Price Waterhouse Chartered Accountants LLP

Final Impact Assessment Report

SBI Cards And Payments Services Limited

July 2026

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Table of Contents

Executive Summary 5

Introduction and Background 35

Approach and Methodology for Impact Assessment 45

Project 1: Cancer Awareness and Early Detection Project in Malwa Belt 51

Project 2: SAMRIDDH (Smart and Modern Rural Infrastructure for Development, Diversity, and Harmony) 69

Project 3: Rural Development through Education, Employment & Empowerment of Girls and Women 106

Project 4: Sponsoring Four School Buses and Solar Street Lights enabling Safe Access to Education for Underserved Children 124

Project 5: To establish 25 Tinkering Labs across different locations in Assam, Punjab & Uttar Pradesh 137

Project 6: Smart Green Power Schools- Installation of off-grid solar system in 20 Government Schools of Delhi & Haryana 155

Project 7: Digital Shaala- Enabling digital learning opportunity in 100 Govt Schools 167

Project 8 and 9: Mainstreaming Deaf Youth through Pre-Vocational Skill Development and Suitable Livelihood 183

Project 10: To skill 558 youths in HealthCare job roles of Phlebotomist, General Duty Assistant- Advanced and Dresser (Medical) in residential mode in Gurugram, Sadiya and Silchar 203

Project 11: BHAVNAM 2.0 – Tree Plantation Project in Aravalli Hills, Delhi NCR 218

Project 12, 13, and 14: Mantra for Advanced Sustainable Solution (MASS) - Phase III, IV and MASS Uttarakhand 229

Project 15: Ensuring Sustainable Water Security for Rural Communities through Rainwater Harvesting 268

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Executive Summary

Background:

SBI Cards and Payment Services Limited also known as SBI Card is committed to **simplifying the lives of its stakeholders through trust and excellence.** Being a responsible corporate citizen, it has **integrated Corporate Social Responsibility** in the way it conducts its business. PWCALLP has been engaged by SBI Card to provide support and assistance for an independent review and impact assessment of its multiple Corporate Social Responsibility (CSR) Projects as identified by the Management to be carried out in several phases. **Phase I** of the project was completed with the **Impact Assessment of 8 CSR projects**. In **Phase II, Impact Assessments** were conducted for **10 CSR projects. Phase III** was completed with the **Impact Assessment of 10 CSR projects**.

At present, this report highlights the findings of Phase IV of the project which comprises of an Impact Assessment of 15 CSR projects that was implemented by SBI Card across India to understand the direct and indirect impact of their CSR interventions on the communities.

The scope of work includes understanding the project implementation plan and reviewing the Key performance indicators (KPIs) as defined by the Management. Framework used was **Inclusiveness, Relevance, Efficiency, Convergence, and Sustainability framework (the 'IRECS') along with the Social Return on investment (the 'SROI') framework (wherever applicable)** as agreed with the Management. The objective of the study was to assess the outcomes and impact created on the stakeholders covered under the project and provide recommendation on the project performance for Management's evaluation. This impact assessment study was conducted using a **mixed-method or qualitative approach** (as relevant for the individual project) for **primary data collection along with the desk review of project documents**.

As a part of the study, the key summary findings for all the 15 projects assessed is provided below:

Project-wise findings:

Project 1: Cancer Awareness and Early Detection Project in the Malwa Belt

About the project

Cancer remains a major public health concern in India, particularly in high-risk regions such as the Malwa Belt in Punjab, where environmental exposure, lifestyle factors, and limited access to preventive healthcare contribute to elevated cancer incidence rates. Barriers such as low awareness, social stigma, geographic distance from diagnostic facilities, and financial constraints further restrict timely screening and treatment.

In response, SBI Card & Payment Services Ltd., in partnership with Cancer Care Charitable Society, implemented the Cancer Awareness and Early Detection Project across high-risk districts of the Malwa Belt. The project adopted a decentralized, outreach-based model, delivering cancer awareness and screening services directly at the community level through mobile medical units.

Designed as an integrated intervention, the project combined awareness generation, multi-cancer screening, on-site consultations, diagnostic testing, and post-camp follow-up support. Through a doctor-led, community-based approach supported by digital reporting and referral mechanisms, the initiative aimed to improve early detection, strengthen care linkages, and promote positive health-seeking behaviour in underserved communities.

Project Objective(s)

The primary objectives of the project are:

- To enhance cancer awareness
- To enable early detection in high-risk areas of the Malwa Belt in Punjab

Key findings:

Improvement in Screening Behavior and Service Utilisation

- High awareness generation was achieved, with **92% of beneficiaries** aware of upcoming camps.
- **47% of respondents** availed at least one cancer screening service, including mammography, Pap smear, PSA, and oral screening.
- Among those screened, **83% reported they would not have undergone screening otherwise**, highlighting limited alternative access.
- Screening services were delivered efficiently, with **78% completing the process within one hour**, reducing time-related barriers.
- The intervention addressed key constraints, including **distance (avg. ~24 km to facilities)** and **high perceived cost (72% estimated > INR 6,000)**.
- Beneficiaries demonstrated strong recall of services such as PSA (93%), bone density (91%), mammography (86%), and oral screening (83%), indicating improved awareness and familiarity with diagnostic options.
- Counselling supported better understanding of early warning signs and reduced misconceptions about screening procedures.

Strengthened Pathways for Early Detection and Follow-up Care

- Among screened individuals (n=65), 38% were identified as symptomatic, indicating effectiveness of risk-based screening.
- The programme established structured follow-up systems, including telephonic guidance, report sharing (physical and digital), and referral support.
- 71% received reports physically, while others accessed them digitally, enabling informed decision-making without additional travel.
- 68% of beneficiaries found reports easy to understand, supported by doctor-led explanations.
- 18% were formally referred to higher-level facilities for further diagnostics and treatment.
- Convergence with government schemes was strong, with 100% of symptomatic individuals informed and 72% successfully accessing financial support, including Ayushman Bharat and Punjab Cancer Raahat Kosh.
- Follow-up engagement reduced anxiety, improved clarity on next steps, and strengthened linkage between community-level screening and formal healthcare systems.

Enhanced Awareness, Confidence, and Health-Seeking Behavior:

- Awareness messages were well retained, with over 85–90% recall on cancer symptoms, lifestyle risks, and preventive practices.
- Beneficiaries reported improved understanding of screening tests, reducing fear and misconceptions associated with cancer diagnosis.
- Increased comfort in discussing symptoms with doctors and mobilisers was observed across all respondents.
- Early behavioral shifts were reported, including:
  - 88% paying greater attention to diet and physical activity
  - 76% reducing tobacco/alcohol consumption
  - 54% expressing higher intent to seek medical consultation
  - 72% indicated willingness to undergo regular cancer screening in future, reflecting improved preventive health orientation.
- Increased proactive engagement, including symptom discussion and follow-up queries, was observed post-camp.
- High satisfaction levels were reported, indicating strong community acceptance of the programme model.

Key recommendations:

Expand Geographic Coverage to Increase Beneficiary Reach: While the intervention demonstrated strong outcomes in awareness, screening uptake and follow up care in the covered locations, there is an opportunity to further strengthen its impact by expanding coverage to surrounding villages. Programme findings suggest that targeted outreach is effective in identifying at-risk individuals who may not be captured through routine care pathways, highlighting the value of broader geographic reach in high-burden settings. Camp planning can therefore build on existing efforts by progressively extending coverage to additional underserved villages within high-risk districts through a phased approach. This may include identifying new clusters, planning recurring camp cycles, and strengthening mobilisation efforts to ensure screening services increasingly reach previously uncovered populations over time.

