

Development Impact Assessment Study Of Holistic Rural Development Program (HRDP)

Assam



Prepared For:



HDFC Bank CSR

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Executive Summary

As part of the HDFC bank's CSR initiative, programs are supported to deliver holistic rural development. Within Parivartan, the "Holistic Rural Development Program" (HRDP) is the flagship CSR program, under which non-governmental organizations across the country are supported to deliver development interventions. In Lakhimpur, the Indo-Global Social Service Society was the implementation partner of the assessed HRD program (10 villages). The major focus areas for intervention were Natural Resource Management (NRM), Skill Development & Livelihood Enhancement, Healthcare & Hygiene, and Promotion of Education.

Table 1: Summary of key income indicators

Income Indicators (based on median)	Before	After	% Change
Average Net Income from Agriculture (INR)	20000	34000	70%
Average Income from Skill (income from enterprises) (INR)	24000	84000	250%
Average Income from SHG (INR)	12000	24000	100%
Average Productivity of 3 major crops (Kg/Acre)	770	1088	41%
Average Income from Livestock Management (INR)	24000	36000	50%

Natural Resource Management: Natural Resource Management is the main pillar under HRDP and the project has achieved notable improvements in farmers' income, adoption of sustainable practices, and reducing vulnerability during disasters such as floods. For instance, **farmers report a 70% increase in annual net income from farming since project inception while 40% of farmers reported increased consumption of natural fertilizers.** As a flood-affected region, the project has also contributed to vulnerability reduction of the community by supporting the development of disaster management infrastructure namely elevated shelters, drinking water, and sanitation units.

Skill Training and Livelihood Enhancement: Skill and livelihood-based interventions largely focused on enhancing the capacity of farmers to adopt innovative and sustainable agricultural practices, employability and self-employment skills of youth, and entrepreneurship development among SHG members. Livestock management training and health services were also provided through the project. In the case of agricultural services and associated training, **84% have continued to adopt at least one practice they learned through the training.** For skill development training, one-third of youth beneficiaries reported starting business or self-employment activities post-training though no major impact was noticed in the case of accessing job opportunities. Similarly, for SHG women, the project served as a platform to not just gain entrepreneurial skills but also an enabling environment to undertake business activities. However, field interactions indicated that, in the case of SHG enterprises, most women chose to continue individual business rather than a collective activity in recent years. In the case of livestock owners, about a **50% increase in average annual income from livestock management** largely owing to improved health status.

Health and Sanitation: Health camps were conducted and the villagers were screened for any possible water-borne diseases that they could have been affected by during floods. **Nearly 81% of the people consulted the medical service they were referred to at the health camps.** Several hygiene and WASH sessions were also conducted for women and children which were successful in creating awareness of the best practices to follow for a healthy lifestyle. Capacity-building sessions on herbal medicine were conducted as a preliminary, preventive measure. About **61%** of the respondents reported **less spreading of diseases.** Furthermore, 21 toilets each on elevated platforms and stilts have been constructed in the villages and they have been received very well by the villagers. For improving their dietary habits, 50 units of kitchen gardens have been supported by the HRDP, including seeds, fertilizers/pesticides, and training.

Promotion of Education: With regard to educational interventions, the project largely focused on improving the learning environment of school students by improving infrastructural facilities, capacity building of teachers, and school management committees. **80% of teachers believe that infrastructural developments have led to improved attendance while about 20% believe this has also contributed to improved concept retention.** The School Management Committees (SMCs) actively functioning in intervention schools were also seen contributing toward better coordination of school activities.

HRDI Indicators: For assessing the effectiveness of the interventions, the study has used the existing Holistic Rural Development Index (HRDI) created by the program. The HRDI is arrived at by defining key outcome indicators for each of the domains and developing a composite index. The composite HRDI score indicated a **high impact at 0.74¹** for Lakhimpur.





Table 2: Summary of HRDI scores

HRDI Score	Baseline	Endline	% Change
	0.52	0.74	42%

Recommendations: A combination of training and physical infrastructure support would lead to better maintenance and sustained **effectiveness of interventions, especially in natural resource management, skill training, and livelihood enhancement.** In the case of health, enhancing the project scope to **revive existing health centers would** add to the impact on health outcomes created by the project through consistent health camps. Furthermore, as **drinking water is a crucial requirement** in the region during monsoon floods, it becomes pertinent for **more people in the districts to be supported by drinking water interventions.** With regard to education interventions, although Science labs, washrooms, and libraries are functional, ensuring proper maintenance would be required to sustain them for a long time. To ensure the same, **community members need to be sensitized and involved in the maintenance process through institutions such as SMCs.**

¹ Overall HRDI scores for different clusters will range from 0 to 1, with
 - 0 being Low/Poor and 1 being High/Best
 - For instance: 0 to 0.33: Poor/Low; 0.34 to 0.66: Moderate/Medium; 0.67 to 1: High/Best (Good)

Figure 1: Overview of project outcomes

	 <p>Natural Resource Management</p>	 <p>Skill Training and Livelihood Enhancement</p>	 <p>Health and Sanitation</p>	 <p>Promotion of Education</p>
Overview of Activities	Vermi pits, SRI cultivation, farm ponds, crop diversification, solar lights, solar water pumps, drinking water management, elevated platforms, houseboats	Training in organic farming, conservation agriculture, green nets, entrepreneurial training for youth and SHGs, livestock health services, camps, and training	Health camps, awareness sessions, elevated hand pumps, kitchen gardens.	Science labs, drinking water posts, library, sports kits, separate washrooms for boys & girls, teacher's training, SMCs
Areas of Improvement	<ul style="list-style-type: none"> • 70% increase in net farmer income • 41% increase in productivity • 33% decrease in input cost • Risk reduction during floods 	<ul style="list-style-type: none"> • 84% of farmers still practicing at least one technique • 33% of enterprise beneficiaries started business activities • 50% increase in livestock income 	<ul style="list-style-type: none"> • 50% report improvements in dietary habits • 13% shifted from open defecation • 62% report less spreading of diseases 	Improved access to facilities such as science labs, washrooms, libraries, improved attendance, and teaching quality
Challenges	<ul style="list-style-type: none"> • High cost of adoption & inadequate information discourage farmers to adopt innovative techniques • Poor maintenance of disaster management infrastructure affecting sustained utilization. 	SHG members discontinued group enterprises' business due to the lack of handholding support for consistent income generation and risks involved.	<ul style="list-style-type: none"> • Accessibility to health centres still posing to be challenging. • Health camps are not conducted frequently. 	Lack of proper utilization and awareness among students regarding facilities and services provided at school
Recommendations	Combination of training and physical infrastructure support for better maintenance and sustained effectiveness. Trained farmers could also help peers.	Ensure handholding support for enterprise development and capacity building for collective action.	Revamping existing health centres to enhance the effectiveness of project health outcomes.	Community members to be sensitized and involved in the maintenance process of school infrastructure through institutions such as SMCs.

1. Introduction

1.1. Background of the Study

As part of the HDFC bank's CSR initiative, programs are supported to deliver holistic rural development. Within Parivartan, the "Holistic Rural Development Program" (HRDP) is the flagship CSR program, under which non-governmental organizations across the country are supported to deliver development interventions. The vision of these programs is 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 eco system thereby promoting better living conditions.

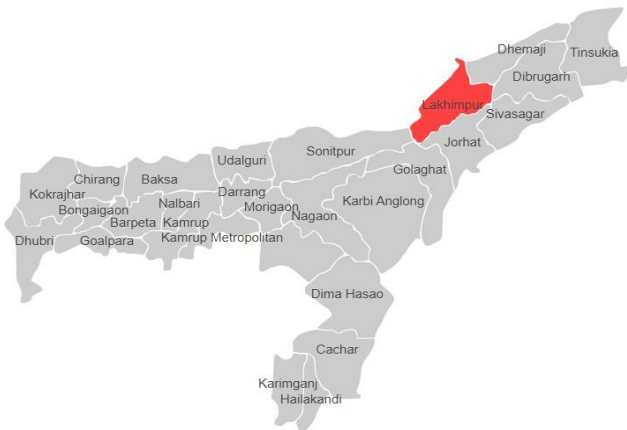


Image 1: Areas covered under the study

In the assessed HRD program in 1 cluster of Lakhimpur, Assam, the implementation partner was the Indo-Global Social Service Society. The major focus areas for intervention were Natural Resource Management (NRM), Skill Development & Livelihood Enhancement, Promotion of Education, Healthcare & Sanitation.

1.2. Partner Organization- Indo-Global Social Service Society

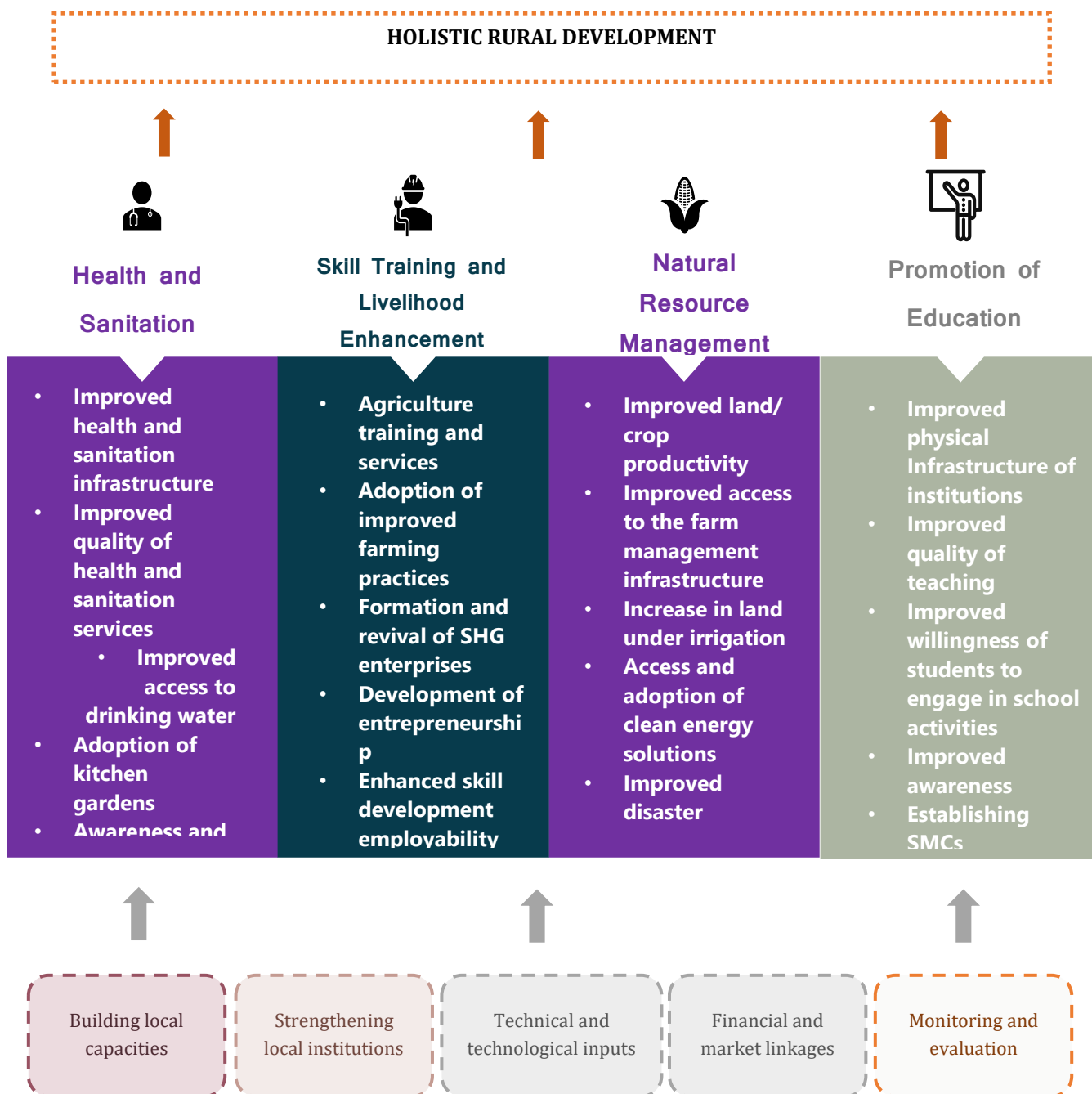
Indo-Global Social Service Society is a non-profit national development organization established in 1961 to support development programs across India, especially providing services to vulnerable communities and grass root community-based organizations. Their vision is to establish a humane social order based on the tenets of equity, liberty, and justice in which the human rights and dignity of every individual are upheld. IGSSS reaches out to more than one lakh families every year through its programs on Sustainable Rural Livelihoods, Disaster Risk Reduction, Gender Equity, Urban Poverty Alleviation, and Youth Development. In April 2016, IGSSS started work with HDFC Bank Parivartan with the focus to support the community in the Recovery and Risk Reduction of Flood Affected communities in the Lakhimpur District of Assam. This project went on for 2 years and subsequently, they started working on the HRDP project where they covered all four domains i.e., Natural Resource Management, Health, and Sanitation, Promoting Education and, Skill Development, and Livelihood Enhancement. The total involvement of the IGSSS was almost 5 years (2016-2021).

1.3. Purpose and objectives of the study

The impact assessment aims at understanding the overall process undertaken by HDFC Bank and partner organizations in implementing the program activities, key milestones achieved, 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, determine the reasons why certain results occurred or not, draw lessons, and 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 partner organizations for such programs. The evaluation was also an opportunity to learn about the relevance of the programs implemented and the effectiveness of such programs. The conceptual framework employed and the area covered under the study are depicted below.

Image 2: Conceptual framework of the implementation



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 the interventions was assessed using the criterion of **Relevance and Convergence, Effectiveness and Impact, and Sustainability**. The evaluation process was carried out in a consultative manner involving interactions with both HDFC Bank and IGSSS team 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. The study has observed if there has been a convergence/ made use of the existing resources of the government and whether different stakeholders involved have worked together to achieve the outcome of the program.

To assess the impact and effectiveness² 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. The findings from primary quantitative data have been substantiated by the information gathered from discussing with the communities/beneficiaries, teachers, students, entrepreneurs, and local institutions at the village level. 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 or could be replicated.

2.1. Design and Methodology

A review of various program documents including HDFC Bank's CSR Policy, Program log-frame (Logical Framework Analysis), 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, the partner NGO, and the HDFC Bank program team. 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 While from an evaluation perspective impact and effectiveness are two different aspects, in the report, these are used interchangeably

2.2. Sample Size and Methodology

The sample size covered during the field is as follows:

Table 3: Quantitative Sample Covered

Lakhimpur, Assam	Health and Sanitation	Skill Training and Livelihood Enhancement	NRM	Promotion of Education	Total HHs covered
Actual	326	200	330	51	380
Planned	100	100	150	50	400

Table 4: Qualitative sample size covered

Lakhimpur	FGDs		IDIs				
	SHG	Community	Headmaster	Village Head	Anganwadi Worker (AWW)	Farmers/livestock owners	Micro enterprise
Actual	2	3	1	1	1	2	4
Planned	2	3	1	1	1	2	4

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. Teams of local enumerators, with requisite education and experience, were hired for data collection. Two days of training at Lakhimpur, Assam were provided to enumerators and supervisors by the NRMC team.

Image 3: Training of field team held at Lakhimpur, Assam



Two days of training at Lakhimpur, Assam were provided to enumerators and supervisors by the NRMC team.

