

Impact Assessment Study Of Holistic Rural Development Programme (HRDP)

Maharashtra



Prepared For:



HDFC Bank CSR

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Abbreviations

ASER	Annual Status of Education Report
CSR	Corporate Social Responsibility
FFS	Farmer Field School
FGD	Focus Group Discussion
FPO	Farmer Producer Organization
GoM	Government of Maharashtra
HDFC	Housing Development Finance Corporation Limited
HDI	Human Development Index
HRDP	Holistic Rural Development Programme
IDI	In-depth Interview
LSD	Lumpy Skin Disease
NCD	Non-Communicable Disease
NGO	Non-Governmental Organization
NRM	Natural Resource Management
NRLM	National Rural Livelihood Mission
NSSO	National Sample Survey Office
RO	Reverse Osmosis
SDG	Sustainable Development Goal
SHG	Self Help Group
SEQI	School Education and Quality Index
AFARM	Action for Agricultural renewal in Maharashtra
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

Executive Summary

The impact assessment study focuses on measuring the impact of the Holistic Rural Development Programme (HRDP) of HDFC Bank that was implemented by Action for Agricultural Renewal in Maharashtra (AFARM) in project clusters of the Phaltan block of Satara district in Maharashtra. The study focused on understanding the overall process undertaken by HDFC Bank and the partner organisation in implementing the project activities, key milestones achieved, impact created by these activities, challenges faced, and the manner in which such challenges were handled.

For the impact assessment study conducted, both quantitative and qualitative methodologies were used. In this cluster, all eight intervention villages were selected for the study. Sample from each village was selected by using Probability Proportionate to Size (PPS) sampling method. The list of beneficiaries was obtained from the implementing partner- AFARM (Action for Agricultural Renewal in Maharashtra). Since beneficiary selection was undertaken independently for each programme, the selection of more than one beneficiary from a single household was probable. The total sample size covered for the quantitative study was 423 households and for the qualitative, 10 focus group discussions and 10 In-depth interviews were conducted. The impact assessment aims to critically and objectively evaluate the implementation and performance, to add value by showcasing successful initiatives, to recommend possible ways to add value by showcasing successful initiatives, to determine the reasons why certain results were achieved or not, to draw lessons, and to derive good practices and lessons learned.

Figure 1: Overview of project impact

	Health and Sanitation	Skill Training and Livelihood Enhancement	Natural Resource Management	Promotion of Education
Overview of Activities	Health related input awareness session for the community Installation of RO filter	SHG strengthening training on agricultural practices, support for enterprise development	Desiltation of existing water harvesting structures, water budgeting exercise, horticultural crops and fodder demonstration	Educational paintings, school repair work, installation of school library, smart class, RO filters
Areas of Improvement	35% reported improved health status 90% reported less spreading of disease	40% increase in average income from skills 38% beneficiaries established/expanded business activity	24% change in income due to agricultural interventions	Promoting quality education through infrastructure development
Challenges	No timely available of filtered water from the RO units established.	Participation from the farmers and community for agriculture -based trainings has been challenging	No grievance redressal mechanism Unavailability of post harvest techniques	Toilets need upgradation and maintenance RO units not operated to maximum capacity
Recommendations	Options for convergence with the government scheme should be looked at in close consultation with the community	The institutional structure created under the program can be made more robust	A system may be put in place to ensure that the beneficiaries do not face any difficulties post-intervention	An asset management fund/committee needs to be established.

Natural Resource Management

Interventions under HRDP included the construction of water management structures (desiltation of existing water harvesting structures such as check dams, deepening of nallas, setting up of continuous contour trenches), activities to enhance agriculture production and productivity such as

the adoption of setting up of drip irrigation unit, horticultural crops, crop diversification, on-farm demonstrations of fodder crops like - Napier and mur grass and Farm Field Schools (FFS). One of the beneficiaries during the qualitative field study quoted ***“Interventions in natural resource management such as the construction of check dam has changed the picture of our village as productivity of crops has increased due to perennial availability of water.”*** These interventions have led to an increase in irrigated land from 2 acres to 2.5 acres in the project area, as per the quantitative survey. Coupled with improved irrigation, agriculture interventions have been pivotal in enhancing production and decreasing the cost of cultivation and agricultural income from agriculture. The overall net income change has been to the tune of 24%.

Skill Training and Livelihood Enhancement

The activities under this thematic area include SHG-based women empowerment; agriculture training and support; livestock management; and entrepreneurship development. The HRDP interventions for skill training and livelihood enhancement also incorporated activities like livestock rearing. The HDFC Bank project emphasized skill development of the farmers mainly through agriculture training to improve their skills and knowledge in areas like fodder plot demonstrations, exposure visits to adopt the best practices, organizing farmers mela etc. The idea was to impart skills that enable farmers to enhance their crop productivity, improve the health of the soil by means of mixed farming and crop diversification and information on how farmers can protect their crops from weather-related shocks. The interventions focused on setting up micro-enterprises which resulted in the economic empowerment of the beneficiaries from the weaker section who were working as agricultural labor before the intervention. **Post-project intervention, women have started their enterprises which have made them financially independent and improved decision-making at the household level.**

Promotion of Education

Activities under education in Satara, Maharashtra included (a) Educational Institutions Development: Educational paintings, school repair work, setting up of computer lab, installation of RO filter, water storage tank and (b) Awareness Generation session. The intervention under HRDP in promoting education aligns with the central and state government objective of providing quality education to the marginalised section of society. **Providing digital screens in the schools under the HDFC Bank project made learning far more engaging and interactive through the audio-visual mode. This made the intervention a successful one as students learning outcomes improved according to qualitative findings.** Upgradation of physical infrastructure in terms of educational paintings, and installation of RO filters has led to visible positive outcomes. The awareness session on health and hygiene has resulted in a decrease in the rate of absenteeism owing to children falling ill before the intervention. The program supported the government's vision of providing quality education in terms of infrastructure and services which can empower the vulnerable sections.

Health and Sanitation

Health and sanitation are essential components contributing to rural development. In the programme villages, diverse interventions for improving health and sanitation were carried out. Activities under the theme include (a) Health-related awareness input sessions, awareness about COVID-19 appropriate behavior, and (b) Installation of RO filters in villages. Health awareness input sessions were organized where villagers were made aware of the importance of frequent health checkups, a balanced and nutritious diet, importance of menstrual hygiene for women. Under the intervention, the COVID-19 brochures have information on avoiding the spread of the pandemic. Through the project interventions, there is a considerable improvement in a better understanding of

the health issues in the villages. One of the beneficiaries quoted **“before the intervention, we used to drink saline water and so the rate of falling ill was quite high. Installation of RO filter has been a blessing as now we can drink purified water and frequency of falling ill has considerably reduced.”**

Table 1: Summary of key income indicators

Income Indicators (based on median)	Before	After	% Change
Average Net Income from Agriculture (INR)	85,000	1,05,000	24%
Average monthly income from Skill (income from enterprises) (INR)	2,000	2,800	40%
Average monthly income from SHG (INR)	800	2,000	150%
Average monthly income from livestock (INR)	1,000	2400	140%
Average Productivity of 3 major crops (kg/acre)	9,833	19,233	95%

For natural resource management, three indicators have been used for the calculation of HRDI- the average productivity of crops (3 major crops) grown (quintal per acre), the percentage of farmers reporting access to irrigation, and the area under irrigation (ha). For the thematic area of skill training and livelihood enhancement, three indicators have been used for HRDI calculation- the proportion of beneficiaries reporting monthly income from enterprises above the baseline median, percentage of respondents following agricultural practices (application of organic manure, construction of vermicompost pits, timely application of fertilizers and pesticides, conservation agriculture) and the proportion of beneficiaries reporting a monthly income of SHG from enterprise above the baseline median. For Education, two indicators were used for HRDI calculation- The percentage of teachers reporting increased access to BaLA and the percentage of teachers who reported conducting sanitation, hygiene, and cleanliness awareness generation session. For the thematic area, health and sanitation, HRDI was calculated based on one indicator which is the proportion of beneficiaries reporting an average number of months with access to adequate drinking water above the baseline median.

Table 2: Overall HRDI Score

Overall HRDI		
Base line	End line	% Change
0.45	0.73	62%

1. Introduction

1.1 Background of the Study

As part of HDFC Bank's CSR initiative, programs are supported to deliver holistic rural development. Within Parivartan, the "Holistic Rural Development Programme" (HRDP) is the flagship CSR program, under which non-governmental organizations across the country are supported to deliver development interventions. The vision of the program was to create happy and prosperous communities in terms of socio-economic and ecological development which is sustainable. The holistic approach supports the lives of communities by providing necessary inputs on issues like shaping economic independence through skilling, providing basic infrastructural development, and establishing a better ecosystem thereby promoting better living conditions. Developing human capital, natural resources, and infrastructure in poor and backward villages would bring about their socio-economic transformation.

The program was implemented by an NGO partner Action for Agricultural Renewal in Maharashtra with the support of HDFC Bank. The major focus areas for intervention were Natural Resource Management (NRM), Skill Development & Livelihood Enhancement, Promotion of Education, Healthcare & Hygiene. However, the extent of the work in each village was undertaken based on the need and varied from place to place.

1.2 Partner Organization-(AFARM)

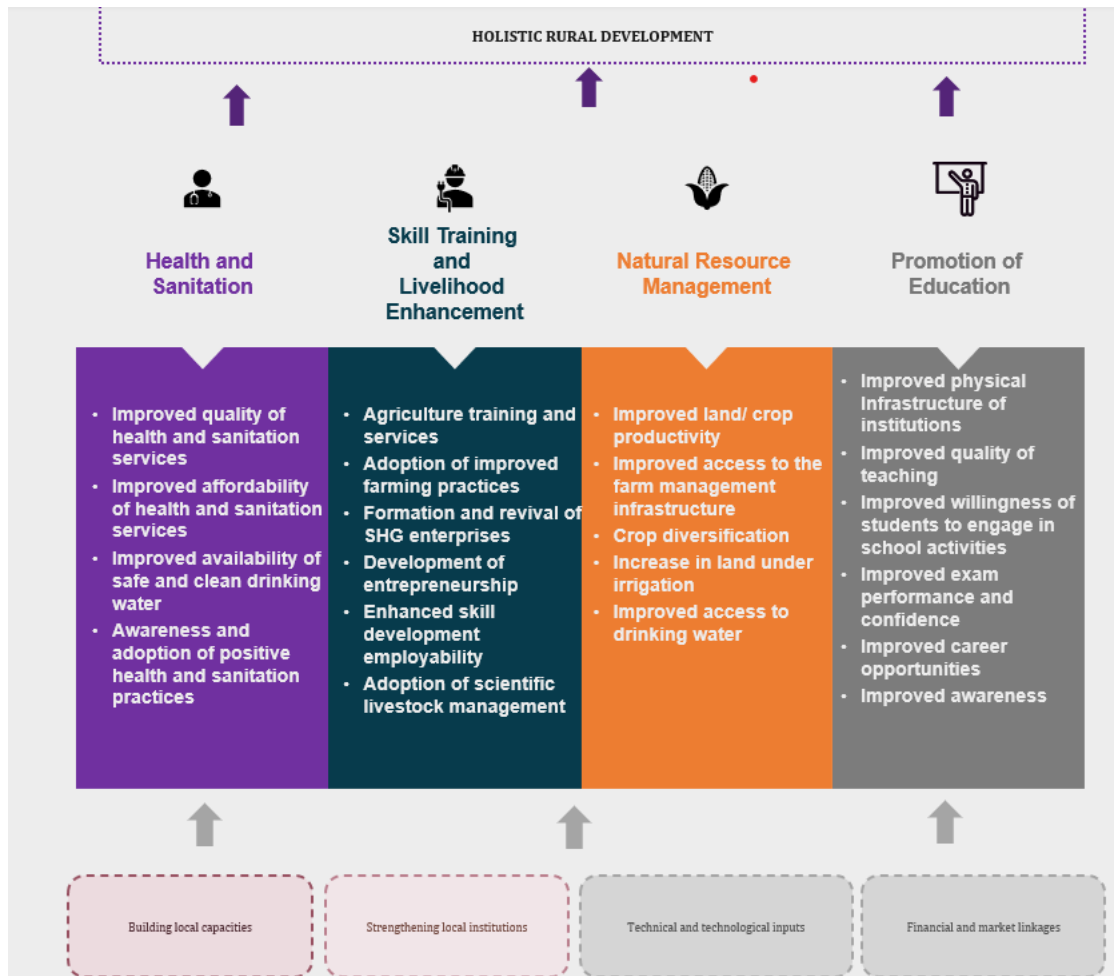
AFARM was born out of an acute need for an apex institution to coordinate the efforts of Non-Government Organizations (NGOs) in their tasks of providing drinking water and agricultural extension services to villages in drought-affected Maharashtra. It was one of the first organizations to operate as an apex institution, in the country.

Prior to 1967, few missionary organizations were engaged in making available drinking water to the rural communities that were facing scarcity of drinking water. A number of national and international funding organizations also took up the said program and supported the missionaries with drilling units and equipment. The independent work of the missionaries in the said program, later on, created the need for a coordinating organization. Therefore, seven missionaries came together and informally started coordinating the program of supplying drinking water to the rural communities as the 'Maharashtra Regional Water Resource Development Group'. This was later on registered as an organization - "Action for Agricultural Renewal in Maharashtra" (AFARM) in 1969.

1.3 Purpose and objectives of the study

The impact assessment aims at understanding the overall process undertaken by HDFC Bank and the partner organization in implementing the program activities, key milestones achieved, the impact created by these activities, challenges faced, and the manner in which such challenges were handled. The guiding philosophy behind this study is to add value by showcasing successful initiatives and recommending possible ways to address challenges that exist. The impact assessment aims to critically and objectively evaluate the implementation and performance, to determine the reasons why certain results were achieved or not, to draw lessons, and to derive good practices and lessons learned. The study is expected to provide evidence-based findings which would inform HDFC Bank in taking operational and strategic decisions while planning and funding its partner organizations for such programmes. The evaluation was also an opportunity to learn about the relevance of the programmes implemented and their effectiveness.

