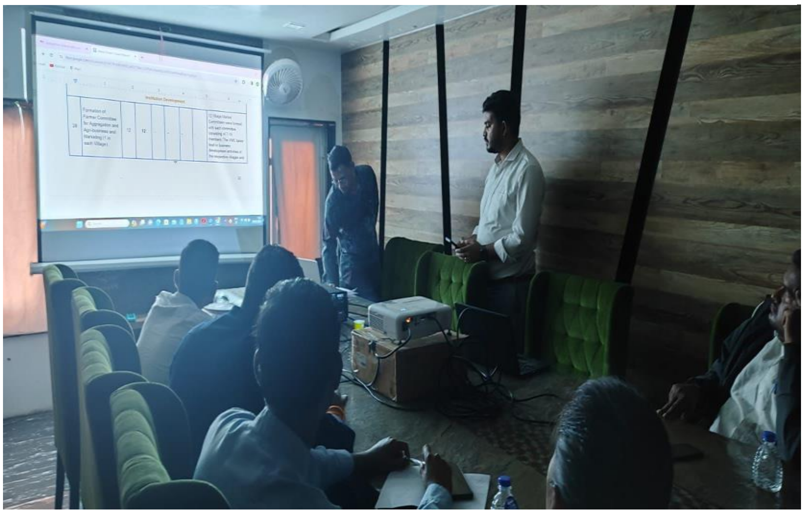
**Figure 2: Gender and Age Group-wise Distribution of Sample (N=420)**




## 2.4 Training of Enumerators

A gender-balanced survey team, comprising five local enumerators and one supervisor equipped with the requisite education and experience, was recruited for data collection. Two days of training were imparted to the enumerators and supervisor by the field coordinator and the research coordinator. Throughout the training, the survey team received comprehensive briefings on the project, data collection tools, the utilisation of CAPI, data collection protocols, data quality control, and other relevant aspects. The training programme encompassed both theoretical instruction within a classroom setting and practical mock exercises of the survey tool.

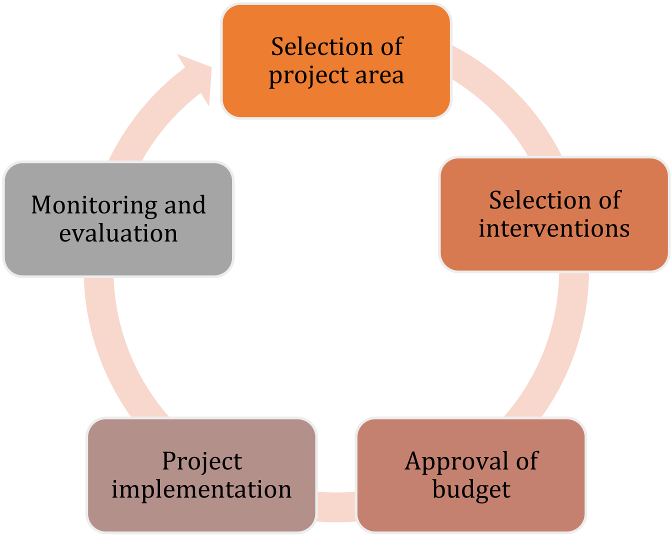
**Figure 3: Enumerators Training for Balod Project**



# 3 Review of Project Planning and Implementation

The planning and implementation of the project involve five stages: selection of the project area viz. district, block, villages etc., selection of interventions, approval of budget, project implementation and monitoring and evaluation. Reviews of each of these stages are explained below.

**Figure 4: Planning and Implementation Process**




## 3.1 Selection of Project Area

In recent years, despite agriculture being the primary occupation in the area with significant cultivation of cash crops, challenges related to water and soil resource depletion were observed due to inadequate suitability mechanisms. The heavy use of chemical fertilisers and pesticides exacerbated land degradation, resulting in negative net returns. To tackle these issues, HDFC Bank's HRDP undertook village selection based on recommendations from a Rapid Rural Appraisal conducted in those blocks. Critical factors influencing village selection included declining land holdings due to population pressure, low yields of major crops such as paddy, gram, sugarcane, and wheat, and untapped potential in agro-industries. Moreover, a notable portion of the population belonged to OBC and SC/ST categories, facing limited access to mainstream markets, which contributed to low commodity prices. The high unemployment rates further compounded the situation, although livestock emerged as a promising avenue for income generation. Additionally, the productivity of crops remained below state and national averages, underscoring the necessity for diversification and the adoption of improved agricultural practices. Through targeted interventions, the program aimed to enhance livelihood opportunities, improve market access, and promote sustainable agricultural practices in the selected villages. By addressing these multifaceted challenges, the program sought to uplift the socio-economic conditions of the communities and

**Figure 5: Project District of Selected Villages**

foster long-term prosperity. Through collaborative efforts with local stakeholders and leveraging resources effectively, HDFC Bank attempted to create a positive impact on the lives of the villagers, empowering them to build resilience and achieve sustainable development. By prioritising holistic approaches and emphasising community participation, the program aimed to create a conducive environment for positive change, fostering a sense of ownership and empowerment among the residents.

## 3.2 Selection of Thematic Interventions

The HRDP program aimed to provide support to 2000 small-scale farmers and landless families in the project villages by focusing on sustainable livelihoods. It supported these communities through agricultural practices that are environmentally friendly and by fostering entrepreneurship. Priority was given to women and socially marginalised groups in selecting farmers for various support services such as enterprise promotion, agricultural demonstrations, and marketing. The goal was to establish a robust ecosystem led by entrepreneurs and sustained by farmer organisations. The initiatives aimed to expand a range of compatible enterprises, including those related to natural resources, farming, and non-farming activities, thereby enhancing overall development in the project area. Vrutti, through its targeted efforts, aimed to create a positive and lasting impact on the community members' lives, promoting both economic growth and empowerment. The activities undertaken were categorised into Farm Advisory Services, Farm Enterprise Development, Institution Development, Marketing, and Value Addition Activities

## 3.3 Project Implementation

During the preparatory phase, which spanned the first quarter of the project, new team members were recruited, and an orientation was provided to familiarise them with the project objectives. The Project Office was established, serving as the hub for initiating various activities. A baseline study, encompassing member profiles and system establishment, was conducted to ensure the timely delivery of activities. Transitioning into the implementation phase, a comprehensive plan was prepared, focusing on grassroots collectivisation efforts. Producer Groups (PGs), Enterprise Groups (EGs), and women's Self-Help Groups (SHGs) were formed and strengthened at the village level to foster community engagement. Farmer Interest Groups (FIGs) played a pivotal role, with 10-15 farmers comprising each group and 5-6 FIGs established in every project village, totalling 126 FIGs across the project area. These groups received specialised training and support tailored to their specific needs and interests. Village Marketing Committees (VMCs) were subsequently formed, with 3-4 members selected from each FIG, to oversee and support project activities within the villages. A total of 12 VMCs were formed in the 12 project villages. Concurrently, interested and needy farmers and landless labourers were organised into enterprise groups, promoting entrepreneurial skills and fostering a culture of agri-allied activities such as poultry, mushroom cultivation, dairy, piggery, and value addition. The project demonstrated various agri-allied enterprises through a group approach, emphasising scalability and viability for smallholder farmers. Advisory services aimed at enhancing yield and ensuring quality produce from the farmers, utilising effective agricultural extension methods like Farm Consultancy, Farm Field Schools (FFS), and capacity building through e-technology. A collectivisation approach was adopted, by the VMCs in the aggregation of products at the village level to enhance marketing services for smallholder farmers. The Marketing Committee operated on an end-to-end value chain approach across identified major commodities within the village, promoting efficient market access. Awareness programs were conducted across the 12 villages, introducing the concepts and benefits of FPCs to the farming community. Through persistent efforts, the project team successfully instilled a comprehensive understanding of FPC functions among farmers, encouraging their enrolment as shareholders in the proposed FPC. The Balod Hareli Farmer Producer Company Ltd. was duly incorporated, with a shareholder strength of 1210 members and a mobilised paid-up share capital of Rs. 12,10,000, facilitated by the proactive involvement of VMC members and EG/PG/SHG participants in shareholder mobilisation and FPC incorporation processes.

## 3.4 Monitoring and Evaluation

The HRDP follows a standard monitoring and evaluation approach, which the implementing partners have adopted. They report the progress of project implementation periodically to HDFC Bank. The HDFC Bank's programme implementation team visits the project villages regularly to review work sites, participate in training programmes and awareness camps, and engage with project beneficiaries. HDFC Bank has specific requirements for project information from the implementing partner. The implementing partner manages project data primarily in spreadsheets, detailing village-wise activities, beneficiaries associated with each project activity, and expenditures. Additionally, the implementing partner submits an annual progress report to HDFC Bank, including plans for the next year. This report is a key source of information summarising implemented activities, delivered outputs, and achieved outcomes.

Furthermore, HDFC Bank enlisted Intellecap as an external agency to conduct an impact assessment of the project after one year of completion. This independent assessment evaluates using four criteria: relevance and convergence, impact and effectiveness, sustainability, and replicability.

# 4 Study Findings

In the sampled project villages, the principal sources of household income are derived from agricultural activities, with 86 percent of households depending on farming. Livestock rearing contributes to the income of 12 percent of households, thereby indicating a degree of diversification in income sources. Salaried employment plays a minor role, constituting merely 5 percent of household income. Non-agricultural sources, such as earnings from business ventures or rental income, account for the income of 15 percent of households. Wage labour emerges as a significant source of income, with 63 percent of households reliant on earnings accrued through labour. Overall, the community predominantly depends on agriculture-related activities, highlighting the pivotal role of the cultivation sector in sustaining household incomes.