Project 2: SAMRIDDH (Smart and Modern Rural Infrastructure for Development, Diversity, and Harmony)

About the project

SBI Card, in partnership with Manjari Foundation, launched Project SAMRIDDH (Smart and Modern Rural Infrastructure for Development, Diversity, and Harmony) to **enhance educational and healthcare access, foster women's empowerment, and catalyze economic growth and prosperity in villages Pipret and Badagaon of Dholpur district of Rajasthan**. The project achieved comprehensive impact, reaching 13,000+ beneficiaries across all thematic areas and activities in both

villages, including 10,500+ direct beneficiaries. The project was carried out over the period from October 2023 to November 2024.

Project Objective(s)

- Provide the basic needs: quality education, healthcare, access to clean water etc.
- Provide better facilities and harmonious healthy places for the community through well-functioning and better equipped AWCs/PHC.
- Promote economic growth and prosperity, in targeted villages through the development of rural infrastructure.
- Enhance the income of the women through their enterprises and market-led livelihoods interventions.
- Sustain the environment through rainwater harvesting and promoting traditional water harvesting structures (ponds) and practices and recharge ground water table as well.

Key findings:

Strengthened Education Ecosystem and Learning Environment

- Comprehensive upgrades across 2 higher secondary schools, 2 Anganwadi Centres, and 1 Girls' Hostel transformed dilapidated facilities into modern, safe, and conducive learning spaces equipped with smart panels, computer labs, RO water, solar power, CCTV, and modern furniture.
- School toilet functionality rated as "Excellent" by 94% of student's post-intervention (compared to 70% rating it "Poor" earlier), while 100% of students reported feeling safer with CCTV installation and significantly improved overall educational experience.
- Girls' Hostel upgrades, including 24x7 solar-powered electricity, sanitary pad dispensers, individual bedding, almirahs, and CCTV, reduced monthly electricity bills from ₹12,000–15,000 to ₹6,000 and increased parental trust and admission interest from surrounding villages.

Enhanced Healthcare Access and Service Delivery

- Badagaon PHC was strengthened with a neonatal respirator, wheelchairs, additional stretchers, upgraded sanitation, and patient-friendly waiting areas, with 100% of beneficiaries rating the upgraded PHC as "High Impact" for their families.
- The neonatal respirator eliminated the need for critical referrals to the district hospital in Karauli (40 km away), enabling timely facility-level care for deliveries and paediatric respiratory cases.
- 100% of respondents confirmed clean and functional toilet facilities post-intervention, eliminating earlier instances of open defecation by patients and visitors during extended waiting periods.

Holistic Village Development and Water Security

- Pond rejuvenation enhanced combined water retention capacity by ~42.34 lakh litres, cut daily water collection time from 127 minutes to 32 minutes, reduced monthly water expenditure by 79% (₹2,718 to ₹548), and improved crop yields for 99% of farming households.

- 175 solar streetlights enabled 100% of women respondents to report improved evening mobility and safety, alongside a 98% reduction in fear of crime and ₹241 average monthly savings on lighting expenses per household.
- Open gym facilities, plantation drives (730 saplings), bus stops, village gates, dustbins, and waste collection carts collectively elevated village aesthetics, sanitation, and community pride, with 82% of respondents using the open gym and 49% doing so daily.
- Two Community Resource Centres, managed by women SHG members, now serve 25–30 villagers monthly while generating ₹1,000–1,500 in monthly income for the women managers, transforming dilapidated buildings into digital service hubs.

Women's Economic Empowerment through Microenterprises

- Established a Pickle Unit (Pipret) and Stitching Unit (Badagaon), alongside vocational training in beauty services, agarbatti, and tulsi bead making, collectively training 440+ women and converting 100+ homemakers into regular earning members with monthly incomes of ₹4,500–₹6,000.
- Pickle unit production capacity scaled tenfold (100kg to 1 ton/month), supported by FPO market linkages with Katori Foods and Jhulki, ensuring consistent demand and long-term sustainability.
- Women reported transformative shifts in agency moving from strict purdah practices to confidently engaging with external stakeholders, taking independent decisions on household and finances, and channelling earnings toward children's education.

Social Return on Investment

- The Social Return on Investment (SROI) estimation helped measure and account for the value created by the project in a broader sense. The cumulative benefit or impact generated by Project SAMRIDDH from FY 2023–24 till the end of FY 2025–26 comes out to be INR 11,70,13,589/-.
- The SROI value created under the project is 2.47. This indicates that for every Re. 1 invested in the project, a social value of approximately Rs. 2.47 was generated.

Key recommendations:

Integrating Climate-Smart Agriculture for Sustainable Rural Livelihoods: Future projects, alongside water recharge interventions such as the pond rejuvenation undertaken in Project SAMRIDDH, can also integrate and explore Climate-Smart Agriculture (CSA) practices tailored to the geography, terrain, and water-stressed conditions of the project area. Based on a scientific landscape analysis and farmer needs assessment, proven modern practices such as Direct Seeded Rice (DSR), Zero Tillage, micro-irrigation (drip and sprinkler), laser land levelling, etc. can be incorporated to enhance productivity, optimise water use, and strengthen climate resilience. Linking these practices with water recharge structures will create a complementary ecosystem that supports farmers, improves agricultural outcomes, and expands the long-term impact of holistic village development projects.

Project 3: Rural Development through Education, Employment & Empowerment of Girls and Women

About the project

SBI Card, under its CSR initiative and in alignment with national priorities on girl child education and women empowerment, partnered with Pardada Pardadi Educational Society (PPES) to implement the project "Rural Development through Education, Employment and Empowerment of Girls and Women" at PPES School, Anupshahr, in the Bulandshahr district of Uttar Pradesh, from December 2023 to December 2024. The project aimed to strengthen school infrastructure, enhance learning outcomes, and support the holistic development of rural girl students by accessing free education, reaching 3,500+ beneficiaries through interventions **spanning digital classrooms, specialised laboratories, transport, solarisation, safety systems, and student well-being services**.

Project Objective(s)

The primary objectives of the project were to enhance the existing facilities of school. The support provided will improve the learning outcomes and provide holistic development of the girl students that access free education.

Key findings:

Strengthened Academic Performance through Digital Learning

- **98.5% of students (n=134)** reported improved academic performance following the establishment of **16 digital classrooms** and teacher training on digital learning software.
- **97% of students** attend smart board-enabled classes daily, with **94%** stating that audio-visual content helped them understand complex topics more clearly.
- **98.51% of students** confirmed that teachers use digital classes effectively, reflecting successful integration of technology into day-to-day teaching across subjects such as Maths, Science, English, Hindi, and Social Science.
- Pre-intervention challenges such as lack of practical demonstrations (74%), difficulty understanding lessons (63%), and low classroom engagement (51%) were **addressed through interactive, visual learning methods**.

Improved Drinking Water Access and Reduced Household Drudgery

- The **upgraded computer lab** achieved **100% student reach**, with high-frequency usage rising from 13% to 21% (3+ times/week) and 38% to 49% (1–2 times/week), reflecting deeper integration into the school routine.
- The **expanded chemistry lab** improved practical engagement, with **98% of users (n=91)** reporting more effective experiments through upgraded apparatus and piped gas supply, replacing earlier spirit-lamp-based methods.
- The newly established **music room** enabled **57% of students** to access structured music learning, with **96% reporting improved learning quality** and students progressing from basic skills (47%) to comfort with one (37%) or multiple instruments (16%).