Figure 2: Conceptual framework of the implementation



Agriculture is one of the main occupations in the state of Maharashtra. About 82% of the rural population depends on agriculture for livelihood. The total irrigated area used for crop cultivation is 33,500 square km which amounts to about 18% of the gross cropped area. In Maharashtra, rainfall patterns differ from region to region.¹

Issues such as delays in rainfall and depleting groundwater levels have led HDFC Bank's HRDP to focus on the desiltation of existing water harvesting structures which can ensure an adequate supply of water for agriculture. Apart from agriculture, the programme also focused on providing other livelihood opportunities through goat-rearing units, providing entrepreneurial support in setting up welding shops, tailoring/boutique shops and strengthening of SHGs. Through these interventions, the program was implemented to create sustainable communities in 8 villages in the Satara district of Maharashtra state.

With the objective to achieve holistic rural development in these areas, the programme has focused broadly on four thematic areas of intervention – promoting education, health and sanitation, natural resource management, skill building and livelihood enhancement.

¹ https://agricoop.nic.in/sites/default/files/Maharashtra-SAP_V1.3-2.pdf

2. Research Methodology

The assessment used both qualitative and quantitative methods. For each cluster and thematic area, activities completed were identified. The impact generated by these activities was assessed using the criterion of Relevance and Convergence, Effectiveness and Impact, and Sustainability and Replicability. The evaluation process was carried out in a consultative manner involving interactions with both HDFC Bank and AFARM teams at key junctures. Under the criteria of relevance and convergence, the evaluation sought to answer whether the design of the program interventions is aligned with the state's plans and priorities for rural development. In addition, the evaluation examined whether the design and implementation of the program were relevant to the local needs of the most vulnerable groups

To assess the impact and effectiveness of the program, the findings seek to establish the values of outcome indicators of all the thematic interventions. These findings are assessed against the outcome indicators finalized during the outcome harvesting stage. Further, through qualitative evidence, the evaluation tries to understand whether and how the program impacted the lives of the community members in the program areas. This was done through an analysis of program outcomes in light of certain variables identified in consultation with HDFC Bank. Through primary data, the study has tried to understand if the program has worked on strengthening the community's capacity to ensure sustainability, and whether any of the activities or strategies adopted have been/could be replicated.

2.1 Design and Methodology

A review of various program documents including HDFC Bank's CSR Policy, Rapid Rural Appraisal Reports, Program implementation timelines, Communication, and Documentation Products, and other relevant reports/literature related to the program was utilized for a secondary review. The primary research included a quantitative household survey as well as in-depth interviews and focused group discussions with program beneficiaries and the partner NGO. The outcome mapping and result chain development were undertaken in consultation with the HDFC Bank team. The exercise resulted in the identification of standardized key outcomes and indicators related to each of the program's thematic areas. **Based on the standardized list of outcomes and outputs, the questionnaire for the state was developed.**

2.2 Sample size and distribution

Quantitative sampling methodology

In this cluster, eight intervention villages were selected for the study.

Stage 1 – Selection of villages

All the intervention villages were selected as sample villages. Sample from each village was selected by using Probability Proportionate to Size (PPS) sampling method. Care was taken to cover the maximum sample from the villages that have received a maximum number of interventions in order to get appropriate coverage of all components of the program.

Stage 2 – Selection of beneficiaries

The list of beneficiaries was obtained from the implementing partner – AFARM Since beneficiary selection was undertaken independently for each programme, the selection of more than one

beneficiary from a single household was probable. Also, there have been instances where a single beneficiary received multiple support for the intervention.

Qualitative sampling methodology

Qualitative tools of In-depth Interviews (IDI) and Focus group discussions (FGD) 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, the 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 at the start of the program.

The sample size covered during the field is as follows:

Table 3: Quantitative sample covered

District	Total Households	NRM	Skill Training and Livelihood Enhancement	Health and Sanitation	Promotion of Education
Satara (Total)	423	207	376	408	134
Planned	400	200	100	100	100

Table 4: Qualitative sample covered

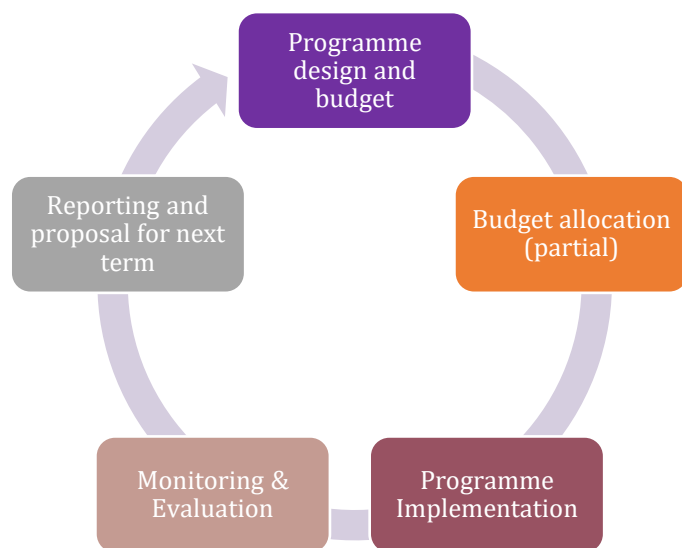
District		Nashik
FGDs	Desiltation of existing water harvesting structures	2
	SHG enterprise	3
	Continuous contour trenches, water user group	2
	Health awareness input session, installation of RO filter	2
	VCD	1
IDIs	School teacher	1
	Micro-enterprise	4
	Livestock beneficiary	2
	Fodder plot demonstration beneficiary	1
	Sarpanch	1
	Parivartak	1

A team of local enumerators, with requisite education and experience, was hired for data collection. One day of training at Satara, Maharashtra was provided to the enumerators and supervisors by the NRMC team.

3. Program review

3.1 Program design and implementation

Figure 3 : Project Planning and implementation process



The programme interventions are decided on an annual basis, with an annual budget allocation based on the proposal by AFARM to HDFC Bank.

Based on preliminary assessments, the partner organization prepared an annual work plan wherein activities were proposed on a need basis. While this approach has helped in providing support for the immediate need of the communities, a systematic approach to resolving issues around such needs and a long-term vision and outcomes towards the thematic areas for HRDP remain desirable.

Based on the observation in the field, budget allocation was largely provided for infrastructure and material support along

with skill training and livelihood, whereas behavioral interventions were very limited in Maharashtra.

3.2 Program relevance

The rural population in Maharashtra is predominantly dependent on agriculture and allied activities for their livelihoods and a significant proportion of them are at a subsistence level of income and livelihoods. Intervention villages have been facing the issues of water scarcity since 2015. The state government has made substantial efforts toward water management for agriculture through the construction of the canal. Even though most rainfall occurs in the months from June to September, the region faces an acute shortage of water owing to a lack of infrastructure to support water storage and management. This often leads to low cultivation and crops and decreased productivity. It was difficult for the farmers to cultivate the rabi crops due to water scarcity in the region. In this background, the interventions were designed around creating infrastructure to support water management and storage for agricultural purposes. Desiltation of existing water harvesting structures, construction of continuous contour trenches, and deepening and widening of nallas have altered the picture of water scarce region in Phaltan taluka, Satara. The intervention villages are spread across a geographical area of 7243 hectares, with a total of 2853 households and a population of 12765 across 8 villages selected under the intervention.

Under HRDP intervention for NRM, activities such as crop diversification, exposure visits, on-field demonstration of fodder cultivation, and organizing farmers' resilience camp were promoted. The promotion of crop diversification and cultivation of horticultural crops has an impact on income, especially for smallholder farmers who possess smaller parcels of land.

The programme has focused on the creation of livelihood opportunities for the economically backward section of society. Under the intervention, micro-enterprises such as welding shops, boutique/tailoring shops, and livestock rearing were introduced to create an additional source of income. The HDFC Bank project has worked towards women's empowerment by strengthening the self-help groups in the intervention villages. SHGs were supported in the development of micro-

enterprise such as the establishment of oil mills, masala-making machines, and manufacturing of droan/patravali which are disposable items, etc. This was done to improve the financial situation of women and improve their confidence. For the smooth functioning of enterprises, training was done for the members, and they were encouraged to promote savings, internal lending, and loan repayment.

While Maharashtra is today one of the most affluent states in India in terms of its per capita income, it continues to have high levels of poverty and inequality which gets reflected in the health outcomes of the state. Maharashtra's performance in the health and sanitation sector is average even though it is the most urbanized and the largest state economy in India. Deaths due to malnutrition, low levels of access to various healthcare services, and lack of sanitation and hygiene practices are some of the reasons why the state is still struggling to achieve the desired health outcomes.² Although Maharashtra is the largest state economy, and second most populous, the performance of the health sector is average. The public health system is deficient in terms of spread and the number of hospitals close to the community. The systemic vulnerability due to a massive shortfall in specialists has become evident with the spread of coronavirus disease.³

In rural areas of Maharashtra, there is still a lack of awareness of the importance of health and many myths related to menstruation and menstrual hygiene practices. It is the need of the hour to dispel them and help rural communities in understanding the importance of timely diagnosis and treatment of diseases which can be ensured by frequent health checkups. Menstrual health needs go unmet due to poverty, gender inequality, and cultural taboos. It is very critical that women be educated regarding good menstrual and personal hygiene as many women continue to use cloth and old rags which can cause allergies, bacterial or fungal infections and urinary tract infections. Under the intervention, a health camp, and community awareness drive were organized and RO units were set up for the rural community to access safe and clean drinking water, thus avoiding water-related diseases.

As per the ASER report 2018, although learning outcomes in the state of Maharashtra have seen substantial improvement in the last few years, the state has not been able to match its performance from a decade ago. In Maharashtra, drop-out rates show a slightly decreasing trend at the upper primary and secondary levels but vary at the primary level. Compared to primary and upper primary, drop-out rates are high at the secondary level. If we look at the gender-wise distribution, drop-out rates are higher among girls as compared to boys. The intervention under HRDP in promoting education aligns with the central and state government's objective to provide quality education to marginalized sections of society. HDRP is working on promoting quality education through infrastructure development such as the construction of separate toilets for girls and boys, the installation of digital screens and projectors, school repair work, and educational paintings. The program also focused on improving learning outcomes by adopting innovative learning techniques that can improve the grasping power of students and creation of a more joyful environment for learning.

² <https://www.cehat.org/go/uploads/Hhr/hhcm.pdf>

³ <https://www.adb.org/sites/default/files/publication/783876/sawp-091-assessment-maharashtra-state-health-system.pdf>

4. Study Findings

4.1 Demographic profile

This section provides the demographic profile of the respondents covered in the sampled program villages under the assessment. In the sample villages, 60% are male, whereas 40% are female. In terms of the education status of the respondents, about 31% have completed secondary education. The majority of the sample respondents belong to the general category in the intervention villages. About 83% of the sample population reported cultivation as their major source of income.

Figure 4: Age group of respondents (n=423)

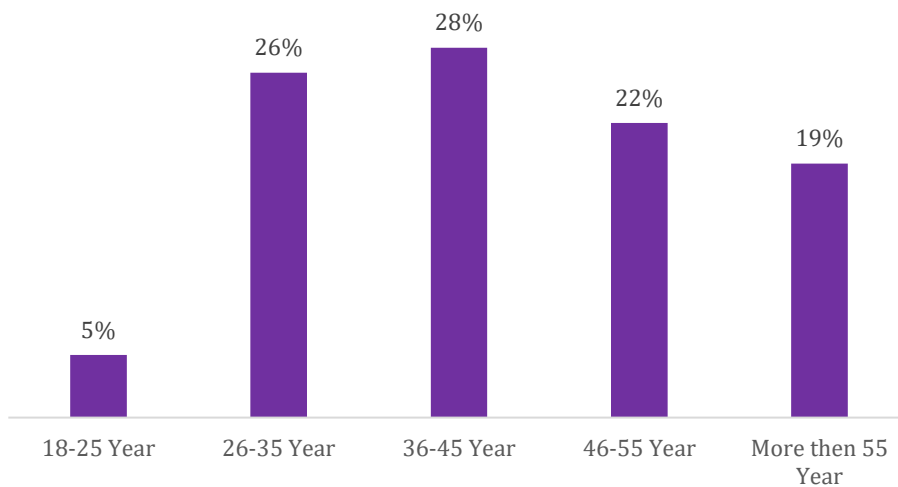
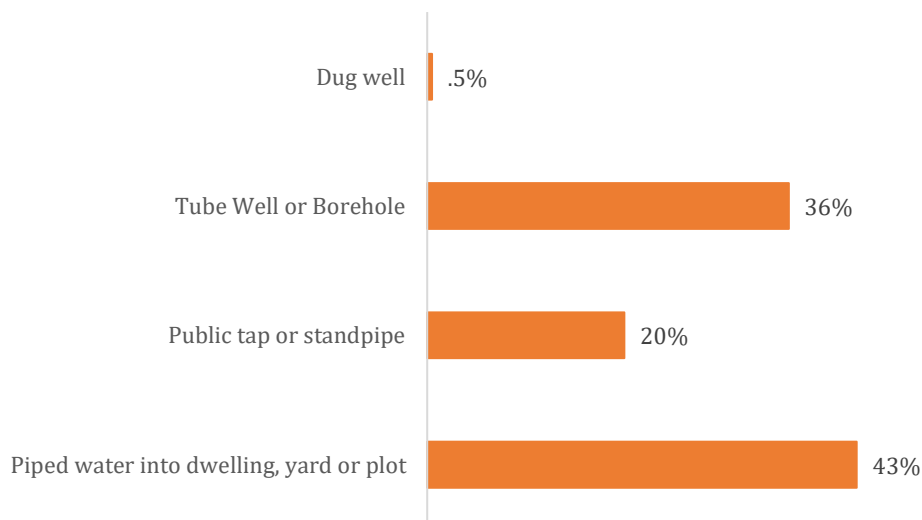


Figure 5: Source of drinking water (n=423)



4.2 Natural resource management

In the Satara district of Maharashtra, 88% of the farmers have landholding below 2 hectares (marginal and small farmers) but hold only about 54% of the total landholding of the district. However, about 3% of medium and large farmers (4 and above) have about 19% of the total land and the remaining is with semi-medium farmers.⁴

Natural Resource Management is one of the most important pillars of HRDP. The interventions in this pillar were designed and implemented keeping in view the needs of the community as well as suitability to the geography. The programme continued for three years from 2018 to 2021 and comprised of interventions under various activities such as setting up of continuous contour trenches, desiltation of existing water existing structures, water management in agriculture (irrigation) by setting up of drip and sprinkler irrigation units, nalla deepening and widening, water budgeting exercise with the community, organizing farmers camp on climate resilience and organizing awareness drive. Since the focused region is drought-prone, intervention in NRM is expected to ease the water-related issues for both household and agricultural purposes.