**Figure 6: Distribution of Sample Based on their Occupation (N=420)**

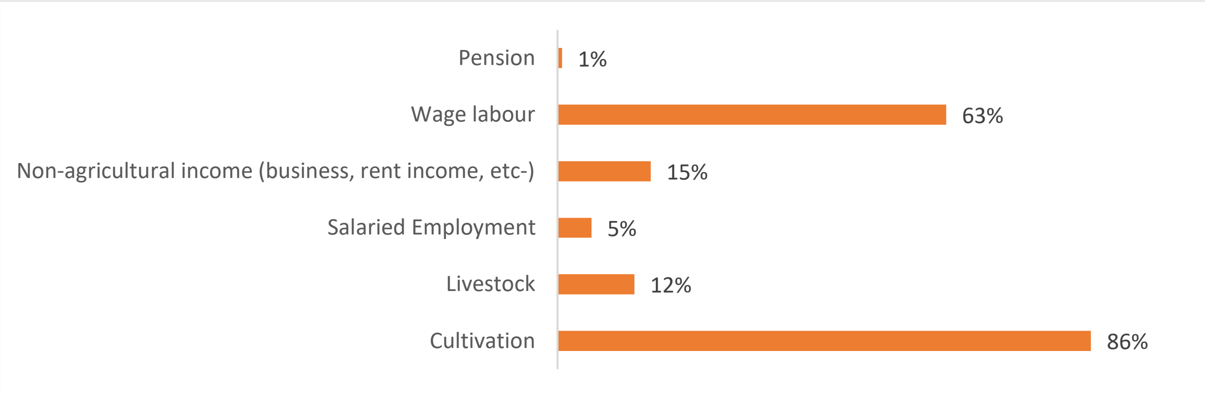



**Figure 7: Educational Qualification-wise Distribution of Sample (N=420)**

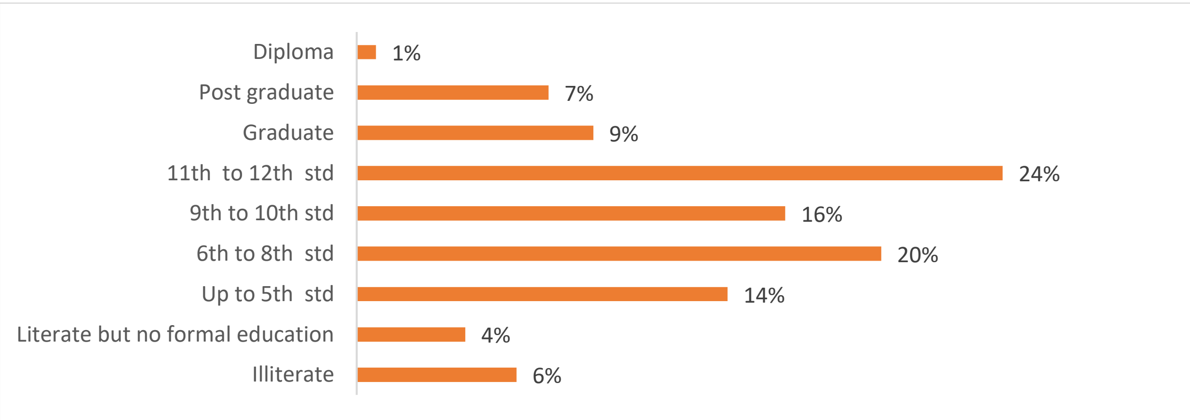
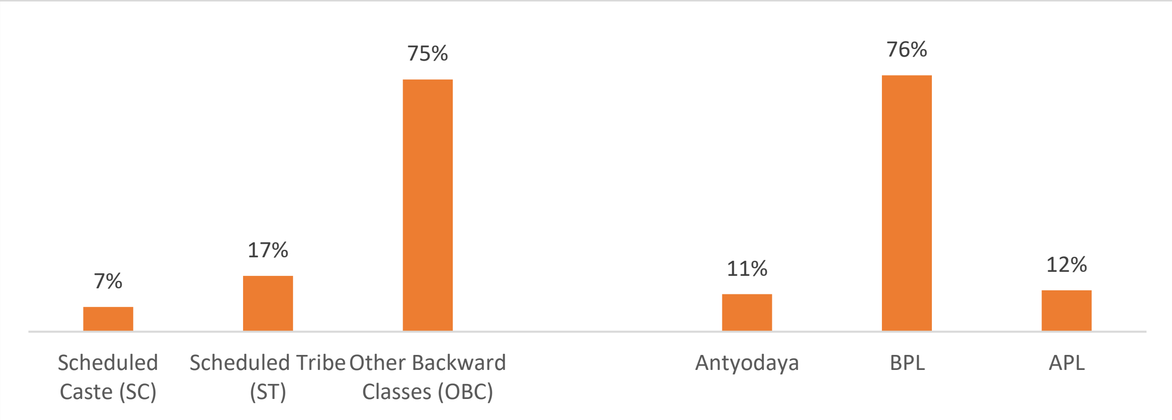


**Figure 8: Caste and Income Categorisation of Sample (N=420)**




While the above analysis represents the nature and status of the sample, the following table represents the summary and quantum of activities carried out. (see Table 2)

**Table 2: Quantum of Activities under each Activity Category**

| Activity Category | Activities | Nos. (as provided by IA) |
|---|---|---|
| Farm Advisory Services | Micro irrigation-Pipe, Sprinklers etc | 48 Farmers |
| | New Variety crop Introduction | 262 Farmers |
| | Vegetable Cultivation | 120 Farmers |
| | Horticulture(Papaya, Banana Cultivation) | 25 Farmers |
| | SRI Method | 54 Farmers |
| | SRT method-Paddy | 6 Farmers |
| | Floriculture | 50 Farmers |
| | Nursery Raising | 2 Unit |
| | Mini Millet Promotion | 10 Farmers |
| | Bio Products | 19 units |
| | Shade Net House | 5 unit |
| | Farm Field school, Learning meeting Training etc | 194 Programme |
| | Seed Bank Society and Good Agricultural Practices | 4 Society |
| | Exposure Visit | 1 time |
| Enterprise Development | Mini Rice Mill | 1 unit |
| | Mushroom Enterprise | 20 units |
| | Gram and Millet Processing Unit | 2 units |
| | Handicrafts-Cloth Value addition | 4 units |
| | Spice and Masala Making Unit | 5 units |
| | Custom Hiring Centre | 12 units |
| Institution Development | Formation of Producer Group, Enterprise Group | 137 Programme |
| | Formation of Farmer Interest Group | 126 Nos. |
| | Formation of Village Marketing Committee | 12 Nos. |
| | FPC | 1 No |
| Marketing Management | Buyer and Seller meeting | 1 time |
| | Aggregation and Marketing centre | 12 units |
| | Exposure for Aggregation and Marketing | 1 time |
| | Low cost Storage(Post Harvest Infra) | 9 unit |
| Livestock Management | Poultry | 15 units |
| | Piggery Enterprise | 2 units |
| | Goatery | 24 units |
| | Bee Keeping | 3 units |
| | Fisheries (BioFloc Method) | 1 unit |

*(Source: Project MIS, Vrutti)*

The following sub-sections provide details on the findings for each activity implemented in the project villages.

### 4.1.1 Farm Advisory Services

#### 4.1.1.1 Micro Irrigation (Pipe, Sprinklers etc.)

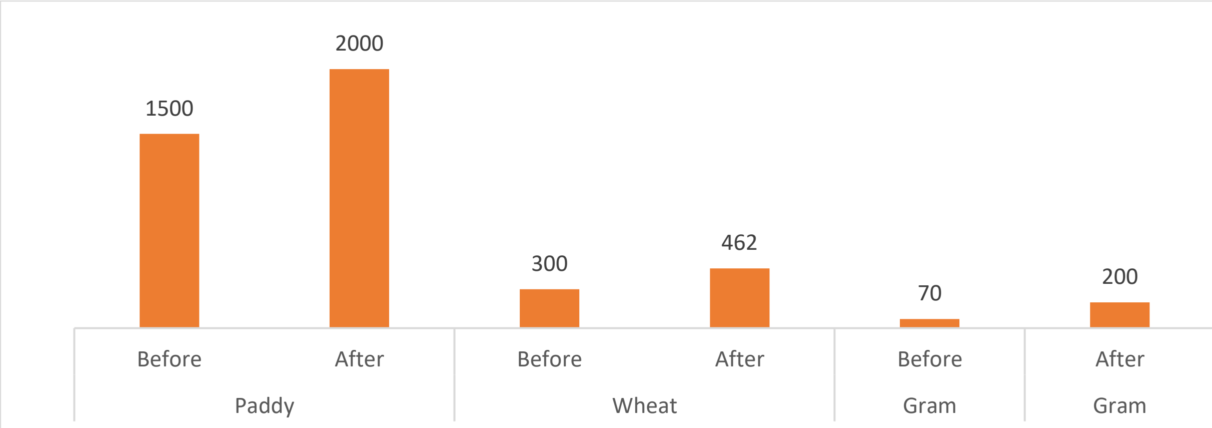
Throughout this intervention, farmers were introduced to the micro sprinkler irrigation method, allowing them to experience its advantages over flood irrigation. This introduction resulted in notable benefits for farmers, such as water conservation, reduced cultivation expenses, and heightened agricultural productivity. Qualitative data uncovered that shifting from flood irrigation to sprinkler systems enabled more effective water management, resulting in a 25 percent reduction in water usage. This decline not only directly benefited farmers but also promoted sustainable agricultural practices. Furthermore, the adoption of sprinkler systems resulted in a 20-30 percent reduction in cultivation costs, mainly due to decreased labour expenses and the elimination of expenses related to building channels and embankments for flood irrigation. The improved efficiency and affordability of micro sprinkler irrigation motivated farmers to broaden their agricultural activities, allowing them to engage in additional rabi crop cycles and utilise previously unutilised land. Quantitative data showing the proportion of households with **irrigated land before and after the project indicates a positive shift, with an increase from 79 percent to 82 percent.** This rise underscores the successful adoption and integration of micro sprinkler irrigation within the farming community, further emphasising its efficacy in advancing agricultural practices and improving livelihoods.