- Lab upgrades collectively strengthened students' participation in school events, external competitions, and career-oriented co-curricular development.

Improved Energy Efficiency, Safety, and Communication

- The **78-kW solar power system**, combined with a net-metering tie-up with UPPCL, reduced the school's **monthly electricity bill from ₹2–2.2 lakhs to ₹95,000 - ₹1.5 lakhs**, enabling cost savings to be redirected toward other institutional needs.
- **100% of students** were aware of the upgraded **IP camera-based CCTV surveillance**, with **84% reporting significant improvement** in discipline and orderliness, and all students reporting feeling safer within the premises.
- The **school-wide public announcement system** is actively used, with **96% of students** confirming that messages now reach everyone instantly, reducing classroom interruptions and enabling smoother communication.

Strengthened Student Well-being, Access, and Overall School Experience

- **80% of students** use the **two newly added buses**, with **97% of bus users reporting increased attendance**, including 33% gaining 20+ extra school days per year, directly supporting retention among girls from distant rural areas.
- The **roti maker** enabled regular inclusion of rotis in the lunch menu (2–3 times/week), with **75% of students** reporting feeling more energetic, fuller, and healthier overall.
- **Renovated and expanded playground slides** created a safer, more reliable recreational space for primary and pre-primary students, easing supervision concerns for teachers.
- Cumulatively, **98% of students** reported a positive shift in their attitude towards attending school, and **98% rated the overall improvements as transformative or significantly better**, reflecting strong acceptance of the holistic interventions.

Key recommendations:

Scale Transport Support to Improve Last-Mile Access: Given the strong uptake and positive impact of the buses on attendance, comfort, and regular school participation, transport support can be considered for scale-up in future phases. While most bus users reported improved commute convenience, a small share of students noted occasional crowding, and some students still travel long distances, up to 10 km, to reach pick-up points. Adding more buses or expanding routes can help reduce crowding, improve last-mile access, and further support attendance and retention among girls from distant rural areas.

Project 4: Sponsoring Four School Buses and Solar Street Lights Enabling Safe Access to Education for Underserved Children

About the project

SBI Cards and Payment Services Limited, in partnership with Lotus Petal Foundation (LPF), supported the project “Sponsoring Four School Buses and Solar Street Lights enabling Safe Access to Education for Underserved Children” at Lotus Petal Senior Secondary School, Dhunela, Gurugram, from January

2024 to January 2025. The project aimed to strengthen access to quality education for children from underserved communities by addressing two critical barriers: safe transportation to school and secure, well-lit school infrastructure.

The intervention supported the procurement of four Starbus Prime CNG school buses with registration, insurance, CCTV cameras, GPS, and a four-year AMC, along with the installation of 90 semi-integrated solar streetlights across the school's boundary wall and playground. Overall, the project benefited 800 students, including 208 direct beneficiaries through the four buses. The intervention improved safe and reliable access to the Dhunela campus, reduced commuting-related stress for families, strengthened campus safety, and supported the school's sustainability efforts.

Project Objective(s)

The primary objective of the project is to enhance the school's existing infrastructure through the provision of school buses and solar streetlights, with the aim of improving safe and reliable access to education, increasing student attendance, and supporting students' holistic development.

Key findings:

Improved affordability and convenience for families

The project reduced the financial and logistical burden of school access for low-income households by replacing fragmented travel arrangements with a structured and supervised bus service:

- Earlier commute modes included walking/cycling (47%), parent drop-offs (35%), public transport (15%), and shared private vehicles (3%).
- 98% found the bus schedule convenient, 94% reported no separate bus fee, and 80% said travel expenses reduced significantly.
- Families save an estimated INR 2,400 per month.

Improved access, attendance and continuity of education

The bus service improved reliable access to the Dhunela campus and supported regular attendance:

- 91% said coming to school is now very easy and 94% reported always arriving on time.
- 67% reported improved attendance; average attendance of bus users reached 88%, exceeding the 80% target.
- 67% said reduced travel fatigue helped them focus better on studies.

Strengthened student safety and school environment

The project improved safety during travel and within the school through monitored buses and solar lighting:

- 100% noticed cameras in the buses, 92% felt much safer, 86% said buses are always clean and well maintained, and 88% reported no delays or operational issues.
- 100% said school areas are well lit due to solar lights; 70% said the lights improved evening safety and comfort, and 77% found them highly useful during power cuts.

Positive impact on student experience

The combined effect of safer transport and better infrastructure improved students' overall experience of the school:

- 93% said the school feels much better than before, 100% said these facilities support regular attendance, and 95% said they would like to continue studying in the school.

Strong relevance for underserved communities

The project effectively addressed distance, affordability, and safety barriers for economically vulnerable students:

- 66% reported that their families hold a BPL card.
- Parents are largely engaged in low-income occupations, and all students used the bus service, with 99% using it daily.

Sustainability and operational value

The solar streetlights generated environmental and cost benefits for the school:

- Savings of 690 electricity units per month, approximately INR 5,000 in monthly costs, and 641 kg CO_2 emissions per month.

Key recommendations:

- **Expand renewable energy use:** Explore phased expansion of solar-based solutions to meet a larger share of the campus's energy needs.
- **Replicate the model:** Consider scaling this integrated model of safe transport and sustainable school infrastructure across similar education settings serving underserved communities.

Project 5: To establish 25 Tinkering Labs across different locations in Assam, Punjab & Uttar Pradesh

About the project

SBI Card, in collaboration with Sumangal Foundation, launched an ambitious initiative to establish **25 Atal Tinkering Labs** across the states of **Assam, Punjab, and Uttar Pradesh** over a **24-month period**. Building on the successful implementation of a similar phase across 25 schools in Delhi and Haryana, this project leveraged prior learnings to ensure systematic fund disbursement tied to milestones, supporting proper installation, optimal resource utilisation, and long-term sustainability.

The labs were established in **government schools** and equipped with state-of-the-art tools including **robotics kits, sensors, 3D printers, Arduino boards, AI and coding platforms, and computers**, designed to introduce advanced science, technology, and engineering learning tools to students of **Classes 6 to 10**.

Project Objective(s)

- Transform pedagogical approaches in government schools by shifting from theory-heavy, textbook-based instruction to experiential, hands-on learning.

- Bridge the infrastructure gap in under-resourced government schools that previously lacked even basic science and computer laboratories.
- Equip students with 21st-century skills such as creative thinking, problem-solving, computational thinking, programming, and teamwork.
- Nurture innovation and scientific temperament by exposing students to robotics, artificial intelligence, electronics, and coding.
- Empower economically disadvantaged students with equitable access to advanced learning opportunities that spark curiosity and inspire entrepreneurship.

Key findings:

Transforming Learning Infrastructure and Enabling Hands-On Exploration:

- 91% of students (n=135) used Electronics/IoT kits like Arduino boards, while 90% used sensors and rapid prototyping tools such as 3D printers.
- 96% of students reported weekly access to the labs, with participation remaining optional.
- 84% of students experienced no technical issues in the lab, with remaining issues resolved within a week.
- An Annual Maintenance Contract (AMC) valid until 2025 ensured uninterrupted access to lab resources.
- The phased implementation approach - infrastructure preparation, equipment installation, and capacity-building training was confirmed by teachers as instrumental in ensuring efficient setup and operational sustainability.