Table 5: Activities under Natural resource management

Activity Category	Activities
Irrigation management	Support for drip and sprinkler units
Water management	Continuous contour trenches, desiltation of existing water harvesting structures, water budgeting exercise with community, nalla deepening and widening
Farm management	Farmers camp on climate resilience
Awareness generation	Organize mela, organizing community awareness drive

Thematic area-wise number of beneficiaries covered during the study is given in the methodology and sampling section. Further, the relevance, effectiveness, and sustainability of activities under Natural Resource Management will be discussed in detail.

4.2.1 Effectiveness and Impact

The interventions by HRDP have resulted in achieving low to high impacts across different output indicators under the project intervention in project clusters of Maharashtra. In summary, the following indicator boxes show in which outcome indicators the programme has performed well. While the overall access to water for agriculture improved significantly, the average increase in income from crops has had a high impact.

⁴ <https://kvksatara2.icar.gov.in/df.pdf>

Figure 6: An overview of project effectiveness and impact in Natural resource management (based on quantitative study)

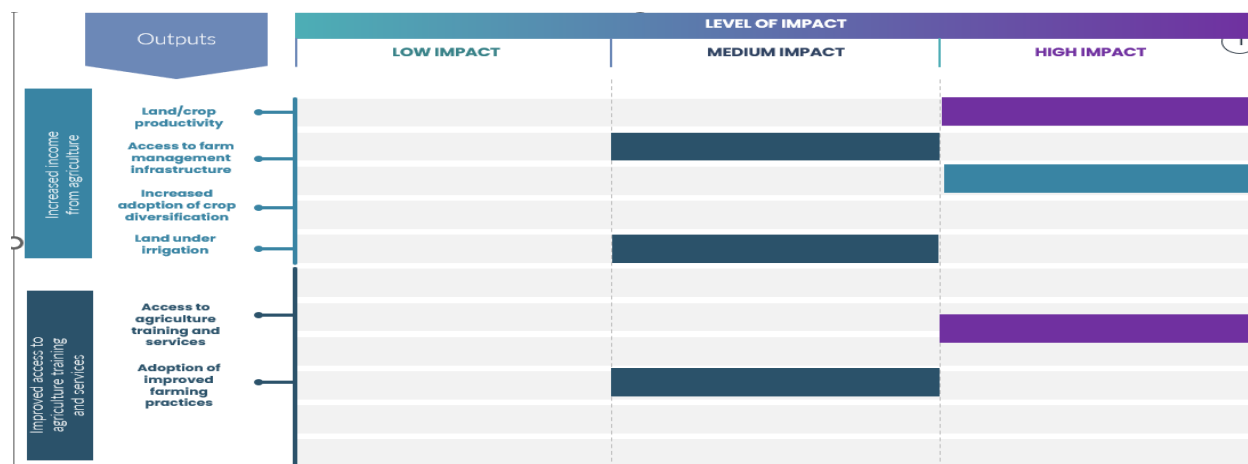


Image 1: Desiltation of existing water harvesting structures, Bibi village, Satara



Water management for agriculture

Field-level qualitative findings have ascertained that the desiltation of existing water harvesting structures has helped in increasing the water availability in the villages under HRDP intervention. As the project area was drought-prone since the year 2015, farmers were not able to cultivate rabi crops due to the unavailability of water. **With the desiltation of existing water harvesting structures and interventions such as the deepening and widening of nallas, water is now perennially available in the villages.** Farmers have been able to adopt the practice of mixed farming, wherein after the intervention they have started cultivating onion,

soybean, gram, wheat, bajra, maize and horticultural crops like pomegranate, guavas and mango along with the sugarcane crop. Further, due to the percolation of rainwater, the groundwater level has increased and has led to good recharge and increased percolation, as per the qualitative study.

On the aspect of the level of satisfaction, 50% of the respondents stated that they were fully satisfied with it since the quality of infrastructure is really good and there has been no damage. When asked about the support provided for the installation of drip and sprinkler irrigation units, 100% and 80% of the beneficiaries reported that they are fully satisfied with the infrastructure quality respectively. Beneficiaries stated that after the installation of the drip unit, water use efficiency

Image 2: Drip irrigation unit, Tardaf Village, Satara



has improved and there has been substantial improvement in the productivity of crops. **Post-intervention, fertilizer efficiency has also improved as farmers have adopted the method of**

fertigation. Under the intervention, continuous contour trenches were set up, which has helped in the prevention of soil loss, increase in the percolation rate, increase groundwater level and helped in keeping the soil moisture intact that ensures water availability in the summer months, according to the qualitative findings.

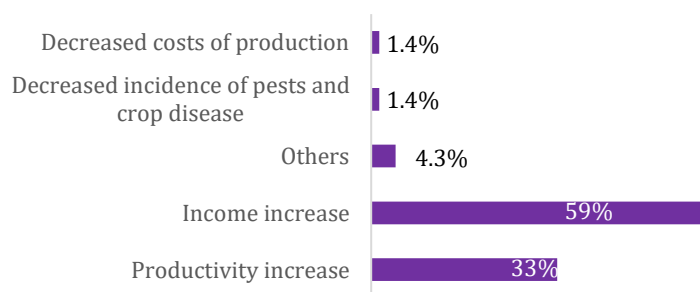
Increase in income from agriculture

Interventions such as water management in agriculture, installation of drip and sprinkler units for irrigation, soil testing, adoption of crop diversification and horticultural crops, installation of vermi compost pits, and reduction in input cost have led to increased income from agriculture. Owing to the agricultural intervention and increased availability of water under the HRDP project, 97% of the respondents stated that there was an increase in annual income. **Before the intervention, the average net income from agriculture was Rs 85,000 (Rs. 1,08,153 when based on mean) which increased to 1,05,000 after intervention (Rs. 1,30,839 mean) which is an increase of around 24%.** On performing the one-sample t-test, as the significance value is greater than 0.05, it can be concluded that net income has not significantly increased as compared to the baseline median value. ($p > 0.05$ at 95% confidence interval). Of all the respondents, 93% reported an increase in income due to various agricultural interventions. When asked about the reasons for the increase in income, the percentage of respondents who ascribed it to various HDFC Bank interventions were - seeds and tools (34%), irrigation (41%), soil testing and land treatment (43%), whereas 2% reported that income increase is due to HDFC Bank intervention in desiltation of existing water harvesting structures. **The gross income before the intervention was Rs. 1,20,000 (Rs. 1,41,512 mean) which increased to Rs. 1,50,000 after the intervention (Rs. 1,73,678 mean) Which is an increase of 25%.** On performing the one-sample t-test, as the significance value is greater than 0.05, it can be concluded that income has not significantly increased as compared to the baseline median value. ($p > 0.05$ at 95% confidence interval)

Adoption of horticulture and crop diversification

Of the sample respondents, 35% stated that they have diversified their crops after the intervention.

Figure 7: Perceived benefits of crop diversification (n=69)



Across the project clusters, the farmers diversified agriculture practices into the production of diverse agricultural crops. Most of the respondents, diversified to the production of wheat (27%), followed by Bajra (19%), Maize and gram (17.5%), Arhar (11%), Moong and Urda (9.5%), Linseed and mustard (7.9%), soybean (6.3%), Groundnut (3.2%) and garlic, chilli, custard apple (1.6%). Very few respondents, i.e., 8.7% of

them, did not diversify their cropping pattern at all. Of the sample respondents, 86% of beneficiaries stated that they are fully satisfied with the crop diversification intervention.

The qualitative findings indicate that there has been an overall increase in income. Other than increasing income from horticulture, many of the farmers have obtained alternate sources of income as well.

Beneficiaries either started growing crops or expanded their area under high horticultural crops like guava, pomegranate, and custard apple. Respondents highlighted that the quality of produce has been

good owing to the technical information provided under the project. As per the field-level findings, cultivation of horticultural crops has enabled farmers to grow high-value crops, and nutrition at the household level has improved as well due to the increased consumption of fruits in the region. Of all the respondents, post-intervention 20% of the beneficiaries reported guava cultivation, pomegranate (40%), custard apple (60%) and others (20%). When asked about the benefits of adopting horticulture, 20% reported an increase in income.

4.2.2 Case Study 1: Rejuvenation of water bodies by deepening of Nallas

Image 3: Nalla deepening, Dhawal village, Satara



Dhawal village is located in Phaltan taluka of Satara district. While the village is mostly inhabited by people belonging to nomadic tribes and other backward class, a small share of the population belongs to schedule caste category. Agriculture is the mainstay of most of the population in the village. Majority of the farmers in the village are small and marginal holders. About 90 percent of the farmers own land and around 10 percent of the population is landless. Migration is not rampant in the village. Between 2012-2014, Dhawal village was constantly confronted with dry spells. The dry spells have endured for long period of two years and has influenced harvest and profitability significantly throughout the village. With the construction of canals under the state government program, farmers were quite relieved; however, the issue of water scarcity persisted even after 2015. Although water situation started changing, farmers were still not able to cultivate rabi season crops as water was not available perennially. Under the intervention, silt was removed from existing water harvesting structures and deepening of the bed of nala was done.

The deepening of nala under HRDP interventions for *Natural Resource Management* have led to increased groundwater percolation, well recharge and increased water availability in the summer months. They have been instrumental in improving the capacity of water bodies and now village has sufficient water throughout the year for agriculture purpose. Deepening and widening of nalas has altered the water scarce situation of the village. Before the intervention, village used to face the issue of water scarcity just after the two months of rainfall which adversely affected their income and crop productivity. Due to deepening of nalas, water is available all-around year which has not only improved crop productivity, but also created livestock rearing and sericulture as additional source of income. The water availability for village has improved by 60 percent, as per respondents.

Image 4: FGD with farmers on nalla deepening



Prior to the HRDP intervention, farmers in the village used to cultivate jowar, bajra, and vegetables along with sugarcane and vegetable crops. Due to improved water availability, sugarcane productivity has increased and therefore farmers have started cultivating sugarcane on the larger area of land along with vegetable crops (lady finger, tomato, chilli, onion, garlic) and fodder crops like maize. Due to this, the overall agricultural production has increased by 30% and their agricultural income has increased 1.5 times. **As the farmers have started growing fodder crops due to increased water availability, this has led to the strengthening of**

livestock rearing as an additional source of income. With the improved fodder production on their own land, farmers' expenditure on fodder has reduced by 20%.

Other than its direct impact on agriculture, Nala deepening also led to well-recharge and positively impacted the availability of drinking water. Now, the wells have water throughout the year which used to run dry in the summer months. From better water management, farmers benefitted from the installation of drip units under the HDFC Bank project.

Increased water availability has led to a decrease in the area under vegetable crops as farmers have increased the land area under sugarcane cultivation. This can be mainly attributed to increased water availability.

Beneficiaries in the village stated that nalla deepening work under HRDP intervention is of superior quality. This substantially improved the water availability in the region. The entire process was carried on with equal participation of villagers and transparency was maintained. They further indicated their willingness to take up more nalla-deepening activities in the future. Overall beneficiaries were satisfied with the quality of support provided under the intervention.

4.3 Skill Training and Livelihood Enhancement

In the project area, a significant proportion of the population depends on agriculture for their livelihood. This sector has been the single largest provider of employment to the rural people in the block. Animal husbandry is the next largest provider of livelihood to the farmers in the area and has been helping them to reduce pressure on crop production. Apart from that, wage labour contributes to the bulk of the livelihood of poor and vulnerable households, especially for the small farmers and landless who are mostly unemployed or underemployed. The HDFC Bank Parivartan project focused on skill development and livelihoods in the 8 villages of Phaltan block, especially for the sections in the area that belong to traditionally marginalised social and occupational groups.

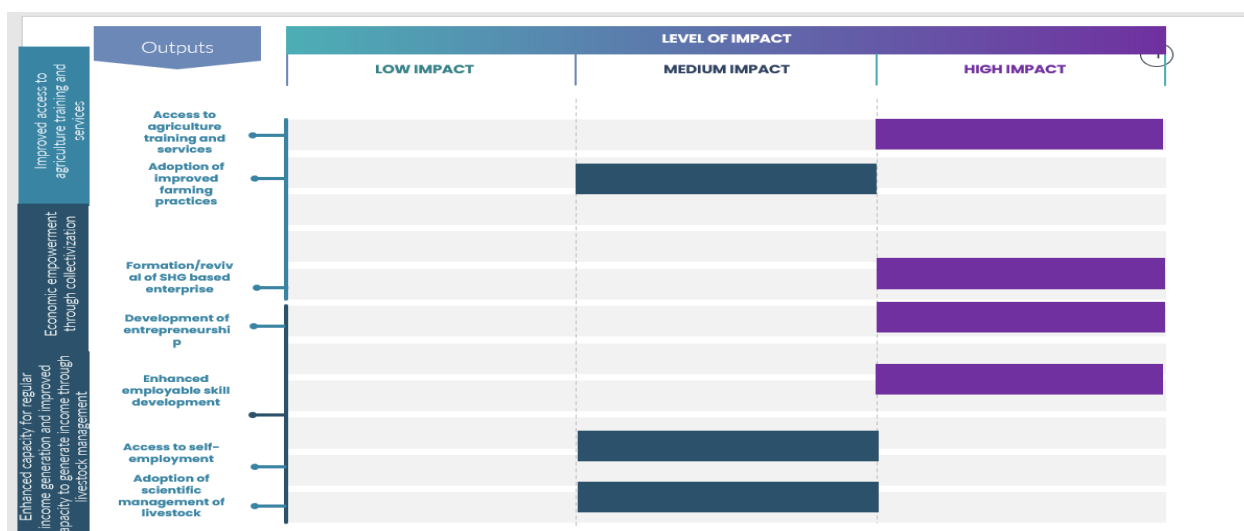
Table 6: Activities under skill training and livelihood enhancement

Activity Category	Activities
SHG-Based Women Empowerment	Strengthening of SHG
Agriculture Training and Support	Training on agricultural practices, support for farmers association group, fodder plots demonstration, construction of vermicompost pits, VDC training, training to Parivartak
Livestock Management	Livestock rearing (goatery, poultry)
Entrepreneurship Development	Promotion of enterprises such as welding shops, tire puncture, and pottery business

The activity-wise number of beneficiaries covered during the study is given in the methodology and sampling section. Further, the relevance, effectiveness, and sustainability of activities under skill training and livelihood enhancement will be discussed in detail.