#### 4.1.1.2 New Variety crop Introduction

TATA Dhanya 8383 & 834, high-yielding and resilient varieties of paddy, were introduced to 156 farmers, replacing the previous OM3 and IR36 varieties. Instead of the former traditional practice of using 40 kilograms of seeds per acre, farmers now employ only 20 kilograms, marking a 50 percent reduction in seed consumption compared to traditional methods. Additionally, each farmer receives pesticides valued at Rs. 3750 as a project support. Results from a qualitative study indicate that implementing GAP (Good Agricultural Practices) alongside bio-inputs such as vermi-compost and Jeevamrutha has led to a reduction in costs by Rs. 3,000 per acre. Furthermore, there has been an average yield increase ranging from 4-6 quintals per acre. As a result, farmers have seen their income rise by approximately Rs. 10,000. Additionally, soil fertility improved, and farmers were able to undertake additional crop cycles through crop diversification, with new crops like Bengal gram, wheat, and maize being introduced. A total of 106 farmers benefited from crop diversification, particularly in water-intensive paddy fields during both kharif and rabi seasons. This diversification strategy not only helped in improving soil health but also reduced the likelihood of pest attacks. Among the new crops introduced, all except maize and a portion of the Bengal gram yielded positive results.

The introduction of new crops through diversification has clearly led to substantial increases in yield across various categories. Initially, the yield of paddy was recorded at 1500 kg per acre, which subsequently rose to 2000 kg per acre. Similarly, wheat production experienced a notable increase, climbing from 300 kg to 462 kg per acre. The most notable improvement was observed in gram production, which surged from 70 kg to 200 kg per acre, representing an **increase of 186 percent.**These statistics underscore the positive influence of diversification on agricultural productivity, enabling farmers to leverage different crop varieties that best suit their land conditions and market demands. The boosted yields not only translate to increased incomes for farmers but also signal improvements in soil health and resilience against pest attacks, thereby boosting the overall sustainability and profitability of agricultural practices in the project villages.

**Figure 9: Productivity per Acre (Crop-wise in Kg) - Paddy, N=191 Wheat, N=19 Gram, N=12**




### 4.1.1.3 Vegetable Cultivation

The introduction of vegetable cultivation to the farming community involved distributing high-yielding seeds of vegetables such as bitter gourd, red leafy vegetables, cowpea, cucumber, and okra to 120 beneficiaries across 12 project villages. These beneficiaries were provided with seed inputs and received technical guidance through farmer field schools. Additionally, assistance was given in preparing bio inputs such as vermicompost, Jeevamrut, and Agniastra to reduce cultivation costs. Subsequently, farmers diversified their produce to include crops like tomato, lady's finger, Navalgam, Burgadi, etc. Qualitative data indicated that this intervention facilitated farmers in undertaking additional crop cycles, resulting in an average income ranging from Rs. 8,000 to Rs. 10,000. Despite these positive outcomes, challenges such as hailstorms and wild pigs (*jungly suwanr*) remained threats to the crops. Furthermore, due to the seasonal nature of produce, fluctuations in demand could potentially lead to losses in cases of overproduction or insufficient timely demand.

### 4.1.1.3.1 Case Study

**Transforming Livelihoods: A Case Study of Lalji Nishad's Journey in Vegetable Cultivation**

Lalji Nishad, a 58-year-old resident of Saloni district in Balod, Chhattisgarh, embarked on a remarkable journey towards transforming his livelihood through vegetable cultivation. With a family of 19 members, including grandchildren, and a landholding of 2.5 acres, Lalji initially utilised one acre through leasing for his cultivation endeavours, predominantly focusing on paddy cultivation, which yielded an approximate income of Rs. 70,000.

Lalji's journey took a pivotal turn when he became part of a project that introduced him to the potential of cash crops, particularly vegetables. In the initial phase, he received seeds and training, prompting him to venture into vegetable production on a small scale. With the guidance provided by Vrutti, Lalji achieved significant success, albeit facing challenges during the COVID-19 period, particularly in transportation. Nonetheless, in the first year, he managed to earn Rs. 25,000, marking a promising start and boosting his confidence. Encouraged by his initial success and with consultations with the team and government officials, Lalji decided to expand his vegetable cultivation further. Focusing on tomato and bitter gourd as major crops, he utilised 1.5 acres of his land for full-fledged cultivation. Lalji's dedication and hard work paid off as he witnessed a bumper harvest, resulting in an impressive income of Rs. 7 lakhs. Despite incurring expenses of Rs. 1 lakh, Lalji achieved a net profit of Rs. 6 lakhs, a significant milestone that not only transformed his own livelihood but also inspired other farmers in the region.

The success story of Lalji Nishad highlights the immense potential of vegetable cultivation in elevating the socio-economic status of farmers. Lalji's newfound income not only enabled him to provide for his large family but also allowed him to support his grandchildren's education and health expenses with pride. Through his journey, Lalji emphasises the profitability and sustainability of vegetable cultivation, suggesting that a diligent farmer can earn over Rs. 12 lakhs from vegetables alone from a landholding as small as 2 acres.

Lalji Nishad's journey serves as a testament to the transformative power of agriculture interventions and the resilience of farmers in adopting new practices. His transition from traditional paddy cultivation to high-value vegetable production not only enhanced his income but also paved the way for prosperity in his community. Lalji's success underscores the importance of empowering farmers with knowledge, resources, and support to unlock the full potential of agriculture as a means of livelihood upliftment and rural development.

#### 4.1.1.4 New Cultivation Practices for the Main Crop Paddy

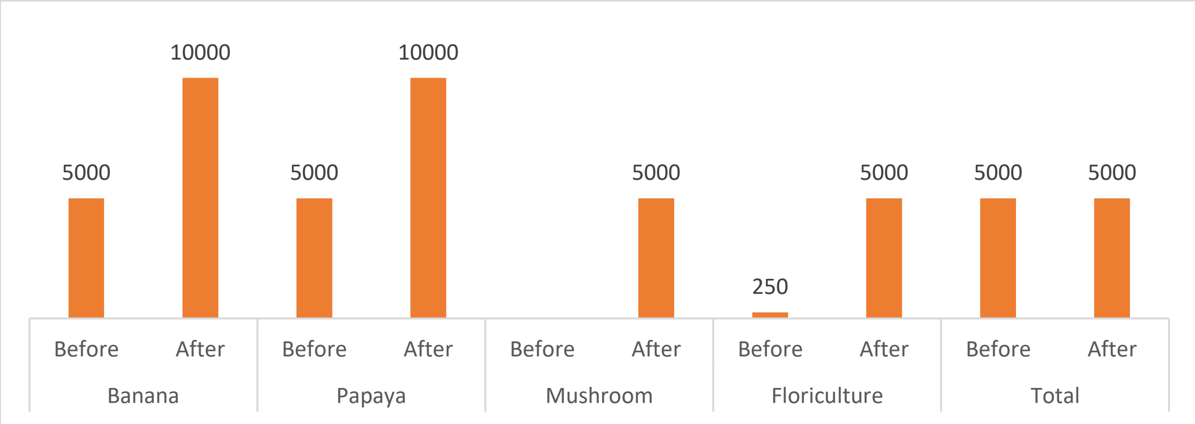
The primary aim of both the System Rice Intensification (SRI) and Saguna Rice Technique (SRT) method is to implement innovative cultivation practices to enhance yield and decrease cultivation costs. In a recent intervention, 60 farmers were equipped with paddy seeds and essential inputs. The SRI method, requiring minimal seed amounts compared to traditional methods, notably reduced seed costs. Additionally, the incorporation of GAP and bio-inputs like vermi-compost and *Jeevamrutha* further slashed cultivation expenses. Nursery raising adopted a raised bed approach, leading to a significant decrease in cultivation costs and a notable 5-6 quintals per acre increase in paddy production. On the other hand, the SRT method, a pioneering approach in rice cultivation, eliminates ploughing, puddling, and transplanting, instead opting for permanent raised beds. This zero-till, conservation agriculture (CA) method not only cuts production costs by 30-40 percent but also reduces labour requirements by 50 percent due to the elimination of transplanting. Demonstrations conducted via Farmer Field Schools showcased a substantial yield increase of approximately 5 quintals per acre compared to traditional cultivation methods, illustrating the efficacy of these innovative approaches.

#### 4.1.1.5 Horticulture

During the project duration, 25 farmers were introduced to papaya and banana cultivation, each at a cost of Rs.10,000. Specifically, Taiwan 786 papaya variety was incorporated into intercropping practices with chilli and coriander. To control nematodes and bacterial rot disease in the polybag before planting, the process involved facilitating seed distribution through collaboration with the Department of Agriculture and transplanting banana plants while ensuring they received the necessary drenchings. Handholding support on GAP, fungicide usage, and vermicompost application was provided to farmers through FFS. Additionally, floriculture was introduced in project villages, involving 50 farmers who received PUSA Lalima variety seeds, fertilizers, and pesticides. The introduction of chilli and tomato aimed to assist farmers in earning supplementary income before marigold harvest, which played a pivotal role in minimising pest attacks in tomatoes. All beneficiaries achieved satisfactory marigold yields through the implementation of quality seeds and GAP practices.

The study found a significant increases in income across various agricultural sectors following the intervention. Before the project, banana and papaya generated Rs. 5000 each in income, which doubled to Rs. 10000 post-intervention. Mushroom cultivation, previously yielding no income, now stands at Rs. 5000, signalling renewed attention to this sector. The most substantial change occurred in floriculture, with income soaring from Rs. 250 to Rs. 5000, highlighting a significant focus on developing this aspect of agriculture. However, despite these positive shifts, the total income remained steady at Rs. 5000 before and after the intervention. This is primarily due to the increase in the number of farmers in these areas, resulting in minimal earnings as they are just starting out in these ventures.