Image 4: Discussion with SHG members under HRDP in Lakhimpur, Assam



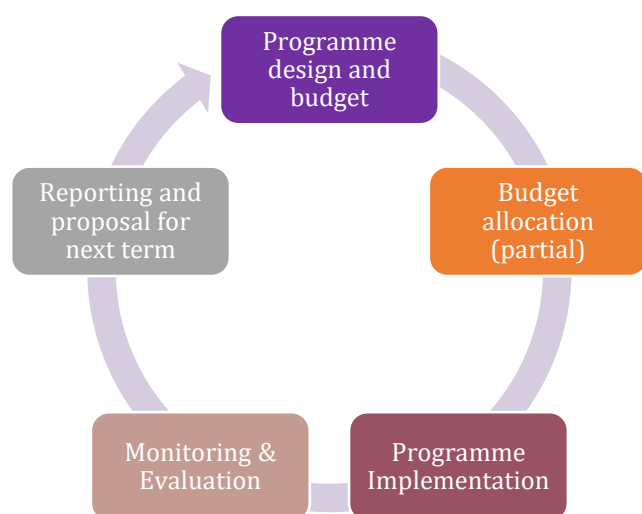
3. Program Review

3.1. Design and Implementation

The program's interventions are decided on an annual basis, with an annual budget allocation based on the proposal by IGSSS to HDFC Bank. Basis our discussions with the partner team, a preliminary rapid rural appraisal (RRA) for each program village was conducted in Lakhimpur, Assam which was also accessed during the study.

Based on these 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 to 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.

Figure 2: Project Planning and implementation process



Based on the observation in the field, budget allocation was largely provided for infrastructure and material support. The limited focus was observed on communication and behavioural change aspects.

Monitoring of the intervention by HDFC Bank is quite frequent and resources from different levels are deployed to monitor the activities frequently, however, such monitoring visits focus on the output aspects such as infrastructure and access while the usage and community-level challenges are usually not taken into the account.

3.2. Program Relevance

Lakhimpur District is situated on the North East corner of Assam. The district of Lakhimpur is bounded on the north by Siang and Papumpare District of Arunachal Pradesh and on the east by Dhemaji District and the Subansiri river. Majuli Sub Division of Jorhat District stands on the southern side and Gahpur sub division of Sonitpur District is on the west.

Assam is a multi-hazard State prone to floods, earthquakes, storms, and landslides besides manmade disasters. Also, the state faces acute flood and erosion problems. Assam has a history of disasters ranging from large earthquakes to severe floods. All the rivers in Assam are liable to floods, mainly because they receive heavy rainfall within a short time. These rivers are in their early stage of maturity and are very active agents of erosion. The river waters collect a tremendous amount of silt and other debris and raise the level of the river beds. Therefore, it becomes impossible for the main

channel to cope with the vast volume of water received during the rains. This in turn necessitates interventions in irrigation, especially sustainable irrigation methods such as solar water pumps.

Image 6: Drinking water infrastructure built under HRDP in Bordubi Lakhimpur



Last year, the flood situation in Assam reached an all-time high with nearly 500,000 people affected due to heavy and continuous rainfall, also causing loss of life, properties, standing crops, road blockades, erosion, and breach of embankments across the state (Hindustan Times, Guwahati). Handpumps are most commonly used by households in study areas for household chores and also for drinking purposes. During floods,

however, handpumps are submerged with water leading to a drinking water shortage in the region. The project interventions in disaster management, namely rescue shelters, elevated handpumps, and houseboats, have hence been appropriate and essential support for the disaster-stricken community. Apart from the seasonal floods, the target area experiences massive erosion affecting village settlements, sand casting on agro-fields, and blockage/stagnation of flood water due to changes in drainage systems. To summarize, the major challenges that have occurred over the last ten years are as under:

1. Unpredictable rainfall and high flood hazard
2. Sand casting on paddy fields
3. Water logging on fields bounded by embankments and barrages
4. Variety of crop diseases and termination of wheat and sugarcane production
5. Unskilled and dropout youths migrating to other places in search of avenues
6. Agriculture-dependent families looking for other livelihood options

Image 5: Discussion with youth beneficiaries of skill development training under HRDP



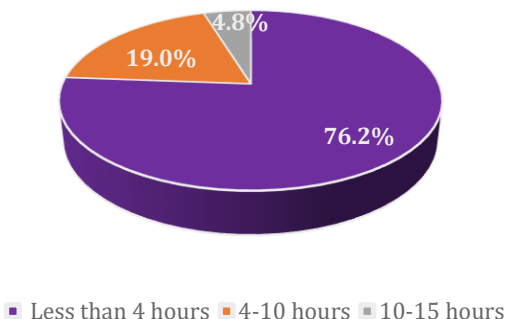
In this context, interventions in the areas of farm management, irrigation, pesticide, and soil health management are pertinent in improving the farm income generation capacity of the community. In addition to responding to the needs of the farming community, the project has also attempted to influence the skill gaps and unemployment among the youth through skill development and enterprise support. Furthermore, the project has also aimed at improving income generation from livestock management through training in scientific livestock management and providing access to livestock health services.

Capacity building and enterprise support for SHG women under the project has also been a pertinent intervention area considering the limited access to economic opportunities for women in the region.

While the majority of villages have access to electricity, about three fourth have access to electricity for less than four hours indicating the need for sustainable and affordable energy-based interventions in the region.

In light of poor access to health services, especially during the floods, the project has provided timely and necessary support through health camps, awareness sessions, drinking water management, and sanitation infrastructure support. According to the quantitative survey, though nearly 50% of the people have received low-cost toilets under the Swacch Bharat Scheme, most of the construction is incomplete, and open defecation is still widely practiced. It was also observed that this model was not suitable for flood-prone areas. There was a complete absence of community toilets and flood-resilient toilets, and these villages also lack access to tap water supply.

Figure 3: Availability of electricity according to respondents



Assam ranks fifth among all the states in the country with an average literacy rate of 86%³. In North Lakhimpur where the HRDP was implemented, the average literacy rate is 89%. But this does not translate to a good quality education system, especially in the project villages. The state of educational institutions in the project villages is distressing, even with the high literacy rate. Even though there have been several initiatives by the state and Central governments to increase the enrolment rate, during floods, it becomes very difficult for the children and youth to access their schools and colleges respectively⁴. Often, because of their poor economic conditions, they are forced to drop out.⁵ The school buildings have poor-quality walls and roofs, or it lacks infrastructure like toilets, lights, and teaching aids.

Through the HRDP, four school buildings have been renovated/constructed, two schools have been provided with water and sanitation infrastructure, 6 units of sports and science kits have been provided to six schools, and one school was supported in the installation of solar lighting.

Image 7: Solar Street light setup under HRDP in Lakhimpur, Assam



³ <https://www.census2011.co.in/census/state/assam.html>

⁴ Mili N., Acharjee S., and Konwar M. Impact of flood and river bank erosion on socio-economy: a case study of Golaghat revenue circle of Golaghat district, Assam, International Journal of Geology, Earth & Environmental Sciences ISSN: 2277-2081 (Online). https://www.academia.edu/download/33148451/JGEE-20-030-_ACHARJEE-_IMPACT-_ASSAM.pdf

⁵ RRA Report- HDFC-IGSSS, Lakhimpur, Assam

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.

Gender	
Male	44%
Female	56%
Age	
18-25 Years	8.7%
26-35 Years	29%
36-45 Years	31%
45-55 Years	18%
More than 55 Years	13%
Educational Status	
Illiterate	13%
Literate but no formal education	16%
Up to 5th std	11%
6th to 8th std	7.6%
9th to 10th std	23%
11th to 12th std	23%
Graduate	5.8%
Post graduate	.8%
Social category	
Scheduled Caste (SC)	13%
Scheduled Tribe (ST)	64%
Other Backward Classes (OBC)	23%
General	1.6%
Poverty status	
Antyodaya	5.3%
BPL	77%
APL	3.4%
Do not have a ration card	14%
Income sources	
Cultivation	90%
Livestock	41%
Salaried employment	5.8%
Non-agricultural income	26%
Wage labor	65%
Pension	11%
Remittances	1.8%
Other	.3%

4.2. Natural Resource Management

Natural Resource Management is the main pillar under HRDP. The interventions in this pillar vary as per geography and the community need. The table below provides the state-wise list of interventions covered under NRM.

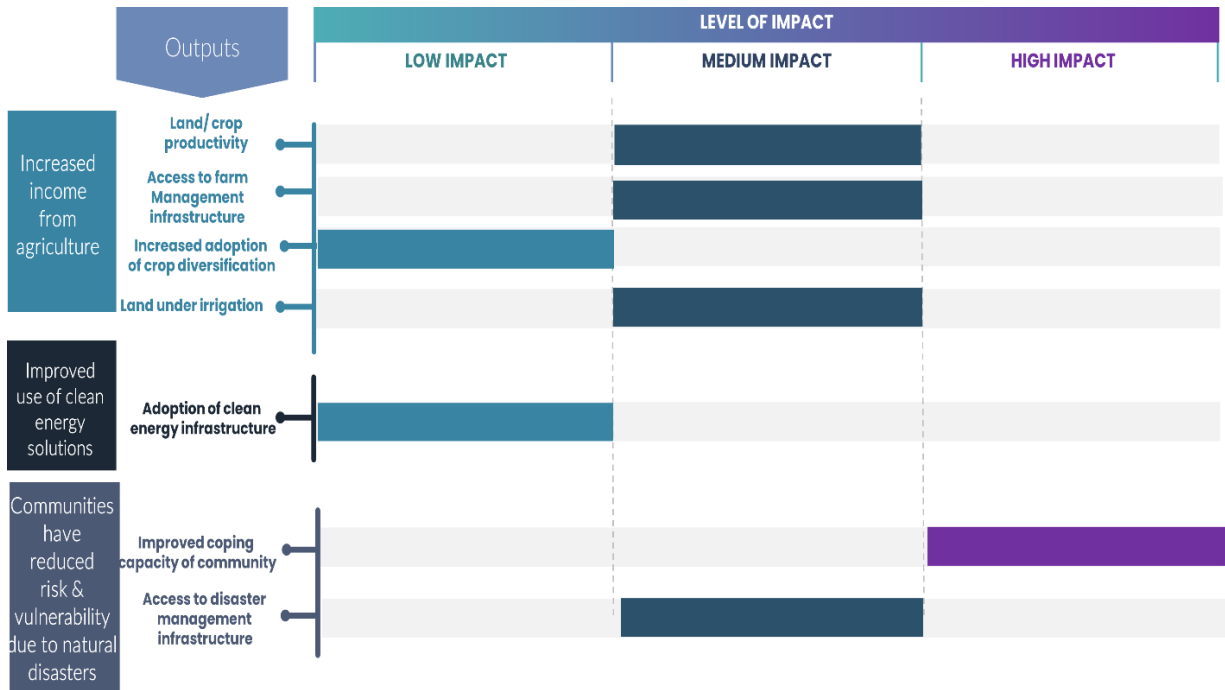
Table 5: Activities under NRM in Lakhimpur, Assam

Activity Category	Activities
Farm Management	Vermi pits, SRI cultivation, Crop diversification, farm pond construction, integrated farm system
Irrigation Management	Solar water pump, Diesel water pump, farm bunding
Clean Energy	Solar street light, solar home light
Disaster Management	Wooden houseboat, high raised platform with shelter, mike set for the early warning system

4.2.1. Effectiveness and Impact

This section provides an overview of the effectiveness of the project activities and their contributions to the outcomes defined in consultation with HDFC Bank. As indicated in Figure 4, the impact level attained under each category is calculated based on the average of output indicators under each activity category. The detailed analysis table used to estimate the same is attached in Annexure 6.5.

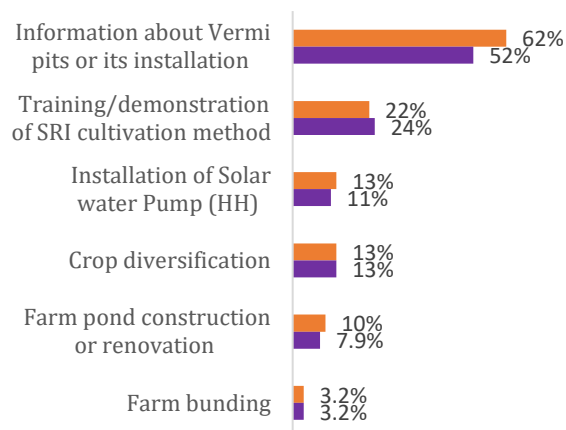
Figure 4: An overview of project effectiveness and impact in Natural Resource Management



The farmer-beneficiaries of the project have reported a **moderate increase in production, productivity, and income generated from agriculture in response to project interventions in farm management.** While infrastructure development had limited scope in the activities undertaken, the adoption of innovative and sustainable activities such as organic manure, vermi-pit,

SRI, and farm pond for fish farming has directly contributed to input efficiency, productivity, and improvements in soil health according to the farming community. However, the project had limited scope in facilitating crop diversification.

Figure 5: Activities conducted and currently practiced under farm management



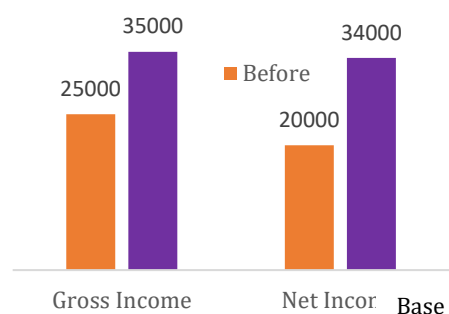
Under clean energy, the project covered solar lights for households and solar street lights which improved the availability of light sources and the ability to move out of the house during nightfall. However, no major interventions were undertaken with regard to improving clean energy or clean cooking under the project.

As a flood-affected region, numerous interventions were undertaken to reduce disaster risks and the vulnerability of the

community. The project focused on setting up infrastructure in the form of elevated shelters, sanitation units, drinking water sources, and houseboats improving the community’s access to disaster management infrastructure during vulnerable times.

Income from agriculture: Under farm management, vermi-pits installation and SRI (Boro farming) are the major activities conducted in the project region as indicated in Figure 5. Community ponds in the region were also renovated to be utilized for fish farming. Furthermore, crop diversification, solar water pump installation, and farm bunding were some of the major activities conducted as part of farm management.

Figure 6: Increase in agricultural income (based on the median in Rs.)⁶



As indicated in Figure 5, **more than 90% of beneficiaries in each activity are still practicing or utilizing the service provided through the project indicating a sustained impact.** While the average land ownership (owned and leased-in) has not increased considerably, **average irrigated land has increased from 1.0 to 1.7 acres⁷ (Based on median) since project inception.** Furthermore, the beneficiary farmers have reported a **70%**

increase in the annual average net income largely owing to reduced input expenditure (33% decrease from Rs.3000 to Rs.2000)⁸.

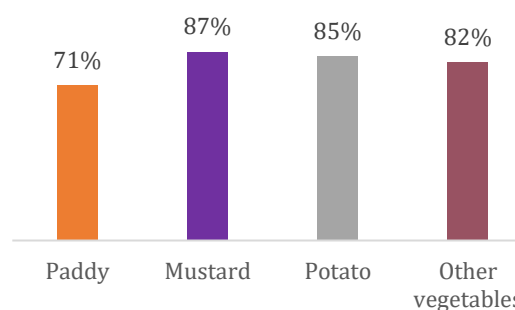
⁶ Based on the Pearson Correlation test, correlation between gross income and increase in net income is significant at 95% confidence interval.