4.3.1 Effectiveness and Impact

Figure 8: An overview of project effectiveness and impact and skill training and livelihood enhancement (based on quantitative study)



Agriculture training and support

As per the quantitative survey in the project area, of the respondents, 80% received support/ training on agricultural activities under the HRDP intervention. The awareness about sustainable farming

practices among the respondents was- the application of organic manure (37%), construction of vermicompost pits (41%), Azolla unit (16%), timely application of fertilizers and insecticides (18%), conservation of agricultural practices (12%), crop diversification (30%) and mixed cropping (4%)

Figure 9: Respondents practicing skills learnt through HDFC Bank intervention (n=76)

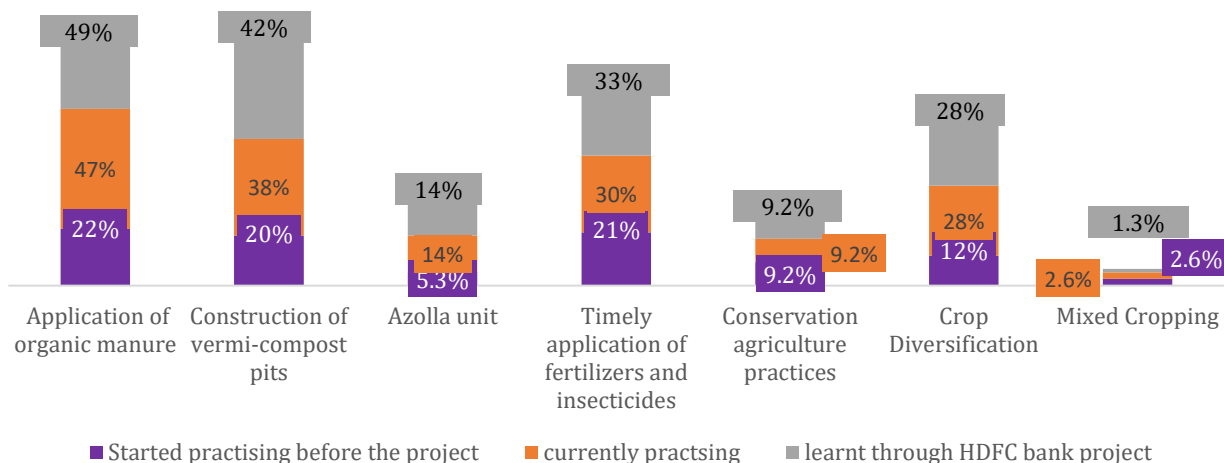
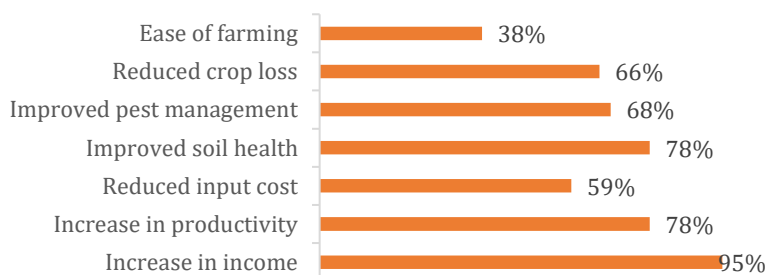


Figure 10: Perceived improvements due to the adoption of agricultural practices (n=76)



About 71% of the respondents reported that the training gave them the confidence to establish their own enterprise whereas 97% of respondents that the intervention has improved their capacity to take up new methods of farming or livestock management. Under the intervention, training was conducted on-farm techniques, demonstration plots,

and farm field schools, and exposure visits were held. Along with this, the qualitative study indicates that the farmers were trained in manufacturing natural fertilizers like jeevamrut and dashparni ark. Of the respondents, 76% said that they found the training useful. When asked the reason why they found it useful 80% responded that it helped in cost reduction, 88% said it helped in improving awareness about sustainable agriculture practices, 84% said that it improved the capacity to increase productivity, whereas 67% said that it helped reduce crop loss/diseases. As per the qualitative findings, an exposure visit was organized for a group of farmers (around 50) to the National Research Centre for onion and garlic, Pune, Hiware Bazar and Ralegan Siddhi in order to improve the adoption of sustainable practices.

Image 5: Napier fodder plot demonstration, Shirechiwadi village, Satara



Qualitative findings report that CO-4, which is a hybrid variety of Napier grass and bajra was provided to the beneficiaries under the intervention. This resulted in increased income for the beneficiary, reduction in input cost, and increased water use efficiency.

Of all the sample respondents, 90% of the beneficiaries reported increased use of natural fertilizers after the project intervention. The training was provided under the intervention on the preparation and use of vermicompost, dashparni ark, lamitarark and neem ark. When asked how the use of natural fertilizers has helped them, the response was decreased use of chemical fertilizers (72%), decreased use of pesticides (69 %), decreased need for water (76%), improved production (84%), improved productivity (78%), improved quality of produce (80%), and decreased cost of production (63%).

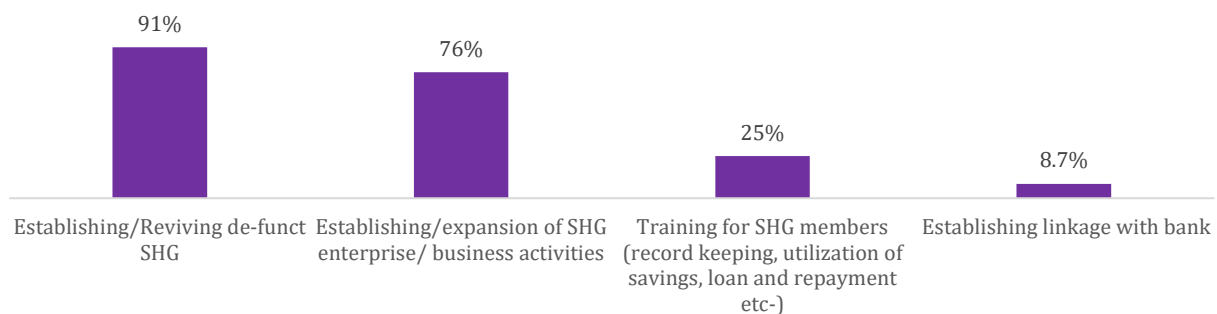
Economic empowerment through collectivization

In the project area, there were a number of informal groups formed by women for addressing their routine credit needs for consumption purposes before the project with HDFC Bank commenced. Though these were formed to function with a broad objective of cooperation and mutual trust, many of the groups had become defunct. Because most of these groups were not linked to the banks, the institutional credit facility was available to the poor women in the group when they needed it. **During the HDFC Bank project, AFARM started promoting new self-help groups (around 30) as well as strengthening the old ones (around 10). It also helped in providing support to the SHGs in opening bank accounts by providing training to the members as most of the bank accounts were defunct.** Further, various enterprise support options were provided to SHG members such as livestock rearing, oil mill unit establishment, masala-making enterprise, and tailoring/ boutique shop under the intervention.

Image 6: Oil mill unit- SHG group enterprise, Thakurki

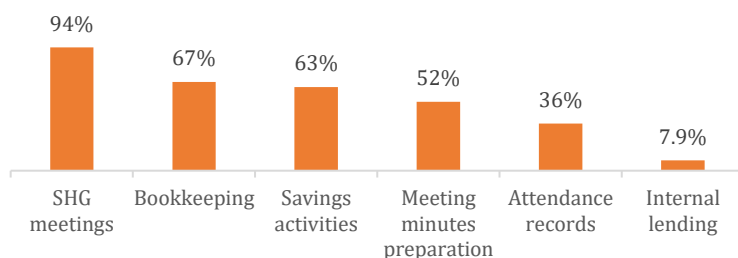


Figure 11: Support services for SHG (n=127)



The effort of AFARM as a part of the project has been to provide better skills, abilities, and functional capacities among the poor and marginalized members of the SHGs in the area of employment and income-generating activities. About 82% of the SHG members reported income generation as one of the key benefits of being an SHG member. Besides this, having personal savings (87%), an increase in confidence (83%) and getting a loan with less interest amount (40%) were other benefits reported by the members of SHG.

Figure 12: Proportion of respondents who feel that the activities are undertaken regularly (n=126)



The project endeavour was to imbibe savings habits in the SHG members. The SHG groups were further mobilized to start their

own enterprises thus economically empowering the women and working on their financial and social inclusion. The project helped in getting access to collateral-free loans which further strengthened the functioning of the group. With the training received under the intervention, the credit absorption capacity of individual members improved substantially according to the qualitative findings.

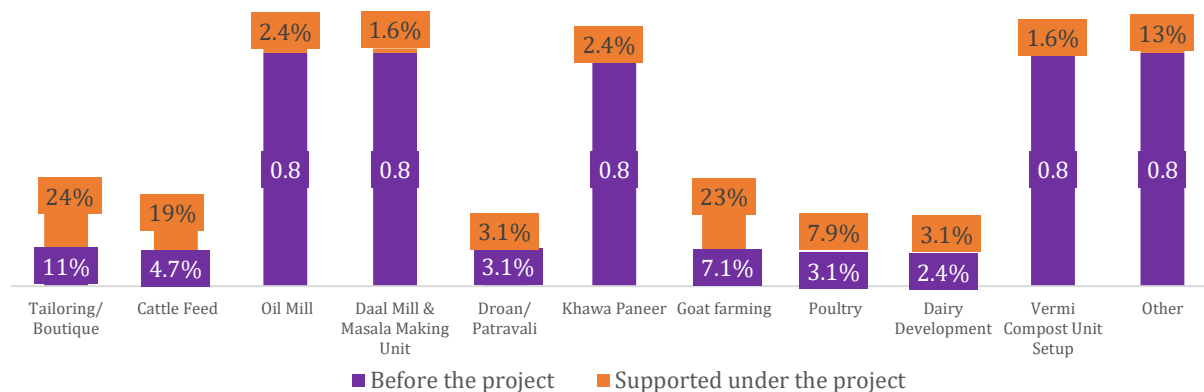
Image 7: Masala making unit, Shirechiwadi village, Satara



The work on providing enterprise support to the women was to achieve financial independence for women and improve their confidence to expand the enterprise. According to the qualitative findings, an oil mill unit was established for the SHG group (Jijau Mahila Gat) wherein each member of the group (total 10 members) contributed Rs. 6500 and an equal amount of Rs. 32,500 was contributed under the intervention by the implementing partner.

Of all the respondents, 85% reported that the project intervention helped their SHG in savings whereas, 70% stated that they benefitted in bookkeeping, 31% benefitted in raw material procurement, 32% stated that it helped in improved borrowing and repayment habits of members, 35% stated that it helped in marketing of produce, whereas 27% of the members benefitted from bank linkages. During the project, on average beneficiaries reported that they attended four meetings and about 69% find the training useful. When asked the reason why they find the training useful, 75% of the beneficiaries reported improved awareness, and 25% stated that training provided them with improved skills to manage enterprises. As a result of setting up their own enterprise, 75% of the respondents stated improved confidence level, 19% benefitted as losses in income are reduced considerably, and 28% benefitted by increasing income from the enterprise.

Figure 13: Proportion of SHG members involved in different enterprises before the project and supported under HDFC Bank project (n=96)



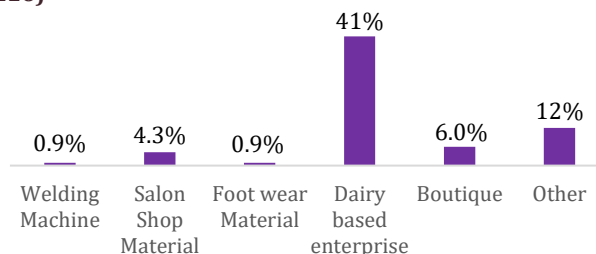
About 99% of the respondents stated that their SHG is currently active. SHG groups in the project still follow the method of internal lending, wherein members of the group can borrow money at a 3% interest rate. Members attend monthly meetings and save anything ranging from Rs. 100-200 a month (varying for groups). Once the group achieves sufficient collection, the loaning mechanism begins. Most of the groups created (or revived) under the HDFC Bank project have around Rs. 70000 to Rs. 100000 of savings. **The average monthly income before the intervention from SHG was**

Rs. 800 (Rs 1,232 mean) which increased to Rs. 2000 (Rs. 2,769 mean) which is a 150% change.⁵

Skill and entrepreneurship development

The HDFC Bank project interventions focused on setting up micro-enterprises such as pottery shops, welding shops, boutique/ tailoring shops, dairy-based enterprises, salon shops etc. Setting up micro-enterprises resulted in the economic empowerment of the section of society who used to work as agricultural wage labourers or wage labourers before the intervention.