Building Teacher Capacity and Confidence in Lab Practices:

- Trainers underwent a rigorous screening process followed by 10–15 days of intensive training before being deployed to schools.
- 59% of students felt teachers were not fully able to comprehend the new technology, while 41% felt they grasped the concepts well.
- 47% of students found the concepts easy to understand, while 53% felt certain topics needed additional explanation.
- 57% of students agreed that teachers provided ample hands-on experience during lab sessions.
- 55% of students learned to use sensors and electronics, 52% attended coding classes, and 50% were taught programming and 3D printing.
- 99% of students reported that trainers made learning more enjoyable and engaging compared to school teachers.

Deepening Conceptual Understanding and Strengthening Student Engagement:

- 88% of students felt the lab helped them understand concepts better, while 84% acknowledged it made learning fun and interactive.

- 81% of students participated in workshops, and 66% participated in competitions post-training (61% school level, 5% district level).
- 96% of students felt the availability of educational kits strongly enhanced their learning experience, with 89% indicating improved understanding of science and technology.
- 50% of students reported attending school more often since the introduction of the lab.
- 98% expressed a desire to continue learning in the lab, while 93% said they would recommend the sessions to peers.

Key recommendations:

Digitisation of Training Content for Scalable and Continuous Learning:

- Develop a structured repository of short, modular video tutorials covering key lab components such as electronics, robotics, coding, and 3D printing, designed for both teachers and students in multiple languages.
- Provide on-demand learning support, reducing reliance on external trainers and ensuring continuity despite teacher transfers or trainer unavailability.
- Serve as a refresher tool for trained teachers and enable self-paced learning among students, especially those with higher interest.
- Establish a centralised digital library accessible via mobile, school devices, or offline storage to ensure sustainability, easy access, and improved concept clarity across locations.

Project 6: Smart Green Power Schools – Installation of off-grid solar system in 20 Government Schools of Delhi & Haryana

About the project

SBI Card partnered with Yuva Unstoppable with the aim of supporting the Future Classroom Initiative and making the schools self-dependent for electricity needs. The schools were unable to utilize the full potential of the Digital Classroom due to frequent power cuts. The inverters provided were aiding for limited time, after which the productivity was compromised. The vision of the project is to make the schools “Smart and Green Power Schools”.

Smart Green Power Schools project started in November 2022 with the focus on supporting Future Classroom Initiative. Under the project, off-grid solar system at 20 government schools of Delhi & Haryana was installed which were among the 51 schools supported by SBI Card under Future Classroom Initiative. Installation of solar panels made the school environment friendly and self-reliant for energy needs.

Project Objective(s)

- To substitute existing consumption of electricity with clean and green electricity.
- To enhance the learning outcomes and improve attendance.

Key findings:

From Disruption to Reliability: The Solar Impact:

- The solar intervention has delivered remarkable results in power stability, with 93% of students reporting significant reductions in electrical interruptions compared to pre-installation conditions.
- The project demonstrates comprehensive success in stakeholder engagement, with complete awareness among all students (100%, n=75) about the solar installation, evidencing strong institutional backing. 93% of students were aware of proper reporting channels for electricity or device problems.
- 97% of students who were enrolled before the project began, the comparison shows a strong increase in usage. Daily use of digital classrooms jumped from just 3% before installation to 93% after installation- about a 30-times increase.
- The initiative extends beyond educational benefits to deliver measurable economic impact, generating monthly cost savings of INR 10,000–12,000 during peak consumption periods, as stated by one of the School Principals.

Infrastructure Access and Digital Learning Transformation:

- According to the survey, 99% (n=75) of students use computers or digital devices at school, with 100% having access to electricity-supported classes.
- The infrastructure has enabled universal access to basic amenities, with all students using fans and lights in classrooms, while 71% utilize smart boards and projectors.
- The solar installation has universally transformed the learning experience and school environment, with 100% of students reporting increased comfort and improved ability to focus due to working fans and lights. Improved lighting in corridors, stairs, and toilets has made 97% of students feel safer moving around school premises.

Key recommendations:

Scale Solar-Powered Digital Learning Solutions Across Government Schools: Building on the demonstrated impact of reliable power in enhancing digital classroom usage and learning outcomes, the project can scale the solar plant intervention to other government schools facing frequent power disruptions. By prioritizing schools with existing digital infrastructure, this approach can maximize utilization, improve teaching effectiveness, and create a sustainable, replication-ready model that strengthens technology-enabled education through consistent electricity access.

Project 7: Digital Shaala- Enabling digital learning opportunity in 100 Govt Schools

About the project

The SBI Card Digital Shaala Programme is a joint initiative by SBI Card and Muskaan Dreams aimed at promoting digital education in government-run schools. The project focuses on setting up digital classrooms by providing ICT devices and equipping teachers with the technical knowledge needed for

their effective use. Targeted at students from Standard 6th to 8th, the curriculum is aligned with the National Education Policy (NEP) 2020 and NCERT standards. By integrating technology into teaching and learning, the programme seeks to bridge the digital divide in underserved regions, ensure continuity of learning, strengthen teacher development, and make education more inclusive, equitable, and responsive to modern demands ultimately enhancing academic outcomes and preparing students with future-ready skills.

Project Objective(s)

- To integrate the use of technology for improving the overall reach and quality of education in government schools.
- To enable access to quality education through provision of teaching and learning tools.
- To enhance the student's learning outcomes, digital literacy, and classroom engagement through innovative teaching and learning.

Key findings:

Improvement in Academic Outcomes & Attendance:

- 100% of students (n=138) reported improved academic performance in STEM subjects after learning through Digital Classrooms.
- 70% stated that audio-visual content helped them better understand complex topics.
- 99% of students now attend school for more than 20 days a month post-intervention.
- All 10 teachers confirmed that Digital Classrooms have improved student attendance and engagement.

Shift in Learning Preferences:

- 99% of students found studying through Digital Classrooms easier and more interesting than traditional methods.
- A clear shift was observed from traditional learning to digital mode, especially in Maths (100%) and Science (100%).

Improved Teacher Capacity in Education Technology:

- 9 out of 10 teachers received formal training; all 10 actively use the Digital Classroom setup on a weekly basis.
- 100% of teachers agreed that Digital Classroom learning is highly effective in capturing student attention.

Transformed Teaching Methods:

- Teachers adopted interactive techniques such as audio-visual aids (100%), storytelling (93%), and graphics (86%).
- 96% of students affirmed that teachers now excel in leveraging digital tools (videos, demonstrations, storyboards, etc.).

- Teachers have also independently adopted innovative practices such as using YouTube for English instruction.

Shift from Traditional to Modern Teaching:

- Significant transformation in teaching practices, particularly in Mathematics and Science.
- Ranchi recorded higher digital content usage (3.47 hrs/day for Science; 2.21 hrs/day for Maths) compared to Jaipur (0.42 hrs and 0.35 hrs respectively).

Improved IT Proficiency of Teachers:

- All teachers reported progression from basic to intermediate, or intermediate to advanced IT proficiency levels.
- Strengthened digital competencies enabled effective integration of technology into classrooms.

Improvement in School Infrastructure & Teaching Quality:

- Digital content empowered substitute teachers to ensure continuity of learning during teacher shortages.
- New desks, benches, and refurbished classrooms created a more welcoming learning environment.
- Increased student enrolment, retention, and parental confidence in the quality of government school education.