⁷ The minimal change reported in land under irrigation is not statistically significant at 95% confidence interval.

⁸ Based on the Pearson Correlation test, correlation between change in net income and change in input cost is statistically significant at 95% confidence interval.

While there is no significant increase in total area under production, on average, **81% of farmers believe that their production has increased for major crops namely paddy, mustard, and potato.** Furthermore, the average **productivity of these crops increased from 770 kg to 1088 kg per acre (41% increase⁹)** in the project period.

Figure 7: Crop-wise increase in income



Project activities in seeds, tools, and organic farming are the major interventions that contributed to improved production according to the farmers. Qualitative discussions also suggested that the adoption of boro farming (SRI) has also led to an increase in productivity, especially in the post-flood context wherein the community was supported in the adoption of SRI. Furthermore, the distribution of solar water pumps also resolved issues related to irrigation in the post-flood scenario according to the farmers.

Figure 8: HRDP interventions that contributed to income increase

Intervention	Crops			
	Paddy	Mustard	Potato	Other Vegetables
Farm pond construction or renovation	2.2%	4.0%		
Information/ installation of Vermi pits	71%	72%	91%	100%
Installation of Solar Water Pump (HH)	8.9%	4.0%	9.1%	10%
Training/demonstration of SRI cultivation	22%	12%		
Crop diversification	6.7%	16%	9.1%	
Soil testing	2.2%	4.0%		
Farm bunding		4.0%		
Installation of Solar Water Pump	11%	4.0%	9.1%	20%
Other	2.2%			

More than three-fourths of farmers (for all major crops) reported that HDFC Bank project interventions led to income gains in addition to better market prices. According to the beneficiary farmers, the installation of vermi-pits has significantly reduced their fertilizer consumption (67%) thereby reducing input expenditure¹⁰ and leading to income gains as indicated below. Among those who received support for vermicompost pits, 42% received training while 79% received support in setting up the pits through the project¹¹.

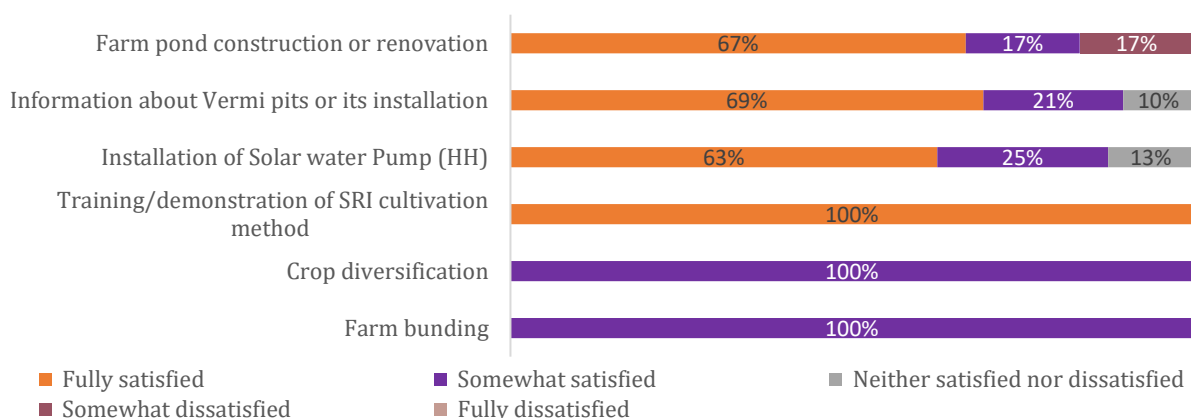
⁹ The increase in productivity reported is statistically significant at 95% confidence interval.

¹⁰ Changes in input cost reported by natural fertilizer beneficiaries is significant at 95% confidence interval

¹¹ Differences in net income and reported interventions are not statistically significant at 95% confidence interval. However, the farmers reported a strong positive influence of project interventions on their income generation capacity in qualitative discussions.

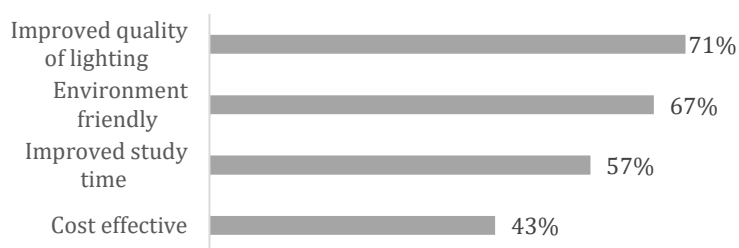
More than half of beneficiary farmers (52%) reported that they only used natural fertilizer in the last season while **27% reported that their use of chemical fertilizer has decreased since the project's inception**. Furthermore, 56% of vermi-pit beneficiaries strongly believe that the adoption of vermicompost has improved soil health as well. More than **80% of beneficiaries for all farm management activities reported that they are satisfied with the project activities** undertaken. When asked about challenges faced for adoption or utilization of farm management services, high expenditure for adoption and inadequate information were reported as the major reasons.

Figure 9: Level of satisfaction with HRDP NRM interventions



Clean Energy Solutions: While about one-third (32%) of beneficiaries reported accessing clean energy solutions, solar street lights installment was the major activity undertaken. Among clean energy beneficiaries, 17% also benefitted from solar home light distribution. While the majority of respondents have access to less than four hours in a day, about two third of solar light beneficiaries lighting purposes while more than 80% utilize it for reading. Furthermore, 29% also reported utilizing the same for studying purposes indicating usage among various age groups. While better lighting is the most reported, sustainability and cost-effectiveness were also reported by solar light beneficiaries as the major benefits as indicated in Figure 10.

Figure 10: Perceived benefits of solar lights

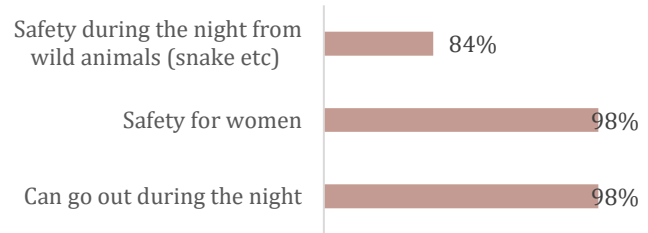


With regard to solar street lights, **more than 90% of solar street light beneficiaries (121 respondents) reported that the solar lights are currently operational** indicating the sustained effectiveness of the intervention. Almost all beneficiaries

of solar street lights reported improved safety due to the installation of solar street lights as indicated in Figure 11.

Figure 11: Benefits of solar street lights

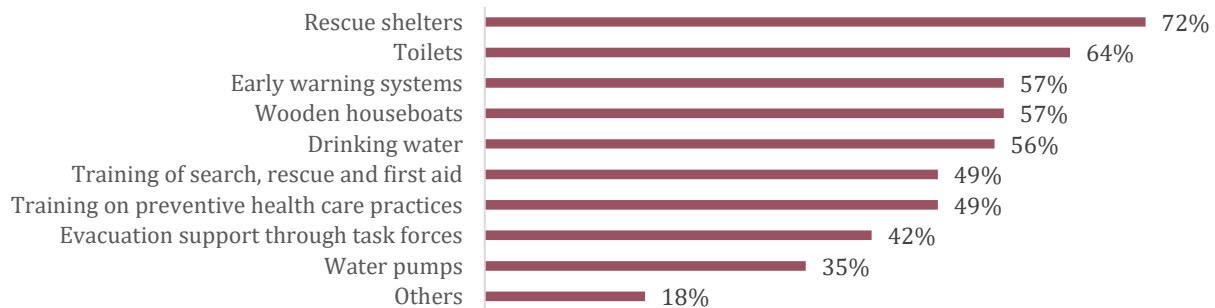
In the case of solar lights for households, more than two-thirds of solar light beneficiaries were ‘fully satisfied with the solar lights received through the HRDP project though the short working duration was a major issue reported by the users.



Reduced risk and vulnerability due to natural disasters: About one-fourth of survey respondents reported receiving disaster management support through the project. Among them, rescue shelters (72%) and toilets (64%) were the key interventions reported. **Qualitative discussions indicated that the community members were in dire need of support and the project interventions were timely and effective efforts in reducing the community’s vulnerability due to natural disasters, namely floods.**

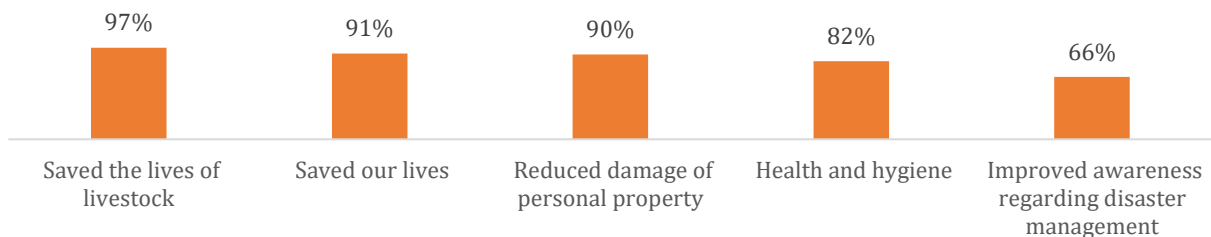
For instance, community members of Alichiga village noted “*The government left us alone during the flood time but IGSSS people stand with us and provided household items, mikes for early warning, houseboat, water pumps, etc.*”

Figure 12: HRDP support areas in disaster risk reduction



Improved safety of livestock and human lives were the major results of disaster management interventions according to the project respondents. Furthermore, improvements in risk reduction with regard to property, health, and hygiene were also reported along with improved awareness.

Figure 13: Perceived benefits of disaster management interventions



While the majority of the respondents noted elevated rescue shelter with toilets as the major intervention, only up to 25 people can be accommodated at a time according to Ms. Dipti Padairi, Panchayat President of Alichiga village. She noted that the project was able to contribute in a lot of areas where even the government failed to address the issues faced by the community. However, maintenance of structures built under the project is still a concern especially considering the lack of initiative among community members to undertake the same.

4.2.2. Case Study

“Community Boat, a great relief to the poor families”

Mr Mithin, aged about 30 years old, is an inhabitant of 1 No Mudoibeel village since birth. He is one of the members of the village disaster management committee and a lead member of the Search and Rescue Group. His village is situated on the river bank of Subensiri and experiences recurrent annual flood during the monsoon due to the proximity to river and absence of embankment.

He explains that as they live in the riverine flood plain, it was essential for every family in the village to own boats of their own but the sad reality was that only 50% of the families in the village own individual boats. Absence of community boats in the village created major setbacks to the poorer families during floods especially with regard to search and rescue operations. This renders loss of household property, livestock and even lives of vulnerable groups.

IGSSS with support from HDFC bank, provided support in the form of two community boats. He narrates how the community boats have been a blessing for the poor families during the high floods. The boats were used to rescue both domestic animals and humans to the embankments and high raised platform, collect fodder for livestock, transport relief materials, transport children to schools, distribute drinking water from different sources, and largely for movement from the village to the road side to meet their daily needs.

“The community boats supported by IGSSS provided great relief to the poor families of my village. They were able to save lives, property and livestock as compared to the previous years. In the massive flood that strike the village nearly every year, with our preparedness and pre-positioning of community boats and other flood resilient infrastructure, this year they have suffered only one human causality and less loss of households’ property and livestock”.

On behalf of the entire village, he thanks IGSSS for all the supports in their village - high raise platform, hand pumps with elevated platforms, community boats, water filters etc. as these infrastructure has helped them greatly in saving their lives and property.

4.3. Skill Training and Livelihood Enhancement

To help increase the income of the household from non-agriculture sources, it becomes important to have pertinent skills. Under the HRD program, several skill development training and support to start their enterprise were conducted, for women, youth, and farmers. This not only includes trade-based skill training but also training on soft skills like communication and digital and financial literacy. The beneficiaries were also supported in market linkages and setting up of the necessary machinery.

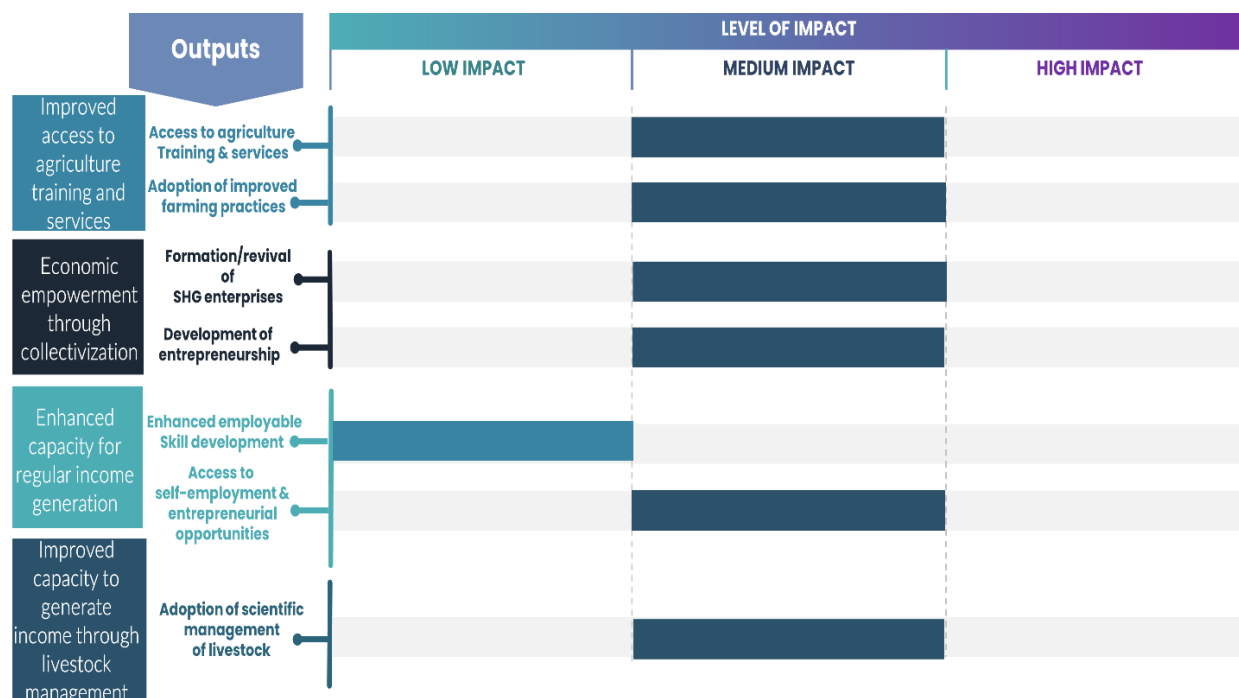
Table 6: Activities under skill training and livelihood enhancement in Lakhimpur, Assam

Activity Category	Activities
Agriculture Training and Support	Fish cum paddy models, intercropping models, demonstration of cultivating paddy through SRI method
SHG-Based Women Empowerment	Training on SHG activities, and training in trade-based enterprises
Skill Training	Relevant skills for youth and women to start their enterprise, including financial literacy and communication skills
Livestock Management	Training on livestock care and management
Entrepreneurship Development	Machinery support and training on soft skills and market linkages

4.3.1. Effectiveness and Impact

Under Skill training and livelihood enhancement, the project was highly successful in facilitating access to agriculture and entrepreneurial training services. While more than 80% reported adoption of at least one skill they gained through the training, the effectiveness of the capacity-building activities was seen heightened when accompanied by physical capital support.