Figure 14: Respondents currently involved in enterprises (n=116)



Of all the respondents 27% of the households received benefits on skill training/ entrepreneurship development. 98% of the respondents stated that the key benefit of the training received was skill development for self-employment. 42% of the respondents stated improved confidence to apply for jobs, 38% reported increased awareness regarding job opportunities, 35% stated confidence to establish enterprise whereas skill training helped 20% of all the respondents in getting a job. Around 83% of the respondents reported an increase in income due to skill training and entrepreneurship development support provided under the intervention.

Findings from the qualitative study report that most of the respondents were satisfied with the quality of support received. The intervention has improved the income of the beneficiaries which has led to several other benefits such as saving time (due to the shift from manual to automatic machines provided under the intervention), better health treatment for families and better education for children. The enterprise development has created an additional source of livelihood for the beneficiaries as they now earn an extra source of income besides working as agricultural labour or livestock rearing. However, at times constant maintenance and quality of the machine such as pottery or welding machine can prove to be a bottleneck.

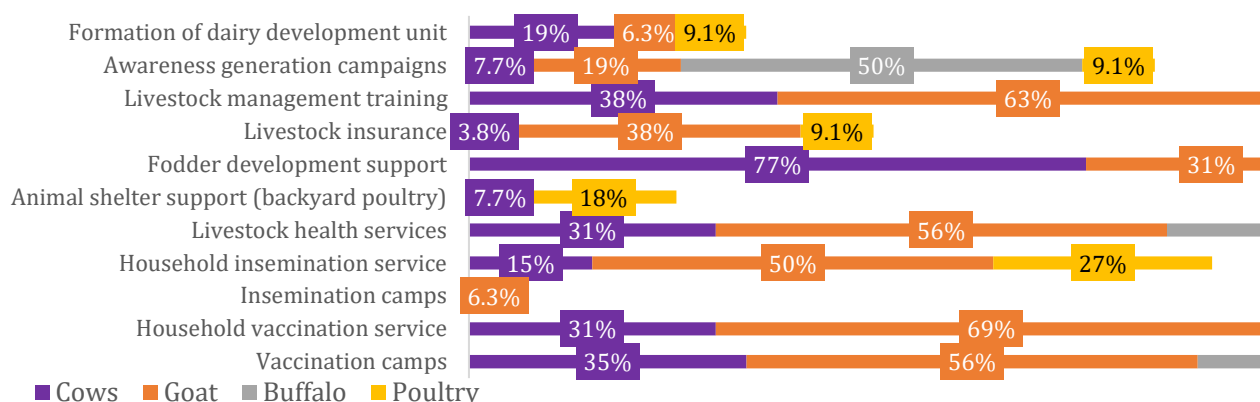
When asked about the benefits gained through the project support in enterprise development, 65% reported regular income generation, 40% stated starting a new business activity, about 80% of the respondents reported an increase in income, 34% stated an increase in savings, 40% reported an increase in savings and 28% of them stated the creation of an additional source of income. **The proportionate change in income due to enterprise development support under the HDFC Bank project is 40%. The average monthly income before the intervention from the enterprise was Rs. 2,000 (Rs. 4,638 mean) which increased to Rs. 2,800 (Rs. 5,962 mean) after the project intervention.** On performing the one-sample t-test, as the significance value is less than 0.05, it can be concluded that income has significantly increased as compared to the baseline median value (p<0.05 at 95% confidence interval).

Livestock Management

Of all the respondents, 88% reported receiving benefits from livestock management under the HDFC Bank project. Livestock for which support was received included cow, buffalo, goat and poultry.

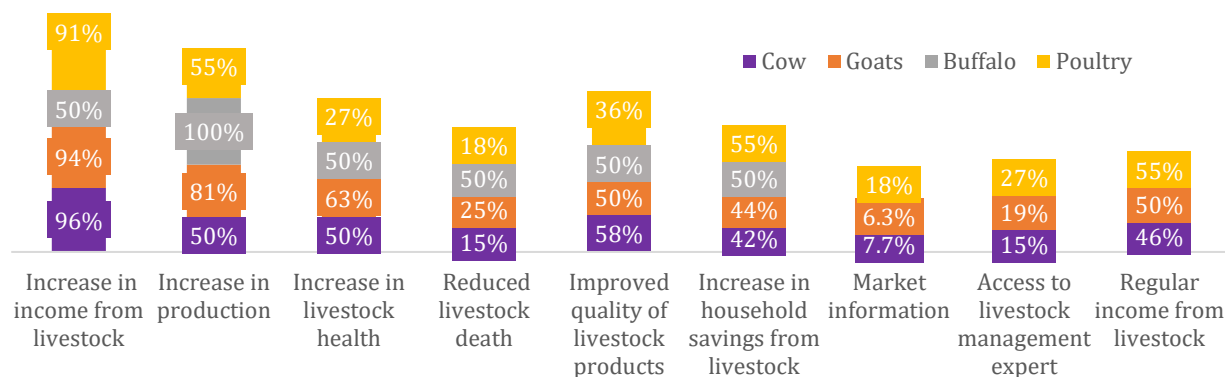
⁵ On performing the one-sample t-test, as the significance value is less than 0.05, it can be concluded that income has significantly increased as compared to the baseline median value. (p<0.05 at 95% confidence interval).

Figure 15: Livestock based interventions (n=53)



The intervention included providing support for the formation of a dairy development unit, conducting awareness generation campaigns, livestock management training, assisting the beneficiaries in availing livestock insurance service provided by the state government, support for fodder development such as Napier grass, providing animal shelter, livestock health services, household insemination services, organizing insemination and vaccination camps.

Figure 16: Perceived benefits of livestock management (n=116)



when asked about the types of livestock the beneficiaries have after the intervention, the response was - cows (48%), goats (31%), poultry (19%) and buffalo (3.8%). Of all the respondents, 96% reported an increase in income due to livestock management. **Before the project the monthly average income of the beneficiary from livestock was Rs. 1,000 (Rs. 1,849 mean), which increased to Rs. 2,400 (Rs. 3,719 mean) after the project intervention. Thus, the proportionate change in income due to livestock management intervention is 140%. On performing the one-sample t-test, as the significance value is less than 0.05, it can be concluded that income has significantly increased as compared to the baseline median value (p<0.05 at 95% confidence interval).** According to qualitative findings, the beneficiary and HDFC Bank both contributed to availing the livestock services. On average, fodder for livestock was given to the beneficiary twice a year (for poultry, in the month of February and April). Services and support provided under livestock intervention were satisfactory, however, beneficiaries during the qualitative study reported that they faced several difficulties during the pandemic times due to restrictions imposed as accessibility to markets was a major challenge. While most respondents during the qualitative study said that they had benefitted from an increase in income, they felt that the programme could have focused on follow-up services to ensure the sustainability of the intervention.

4.3.2 Case Study 2: Tailoring/boutique shop

Image 8: Boutique shop, Mirechiwadi village



Sonali Jadhav is a 28-year-old woman from Mirechiwadi village of Phaltan block in Satara. Her household has five members and is headed by her husband Bhausav Jadhav. While her husband is a farmer, she owns a boutique shop. The other three members of her family which include children and parents, are dependents. Sonali Jadhav belongs to the Maratha caste.

Under the HRDP, Sonali received assistance for setting up of tailoring/ boutique shop as a part of the intervention for *Skill Development and Livelihood*. While she received an amount of Rs. 10,000 under the intervention through the market committee, she contributed an amount of Rs. 5,000 to set up the boutique shop. Under the intervention, the implementing partner assisted the beneficiary by giving her an electrical stitching machine in the year 2020.

Sonali had prior experience in blouse stitching as she was involved in the same activity in the past. However, she was not able to scale-up the business as earlier she used to perform the activity with the help of manual stitching machine. Hence, she did not require any additional training. Before the intervention, she earned on an average Rs. 500-600 per month, as her customer base and infrastructure support was inadequate. Prior to the intervention, she had set up her stitching unit at her home. Under the HDFC Bank project, Sonali started experimenting on new designs that enabled her to increase the customer base and also increase her income to Rs. 1000-1500 per month. In case of festive season, on an average her income sees a rise of another Rs. 500-600 per month.

Sonali quoted *“Other women in my village are encouraged to start their own business and achieve financial independence as it boost their confidence and self worth”*.

The improved business and income, empowered her to set up her own boutique. Setting up her boutique resulted in attracting customers from the neighbouring villages. Due to increased business, she has started procuring stitching material in bulk from the shops in Phaltan taluka. Earlier, small tailors from the village Mirechiwadi and neighbouring villages had to travel to Phaltan frequently to procure stitching material as and when required. Now they can easily access these materials from Sonali’s boutique. This has saved them from a lot of inconvenience and the cost of transportation has reduced considerably. Sonali sells the material at the same cost she procures from the Phaltan market plus the transportation cost. She ensured that she would not sell any material at a higher cost than procured as she feels that it is her moral obligation to help women in villages become financially empowered.

Sonali has now gained a loyal customer base not only from her own village but also the neighbouring ones. Customers are now appreciating her for the quality and finishing of the stitched material. Further, she commented that the HRDP intervention provided her with a stable source of income because of which

4.4 Health and Sanitation

Health and sanitation are essential components contributing to rural development. In the programme villages, diverse interventions for improving health and sanitation were carried out. The time period during which the project interventions took place is 2018-2021. Mapping of the villages was done in the initial phase which was later followed by the execution of the programme. During the designing of the project, it was observed that villagers do not have access to clean drinking water and there was less awareness with regard to the health and sanitation practices that need to be followed. The intervention focused on creating awareness by organizing health camps for villagers and setting up RO units.

Image 9: Activities under health and sanitation

Activity Category	Activities
Health	Health camps, installation of RO filter
Sanitation	Conducting community household awareness session

The activity-wise number of beneficiaries covered during the study is given in the methodology and sampling section. Further, relevance, effectiveness, and sustainability for activities under health and sanitation are discussed in detail.

4.4.1 Effectiveness and Impact

Under HRDP, efforts were undertaken to advocate for the importance of sanitation and hygiene practices so that the early diagnosis of diseases and the incidence of undernutrition among women and children or infectious diseases could be avoided. The health and sanitation interventions in the project area aim to improve health-seeking behavior among disadvantaged sections of the community.

Figure 17: An overview of project effectiveness and impact on health and sanitation (based on quantitative study)

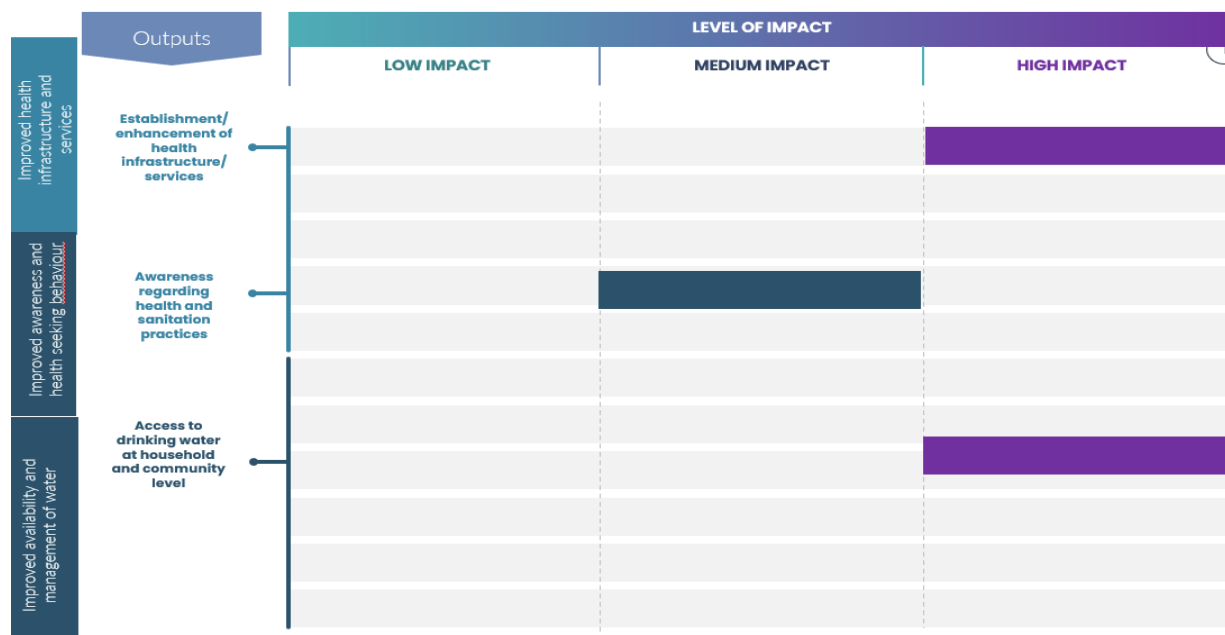


Table 7: Installation of RO unit, Mirechiwadi village, Satara



Improved health infrastructure and services

Under the intervention, RO purifier units were established in the villages. A qualitative study indicates that before the project intervention, villagers did not have access to clean drinking water (as only saline water was available for drinking). Due to this, they used to suffer from several diseases like kidney stones and joint pain. **After the intervention, villagers have access to clean drinking water which has considerably reduced the occurrence of diseases.**

On average, one RO unit was established in each village. Qualitative findings report that accessibility to clean drinking water post-intervention substantially improved the health of the villagers. For the installation of the unit, on average, the community contributed Rs. 40,000-50,000 whereas HDFC Bank's contribution was Rs. 1,50,000-1,60,000 on average per village. The repair and maintenance of the RO unit require an average expenditure of Rs. 1000-1500 per year per village. Even

the neighbouring villagers have been benefitting from the purified RO water, wherein the key benefits were improvement in health and prevention of diseases. These RO units were installed in the intervention year 2020. While most respondents said during the qualitative study that they had benefitted from the installation of a water purifier unit, they felt that the programme could have focused on some of the bottlenecks such as erratic electricity supply which disrupts the water purifying process, frequent leakages or bursting of the pipeline. This disrupts the regular supply of water for the villagers.