Alignment with Global & Organisational Goals:

The project aligns with UN SDG 4 (Quality Education) and SBI Card's ESG vision of transforming education for 1 lakh individuals by FY 2027 and 5 lakh by FY 2030.

Key recommendations:

- **Expand Digital Classroom Infrastructure**: Currently, each school has only two digital classrooms, which restricts usage across grades. Feedback from teachers and students indicates strong interest in using these tools more frequently across subjects. Establishing additional digital classrooms would make digital learning accessible to all students. Moreover, the digital content that has been well received in Standard 6th to 8th could be extended to higher grades (9–12) and to subjects beyond Mathematics and Science, ensuring continuity and broader coverage of learning.
- **Strengthen Trainer Support through Recorded Training Sessions:** While teachers have adapted well to digital classrooms and tools, continuous access to training resources will help them stay updated with evolving technologies and teaching practices. Although informal knowledge sharing occurs among teachers, providing recorded training sessions would offer consistent and accessible support, particularly for newly appointed or transferred teachers who may lack prior experience. These recorded sessions can be accessed by teachers at their convenience, ensuring that all teachers remain confident and capable of fully utilizing the digital infrastructure, thereby sustaining the quality and continuity of technology-enabled learning.

Project 8 and 9: Mainstreaming Deaf youth through Pre-Vocational, Skill Development and suitable Livelihood

About the project

The SBI Cards, through its CSR initiative in partnership with Noida Deaf Society (NDS), implemented the project Mainstreaming Deaf Youth through Pre-Vocational, Skill Development, and Suitable Livelihood to empower hearing-impaired youth and integrate them into the mainstream workforce. In Phase I, the programme focused on building foundational skills through training in Indian Sign Language, computer literacy, English communication, retail, hospitality, and pre-employment preparation, while Phase II expanded the scope to include digital literacy, banking and finance, data entry, sign language, and vocational skills such as bakery and beauty services. Beyond skill-building, the project actively fostered an enabling ecosystem by engaging 100 corporates in Phase I and 110 in Phase II to promote inclusive workplaces and disability hiring, alongside conducting around 200 parental counselling and awareness sessions to drive societal sensitisation. Complemented by quarterly exposure visits to strengthen practical learning and workplace readiness, the initiative addressed critical barriers faced by Persons with Disabilities and worked towards creating sustainable livelihood opportunities for deaf youth in India.

Project Objective(s)

Phase I:

- Skill development and workplace readiness training for 1000 students over a two-year period
- Employment facilitation for 500 students across diverse industries.
- Corporate engagement with 40 companies to raise awareness and explore sustainable job opportunities.

Phase II:

- Adequate skill training and development of 650 deaf youths over the project period.
- Employment opportunity for youths in suitable job roles across all locations.
- Raising awareness and sensitizing society through corporate workshops, PTM's, exposure visits etc.

Key findings:

Building a Safe and Inclusive Learning Hub:

- The training centres provided an accessible and inclusive learning environment where Indian Sign Language (ISL) served as the primary medium of communication often a first-time experience for many trainees.
- Phase I laid the groundwork through outreach and mobilisation, while Phase II achieved wider awareness, increased enrolment, and more consistent participation.
- Word-of-mouth, peer networks, alumni success stories, and digital platforms (Facebook, WhatsApp) effectively expanded community engagement.

Enhanced Career Readiness & Stakeholder Engagement (Phase II):

- Alumni networks played a strong role in influencing new trainees to enroll.
- Exposure visits to workplaces such as Taj Vivanta and Big Basket helped build trainees' confidence, communication, and workplace understanding.
- Family counselling and awareness sessions improved parental understanding of workplace demands.

Infrastructure and Facilitation:

- Free meals, hostel facilities, assistive technologies, and transportation reduced financial and logistical barriers.
- The programme reached underserved regions including Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, and Rajasthan.

Skill Development & Training Outcomes:

- Trainees received structured guidance on selecting vocational and supplementary courses aligned with their age and aspirations.
- **Phase I:** Focused on ISL, computer literacy, English communication, retail, hospitality, and pre-employment preparation.
- **Phase II:** Expanded into digital literacy, banking and finance, data entry, bakery, and beauty services.
- **NIOS-certified** courses provided nationally recognised credentials, supporting further education and employment.
- Monthly assessments showed measurable improvements in English, communication, and digital literacy.

Employment & Corporate Sensitisation:

- Out of **728 youth trained in Phase II, 358 secured employment** across e-commerce, hospitality, manufacturing, retail, and IT.
- Over **110 corporates were sensitised** on disability inclusion (in addition to 100 in Phase I).
- Employers (Taj Vivanta, Big Basket, Zudio, Amazon, etc.) reported strong commitment, concentration, and productivity among hearing-impaired employees.
- Some employers expressed interest in learning ISL to facilitate communication.
- Interpreters, personalised follow-ups, and interview coaching enabled smooth transition into jobs.

Social and Personal Empowerment:

- Parental engagement emerged as a key catalyst, leading to lower dropout rates and greater self-assurance among trainees.
- Improved communication skills (e.g., video calls, WhatsApp messaging) helped parents stay connected with their children's routines.

- Parents expressed personal satisfaction with their children's progress, independence, and confidence, despite limited shifts in broader community perceptions.

Sustainability & Convergence:

- The buddy system at workplaces supported long-term retention of trainees.
- Quarterly PTMs and WhatsApp-based engagement strengthened the family ecosystem in Phase II.
- The project aligned with **SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 10 (Reduced Inequalities)** as well as the **PwD Act** and SBI Card's ESG vision.

Key recommendations:

Scaling the Program through Hybrid Delivery and Institutional Collaborations: Building on the hybrid training model already supported by SBI Card during Phase I and Phase II, NDS can consider scaling the program by complementing physical batches with structured virtual classes delivered in Indian Sign Language (ISL). The current reach of 1,071 trainees in Phase I and 728 in Phase II has been limited by the physical capacity of centres in Noida, Badarpur, Raipur, and Meerut, restricting access for hearing-impaired youth in other remote regions. The scale-up can be supported through the following measures:

- **Hybrid Delivery:** Run virtual classes alongside physical batches, enabling trainees unable to travel to centres to participate remotely and increasing overall trainee count without proportional infrastructure cost.
- **Open Digital Media Platforms:** Host ISL-based modules on platforms such as YouTube, supplementing existing Facebook and WhatsApp outreach. Structured content can cover hospitality (F&B, housekeeping), retail (customer service, store operations), e-commerce (warehousing, packing, data entry), BFSI (back-office operations), and beauty and wellness.
- **College Collaborations:** Partner with colleges across different locations to host satellite batches, share infrastructure, and co-deliver vocational modules, extending reach beyond NDS-operated centres and aligning with the Skill India Mission, NSDC, and PMKVY provisions.

Project 10: To skill 558 youths in HealthCare job roles of Phlebotomist, General Duty Assistant- Advanced and Dresser (Medical) in residential mode in Gurugram, Sadiya and Silchar

About the project

India faces a significant shortage of trained support staff in the healthcare sector, particularly in roles such as technicians, assistants, and frontline workers. This gap is more pronounced in smaller towns and rural areas, where limited availability of trained personnel affects service delivery and increases pressure on existing healthcare systems. The COVID-19 pandemic further highlighted the critical need for a strong and skilled healthcare support workforce.