Figure 10:-Annual income from Horticulture and Floriculture before and after (in Rs)

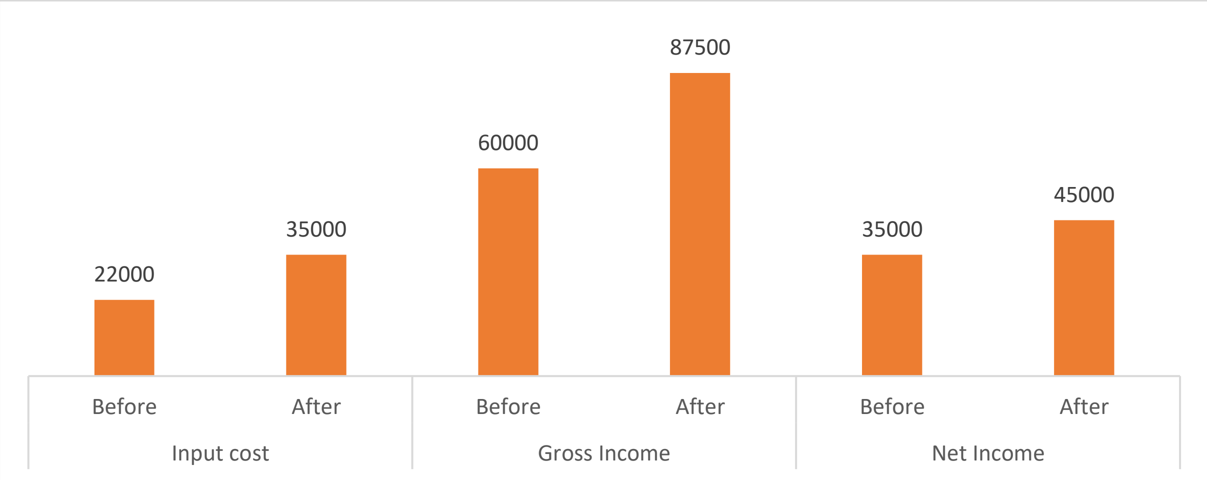



However, despite these efforts, the primary challenge remained the establishment of market linkages, posing a significant obstacle to maximizing profitability and sustaining cultivation efforts across the aforementioned products. The absence of prospective output market linkages emerged as a major roadblock for the majority of farmers, impeding their ability to continue cultivating these products effectively.

### 4.1.1.6 Income From agriculture

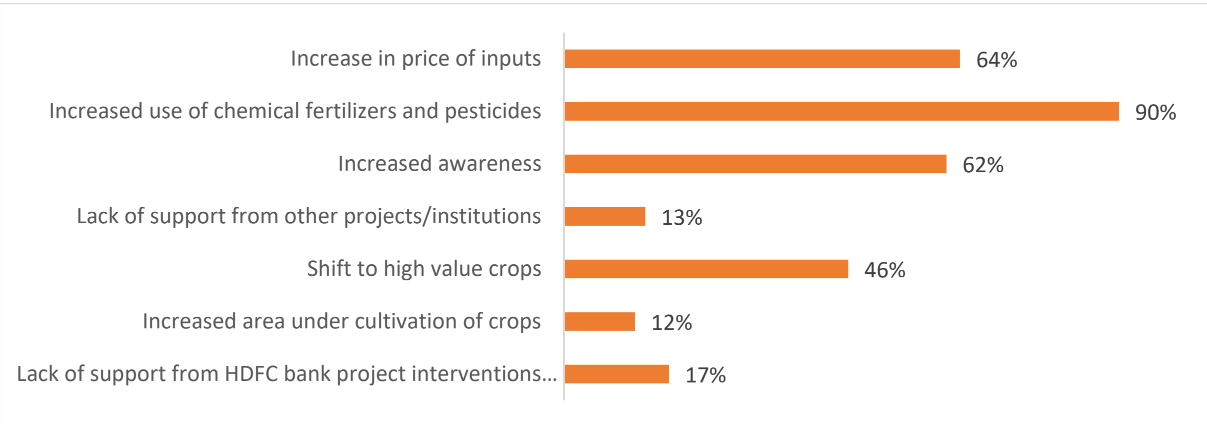
Various initiatives were undertaken to support agricultural development in the project villages. Farmers were assisted in setting up vegetable nurseries, receiving support in shed preparation, nursery raising, and selling seedlings in local markets, resulting in income generation and motivating additional farmers to start nurseries in nearby villages. However, attempts to promote mini millets faced challenges due to unsuitable climatic conditions and wildlife interference. Nonetheless, product units were established, promoting sustainable agricultural practices and providing training and support to the beneficiaries, leading to profitable income and improved soil health. Additionally, few farmers received support for setting up shade net houses, enabling cultivation of various crops and providing protection from adverse weather and pests, resulting in significant income generation. Furthermore, 194 FFS programs were conducted, benefiting 4850 farmers and encouraging the adoption of new techniques and bio inputs to enhance yield and reduce cultivation costs. Seed bank societies were promoted in project villages, facilitating access to quality seeds for farmers and promoting community-based seed production and distribution. An exposure visit to a FPC provided insights into sustainable agricultural practices and processing units, encouraging replication of learnings in local operations. Overall, these initiatives aimed to enhance agricultural productivity, income generation, and sustainability in the project areas.

**Figure 11: Increase in Agricultural Income (INR)**




Following the interventions, there was a notable increase in agricultural income and input costs. The median input cost experienced a substantial rise, increasing by approximately 59 percent. Gross income also saw a significant uptick, with a percentage change of around 46 percent. This increase in gross income can be attributed to improved agricultural practices, enhanced productivity, and possibly diversification into higher-value crops. Additionally, net income witnessed a considerable percentage change, rising by about 28 percent. While the increase in net income is positive, it is relatively lower compared to the percentage changes in input costs and gross income, indicating potential challenges in managing costs effectively or additional investments required in optimising profitability. Despite this, the overall trend suggests a positive impact of the intervention on agricultural income, albeit with a notable increase in input costs. Moving forward, it would be essential to continue monitoring and fine-tuning agricultural practices to ensure sustainable growth and maximise profitability for farmers in the project areas.

**Figure 12:- Reason for Increase in Input Cost (N=182)**




According to the responses gathered, several factors contributed to the increase in input costs following the project interventions. The most significant reason cited was the increased use of chemical fertilisers and pesticides, which saw a staggering 90 percent rise, likely reflecting a shift towards conventional farming methods that rely heavily on agrochemicals. Additionally, the shift to high-value crops was reported as a prominent factor, with a substantial 46 percent increase, indicating a strategic realignment of cultivation practices towards crops with potentially higher returns. Increased awareness among farmers was also highlighted, showing a notable 62 percent rise, which could signify a growing understanding of modern agricultural techniques and the adoption of more sophisticated inputs and practices. Moreover, the lack of support from HDFC Bank project interventions was mentioned by respondents, contributing to a 17 percent increase in input costs, suggesting a need for enhanced input support mechanisms. Similarly, the absence of support from other projects or institutions was cited as a factor, resulting in a 13 percent rise in input costs. Lastly, the increase in the price of inputs was reported to have contributed significantly, with a 64 percent increase, posing challenges to farmers' cost management strategies. These findings underscore the complex interplay of various factors influencing input costs in agricultural production systems. Moving forward, it is crucial for stakeholders to address these challenges collaboratively, emphasising sustainable agricultural practices, access to affordable inputs, and ongoing farmer education and support to ensure the long-term viability and success of agricultural interventions.

### 4.1.2 Farm Enterprise Development

Interested and needy farmers, as well as landless labourers, were organised into enterprise groups to raise entrepreneurial skills and cultivate a culture of agri-allied activities such as mushroom cultivation and value addition to both farm and non-farm enterprises. The project aimed to showcase diverse agri-allied ventures through a group-based approach, emphasizing scalability and viability for smallholder farmers. By encouraging collaboration and collective efforts, the initiative sought to empower participants to explore and engage in a range of income-generating activities beyond traditional farming practices. Through this holistic approach, the project aimed to uplift rural communities by diversifying their economic opportunities and promoting sustainable livelihoods.

#### 4.1.2.1 Spice and Masala Making unit

Five groups were identified for the spice and masala making enterprise, with registration completed under the District Industries Centre (DIC). HDFC Bank provided necessary machinery costing approximately Rs. 75,000 per unit, while operational costs like raw materials and electricity were managed by the respective groups. Members received training in masala preparation, including grading, sorting, and grinding of raw materials, as well as in accounts and bookkeeping to monitor income and expenses. The units primarily produce masala from chilli, coriander, and turmeric, selling it in local markets. However, operating at a low scale limits income generation to only a few members. The enterprise functions in a service model, grinding wheat and spices for customers, with minimal commercial production for sale. A major challenge is the lack of local spice production, forcing the groups to rely on expensive raw materials from the local market, hindering competitiveness against other

**Figure 13: Spice and Masala making unit**

products. Dependency on external sources for raw materials impedes the enterprise's ability to produce value-added products efficiently.

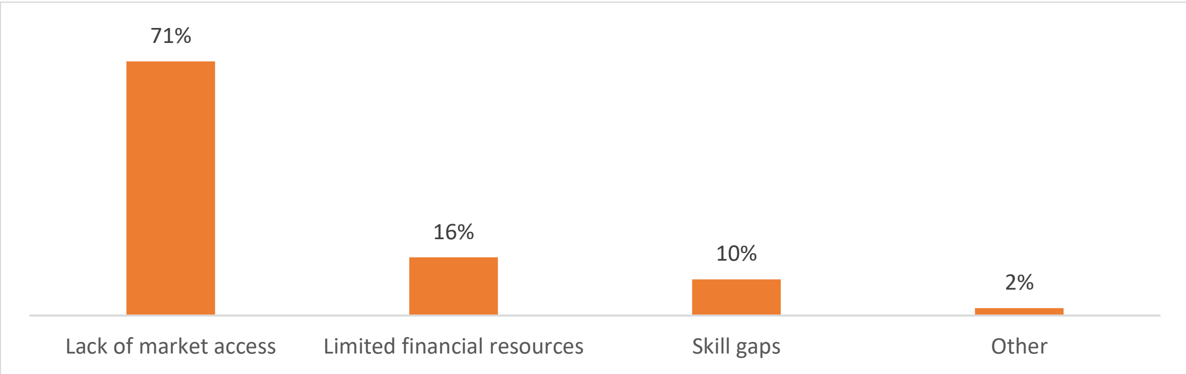
Income diversification initiatives were implemented across 12 project villages during the project period. In this endeavour, 20 mushroom units were established, benefiting 200 women who received practical training in mushroom cultivation techniques. The intervention successfully transformed agricultural residues into valued mushroom products and organic fertilisers, providing women with a new source of income while promoting environmental sustainability. Despite challenges such as weather conditions and seed availability, the initiative encouraged many women to continue mushroom cultivation, with plans to expand into processing and value-added products. Similarly, two gram & millet processing units were set up, offering additional income opportunities for beneficiaries trained in pulse processing. Although these units faced temporary closure due to the lack of raw materials, plans are in place to restart operations with support from the Hareli Balod FPC. Additionally, tailoring units were established as non-farm enterprises, providing income-generating activities for women in select project locations. These units, promoted under Enterprise Groups, received skill development training and found success in producing a variety of clothing items and handicrafts, including masks during the Covid pandemic. While marketing opportunities remain a challenge, the units continue to operate profitably, with the exception of one unit in Pairi village, which became inactive due to internal issues within the group. Overall, these income diversification initiatives have empowered women and rural communities, contributing to their economic resilience and livelihood sustainability.