Through the project interventions, there is a considerable improvement with regard to a better understanding of the health issues in the villages. Beneficiaries reported that the information given through health camps and community awareness generation sessions helped villagers by improving awareness of health practices and improved confidence to openly discuss the health issues they faced.

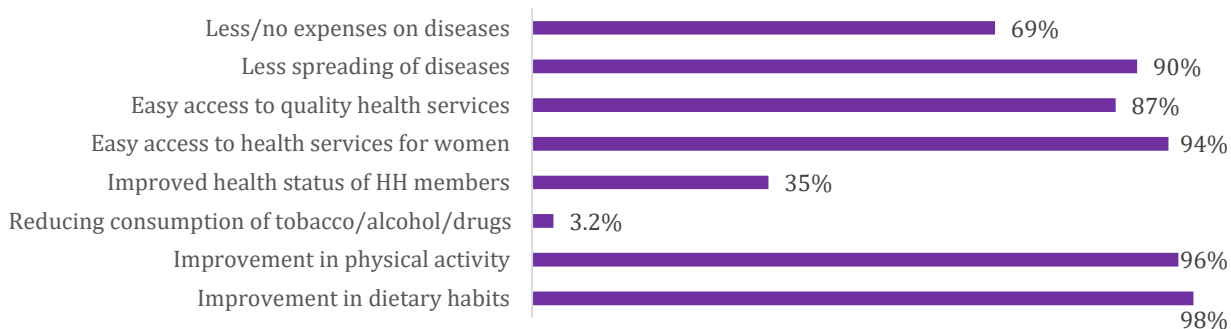
Health camps

According to the qualitative findings, as part of the interventions under HRDP, health awareness sessions were organized. On average, a health checkup for 300 members from each village was done. During the health camp, the level of haemoglobin and other primary tests were done. Women were made aware of the importance of frequent health checkups, menstrual hygiene, and importance of balanced diet during pregnancy. **The discussion on menstrual hygiene helped reduce the stigma, harassment, and social exclusion women faced during menstruation.** This also encouraged them to frequently visit the primary health care center in case of any minor health issues. During the health camp, a Covid-19 kit that included sanitizers and an information brochure was provided to the villagers.

Under the intervention, trained medical personnel from nearby taluka places visited the project villages, where they organized sessions on the various components related to women's and children's health, and encouraged them to adopt healthy practices, the importance of the timely visit to

hospitals, discussed various health issues women face, and tried to motivate the community to improve its health seeking behaviour.

Figure 18: Changes observed due to attending health camps/ awareness session (n=408)



About 97% of the respondents stated that they availed of health camp services under the intervention. Health camps were organized in each village with the larger goal of improving information, awareness, routine checkups, early disease diagnosis, and the importance of a balanced diet, proper treatment of disease and after care. Both preventive and curative aspects were focused on during the health camps conducted in the villages. The various levels looked at were the individual, family and community. Preventive aspects like a balanced diet, nutritious food, food for growing children etc., were addressed at the household level while at the community level the thrust was on improved public health through better awareness about health issues.

Installation of RO water purifiers have ensured access to safe and clean drinking water for students which have reduced the incidence of water borne diseases. HDFC Bank can plan to install more such RO purifiers with improved tank storage capacity in more schools in the district in partnership with state education board.

4.5 Promotion of Education

The work of HRDP in promoting education aligns with the Sustainable Development Goal (SDG) 4, which aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.”⁶ In the assessed programme clusters, HRDP is working on promoting quality education through infrastructure improvements and various other activities as listed below:

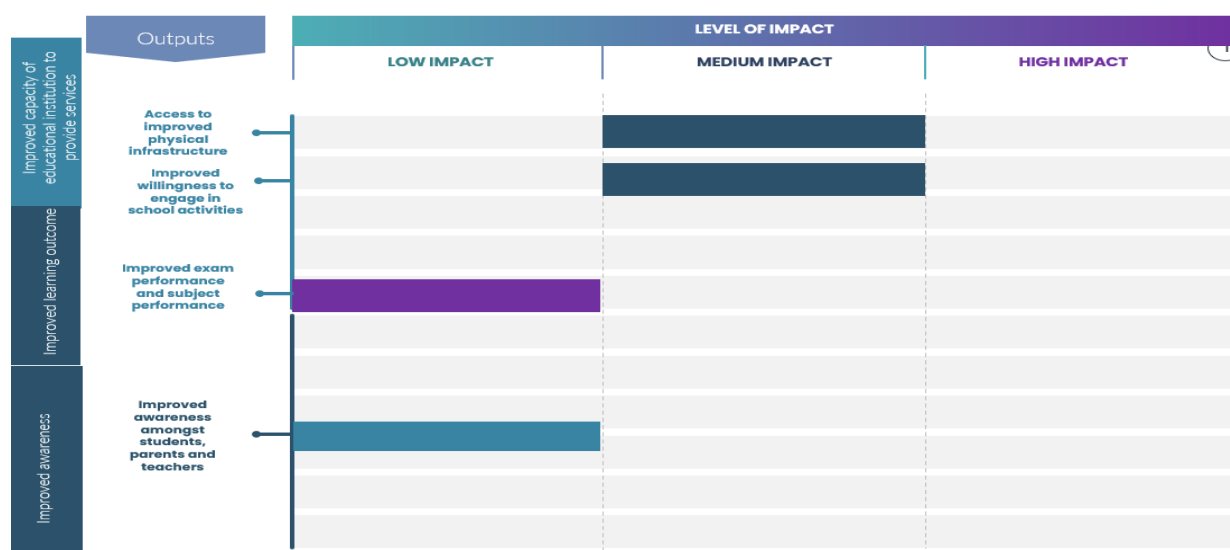
Table 8: Activities under Education

Activity Category	Activities
Educational Institutions Development	Educational paintings, school repair work, installation of school library-providing cupboards and books, separate toilet for girls and boys, installation of drinking water posts/RO filter
Awareness Generation	Awareness generation session

The activity-wise number of beneficiaries covered during the study is given in the methodology and sampling section. Further, relevance, effectiveness, and sustainability for activities under education will be discussed in detail.

4.5.1 Effectiveness and Impact

Figure 19: An overview of project effectiveness and impact on education (based on quantitative study)



Educational Institutions development

The intervention under HRDP has resulted in achieving better learning outcomes in schools due to upgradation in physical infrastructure facilities such as repairing of school, setting up of library (books and cupboards), making classrooms digital, separate washrooms for girls and boys, RO filters for clean drinking water, setting up of water storage tanks and educational paintings. The improvement in the facilities has been by making learning more joyful by means of educational

⁶ Sustainable Development Goal 4 (SDG 4) | Education within the 2030 Agenda for Sustainable Development (sdg4education2030.org)

paintings, providing safe and clean drinking water for children, increase in attendance, and decreasing in dropout ratio of students.

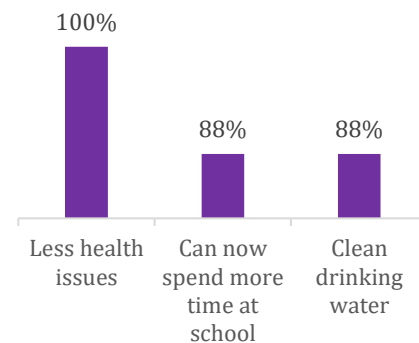
Under the intervention, a library was set up in schools and books were provided. Most books were in the Marathi language, which considerably helped in increasing students' interest in learning outside of text-book knowledge. **Providing digital screens in the schools under the HDFC Bank project made learning far more engaging and interactive through the audio-visual mode. This made the intervention a successful one as students learning outcomes improved according to qualitative findings.** During the qualitative study, teachers reported that due to the upgradation of the school infrastructure facilities, they were able to deliver the courses more efficiently and the quality of teaching was also enhanced. An underground cement tank was established under the project intervention which can then be used according to the need. For instance, qualitative findings report that the water stored in the cement tank has been used for tree plantation drives conducted in schools, washing utensils and sometimes in the washrooms. A two-day training was conducted under the project, wherein teachers were trained in innovative methods of teaching that can improve the grasping power of students thus improving their grades and knowledge.

Image 10: Educational paintings and classroom repair, Dhaval village, Satara



Of all the respondents, 32% of households stated that the schools in villages were supported under the HRDP intervention. As per the survey findings, under the smart class facilities, 54% of respondents stated that they benefitted from computers that were provided, whereas 73% stated that they benefitted from the projector, and 27% benefitted from internet facilities. When asked about the benefits of smart class, 91% of the respondents reported that the lessons have become more interesting, 100% said that the lessons are easier to understand, 82% reported that the syllabus can be covered fast and 73% stated that lessons are easy to remember.

Figure 20: Benefits of RO filters (n=113)

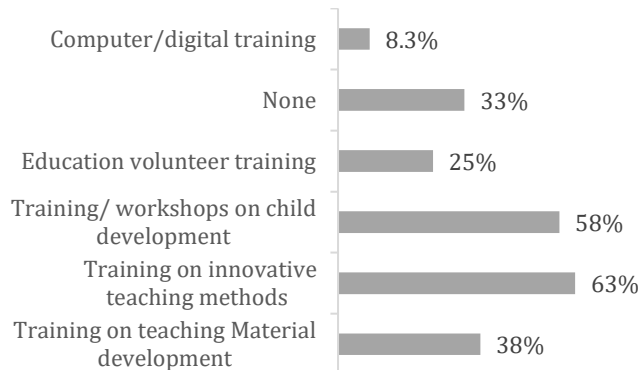


Separate washrooms were established for girls and boys. When asked about the benefits, 100% of the respondents reported spending time more time at school, whereas 99% stated that due to separate washrooms now they can attend school regularly.

Of all the respondents, 98% of the households reported a decrease in health issues caused earlier due to unsafe water, 89% reported that now they can spend more time at school and 90% stated that they had access to clean drinking water after the project. Learning materials such as textbooks, notebooks, and reading materials were provided during the intervention. About 85% of the students received textbooks, 62% received notebooks, and 85% stated that they were able to access learning materials. When asked about the improvement noticed in the school facilities in the last three years, the response received was: 97% of the households reported that the school facilities are now painted,

80% stated that better seating facility is available, 19% and 32% reported improved electricity connection and sufficient water supply respectively.

Figure 21: Capacity building support teachers received through the project (n=24)



Of all the respondents, 98% of the households reported a decrease in health issues caused earlier due to unsafe water, 89% reported that now they can spend more time at school and 90% stated that they had access to clean drinking water after the project. Learning materials such as textbooks, notebooks, and reading materials were provided during the intervention. About 85% of the students received textbooks, 62% received notebooks, and 85% stated that they were able to access learning materials.

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When asked about the improvement noticed in the school facilities in the last three years, the response received was: 97% of the households reported that the school facilities are now painted, 80% stated that better seating facility is available, 19% and 32% reported improved electricity connection and sufficient water supply respectively. Under the intervention, various awareness generation sessions were conducted at schools such as sanitation, hygiene, and cleanliness awareness generation sessions, world water day, international literacy day, the international day against drug abuse, etc. According to the qualitative findings, teachers reported that due to the awareness session held on average, there has been a 10% reduction in the rate of absenteeism. Although most of the beneficiaries were satisfied with the intervention, toilets in the school were not in working condition, and because of the less capacity storage tank of RO filters, clean water was not available to the students all the time. Capacity building of teachers and encouraging SMCs' participation in the decision-making process can ensure the sustainability of the project.

Image 12: Library set up, Dhawal village, Satara



Image 11: RO unit in school, Dhawal village, Satara



Figure 22: Benefits of learning material to the students (n=13)

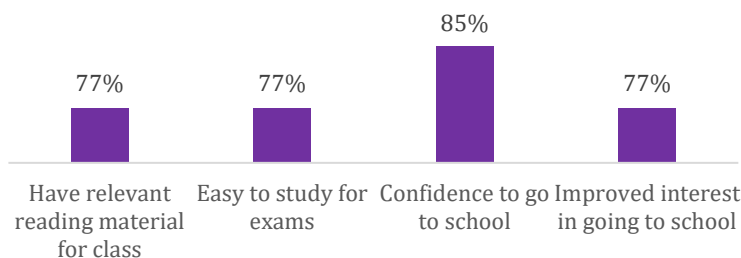


Figure 23: Benefits of the library to students



4.6 Sustainability and Replicability

Under this thematic intervention, the project support provided demonstrated the capability to continue even after the program ended. The project's support to sustain improved farm income, agriculture water management, livestock management, SHG-based and individual enterprises are discussed below.

Support provided for setting up micro-enterprises such as welding shops, and pottery shops have resulted in economic empowerment of the weaker sections who were working as agricultural labour before the intervention. Since the quality of material support provided was satisfactory, the micro-enterprises established would ensure the sustainability of the intervention.

In terms of sustainability under the thematic area of health and sanitation, the RO units established did not have a continuous supply of water due to the frequent bursting of pipeline that supplies water to the unit. For the sustainability of the intervention, options for convergence with government schemes should be looked at in close consultations with the community and respective sarpanch of the village. While the programme focused on the need for frequent health checks and timely diagnosis of disease, the intervention was disrupted due to the Covid-19 pandemic as the social gathering was completely avoided. For the women, the issue of poor access to menstrual hygiene products remains as only awareness generation sessions were conducted as part of HRDP intervention in the project villages. This is because sanitary products cannot be easily availed in rural areas, despite having adequate knowledge and information. Although the programme intervention helped in raising awareness, it can become sustainable if village volunteers are trained to collectively organize people and arrange health camp at least once in six months by inviting doctors/experts from the Phaltan taluka headquarters or Satara district.