To address this gap, SBI Card, in partnership with the Healthcare Sector Skill Council (HSSC), implemented a skill development project aimed at training 558 underprivileged youth in healthcare job

roles including Phlebotomist, General Duty Assistant (Advanced), and Medical Dresser. The programme was implemented across Gurugram (Haryana), Sadiya, and Silchar (Assam).

Training was delivered in alignment with the National Skills Qualification Framework (NSQF), combining classroom instruction, practical training, and mandatory On-the-Job Training (OJT) in healthcare facilities. The project also offered residential training options to enable participation from candidates in remote and underserved areas. The intervention aimed to build employability, create livelihood opportunities, and strengthen the healthcare workforce pipeline.

Project Objective(s)

To train a total of 558 eligible candidates in residential mode under 3 different job roles in-

- Phlebotomist
- General Duty Assistant – Advanced and
- Dresser (Medical)

The training consists of theory and practical based classroom training followed by On-the-Job Training (OJT) in healthcare facilities such as Primary Health Centers (PHC), hospitals, diagnostic facilities, sample collection centers etc.

Key findings:

Strengthening Healthcare Workforce Readiness through Skill Development:

- The programme primarily reached economically vulnerable youth, with 91% holding BPL cards and 86% being women, indicating strong inclusiveness.
- The majority of trainees had completed secondary or higher education (94% completed 12th; 53% graduates) but lacked job-oriented, sector-specific skills.
- Training served as a critical entry point for youth unable to pursue formal medical education due to financial and social constraints.
- 71% of respondents learned about the programme through institute mobilisation, followed by peer networks (47%), highlighting the role of community outreach.
- Courses such as GDA (Advanced), Phlebotomist, and Medical Dresser provided short-term, accessible pathways into the healthcare sector.
- Financial support was a key enabler, with 86% citing free training as a major motivator, and 77% opting for residential facilities, reducing access barriers.
- High satisfaction levels were reported, with 82% rating overall facilities positively and 93% rating OJT highly, indicating strong programme delivery.
- The intervention effectively created a foundation for employability, equipping youth with practical skills aligned with healthcare workforce requirements

Enhancing Practical Competence through Structured Training and On-the-Job Exposure:

- **100% of trainees participated in OJT**, reinforcing the programme's emphasis on experiential learning.
- OJT enabled trainees to apply theoretical knowledge in real healthcare settings, including patient care, hygiene practices, and communication skills.
- Trainees reported improved confidence, clarity on job roles, and better preparedness for workplace responsibilities.
- All trainees received a **stipend during OJT (average ~INR 2,900), with 69% expressing satisfaction with the amount**, supporting financial continuity during training.
- Employers observed that trainees demonstrated basic preparedness, adherence to protocols, and willingness to learn, validating training effectiveness.
- Course content was perceived as relevant and easy to understand, with practical examples supporting application in real-world settings.
- Overall, the structured combination of classroom learning and OJT strengthened skill retention and workplace readiness.

Creating Sustainable Employment and Income Opportunities through Effective Placements:

- **100% of trainees interviewed (n=111) were offered placement opportunities**, with 90% accepting the offers, reflecting strong industry linkage; the remaining 10% opted out primarily to pursue further education.
- Among those who accepted placements **(n=100), 91% were employed at the time of interaction, reflecting high retention**.
- **Average salaries post-placement (~INR 20,000) were ~30% higher than initial expectations (~INR 15,000)**, demonstrating improved earning potential.
- **67% continued in the same healthcare field, while 29% engaged in related entrepreneurial activities, indicating sector relevance and adaptability. whereas the remaining 4% transitioned out of the healthcare sector and took up salaried roles such as teaching positions in private schools.**
- **96% of those in the same field reported career progression**, highlighting strong job readiness and skill applicability.
- Improvements in quality of life were evident:
  - 94% reported improved lifestyle
  - 89% achieved financial independence
  - 80% reported better access to food
  - 67% reported improved access to healthcare
  - 77% reported initiating savings or investments, indicating enhanced financial stability.

- Findings suggest that the programme supported not only employment but also long-term economic resilience and household well-being.

Impact of the Course on Trainee and Trainer Perceptions of Job Skill Importance:

- A large majority of trainees reported that the **programme enabled them to secure meaningful employment (95%) and establish a long-term career pathway (89%) in healthcare.**
- **94% expressed confidence that skills gained would support future career progression.**
- Trainers highlighted that short-duration, job-oriented courses effectively enable youth to balance economic responsibilities while entering the workforce.
- Employers reinforced that trainees, after initial orientation, were able to perform roles effectively and meet workplace expectations.
- The programme was viewed as a practical and scalable model for supporting workforce development, livelihood generation, and sectoral growth

Key recommendations:

Scaling up the Intervention to Expand Impact:

- In view of the outcomes achieved in terms of training completion, placement rates, and income improvement, there is clear potential to scale up the intervention to reach a larger cohort of youth.
- The programme should be expanded to additional geographies with high demand for healthcare support staff by replicating the existing residential training model and NSQF aligned course structure.
- Scaling up through increased intake at existing centres, as well as phased replication in new locations, would help address regional healthcare workforce gaps while creating livelihood opportunities for more underprivileged youth.
- Such expansion would further strengthen the availability of trained healthcare support staff and enhance the programme’s contribution to healthcare delivery and livelihood generation.

Project 11: BHAVNAM 2.0 – Tree Plantation Project in Aravalli Hills, Delhi NCR

About the project

SBI Card, in partnership with Sankalptaru Foundation, launched Project Bhavnam 2.0 to plant 30,000 native tree saplings across 30 hectares in Gairatpur Bas village, Sohna block, Gurugram district, within the ecologically sensitive Aravalli Hills. The Aravalli Mountains, one of the world's oldest ranges, are vital for northwestern India's ecology, acting as a natural barrier against desertification and supporting water recharge systems. However, they face threats from deforestation, mining, grazing, and human encroachment, leading to desertification and ecological degradation. The project addresses these challenges by planting native, fruit, and flowering trees and utilizing a solar-powered irrigation system with drip lines to conserve natural resources. This initiative aims to restore the region's ecosystem, enhancing green cover while providing shelter and fodder for local flora and fauna.

Project Objective(s)

- To halt ongoing degradation of the Aravalli Ranges by planting native, drought-tolerant species that create natural habitats and support local biodiversity.
- To improve groundwater levels by planting species with high water-retaining capacity, aiding in the recharge of depleting aquifers.
- To engage local communities in environmental conservation by promoting a self-sustainable ecosystem supported by solar-powered irrigation to minimize water use and reduce dependency on natural resources.

Key findings:

Improvement in Local Ecological Conditions and Biodiversity:

- The barren and rocky land transformed into greener, healthier ecosystems with increased green cover, restoration of degraded land, and a notable rise in biodiversity, including a greater variety of resident and migratory bird species supported by native plantation over invasive species.
- The plantation has led to increase in the presence and variety of bird species, including species that were not commonly seen earlier and increased influx of migratory birds especially during winters coming from different regions of the country & world, suggesting that the plantation has begun to create a conducive habitat for fauna and support biodiversity recovery.
- Community members observed significant reductions in dust pollution and improvements in overall air quality, with the expanding vegetation acting as a natural barrier, contributing to fresher and cleaner air.
- The plantation has positively impacted micro-climate regulation, with noticeably lower temperatures and a rise in the water table by 20-30 meters, supporting year-round water availability for household, livestock, and agricultural use.
- Native species planting improved plant survival and ecological compatibility, reduced soil erosion, and enhanced soil structure and biological activity, making the ecosystem more resilient to climate change while supporting carbon sequestration.