**Figure 14:Mushroom Enterprises**

**The monthly income from enterprises has exhibited a decrease in median values, dropping from Rs. 10,000 to 2,000.** This trend can be attributed to the proliferation of new enterprises, many of which are still in their initial stages of development. Consequently, these fledgling ventures are yielding lower returns compared to more established enterprises. The disparity in income levels underscores the transitional phase that many of these newly formed enterprises are undergoing, with a significant portion yet to reach economies of scale. As they continue to grow and expand their operations, these enterprises are expected to achieve greater efficiency and profitability over time. Thus, while the current median income may reflect a temporary downturn due to the influx of nascent enterprises, it also signals the potential for future growth and prosperity as these businesses mature and optimise their operations.

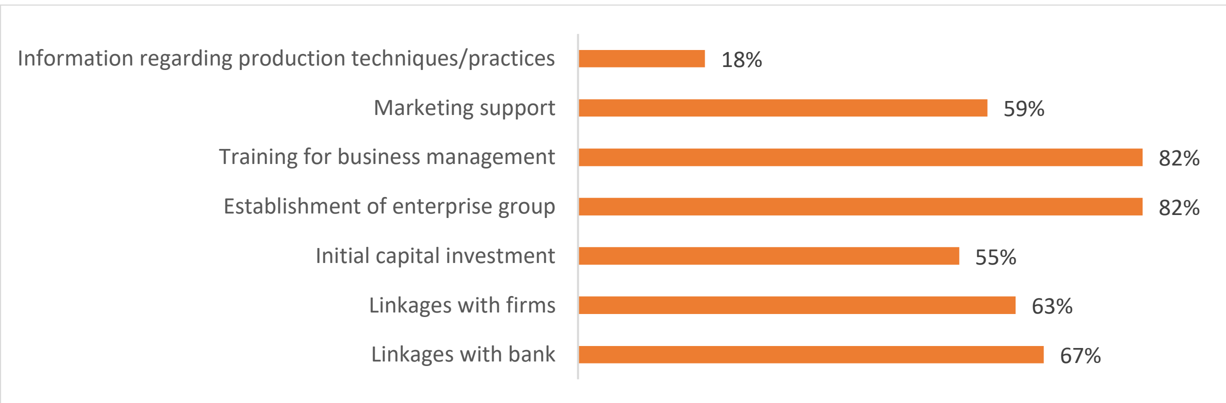
The primary challenges faced by enterprises in their day-to-day operations are predominantly centred around market access, with 71 percent of respondents citing this as their main hurdle. This highlights the crucial need for improved avenues to reach customers and promote products or services effectively. Limited financial resources were identified as a significant challenge by 16 percent of participants, indicating the importance of securing adequate funding for sustaining and expanding operations. Additionally, skill gaps were reported by 10 percent of respondents, underscoring the necessity for ongoing training and development initiatives to enhance workforce capabilities. The relatively lower percentage of respondents mentioning "Other" challenges at 2 percent suggests that market access, financial constraints, and skill gaps are the most pressing concerns for enterprises in their day-to-day activities.

**Figure 15: Primary Challenges the Enterprise Group Faces in Day-to-day Operations (N=49)**



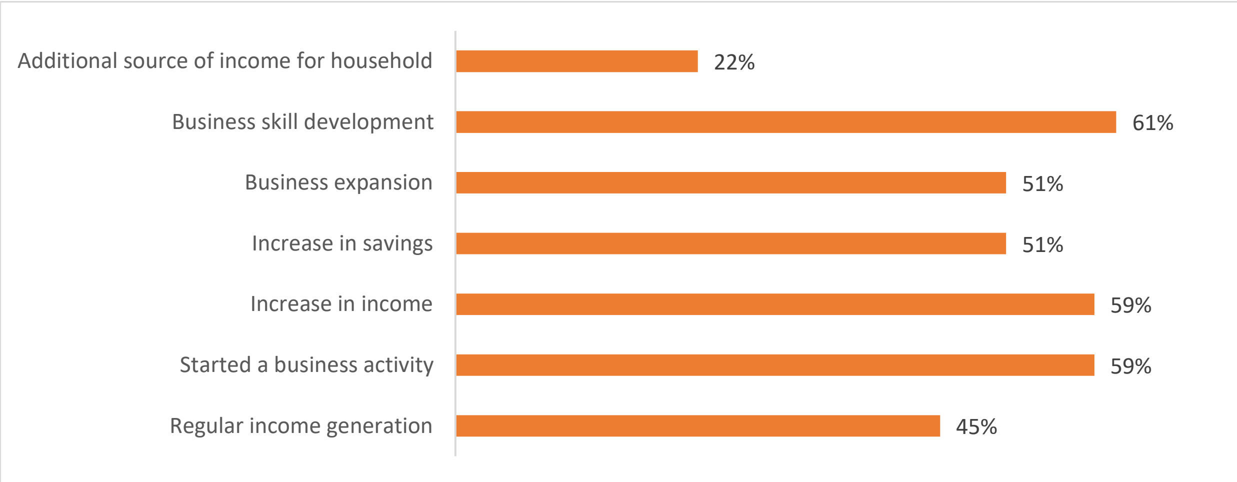

The project has provided substantial support for enterprise development, as indicated by the respondents. Notably, linkages with banks and firms were reported by 67 percent and 63 percent of participants, respectively, underscoring the importance of financial and business connections. Furthermore, the establishment of enterprise groups and training for business management received high acknowledgment, with 82 percent reporting each aspect, highlighting the project's focus on fostering collaboration and providing essential skills. Additionally, 55 percent of respondents noted the significance of initial capital investment, indicating the project's role in facilitating financial resources to kickstart enterprises. Marketing support was also recognised by 59 percent of participants, emphasising the assistance provided in promoting and scaling businesses. However, information regarding production techniques/practices received lower acknowledgment at 18 percent, suggesting a potential area for improvement in knowledge dissemination. The project's effectiveness in facilitating crucial linkages, providing financial support, fostering collaboration, and imparting essential skills, is significantly contributing to enterprise development among the beneficiaries.

**Figure 16:-Project Supported in Enterprise Development (N=49)**



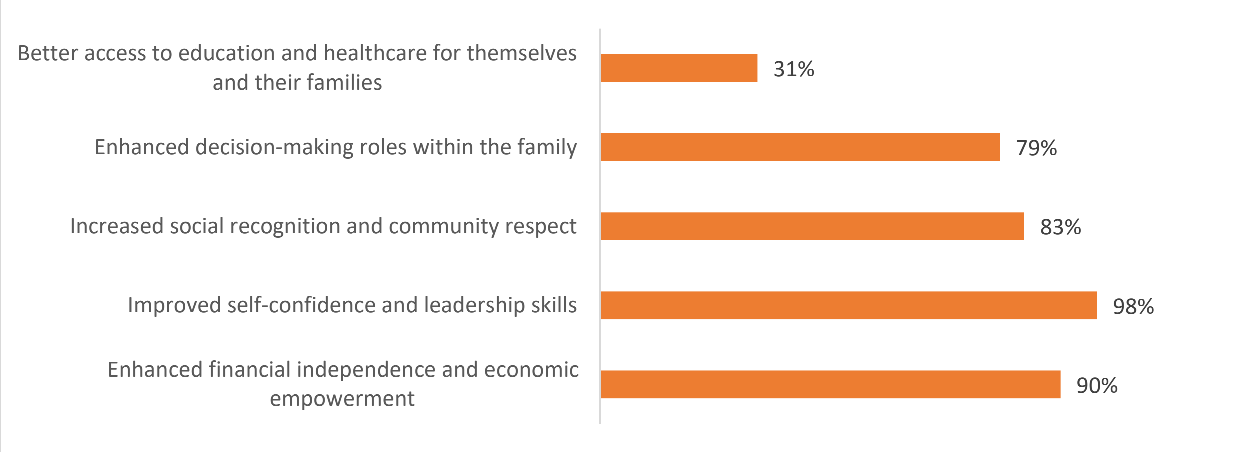
The perceived benefits from the HDFC Bank's enterprise development initiative were prominently reported, with business skill development being the most acknowledged at 61 percent. This underscores the importance attributed to acquiring new skills and knowledge. Starting a business activity and increasing income closely followed, reported by 59 percent of participants, indicating a strong inclination toward entrepreneurship and financial advancement. Stability and financial security were evident priorities, with 45 percent reporting regular income generation and 51 percent reporting an increase in savings. Moreover, aspirations for business growth were notable, with 51 percent mentioning business expansion. However, there was relatively less emphasis on additional household income sources, reported by only 22 percent of participants. Overall, these findings emphasise the project's significant impact on fostering business acumen, income growth, and skill enhancement among the beneficiaries, reflecting their aspirations for economic progress and prosperity.

**Figure 17: Perceived Benefits of Enterprise Development (N=49)**




The involvement of women in the HDFC program has resulted in notable positive changes across various aspects of their lives. Enhanced financial independence and economic empowerment stand out prominently, with an overwhelming 90 percent of respondents reporting significant improvements in this regard, highlighting the program's effectiveness in fostering economic self-sufficiency among women. Moreover, a staggering 98 percent of participants reported improved self-confidence and leadership skills, indicating the program's profound impact on empowering women to assert themselves confidently and take on leadership roles within their communities. Additionally, increased social recognition and community respect were observed among 83 percent of respondents, reflecting the growing acknowledgment of women's contributions and capabilities. Furthermore, 79 percent of participants reported enhanced decision-making roles within their families, underscoring the program's role in promoting gender equality and empowering women to participate actively in household decision-making processes. However, despite these significant strides, better access to education and healthcare for themselves and their families remains a challenge for a relatively smaller percentage of respondents, with only 31 percent reporting improvements in this area, suggesting areas for further focus and intervention within the program. Overall, the analysis highlights the multifaceted impact of the HDFC program in empowering women socially, economically, and personally, while also indicating areas for continued improvement and support.