The sustainability of the support provided has been considered in terms of establishing structures, technical know-how, usage and maintenance. **The interventions in education have performed well in most aspects of the programme, which has resulted in creating a conducive environment by achieving improved sanitation facilities such as the creation of separate washrooms, the use of smart classrooms for better delivery of courses, upgraded infrastructure and even the installation of RO filters.** All these have had direct positive results and have encouraged higher attendance and enrollment. Two more washrooms were constructed under the intervention. However, the washrooms constructed are not in usable condition as the taps are dysfunctional with no access to water. Post-follow-up intervention would have ensured the sustainability of the programme. In the case of the digital screen, teachers lack the know-how on the maintenance of solar panels installed. Improvements in this aspect will have a direct positive impact on this thematic intervention. Similarly tank storage capacity of RO water purifiers needs to be improved for the regular and timely supply of water. **Besides this, training of school management committees on the importance of effective community participation would entail a sense of responsibility and obligation on the parents towards a better future for their children.**

Table 9: Sustainability thematic matrix

Support provided	Structures established	Technical Know-how	Usage	Maintenance
<i>NATURAL RESOURCE MANAGEMENT</i>				
Desiltation of existing water harvesting units	✓	✓	✓	✓
Setting up of drip irrigation unit	✓	✓	✓	✓
Crop Diversification, Farm Demonstration and Farm Field Schools	✓	✓	✓	✓
<i>SKILL TRAINING AND LIVELIHOOD ENHANCEMENT</i>				
Livestock Management	✓	✓	✓	✓
Agricultural training and services	✓	✓	✓	✓
Promotion of micro-enterprises	✓	✓	✓	X
Strengthening of SHG-based enterprises	✓	✓	✓	X
<i>HEALTH AND SANITATION</i>				
Health awareness input session and health camp		✓		
Installation of RO water purifier	✓	✓	✓	X
<i>EDUCATION</i>				
Educational paintings, school repair work, installation of school library- providing cupboards and books, installation of drinking water posts/RO filter	✓	✓	✓	✓
Smart class	✓	✓	✓	X
Separate washrooms for girls and boys	✓	✓	X	X
Awareness session on health and sanitation for students	✓	✓	✓	✓

4.7 Holistic Rural Development Index (HRDI)

HRDI is a composite index developed to measure and rank the clusters and thereby the NGO partners based on their performances on key outcome indicators across these domains. HDFC Bank in its document explaining HRDI states that since the aim of HRDP was to achieve holistic rural development through a multitude of interventions that would lead to overall improvements across related dimensions and therefore the programme introduced significant variability in the interventions. Therefore, it was not possible to ascribe a single impact indicator that might be able to accurately capture the overall performance of HRDP.

Basis our calculation, the HRDI for the studied clusters is presented in the table below, since the programme did not have an available baseline, the baseline was captured through recall during the

study. The index above indicates an improvement in various indicators in the project area over the baseline. Typically, HRDI comprises nine key performance indicators selected from the four domains of focus of the HRDP. The indicators selected were based on their relative contribution to the final expected outcome across all domain-wise interventions. Most of the indicators were found to be relevant for the study in Maharashtra but some needed modifications in accordance with the programme and also in accordance with the study design and information collected.

Table 10: Holistic rural development index for the Maharashtra project

Domain	Category	Value
NRM	Baseline	0.17
	End line	0.25
	% Change	47%
Skill and Livelihood	Baseline	0.08
	End line	0.14
	% Change	75%
Health and Sanitation	Baseline	0.11
	End line	0.25
	% Change	127%
Education	Baseline	0.09
	End line	0.10
	% Change	11%
Overall HRDI	Baseline	0.45
	End line	0.73
	% Change	62%

Skill and livelihood performed better among all other thematic areas due to the intervention that led to the creation of employment opportunities thus empowering the economically weaker section. Under the thematic area-skill and livelihood, the intervention focused on setting up microenterprises, strengthening the SHG, and providing agricultural training to farmers. The improvement in the hygiene condition in each village and a better understanding with regard to health are essential factors contributing to improved health and sanitation practices in the villages. Development of educational institutions such as setting up of library, installation of RO purifier, and Upgradation of physical infrastructure has led to visible positive outcomes. The interventions successfully worked towards the larger goal of providing quality education to empower the vulnerable sections of society. Whereas under the thematic area- NRM, interventions have led to improved water available for agriculture and improvement in crop productivity.

5 Conclusion

Based on the observations and analysis of primary and secondary information presented in the report, the study presents the following conclusion:

- High-value horticulture crops and vegetable cultivation have been promoted under the programme by means of crop diversification and farm field demonstrations. Farmers have benefited from these interventions in terms of an increase in income and crop productivity. Intervention such as providing drip irrigation unit has increased the land area under irrigation. **The interventions taken up under livestock management benefitted the respondents by creating an additional source of income for livelihood.** To ascertain the sustainability of the intervention, follow-up of the project is important. **According to the qualitative findings, a water budgeting exercise with the community helped the villagers become more aware of the water availability at the village level and develop an appropriate agricultural plan.** Now villagers have been able to plan better according to the need for water for crops, livestock, and drinking purpose. Beneficiaries stated that due to the exercise, on average water availability improved by 30-40%. The exposure visits have been organized to the villages such as Ralegan Siddhi and Hiwre Bazar. These villages successfully demonstrate how the adoption of participatory watershed management practices can transform the geography of the region from drought-prone to water surplus. Exposure visits provided an opportunity to learn and adopt the best practices.
- The programme theme aimed at achieving women's empowerment through the creation of SHG-based enterprises such as oil mill units, masala-making enterprises etc. This has improved women's confidence to further expand their businesses and helped in increasing the socio-economic empowerment of women at household and community levels. Enterprises established under the SHG and at the individual level have substantially improved the average monthly income of the beneficiaries. **The qualitative study found that the women participating in the program did report greater economic empowerment and an improvement in status/quality of life and their overall agency.** Farmers under the intervention were trained in manufacturing and use of natural fertilizers like neem ark, dashparni ark etc. Farmers have started replacing chemical fertilizers with natural fertilizers. 48% of the farmers reported learning the techniques of application of organic manure from HDFC Bank training conducted under the intervention. 72% of respondents stated that after the training they have reduced the use of chemical fertilizers.
- Earlier villages in the intervention area did not have access to safe and clean drinking water. Due to saline water, they suffered from various diseases. **With the installation of RO filters, not only the villages under the HDFC Bank project have been benefitted but also the neighbouring villages now have access to clean drinking water.** The awareness generation session and the health camps conducted have improved awareness of the importance of a balanced diet and frequent body checkups.
- The program had established drinking water facilities in the schools, however, a maintenance fund under the school committee is required for better maintenance and upkeep of the facility created. These teaching aids and audio-visual modes of presentation because of the installation of digital screens have changed the relationship between teacher and learner and have the potential to be more than a medium for the transmission of knowledge. But this needs to be backed by new skills, competencies, and attitudes among teachers who are going to design and develop materials and support learners using these aids. It is not enough to establish the basic infrastructure, it has to be consistently maintained and upgraded.

5.1 Summary of findings

Natural resource management

The project intervention aimed at improving the water availability in the drought-prone region of the Satara district. The project tried to improve the availability for agriculture and drinking water purpose. For this, the desiltation of existing water harvesting structures such as check dams and nalas was done, and continuous contour trenches were constructed. It is aimed at the creation of sustainable livelihood opportunities for the community. The project tried to organize the farming community by seeding the concept of FPO formation. Exposure visits were held for farmers to Ralegan Siddhi and Hiwre Bazar to adopt the best practices that would ensure the sustainability of the intervention. The project has promoted livestock rearing as it would help in the creation of an alternative source of income. The livestock product market is local and provides a good source of income, especially for the economically weaker section of society. Hence the promotion of livestock such as goat rearing, and poultry can be considered a promising intervention. However, **most of the farmers faced difficulties regarding better care and management of livestock due to the unavailability of follow-up services and training post-intervention.**

Skill training and livelihood enhancement

The rural population in Maharashtra is prominently dependent on agriculture and allied activities for their livelihood. A significant proportion of the rural population is at a subsistence level of income and livelihood. For the sustainable development of the rural community, the state government has made substantial efforts toward the promotion of micro-enterprises. However, despite the efforts, lack of access to the market, and inadequate infrastructure are some of the impediments that the state faces. Under HDFC Bank intervention, SHG groups in the villages were empowered to start their own enterprise. Masala-making units, oil mill establishment, goat rearing, and tailoring/boutique shop were some of the interventions supported by the project. Women were trained in marketing and branding their produce to fetch a better price in the market. Besides this, beneficiaries were supported by the setting up of welding shops, pottery units etc. **The project intervention to support marginalized sections of society to set up micro-enterprises through providing skill development training and assistance was much needed.**

Health and sanitation

Under the HRDP program, awareness generation sessions and health camps were organized. It was much needed as the rural community lacks awareness about the importance of health, frequent medical checkup, and the importance of a balanced and nutritious diet for women and children. **Through the health camps, villagers were encouraged to frequently visit hospitals for early diagnosis of disease.** Setting up RO units in the villages has reduced the frequency of diseases caused due to drinking saline water.

Education

HRDP is working on promoting quality education through infrastructure improvements and awareness generation activities. Various learning aids such as books, digital screens along with a projector, learning materials, educational paintings, RO units, and separate washrooms for students were provided under the intervention. This helped in improving the knowledge and learning outcomes of students.

5.2 Recommendations

Based on the observations and analysis of primary and secondary information presented in the report, the study recommends strategies for the program to meet the desired outcomes better.

Natural resource management

A system may be put in to check on beneficiaries who adopted practices such as crop diversification, cultivation of horticultural crops and fodder grass like Napier and mur grass to monitor if they are facing any issues post the intervention. **There is a need to ensure that the farmers have time-to-time access to extension services available through KVKs or experts from agricultural universities who can assist them in the easy adoption of scientific practices.** Time-to-time dissemination of practices and follow-up services are required. Along with the promotion of high-value horticultural crops, market linkages would have ensured better price realization for farmers and tangible impacts. The shelf life of horticultural crops can be increased through warehouses or the establishment of cold storage units. Since the traditional channels are long with a large number of intermediaries, the share of farmers in consumer prices is comparatively lower. Activities around connecting farmers directly to consumers or linking them to smaller market channels would have impacted farmers' share in consumer prices. Further, promoting post-harvest techniques for collection and storage can impact the shelf-life and quality of products.

Skill training and livelihood enhancement

The qualitative and quantitative study found that the women participating in the program did report greater economic empowerment and an improvement in status/ quality of life and their overall agency. Activities around connecting women entrepreneurs with the markets can ensure better market linkage and better prices for their produce due to the unavailability of markets. Participation from the farmers has been quite challenging across the clusters as travelling for training and exposure visits was limited during the Covid situation. More needs to be done on developing self-sustainable individual and group-level enterprises. **While the programme focuses on ensuring that the needs of the community are met, it is very critical to thoroughly analyze the input and standardize its quality to achieve the desired outcomes.**

Health and sanitation

As the RO units entail recurring operation costs due to the bursting of pipelines in the villages, options for convergent efforts with the community and respective sarpanch of the village should be looked at. An agreed plan of action for the community may be prepared to ensure sustainability. Parivartaks should be trained in each village to organize frequent health awareness sessions for the community, encouraging them to adopt sanitation and hygiene practices along with regular health checkups.

Education

Appropriate technical knowledge needs to be ensured to operate smart classes, and also to optimize the use of educational aids. To optimize the use of educational aids, the capacity building of teachers needs to be ensured. An asset maintenance fund/ committee needs to be established in the programme-supported schools to ensure the necessary maintenance of supports such as - drinking water posts and smart classes. Proactive convergence with ongoing schemes of the government will ensure efficient use of resources. Post-follow-up intervention to ensure the sustainability of the project is necessary.

6 Annexures

6.1 Detailed Activity list

Sl No	Focus area	Category	Sub-category	Activity	Beneficiary Type
1	Promotion of education	Educational Institutions Development	Infrastructure - Infrastructure renovation	Educational paintings, school repair work, installation of school library- providing cupboards and books, installation of drinking water posts/RO filter, Smart class (digital screen and projector) , awareness, health and sanitation sessions for students	Students and teachers
2	Health and sanitation	Sanitation	Community health session, Construction/ Renovation	Health awareness input session for women, setting up of RO units, health camps	Community
6	NRM	Farm Management	Crop Diversification	Demonstration of methods of crop diversification, fodder demonstration (Napier and mur grass)	Farmers
7	NRM	Water management for agriculture	Farm technique - Other	Installation of drip irrigation unit, desiltation of existing water harvesting structures such as check dam and nalla deepening, water budgeting exercise with the community.	Farmers
8	NRM	Farm Management	Farm technique - Other	The farm field school, construction of vermicompost pits, application of organic manure, organizing mela, and climate resilience camp, exposure visits	Farmers
9	Skill development and livelihood enhancement	Skill Training	Skill Training	Training cum entrepreneurship development support to SHG groups	SHG groups
14	Skill development and livelihood enhancement	Entrepreneurship Development	Goatry	Development of Goat breeding farm.	Farmers
16	Skill development and livelihood enhancement	Entrepreneurship Development	Poultry	Development of poultry farm model	Farmers
19	Skill development and livelihood enhancement	Entrepreneurship Development	Other Small business	Welding shop, pottery shop, boutique/tailoring shop	Individual

6.2 Sampling methodology

6.2.1 Quantitative sample size calculation

For this study, the formula for the calculation of finite sample size for the 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%;

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

S_e = margin of error, set at 5%;

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

Thus, the estimated maximum sample size is 400

Quantitative sampling methodology

In this cluster, eight intervention villages were selected for the study.

Stage 1 – Selection of villages

All the intervention villages were selected as sample villages. Sample from each village was selected by using Probability Proportionate to Size (PPS) sampling method. Care was taken to cover the maximum sample from the villages that have received a maximum number of interventions in order to get appropriate coverage of all components of the program.

Stage 2 – Selection of beneficiaries

The list of beneficiaries was obtained from the implementing partner - Sanjeevani Institute for Empowerment and Development (SIED). Since beneficiary selection was undertaken independently for each programme, the selection of more than one beneficiary from a single household was probable. Also, there have been instances where a single beneficiary received multiple support for the intervention.