Creation of Enabling Infrastructure Supporting Long-term Sustainability:

- The project incorporated a solar-powered drip irrigation system supported by a 10KW solar plant for the borewell and an 18KW system for irrigation, significantly reducing reliance on unreliable village electricity and ensuring sustainable, energy-efficient, year-round watering of 30,000 saplings.
- Protective fencing around the entire 30-hectare site effectively safeguarded saplings from grazing and physical damage, enabling healthier growth, minimizing replantation needs, and facilitating consistent maintenance activities such as watering and mulching.
- The reliable irrigation infrastructure and protective fencing contributed to an exceptionally high sapling survival rate of 100%, supported by consistent maintenance and need-based watering throughout the project duration, ensuring robust ecological regeneration.

Key recommendations:

Replicate the model in similar ecological contexts with contextual adaptations: The project demonstrates an effective afforestation model with visible environmental benefits and a replicable approach through plantation of native species, integration of solar-powered irrigation, and site-specific design considerations. SBICPSL can consider scaling up the project in other geographies while adapting the model based on local contexts such as soil conditions, water availability, and community readiness and retaining core elements of sustainability. Scaling such interventions can amplify environmental impact across geographies.

Project 12, 13, and 14: Mantra for Advanced Sustainable Solution (MASS) - Phase III, IV and MASS Uttarakhand

About the projects

SBI Card in collaboration with Indian Pollution Control Association (IPCA) launched the Mantra for Advanced Sustainable Solutions (MASS) project in February 2021 to establish a sustainable plastic waste management system focused on segregation at source, collection, and recycling. Phase I set up a 2 TPD Material Recovery Facility (MRF) in East Delhi and a 30 TPD Plastic Recycling Facility in Greater Noida for low-value plastics. Phase II expanded the infrastructure with two 5 TPD MRFs in East Delhi and one 10 TPD MRF in Greater Noida. The project aimed to create a scalable, replicable model promoting responsible waste handling, community participation, and awareness, with environmentally sound recycling practices. Furthermore, as the MASS Project progressed, the subsequent phases Phase III & IV along with MASS Uttarakhand were evaluated, with an overview as mentioned below:

- **MASS Ghaziabad:** MASS Phase III, launched in Ghaziabad in January 2023, aimed to develop a sustainable and comprehensive waste management system through a decentralized recovery approach. The project actively engaged local communities, including 23 residential societies in Raj Nagar Extension and 2 educational institutes, to strengthen waste segregation efforts. Extensive training and awareness programs were conducted for residents, maids, waste workers, and housekeeping staff to foster participation. A key infrastructure development was the establishment of a 50 TPD Material Recovery Facility (MRF) at Ret Mandi in partnership with Ghaziabad Nagar Nigam, which provided critical support for permissions, logistics, and integration with the city's waste management system. Additionally, 4 organic waste composters were employed to manage wet waste efficiently.

- **MASS Patiala:** MASS Phase IV, launched in Patiala in August 2023, established a 10 TPD Material Recovery Facility (MRF) and a 10 TPD Plastic Recycling Facility, alongside a decentralized solid waste management system in 10 residential colonies. The project focused on adding value to low-value commercial plastic waste by promoting source segregation and composting organic waste using aerobin community composters. It developed a model ensuring a circular supply chain for plastic waste to promote efficient and optimal waste utilization. Key activities included setting up the MRF and recycling facility, implementing decentralized organic waste management at multiple locations, and conducting IEC and branding campaigns to raise public awareness on sustainable waste management.

- **MASS Uttarakhand:** Project MASS Uttarakhand focused on addressing plastic waste by recycling it into 10,000 school desks distributed to 452 government schools across 12 districts in four zones,

thereby supporting both environmental sustainability and educational infrastructure in remote areas. Key activities included the production, assembly, and dispatch of recycled plastic desks, alongside workshops to raise awareness on the benefits of using recycled plastic products for a sustainable future. Overall, the MASS project collectively strive to establish scalable, sustainable waste management systems that tackle plastic pollution effectively from urban centers like Delhi, Ghaziabad, and Patiala to ecologically sensitive areas like Uttarakhand demonstrating a replicable model for responsible waste handling and community involvement.

Project Objectives

- **MASS Ghaziabad:** The project aimed to establish a state-of-the-art 50 TPD Material Recovery Facility in Delhi NCR and streamline decentralized wet waste management across 25 residential societies. It focuses on fostering sustainable behavioral change in consumers regarding onsite wet waste management and cleanliness, using informative IEC materials, and developing a sustainable supply chain for Municipal Solid Waste.
- **MASS Patiala:** The project aimed to streamline municipal solid waste management and establish a sustainable supply chain for plastic waste in Patiala, Punjab by setting up a 10 TPD Material Recovery Facility and a 10 TPD Plastic Recycling Facility, alongside executing a decentralized organic waste management system at 10 identified locations to recover potential wet waste. Additionally, the project aimed to spread awareness on sustainable waste management among citizens through a comprehensive IEC and branding campaign.
- **MASS Uttarakhand:** The project aimed to successfully recycle plastic waste and repurpose it into 10,000 desks, benefiting 452 government schools in 12 districts (divided into 4 zones) of Uttarakhand. The initiative not only addressed the pressing challenge of plastic waste but also supported the educational infrastructure in these remote areas, contributing to both environmental sustainability and social development. It also aimed to demonstrate the power of recycling, stemming into the educational infrastructure and the potential for creating long-term solutions that benefit both communities and the environment.

Key findings:

MASS Ghaziabad

Increased awareness and ownership towards responsible waste management practices among stakeholders:

- 92% residents reported learning why and how to segregate waste, 80% started practicing segregation, and 80% experienced positive behavioral changes during awareness sessions.
- Training has helped housekeeping staff understand segregation better and ease their work, but some households still do not segregate waste, indicating a need for ongoing awareness.
- Aerobin Composters in residential societies process around 36,000 kg of wet waste monthly with minimal further segregation, producing compost in 45 days for use within the society, eliminating the need for chemical fertilizers or external compost in most societies.

Enhanced infrastructure for waste segregation and recycling:

- The Material Recovery Facility (MRF) is equipped with a capacity of 50 TPD and aids in segregating 3-4 types of waste, including recyclable materials, hazardous waste, and wet waste.
- The MRF successfully recovers approximately 85% of recyclable materials from the total waste collected, minimizing landfill contributions.
- The 50 TPD MRF processes approximately 20 TPD of wet waste through the OWC machines, while the remaining 30 TPD primarily consists of dry waste and rejects.
- Out of the 30 TPD dry waste, about 9 TPD of plastic waste is segregated and sent to authorized recyclers. Of this, approximately 2 TPD of multilayer plastic (MLP) waste is directed to IPCA's recycling unit in Greater Noida.

Skill Development and Enhanced working conditions of the waste workers:

- Waste workers reported a significant improvement in their understanding of waste segregation and better working conditions since much of the waste arrives pre-segregated at the Material Recovery Facility (MRF), reducing manual segregation time by about 2 hours daily.
- The MRF has also provided them with safety equipment like masks and gloves, improved overall area cleanliness, and decreased disease incidence.
- Additionally, the MRF has enhanced workers' earnings from around INR 5,000 to INR 6,000–7,000 per month by increasing efficiency and enabling better sales of recyclables. This allows them to finish work earlier, better manage household responsibilities, and save more money.