**Figure 18: Changes Found in Women Beneficiaries (N=42)**



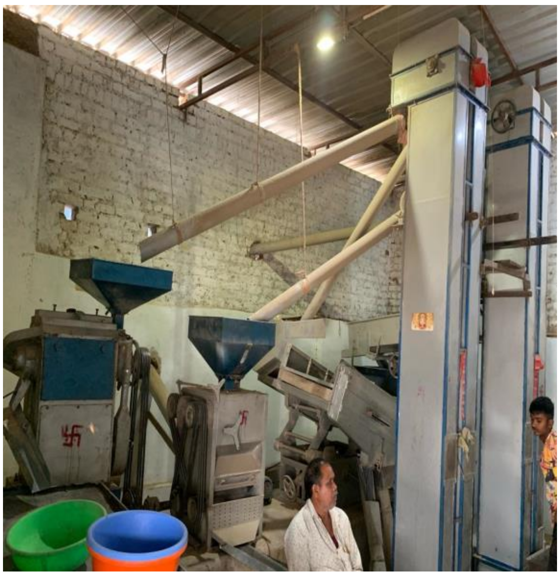
### 4.1.2.2 Case Study

**" Empowering Rural Prosperity: The Success Story of Latabod's Mini Rice Mill Enterprise"**


The inception of a Mini Rice Mill in Latabod village stands as a testament to successful enterprise development within rural communities. Launched in 2020, the project received financial backing from HDFC Bank's Parivartan, contributing Rs. 2,50,000, and Rs. 3,50,000 from each of the 10 members of the Kisan Kalyan Rice Mill Group, totalling Rs. 6,00,000, with an additional loan of Rs. 4,00,000 obtained from a Samuh to cover remaining expenses. Despite initial delays in securing electricity connections, the unit commenced operations in August 2022, heralding a new era of economic opportunity for local farmers.

Under the management of the Kisan Kalyan Rice Mill group, the Mini Rice Mill swiftly garnered farmer support, acknowledging its potential for value addition through on-site paddy processing. Within two months of commencing operations, the unit showcased promising income generation, averaging around Rs. 40,000 per month. Operational expenses, inclusive of technician/operators' remuneration amounting to Rs. 5,500 and an electricity bill of approximately Rs. 10,000, were covered by the unit's earnings, resulting in a net profit of approximately Rs. 25,000 per month. Despite fixed expenses such as premises rent, which was deferred by the owner, also a group member, to prioritise loan repayment, the group remained steadfast in meeting their financial commitments.

Challenges such as machinery failures were addressed effectively through training provided to group members, ensuring minimal disruptions to operations. Their proactive problem-solving approach reflected resilience and determination in overcoming obstacles. Encouraged by their progress, the group repaid Rs. 3,00,000 of the loan, with plans to settle the remaining balance expeditiously. The Mini Rice Mill empowered farmers by reducing dependency on external rice mills and generating additional income from paddy waste, enhancing economic independence.



With increasing demand for processing services from neighbouring villages, the group anticipated a lucrative upcoming season, poised for continued growth and success. Plans to purchase paddy and sell rice in the market demonstrated strategic thinking to maximize the utilisation of the milling machine and capitalise on local agricultural resources.

Beyond rice processing, the Mini Rice Mill presented additional avenues for diversification and value addition. By-products such as rice husk and rice bran held commercial potential, with opportunities to integrate the milling operation with an oil expeller for rice bran oil extraction and a feed production unit for cattle and pig feed. These initiatives added value to the primary processing activity, contributing to the local economy by meeting demand for essential agricultural products.

In conclusion, the establishment of the Mini Rice Mill in Latabod village exemplified the transformative impact of enterprise development on rural livelihoods. Through collaboration, innovation, and perseverance, the Kisan Kalyan Rice Mill Group created a sustainable business model benefiting local farmers and contributing to the economic growth of the entire community. As they continued to navigate challenges and seize opportunities, their success served as an inspiring example of grassroots initiatives driving meaningful change and prosperity in rural India.

## 4.1.3 Institution Development

In the project's early phases, farmers' collectivisation commenced at the village level through the establishment and reinforcement of PGs, EGs, and women's SHGs. These efforts culminated in the formation of FIGs, each consisting of 10-15 members, with typically 4-5 FIGs formed per village. From these FIGs, 3 to 4 active members were selected to form VMCs, tasked with overseeing and supporting project activities within their respective villages. Supported by the HDFC Bank Parivartan initiative, each VMC received Rs. 75,000 to bolster business endeavours, resulting in notable transactions involving onion, non-timber forest products (NTFP), and seeds. Despite hurdles encountered by certain VMCs, such as Saloni VMC's struggle to turn a profit in tamarind and gram seed transactions, there remained a hopeful outlook for future achievements. A comprehensive series of 137 training programs were conducted, benefiting a total of 3425 members from PGs, EGs, and SHGs across all 12 villages. These sessions aimed to enhance capacities and raise awareness, covering diverse topics ranging from SHG functionality and advantages to technical insights into animal husbandry, handicrafts, and business strategies. Additionally, participants received instruction in accounting and bookkeeping, equipping them with the necessary skills to monitor financial transactions with precision. The implementation of these capacity-building initiatives proved pivotal in nurturing the entrepreneurial drive among group members and fostering institutional development, ultimately empowering them to flourish as successful entrepreneurs within their respective communities.

### 4.1.3.1 Farmer Producer Company

Balod Hareli Farmer Producer Company Limited is a registered organisation formed under the Company's Act in May 2022 to help farmers in Balod district. It's run by Sishupal Nisad as President and Badal Budhe as CEO. They started working in 2022 as part of a two-year plan to build and strengthen the company. They operate in 12 villages in Balod district, serving 3000 households. The FPC's share price is Rs. 1000, and they have a total share value of Rs. 11,29,300 from 1212 shareholders. The FPC is managed by 11 Directors, including the President, Secretary, and CEO. They have licenses for fertilisers and pesticides and are authorised by IFFCO to distribute these. They are also in the process of getting seeds from Kaveri Seed Store, an agricultural seed company. Additionally, they have a license from the Government of Chhattisgarh to operate a market and an FSSI license, allowing them to engage in various agricultural activities.

In the project villages, FIGs were established through a partnership between Vrutti, the implementing partner and HDFC Bank. The FIGs comprised 10-15 farmers each, totalling 126 FIGs across the project area. These FIGs elected 3-4 active members to form VMCs, each consisting of 10-15 members, with separate bank accounts. Over a two-year period, the VMCs received support aimed at enhancing awareness of marketing strategies and facilitating procurement activities. They conducted meetings in each village to mobilise funds from shareholders, which were then deposited into their respective bank accounts. Boards of Directors (BODs) were elected from these VMCs. The Agriculture Business Accelerator (ABA), selected from the VMCs, played a central role in coordinating with farmers and the FPC, facilitating their activities within the village. The ABA received a remuneration of Rs. 1000 from the project and supplied agricultural inputs such as urea, DAP, and pesticides, with 1 percent incentives tied to sales performance. Additionally, the FPC extended loans to its member shareholders, with the ABA getting an additional 1 percent on loan amounts. Presently, the FPC has achieved a total business turnover of Rs. 3,590,773, with a profit of approximately Rs. 500,000 derived from the input business and Rs. 800,000 from output revenue. The FPC maintains two bank accounts, one with Axis Bank and another with Bandhan Bank, with total deposits amounting to Rs. 3,846,679.

The HDFC provided support to the FPC amounting to Rs. 12 lakhs. The FPC kept a loan portfolio of Rs. 6-7 lakhs for loan disbursement, input procurement, and working capital support. FIGs were approved by BoDs, with the ABA ensuring loan repayment. A total of 43 shareholders received loans. Additionally, nine low-cost storage structures were constructed with HDFC support, and three were taken in rent. The FPC holds fertiliser and other stocks valued at Rs. 6 lakh. Output primarily comprises of non-MSP paddy purchases, mostly procured informally and sold to local traders. The majority of the output is what exceeds the Minimum Support Price quota, mainly consisting of summer paddy. Plans for diversification into rice processing and other products like poha are in progress. While microfinance companies approached the FPC for credit linkage, they were not engaged due to the higher interest rate of 21 percent.

### Challenges

The FPC encounters market competition from local *kuchias* (moneylenders), who run shops offering various products and frequently avoid Goods and Services Tax (GST). The presence of unbranded goods and the evasion of GST by these local competitors present obstacles to the FPC's market penetration. Moreover, farmers face difficulties in obtaining informal credit through the FPC, as nearby shopkeepers persist in offering such services. This situation restricts the FPC's capacity to meet the financial requirements of farmers effectively.

### Impact

The static prices of fertilisers suggest a dearth of demand, with sales failing to gain momentum even in underground markets. Nonetheless, the pricing tactics implemented by the FPC have resulted in elevated output prices, proving advantageous for both the FPC and farmers alike. Consequently, due to the FPC's activities, the accessibility of informal credit from local shopkeepers (*kuchias*), is dwindling, indicating a notable alteration in the financial dynamics within the community. This shift reflects a broader transformation in how financial services are accessed and utilised by farmers, with the FPC emerging as a more prominent player in meeting their needs. Despite the challenges posed by stagnant fertiliser prices and market competition, the FPC's strategic pricing measures have facilitated improved returns for farmers, while simultaneously reshaping the local credit landscape. This underscores the FPC's growing influence in not only agricultural markets but also in the broader economic ecosystem of the community, where it is gradually supplanting traditional sources of financial support.