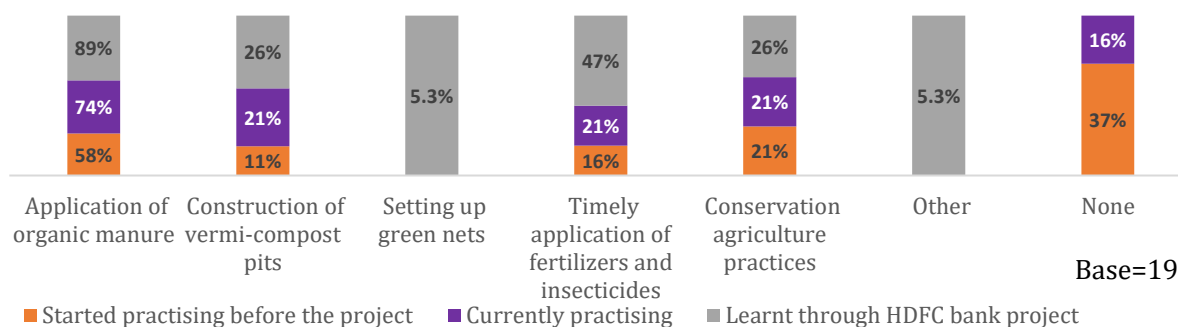
Figure 14: An overview of project effectiveness and impact and skill and livelihood enhancement



In the case of SHG-based enterprise interventions, however, were seen to be discontinued or undertaken at an individual level rather than at a collective level. This in turn has affected the scaling up potential and profit generation capacity of the SHG enterprises. The intervention has nonetheless enhanced the capacity of women to improve income generation capacity and entrepreneurship at the individual or collective level as indicated below. Furthermore, the beneficiary livestock owners have reported a 50% increase from Rs. 2000 to Rs. 3000 (based on median) in their monthly income since the project inception.

Agriculture training and services: Application of organic manure, timely application of inputs such as fertilizers and insecticides, and conservation agriculture are the major areas of training the community accessed through the project. More than 80% reported continued adoption of at least one practice they learned through the project indicating high effectiveness, especially in the case of organic manure application.

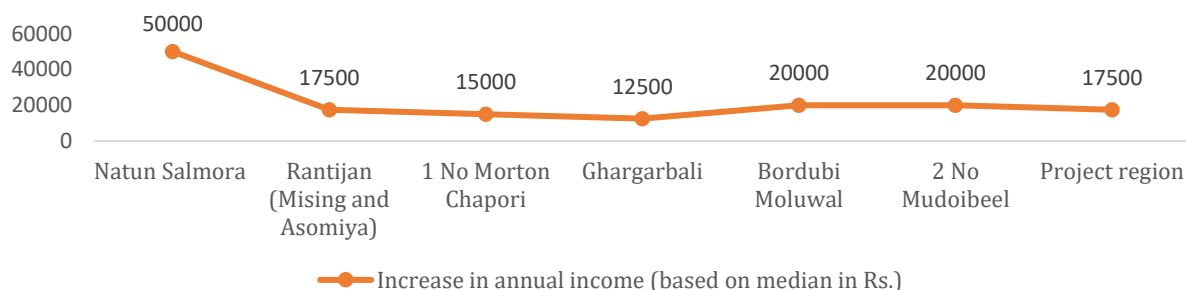
Figure 15: Agriculture practices learned and adopted through HDFC Bank training



While practices such as organic manure, timely application of inputs such as fertilizers, and vermicompost pits were adopted by community members even before project inception, this was only undertaken only by a minuscule of farmers.

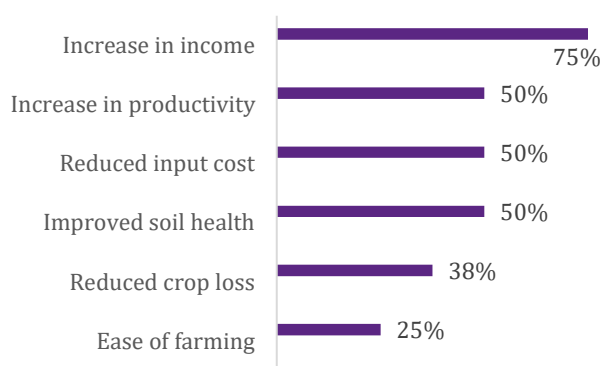
However, in response to the project training, a noticeable increase in the adoption rate can be noticed in these areas. Furthermore, **two-thirds of respondents who received training believe that their income (Rs.17,500 annually) has increased due to the adoption of the practices.**

Figure 16: Increase in annual income



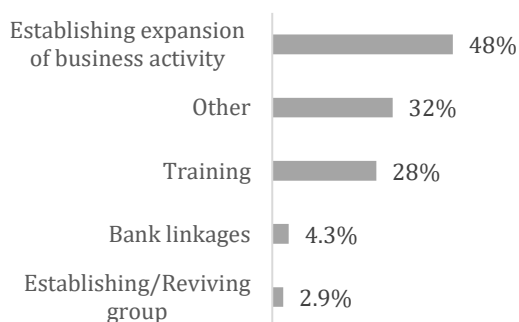
Furthermore, **half of them report an increase in productivity, reduced input cost, and improved soil health influenced by the continued adoption of sustainable agricultural practices.**

Figure 17: Perceived improvements due to the adoption of agricultural practices



While the majority of beneficiaries who received training continue to adopt at least one of the practices they learned through the program, the adoption was low in some cases, especially in the case of setting up green nets. When asked about the reasons for low adoption, low returns, lack of local availability of inputs, and poor access to adequate water were cited as the major issues in the quantitative survey.

Figure 18: Support provided for SHGs through HRDP

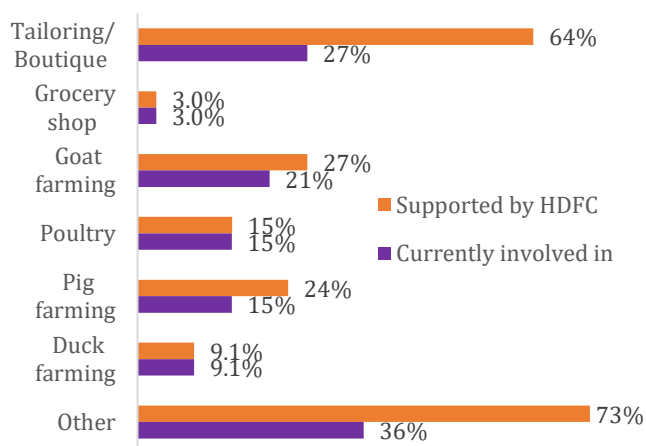


Women’s Economic Empowerment through collectivization:

About one-fifth of survey respondents were SHG members who received project support, especially in areas including establishing/ expansion of SHG enterprises, training, and establishing bank linkages. With regard to training for SHG members, the project provided support in SHG management, lending and savings management, enterprise management, and bookkeeping. **More than 80% of SHG beneficiaries believe that being an SHG member has helped them**

in improving income generation capacity, personal savings, and confidence building indicating the crucial role these institutions play in facilitating women empowerment.

Figure 19: Project-supported SHG enterprise activities active post-intervention



As indicated in Figure 19, all those who were supported for enterprises grocery shops, poultry, and duck farming have continued with these enterprises indicating sustained effectiveness of the support received through HRDP.

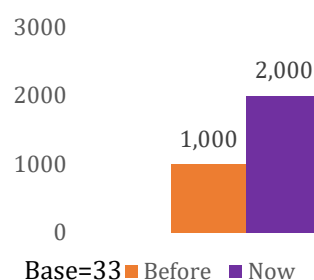
However, in the case of goat rearing, qualitative discussions indicated that unsuitable weather conditions have led to high morbidity among goats and increasing losses. While many have discontinued goat

rearing, some of them have also ventured into cow rearing which has better potential in terms of profit generation. The SHG members also noted that goats provided to SHG were distributed among members and are reared individually rather than as a collective activity which in turn reduces the scope for business expansion of the SHG-based enterprise.

More than half of SHG enterprise beneficiaries (58%) reported that involvement in SHG-based enterprises has increased their income.

Figure 20: Changes in SHG enterprise income since project inception (in Rs.)

As indicated in Figure 20, the reported average monthly income¹² has doubled since project inception¹³. Among those who reported currently having group savings, more than three fourth (78%) reported that their group savings have increased since project inception. Furthermore, all beneficiaries who received training reported that the **capacity-building support** they received was either **‘very useful’ (16%)** or **‘useful (84%)**. The respondents strongly believe that the training support has contributed to **improved business management (74%), improved confidence (42%), and have also reduced income loss from business activities (36.8%)** which in turn indicates the direct impact of the project intervention in increasing the income generated through SHG based business activities.



While SHG-based interventions have improved its members’ income generation capacity and overall confidence, undertaking business activity as a group continues to be a challenge. While SHG members are increasingly undertaking business activities at the individual level, encouraging group-based business enterprises could translate into the enhanced potential for scaling up, risk sharing, and profit generation.

Skill and Entrepreneurship Development: About one-fifth (17%) of the survey respondents reported receiving skill and entrepreneurship development support through the project. The support received was mostly in the areas of enterprise development (32%), skill development training in job-oriented programs (21%), and linkages with employers (16%).

With regard to skill training mobile repairing and tailoring were the main training activities conducted. In the case of enterprise development support, more than two third of beneficiaries reported receiving business management training (67%) while information on production techniques, initial capital investment, and enterprise group were some of the areas in which the project support was provided.

Among those who received training, **85% reported that they were able to apply the skills gained** through the training indicating the high level of effectiveness of the intervention. About half (46%) of the beneficiaries of training services also believe that **the skills they gained have led to an increase in their income. A 250% increase from Rs. 2000 to Rs.7000 in monthly income (based on the median¹⁴)** was reported. In the case of enterprise owners, more than three fourth of

¹² Based on median

¹³ The increase in average monthly SHG income of SHG based enterprise intervention beneficiaries is statistically significant at 95% confidence interval.

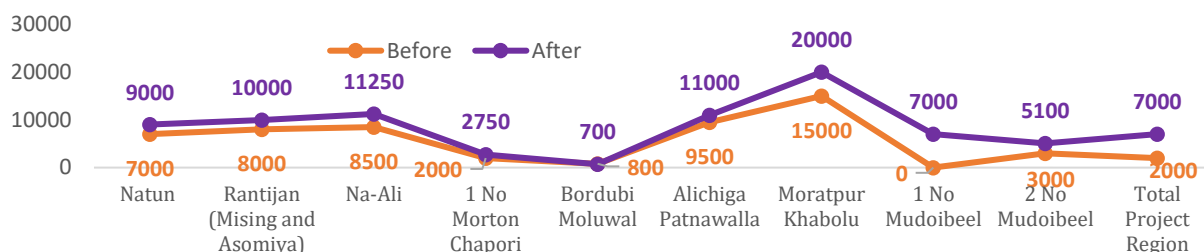
¹⁴ The increase in average monthly income in response to skill enhancement of skill training beneficiaries is not statistically significant at 95% confidence interval.

respondents reported an increase in income while **more than 40% believe that the enterprise has led to consistent income generation since project inception.**

Figure 21: Skill and entrepreneurship development services accessed through HRDP

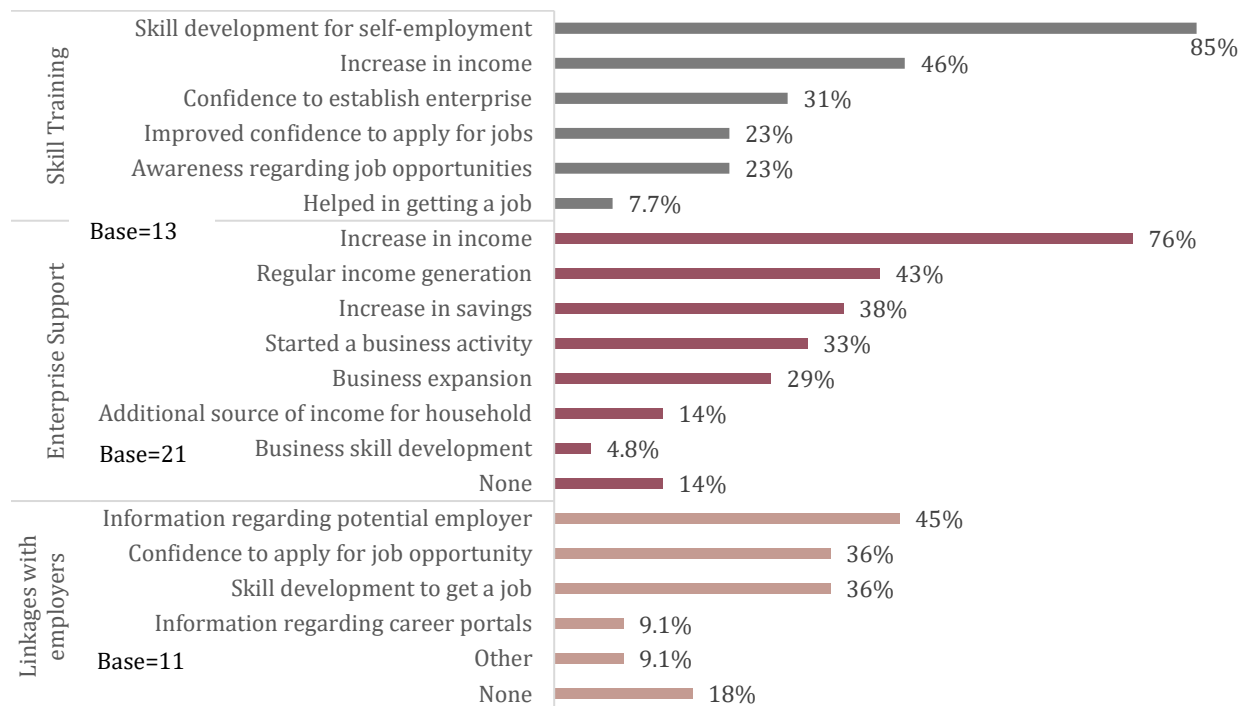
Community members who were provided physical capital support (tailoring machines, tool kits, etc.) reported consistent income gains as they were mostly unemployed or hardly had a stable income prior to the intervention. Based on median income change, enterprise owners reported that their average monthly income has significantly increased since project inception as indicated below:

Figure 22: Increase in average monthly income from enterprise development (in INR)¹⁵



In addition, increasing the income, skills, and entrepreneurship services has also led to multiple benefits as indicated below:

Figure 23: Perceived benefits of skill training and enterprise development



¹⁵ Based on the Pearson Correlation test, the proportion of current personal income from enterprises and change in income from enterprise were correlated at 95% confidence interval. Income based on median

Skill training and enterprise development interventions have reportedly led to improvements in income generation capacity. Interventions aimed at skill and capacity development were seen as more impactful when accompanied by physical capital support to initiate setting up enterprises.