6.2.2 Qualitative sample size calculation

Qualitative tools of In-depth Interviews (IDI) and Focus group discussions (FGD) 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, the 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 at the start of the program.

6.4 HRDI Methodology

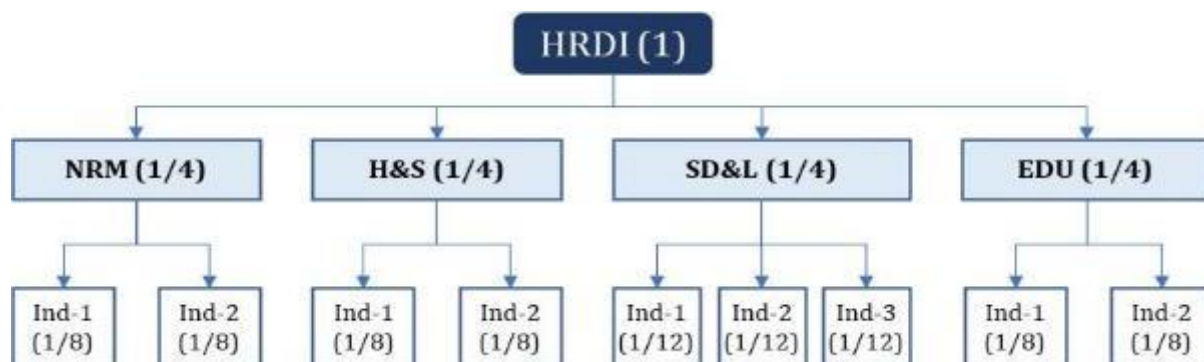
The outcome indicators included in the HRDI were obtained from different domains and are consequently measured on different scales. Therefore, to ensure the comparability of these indicators, all the indicators were converted into discrete variables such that the indicators could be measured between 0 and 1. Indicators such as productivity and income which were measured on a continuous scale were converted to discrete variables by setting a cut-off. The 50th percentile of these indicators at baseline was chosen as the cut-off point. **Thus, a change in the indicator could be captured by recording the proportion of beneficiaries above the cut-off at two distinct points in time.**

Indicator Weights

Weights were applied to each of these indicators, along similar lines to the HRDI calculation. Attribution of equal weights to all the domains was done in order to create a standard HRDI for each cluster.

Equal weights were assigned to each of the four domains. Further, the domain weight was equally distributed among the indicators of that domain; thereby ensuring that equal weightage of the domains was maintained overall.

Domain and indicator weights⁷



The example above is indicative. The domains, as well as indicators, were different across all projects, and hence the weights were changed slightly for the purpose of the study, following the principle stated above.

Project X

Natural Resource Management

Average net income from farming	$(1/4) \times (1/3) = 0.083$
Percentage of farmers reporting access to irrigation	$(1/4) \times (1/3) = 0.083$
The area under irrigation (Ha)	$(1/4) \times (1/3) = 0.083$

⁷ NRM: Natural Resource Management | H&S: Health and Sanitation | SD&L: Skill Development and Livelihoods | EDU: Education

<i>Health and Sanitation</i>	The average number of months with access to adequate drinking water	$(1/4) \times (1/3) = 0.083$
	Percentage of households with access to an improved toilet facility	$(1/4) \times (1/3) = 0.083$
	Percentage of households utilizing soak pits	$(1/4) \times (1/3) = 0.083$
<i>Livelihoods and Skill development</i>	Average monthly income of household from Livestock (INR)	$(1/4) \times (1/3) = 0.083$
	Average monthly income from enterprises (INR)	$(1/4) \times (1/3) = 0.083$
	Average monthly income of SHG women from enterprise (INR)	$(1/4) \times (1/3) = 0.083$
<i>Education</i>	Percentage of students reporting increased access to functional school physical infrastructure (drinking water posts, separate washrooms, etc.)	$(1/4) \times (1/2) = 0.125$
	Percentage of students reporting increased access to functional learning infrastructure (library, science labs, learning aids, etc.)	$(1/4) \times (1/2) = 0.125$

Once all the indicators were standardized and weighted, a sum of these weighted indicators was utilized to calculate the value of HRDI.

Analysis Plan: HRDI for each cluster/ NGO was calculated at two points in time i.e., before and after HRDP and can be compared cross-sectionally to understand which domains contributed to an increase or decrease in HRDI value. Concurrently, the NGOs can be ranked according to the HRDI score based on their performance across different domains, but care should be taken as the project context varies for each area. Since the value attribution of the indicators is in proportion, the HRDI value numerically ranges between 0 and 1.

Method to calculate HRDI

Step 1: All the indicators were cleaned and adjusted for outliers. Only those beneficiaries were considered for the analysis where data on outcome indicators was available for both pre-and post-intervention.

Step 2: A cut-off value was calculated by taking the 50th percentile for each indicator before HRDP (baseline). For instance, consider the indicator - average annual income of farmers, at baseline, then sorted all the farmers across the seven clusters in ascending order based on their income. The 50th percentile i.e., the median value of the income was taken. This median or 50th percentile was taken as the cut-off (baseline cut-off to be precise).

Step 3: Calculated the proportion of beneficiaries above the set cut-off value at the baseline for each indicator.

Step-4: Calculated the same at the end-line i.e., the proportion of beneficiaries above the baseline cut-off for each indicator.

Step-5: Multiplied each proportion of the indicators with the set indicator weights.

Step-6: Sum all the indicators (i.e., weighted sum) to calculate the HRDI value at baseline and end-line.

Step-7: Calculated the relative change in the HRDI value from baseline to end line.

Step-8: Ranked the clusters based on relative change brought about in the HRDI value i.e., the cluster that brought the maximum change in the HRDI value received the first rank

Domain	Indicators	Baseline	Weight	HRDI	Endline	Weight	HRDI	% Change
NRM	The average productivity of crops (3 major crops) grown (quintal per acre)	98.00	33%	0.17	192.00	33%	0.25	47%
NRM	Percentage of farmers reporting access to irrigation	100.00	33%		100.00	33%		
NRM	The area under irrigation (Ha)	2.00	33%		2.05	33%		
H&S	The proportion of beneficiaries reporting an average number of months with access to adequate drinking water above the baseline median	45.00	100%	0.11	100.00	100%	0.25	127%
Skill	The proportion of beneficiaries reporting monthly income from enterprises above the baseline median.	34.00	33%	0.08	50.00	33%	0.14	75%
Skill	Percentage of respondents following agricultural practices (application of organic manure, construction of vermicompost pits, timely application of fertilizers and pesticides, conservation agriculture)	13.00	33%		24.00	33%		
Skill	The proportion of beneficiaries reporting a monthly income of SHG from enterprise above the baseline median	49.00	33%		93.00	33%		
ED	Percentage of teachers reporting increased access to BaLA (Building as Learning aid/wall paintings/messages)	22.00	50%	0.09	38.00	50%	0.10	11%
ED	Percentage of teachers reported conducting sanitation, hygiene, and cleanliness awareness generation session	51.00	50%		40.00	50%		

6.5 Overview of project effectiveness and impact tables

An overview of project effectiveness and impact in natural resource management (based on the quantitative findings)

Outputs	Output Indicators		Output Avg	Impact Level
1. Increased income from agriculture				
1.1. Land/ crop productivity	NA1. (a) Proportion of farmers reporting an increase in production of crops that were supported under HRDP	97%	79%	High
	NA1. (b) Proportion of farmers reporting a reduction in input cost	80%		
	NA1. (c) Proportion of farmers reporting increased income from crops that were supported under HRDP.	98%		
	N.A1.i(d) Average increase in income from crops that were supported under HRDP (% change)	24%		
	N.A1.I (e) Average increase in productivity from top three crops that were supported under HRDP (% change)	95%		
	N.A1.i(f) Average decrease in input cost (% change)	33%		
1.2. Access to the farm management infrastructure	N.A2(a) Proportion of beneficiaries satisfied with the quality of available services (in farm management)	81%	59%	Medium
	NA2. (b) Proportion of farmers reporting support in agriculture	51%		
	NA2. (c) Proportion of farmers reporting project interventions leading to increase in income (average of top 4-5 crops)	92%		
	NA2. (e) Proportion of farmers currently practicing organic farming/conservation agriculture/other sustainable practices	22%		
	N.A2.(f) The proportion of farmers reporting an increase in the use of natural fertilizers?	90%		
1.3 Increased adoption of crop diversification	NA3. (a) Proportion of farmers diversifying their crops with project support.	28%	23%	Low
	NA3. (b) Proportion of farmers who report income increase due to crop diversification (base = farmers who adopted crop diversification)	40%		
1.4 Land under irrigation	NA4. (a) Increased area under irrigation	67%	46%	Medium
	NA (4). (b). The proportion of farmers who received support for irrigation	25%		
2 Improved access to agricultural training and services				
2.1 Access to Agriculture training and services	SA.i(a) Proportion of farmers who reported project training services are useful	76%	82%	High
	SA.i(b) Proportion of farmers who demonstrate awareness regarding sustainable farming practices	88%		
2.2.Adoption of improved farming practices	SA.ii(a) Proportion of farmers who adopt scientific agricultural practices	24%	66%	Medium

An overview of project effectiveness and impact and skill training and livelihood enhancement (based on the quantitative findings)⁸

1. Improved access to agricultural training and services				
1.1 Access to Agriculture training and services	SA.i(a) Proportion of farmers who reported project training services are useful	76%	82%	High
	SA.i(b) Proportion of farmers who demonstrate awareness regarding sustainable farming practices	88%		
1.2.Adoption of improved farming practices	SA.ii(a) Proportion of farmers who adopt scientific agricultural practices	24%	66%	Medium
	SA.ii(b) Proportion of beneficiaries reporting an increase in productivity due to better farm management	78%		
	SA.iii(c) Proportion of farmers reporting increased income	95%		
2. Economic empowerment through collectivization (Only for SHG members)				
2.1 Formation/ revival of SHG-based Enterprises	SB.i(a) Proportion of members who received support with establishing/reviving SHGs	91%	89%	High
	SB.i(b) Proportion of members who received support with establishing/reviving SHG enterprises	76%		
	SB.i(b) Proportion of members whose SHGs are currently functioning	99%		
2.2 Development of entrepreneurship	SB.ii(a) Proportion of SHG members who received training	70%	91%	High
	SB.ii(b) Proportion of SHG members undertaking entrepreneurial activities	9%		
	SB.ii(d)Proportion of SHGs with increased savings	100%		
	SB.ii(e) Proportion of SHG members reporting improved income	93.7%		
3. Enhanced capacity for regular income generation				
3.1 Enhanced employable skill development	SC.1(a) Percentage of youth who accessed skill development training	87.9%	85%	High
	SC.1(b) Percentage of youth who report improved income through skill development	83.2%		
3.2 Access to self-employment and	SC.2(a) Proportion of beneficiaries who established/ expanded entrepreneurial activities	37.9%	40%	Medium
4. Improved capacity to generate income through livestock management				
4.1 Adoption of scientific management of livestock			65%	Medium
	SD.i(b) Proportion of beneficiaries reporting an increase in income from livestock management	83%		

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Change	Impact Level
0%-40%	Low
>40% - 70%	Medium
>70%- 100%	High

	SD.i(c) Proportion of beneficiaries reporting improved livestock health	47%		
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An overview of project effectiveness and impact on skill training and livelihood enhancement (based on the quantitative findings)⁹

1. Improved health infrastructure and services				
1.1 Establishment/ enhancement of health infrastructure and services	H.A.i(a) Proportion of beneficiaries who gained access to health services	96.5%	80%	High
	H.A.i(c) Proportion of beneficiaries who consulted medical references from camps	100%		
2 Improved awareness and health-seeking behavior				
2.1 Awareness regarding health and sanitation practices	H.D.i (a) Improved dietary practices/ reduced tobacco consumption/ improved physical exercise	66%	64%	Medium
	H.D.i(b) Improved awareness regarding cleanliness and sanitation practices	100%		
3. Improved availability and management of water				
3.1. Access to drinking water at household and community levels improved	NB.1. (a) The proportionate increase in the average number of months with access to clean drinking water	22%	84%	High
	NB.1. (b) The proportion of households reporting improved well-being due to the availability of clean drinking water.	73%		

An overview of project effectiveness and impact on education (based on the quantitative findings)

Outcome 1. Improved capacity of educational institutions to provide services				
1.1 Access to improved physical infrastructure	EA.i(a) Proportion of schools who report gaining access to functioning smart classrooms/ Bala/science labs/libraries/learning aid/furniture/sports equipment	17%	51%	Medium
	EA.i(b) Proportion of schools who gained access to clean and functioning sanitation units/drinking water posts at education institutions	85%		
	EA.ii(c) Proportion of parents/students/teachers who report improvements in teaching quality	87%		
	EA.ii(e) Proportion of teachers reporting improved capacity to adopt innovative teaching methods (Base= teachers who received training)	72%		
	EA.ii(f) Awareness among teachers regarding child development (Base= teachers who received training)	68%		

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Change	Impact Level
0%-40%	Low
>40% - 70%	Medium
>70%- 100%	High

1.3. Improved willingness to engage in school activities	EA.iii(a) Teachers reporting improvements in attendance due to improved infrastructure	99%	70%	Medium
	EA.iii(b) Proportion of teachers reporting an increase in enrolment post infrastructure development	70%		
	EA.iii(c) Proportion of institutions reporting a decrease in dropout rates	41%		
Outcome 2. Improved learning outcomes				
2.1 Improved exam performance and subject confidence among students	EB.i(a) Proportion of students who gained access to coaching classes	NA	83%	High
	EB.i(b) Proportion of students who report improvements in access to reference material	80%		
	EB.i(c) Proportion of students reporting an increase in confidence in various subjects (lessons are easy to understand, more interesting, etc.)	85%		
	EB.i(d) Proportion of students who received scholarships	NA		
Outcome 3. Improved Awareness				
3.1 Improved Awareness among students, parents, and teachers	EC.i(a) Awareness activities conducted	20%	20%	Low