**Observations on the FPC**

The FPC primarily focuses on the input business, facing stiff competition from local traders and district markets. While its main output is paddy procurement, its scope is limited to purchasing leftover paddy after farmers have already sold to Primary Agricultural Credit Societies (PACS) at Minimum Support Price (MSP). Recent quota increases have further constrained its activities in this area. To ensure sustainability, there's a growing need for the FPC to diversify into non-paddy cash crops like off-season vegetables and spices. Post-support from HDFC, the FPC is now receiving assistance from Vrutti through the Great Eastern program, aimed at bolstering its capacity for future sustainability. However, with business slowing down during post-paddy season, diversifying into other crops or products becomes crucial for maintaining year-round operations. There's also a recommendation to make better use of funds remaining idle in the FPC's bank account after the paddy season, suggesting investment or short-term deposits. Strengthening convergence with government support programs is identified as critical, as the FPC currently lacks access to these benefits. Despite maintaining high documentation and record-keeping standards due to ongoing support from Vrutti, there's an acknowledgment of the need for regular training and capacity-building efforts for Board of Directors members and other key personnel within the FPC. Prioritising expansion in existing villages before venturing into new ones is advised, given the ample opportunities available within current areas. Finally, there's a caution against becoming too reliant on management support from Vrutti, suggesting a gradual withdrawal of this assistance with full reimbursement of costs to the FPC to enhance self-reliance and long-term sustainability.

### 4.1.4 Improved Capacity through Livestock Management

The project aimed to diversify income sources by promoting poultry rearing across 12 villages. 15 units were established in the project villages, benefiting 150 farmers. Kuroiler and Sonali breed chicks were chosen based on market feasibility and adaptation conditions. Beneficiaries received chicks along with essential supplies and extensive training on rearing practices, resulting in reduced mortality rates and increased weight gain per chick. This enabled farmers to earn substantial profits in local and wholesale markets, with a preference for home-reared chicken due to health benefits. Some beneficiaries expanded their ventures by establishing chicken cutting centres, further enhancing their income. The quality of chicken and rising demand within the community led to average net incomes ranging from Rs. 50,000 to Rs. 60,000 annually for participants. Despite the success, challenges like market linkages and community opposition, in villages, caused some beneficiaries to discontinue their operations in those areas. Overall, the initiative significantly impacted livelihoods by providing sustainable income opportunities through poultry rearing.

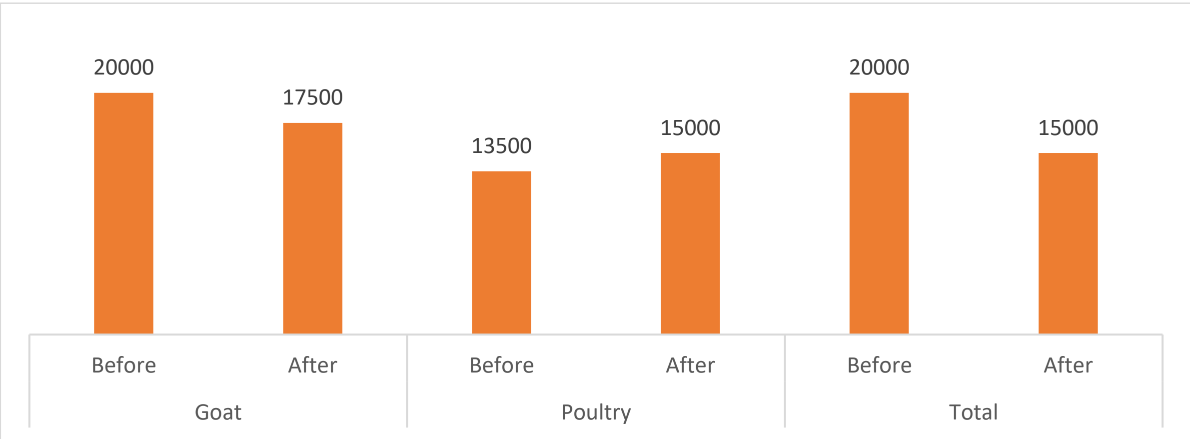
A total of 24 goat enterprise units were established across 12 villages, benefiting 120 beneficiaries who contributed Rs. 6,000 each, with additional support from the project amounting to Rs. 11,250 per beneficiary. Each participant received 4 goats (3 female and 1 male) under the 'passing on the goat' concept, where they would return 3 goats to the FPC after the birth of newborns, contributing to the FPC's sustainability. Training sessions were conducted on goat rearing practices, feed and disease management, and vaccination. Despite encountering disease challenges during the rainy season, proper vaccination protocols were followed, and vendors replaced a significant number of goats due to high mortality rates. From qualitative data it is found that beneficiaries are yet to realize income from goat rearing, they anticipate earning Rs. 7,000 to Rs. 8,000 per goat in the market.

During intervention, piggery rearing enterprise units were planned and promoted in two locations, Dewarbhat and Tekapar villages, as part of the HDFC Bank Parivartan initiative. Each unit, costing Rs. 50,000, aimed to diversify income sources for the beneficiaries, benefiting 3 farmers in each village. To initiate the units, each beneficiary received 3 female and 1 male piglet, opting for local breed animals due to the unavailability of the American Yorkshire breed and to better suit village conditions. The beneficiaries underwent training on basic rearing practices, feed management, medicine administration, and timely vaccination for the piglets. Regular monitoring through meetings and visits ensured proper management of the units, supplemented by information handouts on rearing practices. Because of disease as well as the ban from respective villages, all three farmers were unable to continue due to a ban imposed by the local Gram Panchayat administration on piggery rearing activities.

#### 4.1.4.1 Income from Livestock Management

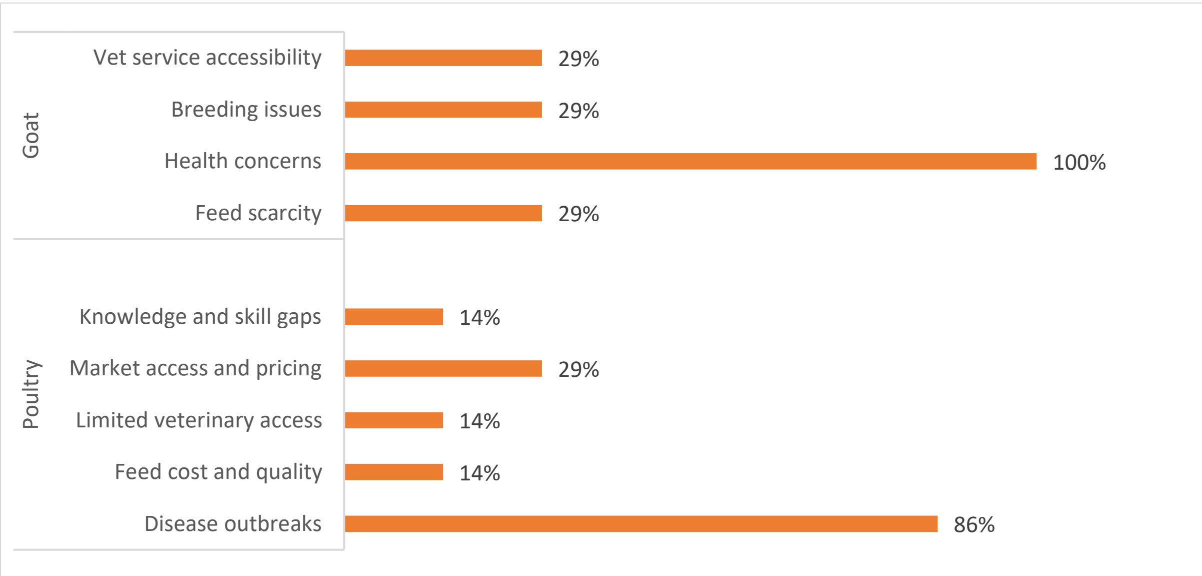
The income from goat rearing saw a decrease from Rs 20,000 to Rs 17,500, reflecting a decline of 12.5 percent. Conversely, poultry income increased from Rs 13,500 to Rs 15,000, indicating a rise of 11 percent. However, the total income exhibited a notable decrease, falling from Rs 20,000 to Rs 15,000, representing a decrease of 25 percent. This discrepancy in income trends between goat rearing, poultry, and the total can be attributed to the influx of new farmers during the intervention, many of whom lacked prior experience in these enterprises. As a result, these newly formed enterprises are still in a transitional phase, with a considerable portion yet to optimise their earnings. Despite the median data showing a decrease in goat rearing and total income, the mean income displays a positive trend, suggesting that some enterprises are performing well and contributing to the overall increase in mean income. This highlights the complexities involved in enterprise development and underscores the need for continued support and capacity building to ensure the success and sustainability of these ventures.

**Figure 19: Approximate Annual Income (Rs.) from Livestock Rearing (N=86)**




The HDFC program effectively addressed several challenges faced by farmers in the poultry and goat rearing sectors, as reported by the respective percentages of farmers. Notably, in poultry farming, significant strides were made in tackling disease outbreaks, with 86 percent of farmers reporting that this challenge had been successfully addressed. However, challenges related to feed cost and quality, limited veterinary access, and market access and pricing still persisted to varying degrees, with 14 percent to 29 percent of farmers reported these issues as having been addressed. In the goat rearing sector, health concerns were effectively managed, with all farmers reporting that this challenge had been addressed. Nevertheless, challenges such as feed scarcity, breeding issues, and limited accessibility to veterinary services continued to impact a notable proportion of farmers, with 29 percent reporting each of these challenges as having been addressed. These findings highlight the comprehensive approach taken by the HDFC program in addressing the diverse needs and challenges faced by farmers in poultry and goat rearing, while also emphasising the ongoing efforts needed to further mitigate existing challenges and enhance the overall sustainability and success of these agricultural enterprises

**Figure 20: Challenges have been addressed by HDFC in the Project (Goat N=7, Poultry N=7)**



### 4.1.4.2 Case Study

**" Job Seeker to Job Giver: Neeraj Patel's Journey of Entrepreneurial Success "**

Neeraj Patel, a 28-year-old resident of Pairi village in Chhattisgarh, epitomises the transformative impact of the HDFC's HRDP on rural livelihoods. Previously struggling with poverty as a small farmer, Neeraj's encounter with the programme sparked his interest in income diversification, leading him on a remarkable journey from a job seeker to a job giver.

His journey began when he expressed interest in poultry farming, recognising its potential for high returns in a short period. Encouraged by the programme's support, Neeraj received 100 chicks, along with essential equipment and feed. Diligently raising the chicks, he quickly turned a profit of Rs 15,000 within three months, motivating him to expand his operation exponentially.