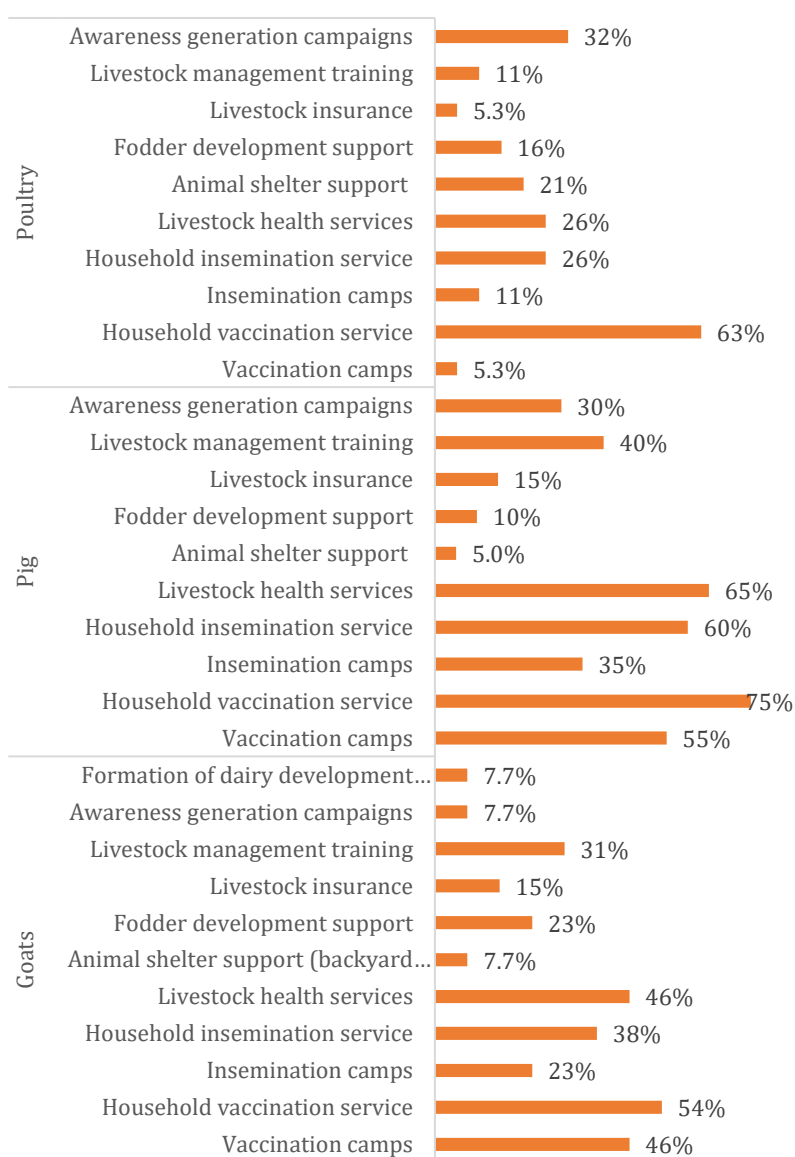
Livestock Management: Among the quantitative survey respondents, 14% reported accessing livestock-based interventions. In terms of the major livestock owned by the community members, more than one-third (36%) currently owns poultry while about one-fifth owns goats and pigs. The livestock owners are involved in small-scale livestock farming as the average number of livestock owned is between 3-20.

Figure 24: Livestock management services availed through HRDP

Household vaccination service is the major livestock service accessed by livestock owners through the project followed by livestock health and insemination services as indicated below. More than one-third of beneficiary livestock owners have also received livestock management training.

More than two-thirds of project beneficiaries believe that project interventions have led to an increase in income from livestock. Reduced livestock death and improved health are the other major key benefits reported. Furthermore, an increase in household savings was also reported except for poultry owners.

According to the livestock management beneficiaries, **the monthly income from livestock management has increased by 50% (Rs.2000 to Rs.3000 based on median) since the project's inception¹⁶.**



¹⁶ Based on the Pearson correlation test, the correlation between increase in income from livestock and average monthly income from livestock rearing supported by the project is significant at 95% confidence interval.

“The shelter is small to have pigs inside also as we keep the litter inside. So, we prefer keeping the pigs outside”. - Pawer Pegu, Gharmukh Baligaon village.

Figure 25: Perceived primary benefits of livestock interventions

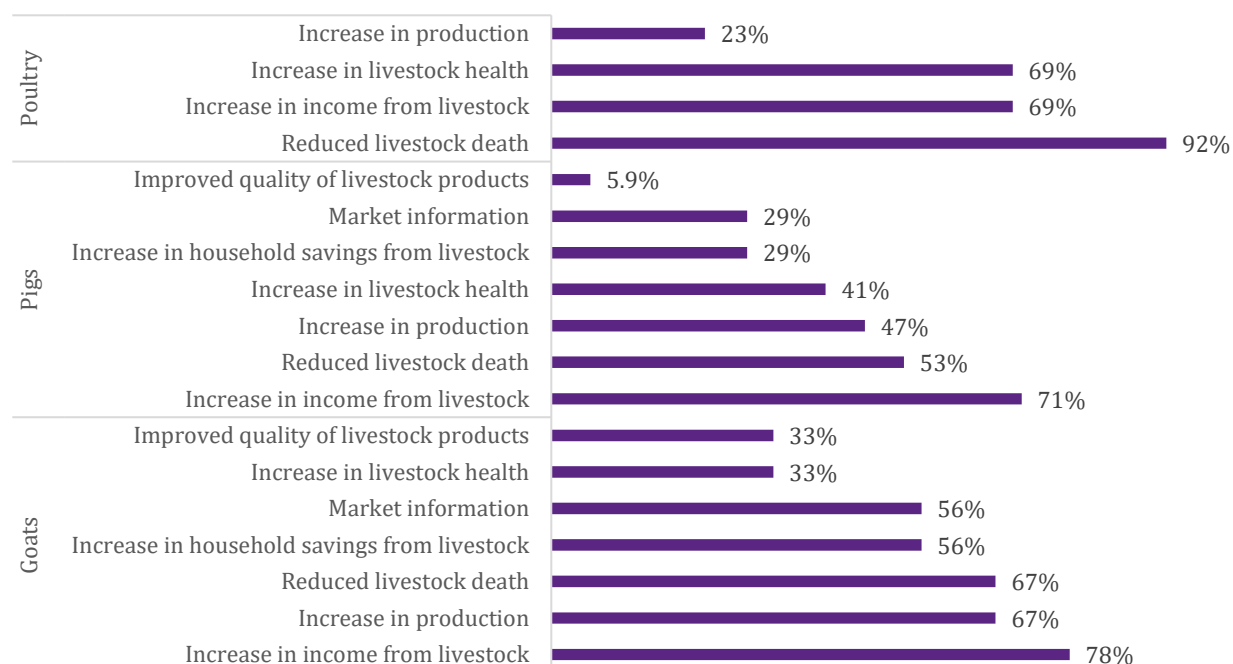
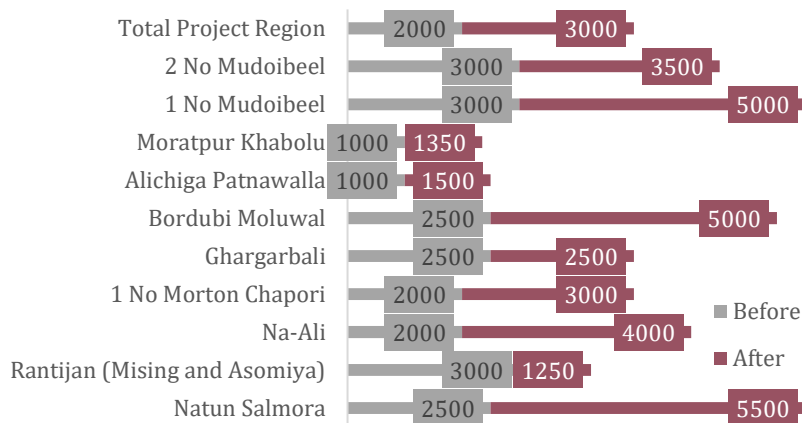


Figure 26: Change in average monthly income due to improved livestock rearing¹⁷



The projects accessed by the community are largely in the areas of vaccination and insemination services leading to reduced death and improved health of livestock. However, the project has a relatively lower impact on enhancing the production capacity of the animals as the activities

conducted were largely focused on improving livestock health. Furthermore, with regard to animal shelters constructed with project support, livestock owners have not been able to adequately utilize the shelter due to space restrictions, especially in the case of an increasing number of animals. Livestock management beneficiaries across all project villages reported an increase in average monthly income except in Rantijan village.

¹⁷Based on the Pearson Correlation test, the proportion of current personal income from livestock and change in income from livestock were correlated at 95% confidence interval. However, change in income was not statistically significant for any of the livestock intervention beneficiary categories.

4.3.2. Case Study



“Livestock rearing as our primary source of livelihood.”

Under the project title, “Recovery and Reconstruction of Flood affected communities in Lakhimpur district, Assam” there is a provision of livelihood support to SHGs or Farmer Groups under three components – Agriculture, livestock and weaving. Accordingly, Alichiga SHG opted for kid (goat) rearing under livestock rearing. Alichiga SHG group was registered in 2008 and has 13 members.

Mrs Pulmala Sarkar, President of the Alichiga SHG narrates the livelihood support received by IGSSS. They have opted to rear goats under the livestock support. They received 22 kids. Of the total 22 kids, 20 were female kids and two were male kids. They were distributed amongst the nine members, who received two each while four members received 1 each. Apart from receiving the livelihood support, they also received training on livestock care and management. This training has helped them in the day-to-day livestock management and now they are also aware about vaccination, food and medicines like deworming and vitamins etc. They also learnt about the feeding habits of the goats during the flood time to keep them healthy and prevent from various water borne diseases.

During the massive flood in 2017, they were able to rescue all the 22 kids and were able to provide them safe shelter in the HRDP, supported by IGSSS. Among the 20, five female goats have given birth in the month of December and other 15 are pregnant and expecting in the month of January. As per their business plan, they would be selling the kids by end of the 3 months, when the kids are grown up and stops feeding from its mother. Since it is their first delivery, it is likely that most of the female goats will give birth to a single kid. By April, they are expecting to sell 15 kids for about Rs. 1400 per unit. They plan on starting a tent house with the savings and income after selling of the kids.

4.4. Health and Sanitation

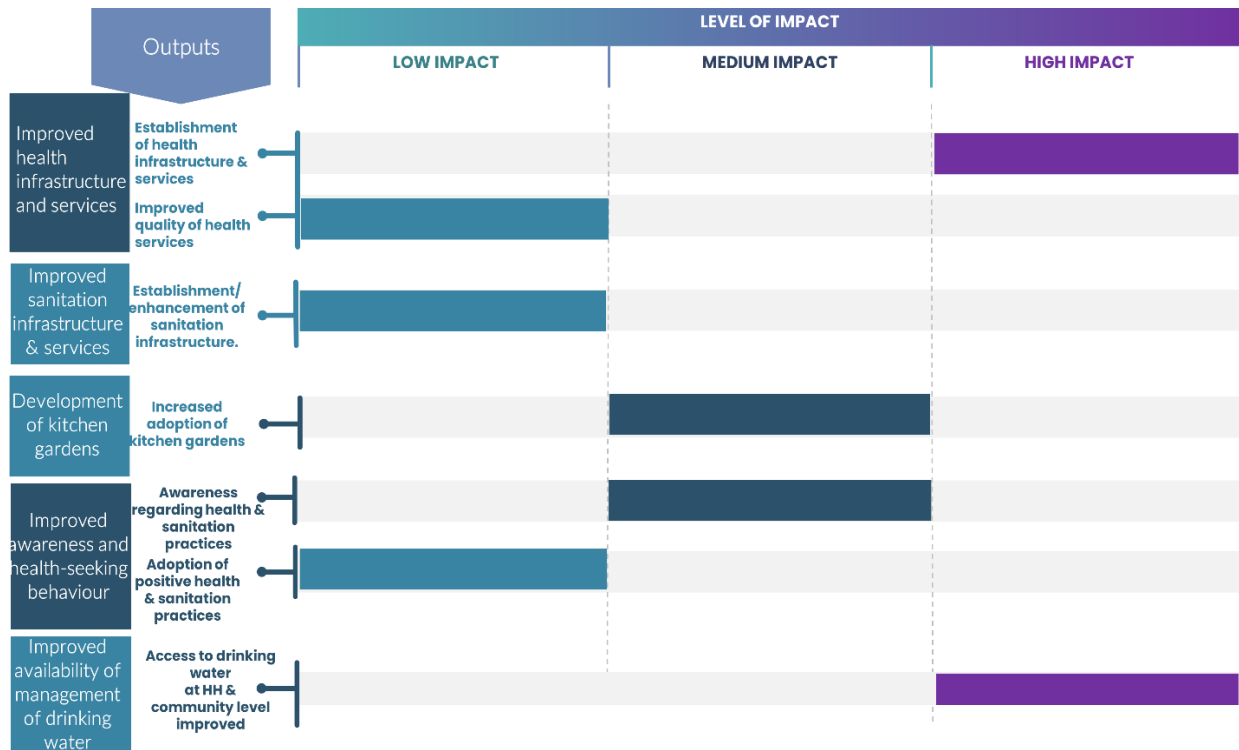
The interventions under Health and Sanitation were imperative in the project villages. They were mainly aimed at creating infrastructure that can be accessed even during floods. According to the project survey, people are unable to access toilets and drinking water during floods. The project took place between 2018 and 2020 and since then, it has helped build several elevated toilets on both raised platforms and stilts, conducted health camps, distributed several hygiene kits, and conducted several programs and sessions on hygienic WASH practices for women and children.

Table 7: Activities under health and sanitation in Assam

Activity Category	Activities
Health	Health camp, Hygiene promotion cum sensitization of health schemes
Sanitation	Community level stilt /elevated toilet construction in 5 villages
Drinking Water Management	Elevated hand hump
Kitchen Garden	Kitchen garden setups

4.4.1. Effectiveness and Impact

Figure 27: An overview of project effectiveness and impact on Health and sanitation

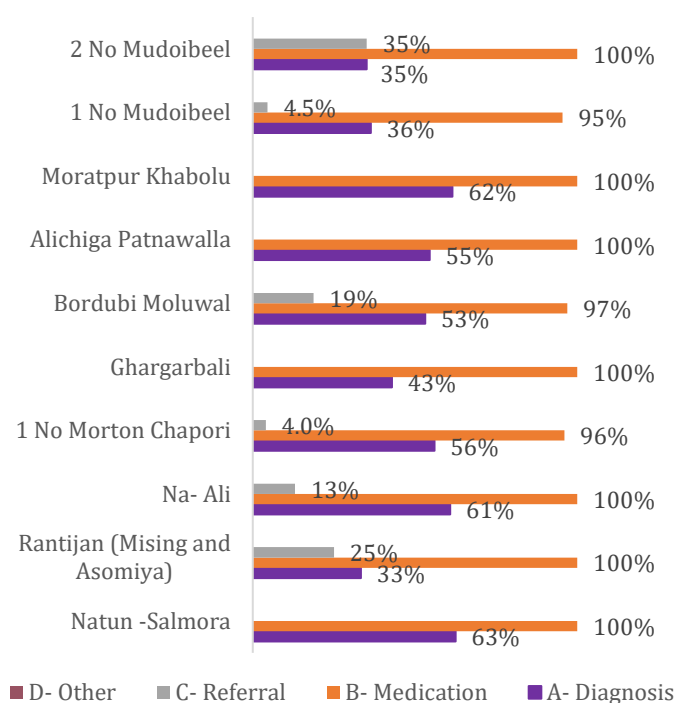


Under health and sanitation, the main focus was to improve the hygiene and health of the people living in the flood-prone area of Lakhimpur. The most effective was the health camps where the people were screened for various water-borne diseases and given medication for the same. The number of these health camps could perhaps be increased. In the case of drinking water management, **more than 80% of households reported at least one health benefit from improved quality and quantity of water availability through the project.**

The communities often faced several issues in accessing toilets during floods, so several stilted and elevated toilets were constructed. This was one of the most impactful interventions. In addition to this, HRDP supported several households in setting up kitchen gardens so that they could add to their diets and help them gain more nutrition, as well as an extra source of income.

Health infrastructure and services: Under HRDP, several health camps were conducted in 10 villages for Lakhimpur. Nearly 98% of the people who attended the health camps mostly availed medication, and about half of them also availed diagnosis services. People who availed referrals were, however, relatively few. Upon further inspection, nearly 81% of the people consulted the medical service they were referred to. Among the 19% of the people who did not consult the medical service they were referred to, 90% of their reasoning was that they did not feel the need to.

Figure 28: Services availed at HDFC Bank-supported camps/clinics



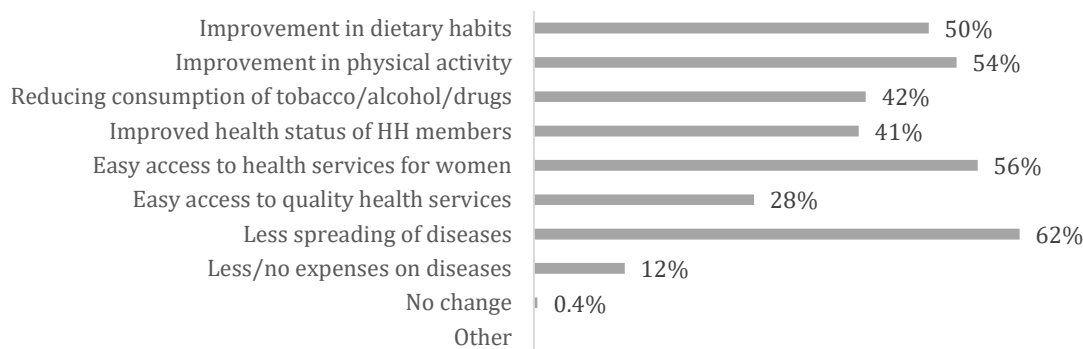
The health camps covered screening for waterborne diseases which were prevalent in the flood-prone area of Lakhimpur. Several hygiene and WASH sessions were also conducted for women and children, and it was successful in creating awareness of the best practices to follow for a healthy lifestyle. As a preliminary, preventive measure, HRDP also conducted capacity-building sessions on herbal medicine for nearly 180 participants in 2019-2020 alone and is now serving the community.

After the HRDP intervention, more than half of the people in the community responded positively when asked about how the health services provided have helped bring about changes in their lives. **About 61% of the respondents have observed that there is less spreading of diseases.** This is an important change as water-borne diseases are often prevalent during floods. About 50% of the respondents have noticed an improvement in their dietary habits, while 41% of the respondents have noticed an improvement in the health of their household members.

In addition to this, a smaller proportion of respondents stated that it was **now easy to access health care, at about 28% and about 56% of the respondents have observed that it has been easy for women to access health services.** This remains a concern as health care should be easily accessible by everyone.

Significant improvement is seen with respect to health infrastructure, considering that the closest hospital is not easily accessible by many. The awareness campaigns conducted on hygiene and healthy WASH practices can only be completely effective if suitable infrastructure is accessible to support them.

Figure 29: Perceived benefits of HDFC Bank-supported health camps/clinics

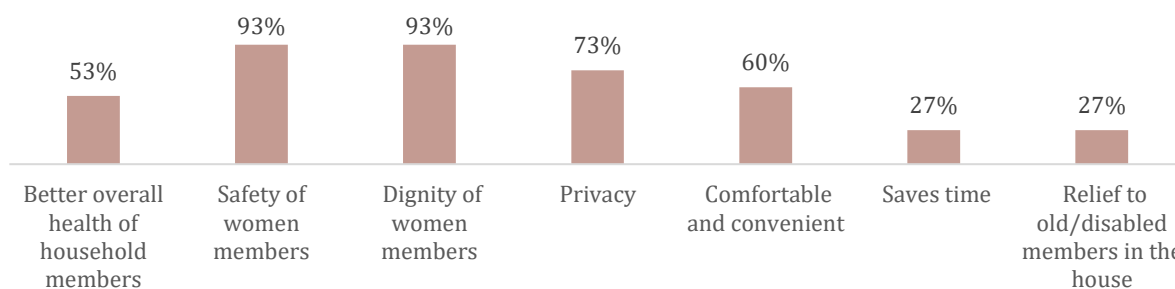


Sanitation infrastructure and services: Since Lakhimpur is a flood-prone area, it becomes pertinent to adopt appropriate resilient infrastructure for the development of the area. To improve the hygiene of the villages, HRDP was involved in the construction of elevated hand pumps and stilted toilets. Furthermore, quantitative data indicated that **13% of beneficiaries¹⁸ who used to practice open defecation are now utilizing community toilets**. Several awareness campaigns on healthy and hygienic WASH practices were conducted for women and school children.

From the qualitative data, it is evident that most of the respondents have availed of household and/or community toilets from this project. But they have also availed other project services like drainage systems and water management plants.

More than 90% of the respondents have conferred that the safety and dignity of women is the most beneficial aspect of sanitation services. Privacy is a close second, while many other respondents have also agreed that these sanitation units are comfortable and convenient. A few other respondents state that it has been better for the overall health of the household.

Figure 30: Perceived benefits of sanitation units



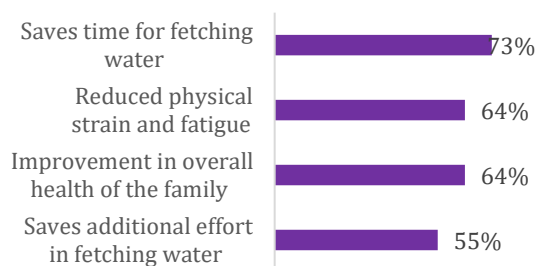
¹⁸ Decrease of 13% in open defecation is not statistically significant.

Availability and Management of Drinking Water: The quantitative survey indicated that 12% of the respondents had access to drinking water-based interventions under the HRDP project. Among the drinking water management beneficiaries, the water treatment plant was the major intervention followed by community taps while 48% reported a change in the main drinking water source since the project inception. Among those who reported changes in drinking water sources since project inception, about three fourth of beneficiaries (73%) reported utilizing project-supported drinking water sources for over two years indicating a high usage rate.

The respondents also reported improvements in the availability of drinking water since project inception as the average number of months with sufficient water availability increased from four to nine months (125% increase) over the duration of the project. Furthermore, about three fourth of respondents (73%) who reported changes in drinking water sources also reported a decrease in instances of water-borne diseases such as cholera while 86% reported improvement in at least one health benefit from improved access to drinking water.

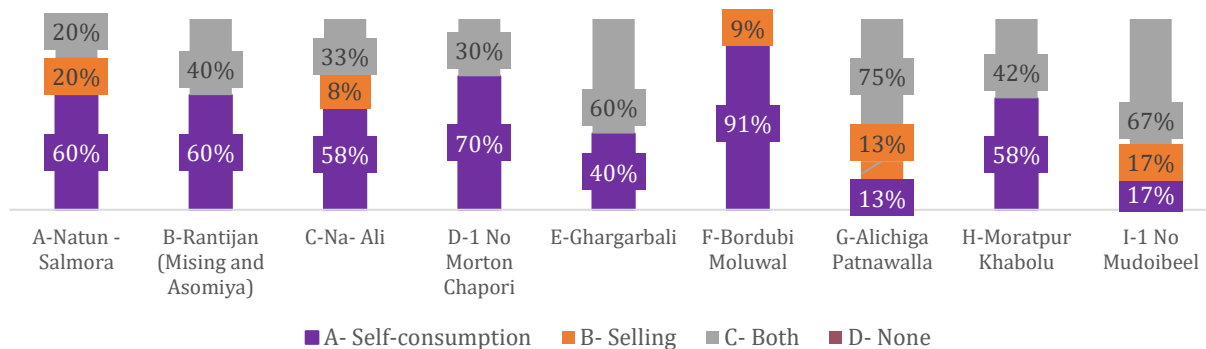
Figure 31: Perceived health benefits of improved drinking water sources

While about half of drinking water management beneficiaries report changes in drinking water sources since project inception, less than one-fifth of respondents directly benefitted from the repair or construction of drinking water sources under the project. However, improved health benefits reported by the majority of this category can be directly attributed to more than 60% of drinking water beneficiaries accessing water treatment plant services established under the project.



Kitchen Garden: Due to the prevailing malnourishment issue in Lakhimpur, kitchen gardens have been most useful to address this. The HRDP supported the household members by providing them with seeds, training, and inputs like fertilizers and pesticides.

Figure 32: Utilization of kitchen garden produce



Due to the kitchen garden intervention, a large proportion of the respondents have stated that it has helped in the reduction of expenditure on food and has become an additional source of income. 47% of the respondents reported improved nutrition since they include healthy vegetables in their diet while 68% reported reduced expenditure on food. The respondents have also stated that they are very satisfied with the support that they have received in setting up their kitchen gardens. However, as per our observations, more training/capacity-building sessions on effectively running a backyard kitchen garden could be more useful.

4.4.2. Case study



“Toilet, a game changer to avoid open defecation”

Mrs. Rupali Payeng, mother of two, is a daughter in-law of Mr Aldhar Payeng, a local resident of 2 No Mudoibeel Village. It is one of the target villages under the DRR project supported by HDFC Bank. The village is inhabited by Mishing Community, belongs to schedule tribe social status. The Mishing tribe is the second populous tribe of Assam and are riverine community, living in the flood plain of upper Assam.

The residents of 2 No Mudoibeel, including the Mishing tribe, practice open defecation, irrespective of their social and economic status.

Mrs Rupali Payeng a regular participant who attended the WASH awareness programs organized by IGSSS. She was sensitized on water, sanitation and hygiene practices and its importance in everyday life. Apart from sensitization programs, IGSSS also constructed a community toilet in their village. Since its completion in June, she has been using the community toilet and expresses her sense of privacy and ease in using these toilets. She also describes the sense of discomfort while using the structured toilet initially but with sheer determination and practiced use of the structured toilet, adopted the hygienic sanitation practice. She also expressed the difficulties of maintaining the cleanliness of the toilet blocks as the users were not acquainted with such toilets. Gradually, with constant coordinated efforts among the users, they are now able to maintain the cleanliness of the toilets. She personally orients the new users on the usage and maintenance aspects of the toilets. Presently, five families are regularly using the toilets with proper maintenance.

4.5. Promotion of Education

Under the HRD program, the promotion of education included renovation of school buildings across the district and building sanitation infrastructure in schools, although they were fewer in number. To encourage kids to take study science and take up sports, the schools were also provided with science and sports kits.

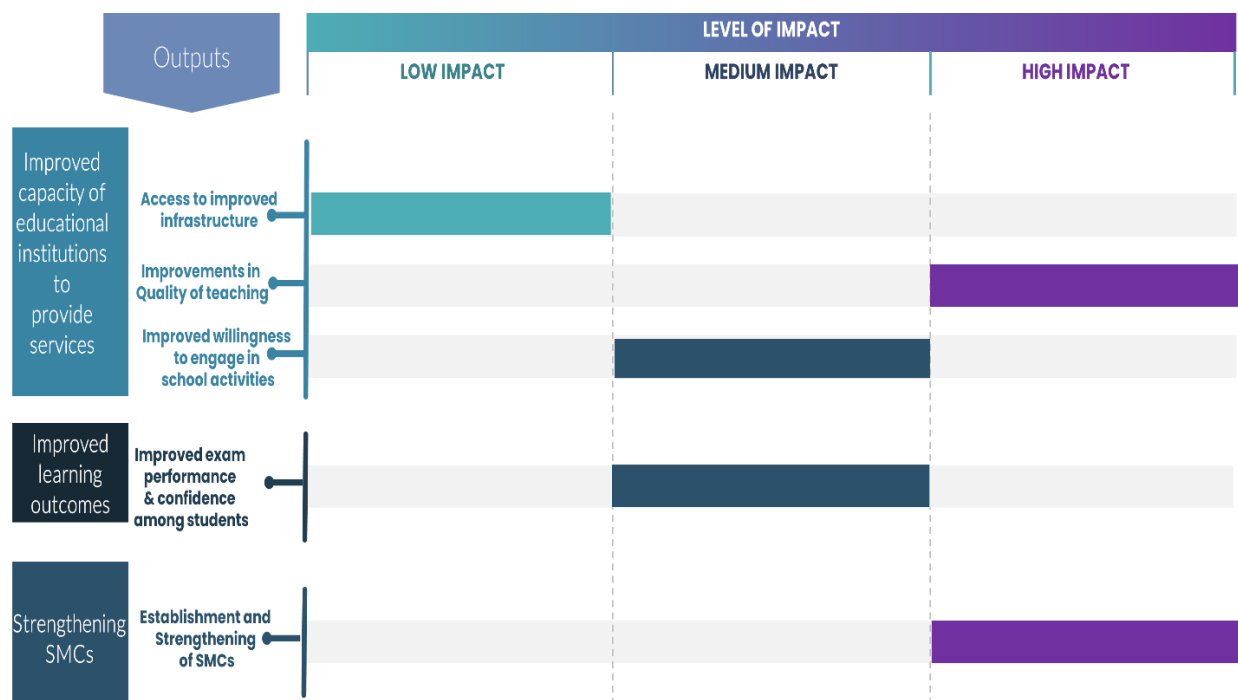
Table 8: Activities under education in Assam

Activity Category	Activities
Educational Institutions Development and Education support	Renovation of school buildings and sanitation structures, provision of science kits and sports kits
SMC Strengthening	Establishing and revival of SMCs

4.5.1. Effectiveness and Impact

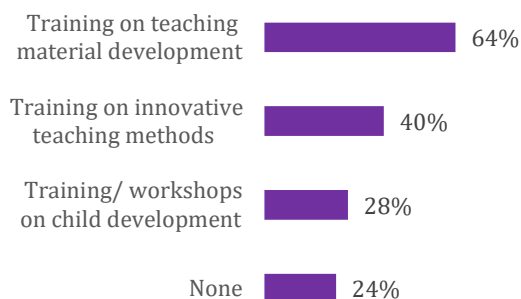
The project was successful in enhancing the quality of the learning environment for students. The project interventions in schools facilitated not just improvements in infrastructural facilities accessed by students but also focused on capacity building of teachers. Furthermore, the project also facilitated the involvement of community members and better coordination of school activities by supporting SMC establishment and functioning.

Figure 33: An overview of project effectiveness and impact on Education



Educational Institutions Development: Under the education category, the project focused on setting up smart classes, improving access to libraries, drinking water posts, and separate washrooms for male and female students in addition to classroom furniture and sports kits. Along with improving the quality of infrastructural facilities the project also focused on capacity building of teachers and community members to enhance the learning environment.