As Neeraj expanded his poultry farm to accommodate up to 1,000 chickens, he encountered challenges such as price fluctuations in the market and the market linkage also. To address this, he innovatively set up a chicken cutting centre roadside, enabling him to sell more birds and secure higher prices for his products. This strategic move not only boosted his sales but also enhanced the value proposition of his enterprise.

With his poultry business flourishing, Neeraj seized further opportunities for diversification. Inspired by the success of his cutting centre, he ventured into the food service industry, opening a dhaba (eating place) near the bus stop. This strategic location provided additional foot traffic and complemented his existing poultry business, leading to increased revenue streams and a stronger market presence. At present he is earning a net of Rs. 6 lakh per annum from all of this.His entrepreneurial journey has not only transformed his own fortunes but has also had a ripple effect on his community. By employing one person to assist with his business operations, Neeraj has contributed to local employment opportunities, empowering individuals and fostering economic growth in his village. Moreover, his success story serves as inspiration for other aspiring entrepreneurs in the community, encouraging them to pursue their dreams and explore new avenues for prosperity.

In just a year or two, Neeraj Patel has transitioned from a job seeker to a job giver, thanks to his entrepreneurial spirit and the support of the HDFC Programme. His journey showcases the transformative power of entrepreneurship in uplifting rural livelihoods and driving economic development. As Neeraj continues to innovate and expand his ventures, he not only secures a brighter future for himself and his family but also leaves a lasting legacy of empowerment and opportunity in his community.

# 5 Analysis of Assessment Criteria

## 5.1 Relevance and Convergence

**Relevance:** The project holds significant relevance as it strives to uplift rural communities and drive sustainable development in the target areas. With a focus on income diversification, agricultural entrepreneurship, and capacity-building initiatives, the project effectively tackles key challenges faced by rural populations, including poverty, limited market access, and inadequate livelihood opportunities. By promoting various enterprise activities such as poultry farming, goat rearing, and agribusiness ventures, individuals like Neeraj Patel are empowered to break the cycle of poverty and attain economic self-sufficiency. Furthermore, the emphasis on skill development, market linkages, and value chain integration equips beneficiaries with the necessary tools and knowledge to thrive in competitive market environments and maximize their earnings potential. The project's collaboration with the FPC further enhances its impact by facilitating collective action, market access, and resource pooling among farmers. By fostering convergence with government programs, NGOs, and community-based organisations, the project leverages synergies and ensures a holistic approach to rural development that addresses multifaceted challenges. Ultimately, the project's relevance lies in its transformative impact on individual lives, the creation of resilient communities, and the facilitation of pathways to prosperity for marginalised populations, thereby contributing to the overall socio-economic advancement and well-being of the project villages.

**Convergence:** Throughout the project duration, a convergence strategy was employed to introduce papaya and banana cultivation to farmers, alongside raising awareness on intercropping techniques and facilitating access to chilli and coriander seeds through collaboration with the Department of Agriculture. Additionally, partnerships were forged with relevant departments to ensure goat vaccination and insemination services, as well as to support poultry farming initiatives. Furthermore, the project facilitated collaborations with government schemes for crop Insurance and pesticide procurement, ensuring comprehensive assistance and resource accessibility for farmers. Through this convergence approach, the project effectively utilised existing institutional mechanisms and expertise, thereby maximising the impact of interventions and bolstering the sustainability of agricultural practices in the project villages.

## 5.2 Sustainability

The sustainability plan outlines various objectives and key activities aimed at improving the wealth and resilience of smallholder farmers through agriculture-based livelihood interventions facilitated by the Balod Hareli Farmers Producer Company Limited (FPC). The key activities include agri input and output trading, rice milling, goat and poultry value chains, establishment of a masala unit, and operating a custom hiring centre. These activities aimed to generate revenue and enhance the income of smallholder farmers through value addition and efficient business operations.

The outcomes of these activities are expected to contribute to the sustainability of the FPC by generating maximum revenue. However, several challenges need to be addressed to ensure long-term sustainability. The market's variability poses a significant challenge, particularly in activities like poultry and goat rearing where controlling mortality rates can be difficult. Additionally, running these activities without adequate financial support may pose challenges.

To mitigate these challenges and ensure sustainability, the FPC must focus on implementing robust market strategies, enhancing veterinary care and disease control measures for livestock, and seeking financial support through grants, loans, or partnerships. Furthermore, continuous monitoring and evaluation of each activity's performance and its impact on smallholder farmers' income and resilience will be essential for refining strategies and ensuring the long-term sustainability of the FPC's operations. By addressing these challenges and leveraging opportunities, the FPC will achieve its objectives of improving smallholder farmers' livelihoods and contributing to the overall economic development of the community.

# 6 Recommendations

To further improve the outcomes of HRDP in Balod district of Chhattisgarh, the following recommendations are made for the HDFC Bank's *Parivartan* and HRDP teams and the implementing partner:

**Recommendations to Sustain Project Initiatives**

- Ensure consistent funding sources to support ongoing project activities and cover operational costs of the FPO. This can be achieved through scaling up of the FPO business operations and expanding geography of operations. In addition, grants support from CSR or Government, forming partnerships with donors or investors me be explored.
- Before expanding into new villages, it would be beneficial for the FPO to prioritise universalising its presence in existing villages by including a greater number of farmers. This approach is recommended considering the ample scope for growth and development within the current villages.
- Currently, the FPO is losing opportunities to avail of benefits from the government schemes/ programs running in the region. There is a need to dovetail resources from government programs through convergence.
- The management support cost for FPOs is currently covered by Vrutti through various projects. However, this practice may lead to excessive reliance on the implementing partner. It would be more advisable to gradually withdraw this support, beginning with fully reimbursing the FPO for the cost from the project and then gradually reducing it. This approach would also extend the duration of support provided by the implementing partner to the FPO, thereby encouraging greater self-reliance on their own resources.
- To integrate the mini rice mill with an oil expeller and a feed production unit. This integration allows for the extraction of rice bran oil from the by product and the production of feed from rice husk. Considering the demand for cattle and pig feeds in nearby villages, this approach can efficiently utilise resources and cater to the local market needs.
- The masala and spice making units currently operates in residential area and should transition to a more commercial setting. It is advisable for the unit to explore opportunities in marketplaces or available government buildings by engaging with relevant government departments. By relocating to a market area, the unit can scale up its operations and focus on commercial spice production to boost earnings.
- Invest in capacity-building efforts for project beneficiaries, including training programs and skill development workshops. By equipping individuals with the necessary knowledge and skills, they can effectively manage project initiatives and adapt to changing circumstances, thereby enhancing the sustainability of the project in the long run.

**Recommendations to Build Project Efficiency**

- Integrate technology solutions like project management software or mobile applications to automate tasks, improve communication, and track progress more efficiently at the FPO level.
- Perform comprehensive reviews and needs assessments to identify potential challenges and opportunities within the current project methodologies. Implement suitable

interventions based on the findings to enhance the effectiveness and precision of the outcomes.

**Recommendations to Strengthen Project Design**

- The project was shifted to HRDP from FDP midway during the initial stage of implementation. This has limited few interventions in the project area and primarily focused around rural enterprise promotion. While, the model worked at a smaller scale, but expansion of business by the FPO and entrepreneurs would be challenging. Establishing linkages with banks/ financial institutions for credit would be helpful for the FPOs to expand.
- Systematising the project monitoring and backstopping process and synchronising engagement of HDFC program staff and implementing partner.
- Involve key stakeholders, including beneficiaries and community members, in the project design process to ensure their needs and perspectives are considered and incorporated into the plans.

# Annexures

## A Sampling Methodology

The quantitative household survey was administered for four thematic areas in the district.

### A.1 Quantitative Sample Size Calculation

For this study, the formula for calculation of finite sample size for one-time cross-sectional survey (Cochran's 1977), has been deemed appropriate. The formula used to estimate the sample size for the quantitative household survey is given below:

$$N = Z_{1-\alpha}^{2} \times P\ (1 - P)\ \times D_{eff} \div\ (S_e)^2$$

Where,

N= sample size

P= key characteristic of the population, set at 50 percent;

$Z_{1-\alpha}$= standard score corresponding to the confidence interval, set at 95 percent (1.96 for two tailed test);

$S_e$= margin of error, set at 5 percent;

$D_{eff}$= factor for design effect, set at 1 (no design effect)

Thus, the estimated maximum sample size is *(enter number).*

### A.2 Quantitative Sampling Methodology

All the ten project villages were selected for the study. The stages of sampling are explained as follows:

***Stage 1: Selection of beneficiaries:***

The list of beneficiaries from all the nine villages acted as the sampling frame for the project. This list was obtained from the implementing partner – Vrutti. Simple random sampling was done to select the required number of households from within the list. Since beneficiary selection was undertaken independently for each project, the selection of more than one beneficiary from a single household was probable.

***Stage 2: Sampling for villages:***

Sampling for each village was done using the Probability Proportionate to Size (PPS) method. The percentage of the total number of beneficiaries in a village was taken out from the total beneficiaries. This percentage was then converted into a sample per village. A total of nine villages were covered under the survey.

### A.3 Qualitative Sample Size Calculation

Qualitative tools of In-depth Interviews (IDIs) and Focus Group Discussions (FGDs) were administered for obtaining information about the remaining themes as well as to enrich the household survey information with a deeper understanding.

Since there was no baseline available for this evaluation, recall method was used in the household survey to assess the change that has happened over time. For this purpose, the respondents were asked to recall the value of critical indicators that they could recall from the time the Programme started.

## B Theme-wise Sustainability Matrix

The programme support demonstrated the ability to continue even after its conclusion. The programme's support to sustain improved outcomes are enumerated below (see Table 4).

**Table 2: Theme-wise Sustainability Matrix**

| Support Provided | Structures Established | Technical Know-how | Usage | Maintenance |
|---|---|---|---|---|
| Farm Advisory Services | ✓ | ✓ | ✓ | |
| Farm Enterprise Development | ✓ | ✓ | ✓ | |
| Institution Development | ✓ | ✓ | ✓ | ✓ |
| Livestock Management | ✓ | ✓ | ✓ | |