Figure 34: Capacity-building support accessed by the beneficiary teachers



As indicated above, about two-thirds of teachers (64%) received training on teaching material development while 40% received training on innovative teaching methods. The enhanced capacity of teachers to prepare learning material and engage with children has translated into engaging lessons and better delivery of lessons. For instance, when asked about the improvements in their children’s school in the last 3-4 years, **two-thirds of parents reported that classes are now more interesting while the**

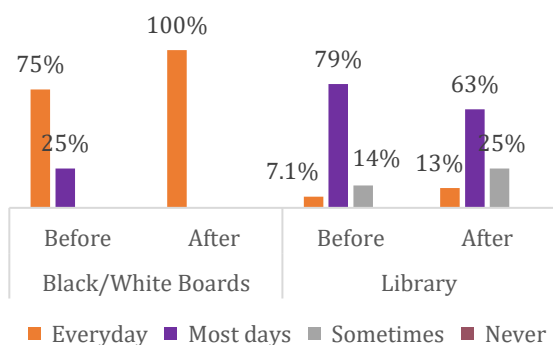
quality of study material provided has also improved. Furthermore, the teaching community strongly believes that the **training sessions have improved their capacity to use innovative teaching methods (72%) and have a better understanding of child development (68%).**

Image 8: School infrastructure development under HRDP in Lakhimpur, Assam

In the case of infrastructural facilities available in beneficiary schools before the project, almost all the respondents from the teaching community reported not having access to proper drinking water facilities or smart classes before the project. In addition to filling in gaps in infrastructural facilities, the project has also contributed to improving quality and thereby utilization of existing infrastructure such as blackboards and libraries as indicated here.



Figure 35: Frequency of utilization of facilities before and after the project



Improved learning outcomes: More than 80% of students and parents who accessed project support for school libraries report that the students have better access to reference material through library resources offered at the school. Separate washrooms for boys and girls, on the other hand, have directly influenced the time spent at school. Innovative infrastructural facilities have not only made classes more interesting but have also improved

the efficiency of teachers as the syllabus is now covered at a faster pace with better retention among students than before.

Figure 36: Perceived benefits of infrastructural services according to students and parents

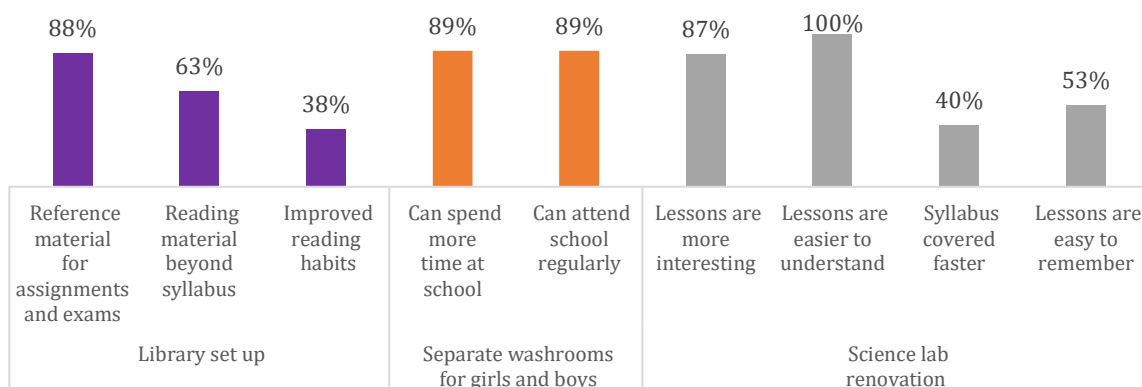
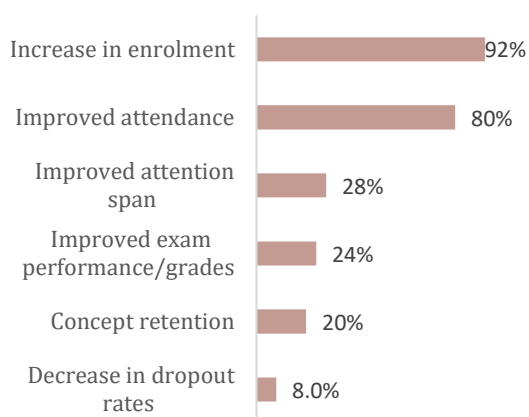


Figure 37: Perceived benefits of infrastructural interventions according to teachers



The teaching community also strongly believes that the infrastructural developments have directly contributed to increased enrolment, attendance, and attention span of students among other benefits as indicated in Figure 37.

While the project has contributed positively toward enhancing the learning and teaching environment in schools, respondents of the school community also displayed a lack of awareness regarding the facilities available at their school.

School Management Committees: School Management Committees were active and supported by the project in all schools that were covered under the quantitative survey. More than 68% of teaching community respondents also reported being members of the SMCs at their respective schools. Furthermore, 84% of SMCs received capacity-building support while about two-thirds (64%) of respondents reported receiving support for mobilizing members. All of the teaching community respondents believe that the SMCs facilitate the active participation of community members in school activities in addition to improving the coordination of activities conducted at school.

Image 9: Sports equipment provided through HRDP in Lakhimpur, Assam



4.6. Holistic Rural Development Index (HRDI)

According to the World Bank, there are multiple dimensions involved in achieving the goals of rural development and the resulting mixture raises agricultural production, generates new jobs, enhances health, increases communication, and provides better living infrastructure. Rural development is defined by the World Bank as the improvement in the social and economic environment of the rural population. Thus, the fundamental aims of rural development include planning, creating, and using the resources such as land, water, and manpower in order to promote equal opportunity for the population reliant on them.

HDFC Bank in its document explaining HRDI stated that since HRDP aimed to achieve holistic rural development through a multitude of interventions that would lead to overall improvements across related dimensions and therefore the program 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. Since the index aimed to create comparability across the various clusters, similar indicators were used for the calculation of HRDI in Assam. Based on our calculation, the HRDI for the studied clusters is presented in the table below.

Table 9: Holistic Rural Development Index for Lakhimpur, Assam

Domain	HRDI Score	
NRM	Baseline	0.11
	Endline	0.14
	% Change	27%
Skill and Livelihood	Base line	0.1
	Endline	0.14
	% Change	40%
Health and Sanitation	Baseline	0.12
	Endline	0.22
	% Change	83%
Education	Baseline	0.19
	Endline	0.23
	% Change	21%
Overall HRDI	Baseline	0.52
	Endline	0.74
	% Change	42%

Since the program did not have an available baseline, the baseline was captured through the recall method. The indicators were selected and assigned weights based on their relative contribution to the final expected outcome across all domain-wise interventions. While most of the indicators were found to be relevant for the study in Assam, some needed modifications in accordance with the program and also in accordance with the study design, and the information collected. The detailed methodology can be accessed in Annexure 6.4.

Further, the thematic-wise indicators were assigned weights to arrive at the composite HRDI score of **0.74** indicating a **notable positive change toward the desired impact** from the baseline score of 0.52.

4.7. Sustainability

More than 80% of farmers are currently adopting the services and practices accessed through the project under farm management. These are namely adoption of vermi-pits, boro farming, and community pond-based fish farming. Continued adoption of sustainable farming solutions has also resulted in notable improvements in productivity and reduction of input costs as discussed in the earlier section. More than 90% of solar light beneficiaries reported that solar street lights are still functioning indicating the sustained impact of the intervention. In the case of disaster management, while beneficiaries report high effectiveness in terms of reduced risk for human and livestock lives, proper and continued maintenance of disaster management structures built under the project is a growing concern considering the lack of initiative among the community.

In the case of both agricultural training and skill training, more than 80% are still utilizing at least one practice/skill they learned through the project. This in turn indicates sustained adoption and impact, especially in the case of organic manure application. SHG enterprise beneficiaries, on the other hand, have not been able to scale up or continue their business activities in most cases. While the SHG members have gained the technical know-how, lack of collection active action and unfavorable external factors such as poor weather conditions (for goat farming) have adversely affected the sustained income generation capacity of SHG-based business activities. On the other hand, livestock management beneficiaries report better health and reduced death among livestock in response to better access to livestock health services and livestock management training they received. While animal shelters are not effectively utilized due to space constraints, and lack of incentive for maintenance among small livestock owners, the technical know-how gained has sustained an impact on overall livestock health. Interventions aimed at the skill and capacity development were seen as more impactful when accompanied by physical capital.

The community is aware of the usage of sanitation structures and kitchen gardens and has been trained in the same. The members also volunteer for the maintenance of the community toilets. The health interventions that have taken place are health camps, and no structures were required to be built. But they have been used well by the community. In the case of drinking water management, most of the project beneficiaries have reported utilization period of over two years indicating a sustained impact.

The project also focused on improving the learning environment in intervention schools by reducing infrastructural gaps, improving the quality of existing infrastructure, and improving teaching quality. Findings from the quantitative survey indicated that the structures built in the school namely science labs, separate washrooms for boys and girls, and libraries are still functional and are utilized frequently. In addition to improving the infrastructure, the teaching community was also provided adequate capacity-building support to enhance their capacity to improve the quality of teaching material and teaching methods thereby contributing to the sustained improvement of the learning environment even after the project intervention period.

5. Conclusion and Recommendations

5.1. Summary of Findings

The HRDP project is aimed to support the lives of communities by adopting a holistic approach to development. This involved 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. The development of human capital, natural resources, and infrastructure in poor and backward villages was expected to bring about their socio-economic transformation.

In the assessed HRD programs in 1 cluster of Lakhimpur, Assam, the major focus areas for intervention were Natural Resource Management (NRM), Skill Development & Livelihood Enhancement, Promotion of Education, Healthcare & Hygiene, and Financial Literacy & Inclusion. The project can be deemed **effective in creating noticeable changes in the income generation capacity of farmers through improved productivity, reduced input cost, and capacity building of farmers to adopt sustainable and innovative agricultural practices**. Furthermore, the project also brought about changes in facilitating access to clean energy solutions such as solar lights. Being a region frequented by floods, the project interventions in disaster management have been timely and effective in reducing the community risks in terms of loss of life, property, and poor health.

The project activities within skill and livelihood enhancement also have **opened up economic opportunities not just for farmers, but for SHG women and youth in the community**. These beneficiary categories, who otherwise have limited access to economic opportunities benefitted from the project by gaining the skills, technical support, and physical capital to undertake and expand entrepreneurial activities during the project period. While sustained profit generation is yet to be achieved, the project was successful in initiating entrepreneurial activities in the community among women and youth.

The health interventions aimed at facilitating access to health services have been **effective in terms of improving women's access to health services, household health status, and dietary practices**. The adoption of kitchen gardens has not only contributed to improved dietary diversity but also serves as a source of income for the beneficiaries. Furthermore, 80% of drinking water beneficiaries report reduced illnesses in response to access to improved drinking water sources.

The project has also **contributed toward improving and enhancing the infrastructural and learning environment at schools**. To facilitate the same, several project interventions were undertaken including the construction and renovation of physical infrastructural facilities such as drinking water posts, classroom furniture, and separate washrooms for boys and girls that led to improved capacity of students to spend more time at school, be actively involved in school activities and has even led to increased enrolment according to the teachers. Furthermore, with the aim of improving the learning environment, project support was also provided in terms of science labs, and libraries in addition to capacity building of teachers for the adoption of innovative teaching methods. Thus, **in addition to creating physical infrastructural facilities, the project also contributed to**

improving the teaching quality. Nevertheless, to bridge the gaps in implementation and address the challenges, some of the recommendations are discussed in the following section.

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. These are:

Natural Resource Management

While a large proportion of the farmers received support in setting up the vermi-pits, less than half of the farmers received training on the same. A **combination of training and physical infrastructure support would lead to better maintenance and sustained effectiveness of interventions** such as vermi-pits. Furthermore, the trained farmers could also help set up the vermi-pits for their peers.

Skill Training and Livelihood Enhancement

Findings from the field indicate that SHG-based enterprises are either discontinued or undertaken at an individual level, rather than a collective level in most cases. Moving forward, interventions pertaining to SHG activities and their sustainability could be more focused upon by ensuring **handholding support for enterprise development and capacity building for collective action.**

While many of the farmer-beneficiaries have adopted at least one of the practices suggested, the farmers expressed that lack of local availability of inputs, high expenses, and poor access to adequate water as challenges for adoption. **Interventions to improve local availability of inputs and capacity building of resource persons to provide handholding support** to farmers could resolve such issues to an extent.

Health and Sanitation

Enhancing the project scope to revive existing health centers would add to the impact on health outcomes created by the project through consistent health camps. Furthermore, as **drinking water is a crucial requirement** in the region during monsoon floods, it becomes pertinent for **more people in the districts to be supported by drinking water interventions.**

Promotion of Education

Though science labs, washrooms, and libraries are functional, ensuring proper maintenance would be required to sustain them for a long time. To ensure the same, **community members need to be sensitized and involved in the maintenance process through institutions such as SMCs.**

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	Promotion of joyful learning and renovation of toilet and drinking water facilities in Anganwadi centers at Rantijan, Natun Salmora, and Ghargharmukh bali	Anganwadi centers
2	Promotion of education	Educational Institutions Development	Infrastructure - Infrastructure renovation	Renovation of four government schools Building and sanitation structures at Bordubi Chanong, Bordubi Moluhal Kundali Pathar and Naali	School
3	Health and sanitation	Sanitation	Community Toilets Construction/ Renovation	Community level stilt /elevated toilet construction in 5 villages	Community
4	Health and sanitation	Health	Health Camps	Health camp, Hygiene promotion cum sensitization of health schemes in 10 target villages	Community
5	Health and sanitation	Sanitation	Other	Flood relief and support for community action	Community
6	NRM	Farm Management	Crop Diversification	Demonstration of Intercropping Model	Farmers
7	NRM	Farm Management	Farm technique - Other	Integrated farming system model	Farmers
8	NRM	Farm Management	Farm technique - SRI	Post or Pre-flood paddy cultivation through SRI and Conventional methods for comparative study	Farmers
9	NRM	Clean Energy	Other	Solar Irrigation promotion activity	Farmers
10	NRM	Water Management - Agriculture	Irrigation method - Other	Farm Pond and Channel cutting for surface irrigation practices	Farmers
11	NRM	Farm Management	Grain bank	Promotion of Community Grain Bank	Farmers
12	NRM	Clean Energy	Street Solar Lights installation	Promotion of renewable energy for small-scale entrepreneurs (Market places and common space)	Community
13	Skill development and	Skill Training	Skill Training	Training cum entrepreneurship development support to youth and women	youth and women

	livelihood enhancement				
14	Skill development and livelihood enhancement	Entrepreneurship Development	Goatry	Development of Goat breeding farm.	Farmers
15	Skill development and livelihood enhancement	Entrepreneurship Development	Piggery	Development of Pig breeding farm	Farmers
16	Skill development and livelihood enhancement	Entrepreneurship Development	Poultry	Development of poultry farm model	Farmers
17	Skill development and livelihood enhancement	Entrepreneurship Development	Other Small business	Development of handloom weaving unit	Women
18	Skill development and livelihood enhancement	Skill Training	Other	Community resource persons in 10 target villages	Community
19	Skill development and livelihood enhancement	Entrepreneurship Development	Other Small business	Market shed Development at Rantijan village	Farmers

6.2. Sampling Methodology

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

6.2.1. Quantitative Sample Size Calculation

For this study, the formula for 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 Sample Size and Distribution: A detailed outcome harvesting process was carried out during the inception phase, and after discussions with the HDFC Bank team, the outcome indicators were finalized.

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. All 10 of the intervention villages were selected for the study. A multi-stage cluster sampling method was adopted for the sample selection for the quantitative survey.

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.

6.3. Sustainability Thematic wise matrix

Table 10 - Sustainability of interventions under skill and enterprise development

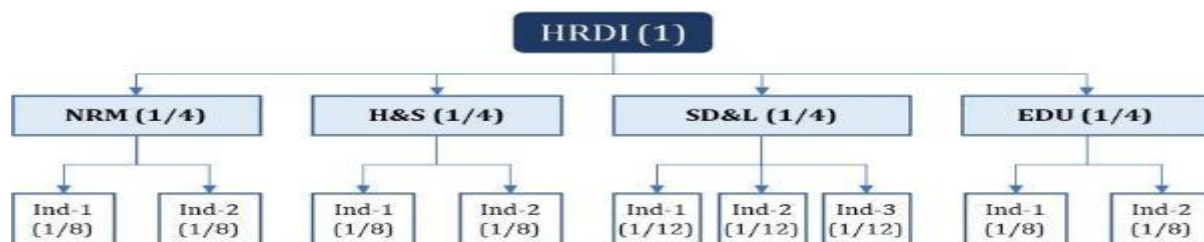
Support provided	Structures established	Technical Know-how	Usage	Maintenance
<i>NRM</i>				
Farm Management	✓	✓	✓	✓
Irrigation Management	✓	✓	✓	✓
Clean Energy	✓		✓	✓
Disaster Management	✓	✓	✓	X
Skill Training and Livelihood Enhancement				
Agriculture Training and Support		✓	✓	✓
SHG-Based Women Empowerment		✓	✓	X
Skill Training		✓	✓	
Livestock Management	✓	✓	✓	X
Entrepreneurship Development	✓	✓	X	
Health and Sanitation				
Health			✓	✓
Sanitation	✓	✓	✓	✓
Drinking Water Management	✓	✓	✓	✓
Kitchen Garden	✓	✓	✓	✓
Education				
Educational Institutions Development	✓	✓	✓	✓
SMC Strengthening	✓	✓	✓	

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 weights¹⁹



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.

Table 11: HRDI Weights

Project X		
<i>Natural Resource Management</i>	Proportion of farmers reporting net farm income above baseline median.	$(1/4) \times (1/3) = 0.083$
	Proportion of farmers reporting access to irrigation	$(1/4) \times (1/3) = 0.083$
	Proportion of farmers with area under irrigation above baseline median.	$(1/4) \times (1/3) = 0.083$
<i>Health and Sanitation</i>	Proportion of beneficiaries reporting average number of months with access to adequate drinking water above baseline median.	$(1/4) \times (1/3) = 0.083$
	Proportion of households with access to improved toilet facilities.	$(1/4) \times (1/3) = 0.083$
	Proportion of households utilizing soak pits	$(1/4) \times (1/3) = 0.083$
	Proportion of members reporting entrepreneurial activities undertaken by SHGs	$(1/4) \times (1/4) = 0.0625$

¹⁹ NRM: Natural Resource Management | H&S: Health and Sanitation | SD&L: Skill Development and Livelihoods | EDU: Education

<i>Livelihoods and Skill development</i>	Proportion of livestock owners reporting average monthly livestock income above baseline median.	$(1/4) \times (1/4) = 0.0625$
	Proportion of beneficiaries reporting monthly income from enterprises above baseline median.	$(1/4) \times (1/4) = 0.0625$
	Proportion of beneficiaries reporting monthly income of SHG from enterprises above baseline median.	$(1/4) \times (1/4) = 0.0625$
<i>Education</i>	Proportion of students reporting increased access to functional school physical infrastructure (drinking water posts, separate washrooms, etc.)	$(1/4) \times (1/2) = 0.125$
	Proportion 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.

Table 12: HRDI score calculation

Domain	Indicator	Base line	HRDI	End line	HRDI
NRM	Proportion of farmers reporting net farm income above baseline median.	0.24	0.11	0.31	0.14
	Proportion of farmers reporting access to irrigation	0.10		0.12	
	Proportion of farmers with area under irrigation above baseline median.	0.12		0.14	
H&S	Proportion of beneficiaries reporting average number of months with access to adequate drinking water above baseline median.	0.15	0.12	0.30	0.22
	Proportion of households with access to improved toilet facilities.	0.29		0.33	
	Proportion of households utilizing soak pits	0.04		0.24	
SL	Proportion of members reporting entrepreneurial activities undertaken by SHGs	0.07	0.10	0.08	0.14
	Proportion of livestock owners reporting average monthly livestock income above baseline median.	0.11		0.18	
	Proportion of beneficiaries reporting monthly income from enterprises above baseline median.	0.12		0.13	
	Proportion of beneficiaries reporting monthly income of SHG from enterprises above baseline median.	0.10		0.18	
ED	Proportion of students reporting increased access to functional school physical infrastructure (drinking water posts, separate washrooms, etc.)	0.41	0.19	0.46	0.23
	Proportion of students reporting increased access to functional learning infrastructure (library, science labs, learning aids, etc.)	0.34		0.47	
Total			0.52		0.74

6.5. Overview of Impact Calculation Methodology

Outputs	Output Indicators	Value	Output Avg	Impact Level
NA. Increased income from agriculture				
N. A1Land/ crop productivity	NA1. (a) Proportion of farmers reporting an increase in production of crops that were supported under HRDP	81%	61%	Medium
	NA1. (b) Proportion of farmers reporting increased input efficiency after the intervention	57%		
	NA1. (c) Proportion of farmers reporting increased income from crops that were supported under HRDP.	82%		
	N.A1.i(d) Average increase in income from crops that were supported under HRDP (% change)	70%		
	N.A1.I (e) Average increase in productivity from crops that were supported under HRDP (% change)	41%		
	N.A1.i(f) Average decrease in input cost (% change)	33%		
N.A2. Access to the farm	N.A2(a) Proportion of beneficiaries satisfied with the quality of available services (in farm management)	92%	59%	Medium

management infrastructure	NA2. (b) Proportion of farmers reporting project interventions in seeds, tools, and irrigation leading to an increase in production	40%		
	NA2. (c) Proportion of farmers reporting project interventions leading to increase in income (average of top 4-5 crops)	88%		
	NA2. (e) Proportion of farmers currently practicing organic farming/conservation agriculture/other sustainable practices	33%		
	N.A2.(f) The proportion of farmers reporting an increase in the use of natural fertilizers?	40%		
NA.3 Increased adoption of crop diversification	NA3. (a) Proportion of farmers diversifying their crops with project support.	6.3%	23.2%	Low
	NA3. (b) Proportion of farmers who report income increase due to crop diversification (base = farmers who adopted crop diversification)	40%		
NA.5 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%		
NC. Increased use of clean energy solutions				
NC1.Adoption of clean energy infrastructure	NC1 (a) Proportion of HHs using clean energy infrastructure (Base=all)	3%	31%	Low
	NC1. (b)Proportion of households reporting benefits from using clean energy infrastructure (Base=clean energy beneficiaries)	58%		
NE. Communities have reduced risk and vulnerability due to natural disasters				
NE.1 Improved coping capacity of community	NE1(a) Proportion of community members trained on techniques of Search, Rescue, and First Aid after intervention	49%	72%	High
	NE1(b) Proportion. of community members reporting improved health after the intervention during disasters	82%		
	NE1 (c) Proportion of community members demonstrating disaster preparedness in livelihood activities after intervention (improved awareness)	66%		
	NE1 (d) Proportion of community members reporting reduced risk life, livestock, and property	92%		
NE.2 Access to the disaster management infrastructure	NE.2 (a) Proportion of community members who have access to early warning systems after intervention	57%	60%	Medium
	NE.2 (b) Proportion of community members who had access to rescue shelters post disasters after intervention	72%		
	NE.2(c)Proportion of HHS who have access to proper evacuation mechanisms in case of disasters after intervention	49%		
	NE.2 (d) Proportion of HHs who had access to drinking water sources during disasters after intervention	56%		
	NE.2 (e) Proportion of HHs who had access to sanitation units during disasters after intervention	64%		
SA. Improved access to agricultural training and services				
S.A.1 Access to Agriculture	SA.i(a) Proportion of farmers who reported project training services are useful	95%	64%	Medium

training and services	SA.i(b) Proportion of farmers who demonstrate awareness regarding sustainable farming practices	33%		
S.A.2.Adoption of improved farming practices	SA.ii(a) Proportion of farmers who adopt scientific agricultural practices	28%	51%	Medium
	SA.ii(b) Proportion of beneficiaries reporting an increase in productivity due to better farm management	50%		
	SA.iii(c) Proportion of farmers reporting increased income	75%		
SB. Economic empowerment through collectivization (Only for SHG members)				
SB.1 Formation/ revival of SHG-based Enterprises	SB.i(a) Proportion of members who received support with establishing/reviving SHGs	3%	49%	Medium
	SB.i(b) Proportion of members who received support with establishing/reviving SHG enterprises	48%		
	SB.i(b) Proportion of members whose SHGs are currently functioning	96%		
SB.2 Development of entrepreneurship	SB.ii(a) Proportion of SHG members who received training	27%	50%	Medium
	SB.ii(b) Proportion of SHG members undertaking entrepreneurial activities	57%		
	SB.ii(c) Proportion of SHG members reporting starting new SHG enterprises	29%		
	SB.ii(d) Proportion of SHGs with increased savings	78%		
	SB.ii(e) Proportion of SHG members reporting improved income	58%		
SC. Enhanced capacity for regular income generation				
SC.1 Enhanced employable skill development	SC.1(a) Proportion of youth who accessed skill development training	21%	34%	Low
	SC.1(b) Proportion of youth who report improved income through skill development	46%		
SC.2 Access to self-employment and entrepreneurial opportunities	SC.2(a) Proportion of beneficiaries who established/expanded entrepreneurial activities	62%	48%	Medium
	SC.2(b) Proportion of beneficiaries reporting improved capacity to undertake entrepreneurial activities	5%		
	SC.2(c) Proportion of beneficiary HHs reporting an increase in income	76%		
SD. Improved capacity to generate income through livestock management				
SD.1 Adoption of scientific management of livestock	SD.I (a) Proportion of beneficiaries who received support in livestock management services	14%	47%	Medium
	SD.i(b) Proportion of beneficiaries reporting an increase in income from livestock management	72%		
	SD.i(c) Proportion of beneficiaries reporting improved livestock health	50%		
	SD.i(d) Proportionate increase in average income from livestock	50%		
H.A. Improved health infrastructure and services				
H.A.1 Establishment/ enhancement of health infrastructure and services	H.A.i(a) Proportion of beneficiaries who gained access to health services	59%	80%	High
	HA. i(b) Proportion of beneficiaries reporting lifestyle changes due to improved access	100%		
	H.A.i(c) Proportion of beneficiaries who consulted medical references from camps	81%		

H.A.2. Improved quality of health services	H.A.ii(a) Increase in no. of beneficiaries reporting improved quality of available services	30%	30%	Low
H.B. Improved sanitation infrastructure and services				
HB.1 Establishment/enhancement of sanitation infrastructure.	H.B.i(a) Proportion of beneficiaries who gained access to sanitation services	4%	26%	Low
	H.B.i(b) Increase in no of HHs with access to sanitation infrastructure/ facilities	13%		
	H.B.i(c) Proportion of beneficiaries reporting benefits due to improved access	61%		
H.C. Development of Kitchen gardens				
HC.1 Increased adoption of kitchen gardens	HC.i(a) Proportion of HHs reporting income gains from kitchen gardens	81%	66%	Medium
	HC. i (b) No of HHs received seeds/training in the kitchen garden	100%		
	HC.i(c) No of HHs with improved vegetable/fruit consumption due to kitchen gardens	83%		
	HC.i(d) Proportion of HHs reporting improved nutrition	47%		
	HC.i(e) Increase in the area under the kitchen garden	17%		
H.D Improved awareness and health-seeking behaviour				
H.D.1 Awareness regarding health and sanitation practices	H.D.i (a) Improved dietary practices/ reduced tobacco consumption/ improved physical exercise	48%	64%	Medium
	H.D.i(b) Improved awareness regarding cleanliness and sanitation practices	83%		
	H.D.i(c) Improved awareness regarding waste management	60%		
H.D.2 Adoption of positive health and sanitation practices	H.D.ii(a) Increase in no of HHs demonstrating the adoption of WASH practices	13%	29%	Low
	H.D.ii(b) Increase in no. of HHs adopting proper solid waste management practices	13%		
	H.D.ii(c) Increase in no of HHs adopting proper liquid waste management practices	60%		
H.E. Improved availability and management of water				
H.E.1. Access to drinking water at household and community levels improved	NB.1. (a) Proportion of households reporting decreased instances of water borne diseases	73%	73%	High
	NB.1. (b) Proportion of households reporting reduced time for fetching water	73%		
Outcome E.A. Improved capacity of educational institutions to provide services				
EA.1 Access to improved physical infrastructure	EA.i(a) Proportion of students/schools who report gaining access to functioning smart classrooms/ Bala/science labs/libraries/learning aid/furniture/sports equipment	39%	31%	Low
	EA.i(b) Proportion of schools who gained access to clean and functioning sanitation units/drinking water posts at education institutions	22%		
EA.2 Improvements in quality of teaching	EA.ii(a) Proportion of teachers regularly utilizing smart classrooms/libraries/smart class	63%		High
	EA.ii(b) Proportion of students who prefer/regularly use smart classrooms/science labs/ libraries for lessons	52%		

	EA.ii(c) Proportion of parents/students/teachers who report improvements in teaching quality	73%	71%	
	EA.ii(d) Proportion of students/teachers reporting regular utilization of other infra	100%		
	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%		
EA.3. Improved willingness to engage in school activities	EA.iii(a) Teachers reporting improvements in attendance due to improved infrastructure	80%	60%	Medium
	EA.iii(b) Proportion of teachers reporting an increase in enrolment post infrastructure development	92%		
	EA.iii(c) Proportion of institutions reporting a decrease in dropout rates	8%		
Outcome E.B. Improved learning outcomes				
EB.1 Improved exam performance and subject confidence among students	EB.i(a) Proportion of students who gained access to coaching classes	NA	55%	Medium
	EB.i(b) Proportion of students who report improvements in access to reference material	62%		
	EB.i(c) Proportion of students reporting an increase in confidence in various subjects (lessons are easy to understand, more interesting, etc.)	80%		
	EB.i(d) Proportion of students who received scholarships	NA		
	EB.i(e) Proportion of teachers reporting improvements in learning outcomes due to infrastructural facilities at institutions (concept retention, attention span, and exam performance)	24%		
Outcome E.C. Improved Awareness				
EC.1 Improved Awareness among students, parents, and teachers	EC.i(a) Awareness activities conducted	7%	7%	Low
Outcome E.D. Strengthening SMCs				
ED.1 Establishment and strengthening of SMCs	ED.i(a) Proportion of teachers reporting SMCs that are functioning regularly	100%	89%	High
	ED.i(b) Proportion of beneficiaries(teachers) who actively engage in SMCs	68%		
	ED.i(c) Perceived benefits of SMC	100%		

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