Solidifying the commitment for environmental well-being:

- The Ghaziabad MRF processes 50 tonnes of waste daily, diverting a large portion from landfills to promote eco-friendly waste management. The waste received is about 60% dry and 40% wet; wet waste is processed through Organic Waste Converters, while 30% of the dry waste (9 TPD) is plastic recycled at the Plastic Recycling Facility, with only 10-15% of residual waste sent to landfills.
- At the residential level, respondents reported that 80% of the waste generated per household is wet waste, which is managed through composting by the Resident Welfare Associations (RWAs).

The SROI calculation demonstrated a value of 13.02, indicating that for every ₹1 invested in the project, a social value of ₹13.02 is generated.

MASS Patiala

Increased awareness about the project and waste management practices:

- All residents reported being aware of waste segregation, with 96% actively practicing it at the household level.
- 54% of respondents indicated that they have been practicing waste segregation at the household level for 1-2 years, while 44% mentioned they have been doing so for more than 2 years. This has led to increased cleanliness and general hygiene in residential societies as well.

Positive behavioural change among residents for waste management at source:

- 96% of respondents reported engaging in waste segregation at their household level, reflecting both increased awareness and a significant behavioral change among residents regarding source segregation.
- Initially, before the intervention, only 2% of respondents practiced waste segregation at home. In contrast, post-intervention 96% are now actively separating their waste into dry and wet categories.
- Introduction of Aerobin composters has further heightened residents' awareness of the benefits of waste segregation. Once segregated waste is collected by the housekeeping staff, the wet waste is added to the Aerobin composters.

Enhanced waste management infrastructure leading to sustainable management of waste

- The MRF at Patiala handles 8-9 TPD of wet waste and 3 TPD of dry waste. The MRF's capacity is divided equally, with 5 TPD allocated for wet waste processing and 5 TPD for dry waste processing. Approximately 2-3 TPD of plastic waste is sent from the MRF to the PRF for further processing and recycling into end products every month.
- The recycled plastic waste is initially transformed into sheets of varying thicknesses. These sheets serve as raw material that can be further converted into a variety of end products such as pots, desks, benches, and more, depending on the order volume and specific product requirements.
- This intervention established essential infrastructure for comprehensive waste management, educating residents on segregation at source, providing organic composters for on-site wet waste processing, and managing plastic waste through segregation, baling, and recycling at the Plastic Recycling Facility. The project’s holistic approach ensures sustainability by covering the entire waste management process from collection to final processing.

Skill development and better working conditions of the waste workers

- Waste workers reported a significant reduction in manual segregation time and improved efficiency due to most waste arriving pre-sorted and the introduction of semi-automatic machines at the MRF. The increase in composting pits from 58 to 98 further enhanced waste processing capacity, marking a major improvement in waste handling practices.
- Additionally, waste workers’ working conditions have improved with training on machinery operation and provision of safety gear such as masks and gloves, enabling safer and more effective task performance.
- The SROI calculation demonstrated a value of 7.94, indicating that for every ₹1 invested in the project, a social value of ₹7.94 is generated.

MASS Uttarakhand

Improved Learning Comfort and Classroom Experience:

- The program successfully addressed a critical infrastructure gap by providing benches to students, significantly improving classroom functionality, comfort, and student well-being, especially during harsh winter conditions.
- Awareness of the program was universal (100%), indicating strong communication and visibility efforts within the school, which contributed to high acceptance and utilization.

- The provision of benches alleviated key challenges such as writing difficulties (79%), discomfort from floor seating (44%), and related impacts on attention (37%) and hygiene (29%), fostering a more engaged, structured, and motivating learning environment.
- Almost all students (96%) reported high comfort with the benches, with full awareness of their recycled plastic origin, resulting in increased student pride (98%) and potential for promoting sustainability education and community support.

Awareness generation and capacity building around waste management

- Awareness sessions for students receiving recycled plastic benches achieved full participation (100%) and effectively promoted behavior change by educating on waste segregation, management, and environmental health risks.
- Key messages on waste segregation had strong retention (79% recall), and 75% of students retained core concepts, with 58% reporting adoption of better waste practices, indicating significant awareness-to-action progress despite existing gaps.
- Students demonstrated early behavior change, such as placing dustbins in classrooms and starting waste separation, though only 25% practiced source segregation, highlighting the need for ongoing reinforcement and improved facilities.
- Topics like health risks of littering (46% recall) and composting (34% recall) were also covered, with composting requiring more hands-on learning to enhance understanding and practice, underlining the importance of continued practical engagement.

Usage of benches and experience

- The intervention significantly reduced physical discomfort, including back pain, for 72% of students, contributing to improved comfort and positively influencing regular attendance and school retention.
- Comfortable seating enhanced students' concentration, with 71% reporting better focus, and 63% noting increased motivation for regular attendance, fostering a more structured and disciplined classroom environment.
- Nearly all students (99%) perceived the new benches as having a positive impact on the overall learning environment.

The SROI calculation demonstrated a value of 1.39, indicating that for every ₹1 invested in the project, a social value of ₹1.39 is generated.

Key recommendations:

- Based on the outcomes observed in Ghaziabad and Patiala, it is recommended that the MASS project be scaled through an integrated MRF-PRF model, combining Ghaziabad’s high-capacity MRF approach with Patiala’s end-to-end plastic waste recycling value chain. This model can enable systematic collection, segregation, processing and recycling of plastic waste, particularly low-value plastic that otherwise has limited market demand and often ends up in landfills. High-capacity MRFs may be established or strengthened in larger urban centres, with direct linkages to PRFs and authorised recyclers to ensure downstream recycling and value creation. The scale-up should be supported by partnerships with Urban Local Bodies and Pollution Control Boards, adequate segregation and composting infrastructure, waste worker training and safety measures, and

monitoring systems to track waste processed, plastic recycled and landfill diversion. This approach can help create a closed-loop, sustainable and replicable circular waste management model across cities.

- Additionally, it was observed that the gap between the seating surface and the front bench/desk is relatively large, making the benches less suitable for primary-level students. Due to this design limitation, the benches are currently more appropriate for middle and higher-grade students, thereby restricting their universal usability. To address this, it is recommended that future bench designs adopt age-appropriate dimensions based on the level of students. Introducing such differentiated sizing would ensure that the benches can be effectively used across primary, middle and higher classes, thereby enhancing inclusiveness, comfort, posture support and optimal utilization of the infrastructure provided.

Project 15: Ensuring sustainable water security for rural communities through rainwater harvesting

About the project

SBI Card, under its CSR initiative, partnered with Tarun Bharat Sangh (TBS) to implement the project "Ensuring Sustainable Water Security for Rural Communities through Rainwater Harvesting" across the Nuh district of Haryana and Alwar district of Rajasthan, from November 2022 to November 2024, reaching 7,000+ beneficiaries across both districts. Activities focused on **building community capacity, ensuring water access for drinking and irrigation, and promoting efficient water-use practices in agriculture**.

Project Objective(s)

- To enhance the capacity of the indigenous communities in water conservation and management
- To ensure water security for drinking and irrigation with indigenous communities in the project area for sustainable development and livelihood generation.
- To implement an efficient model of water consumption in agriculture with farmers.

Key findings:

Strengthened Groundwater Recharge and Agricultural Water Security

- Construction of 27 Rainwater Harvesting Structures across 15 villages in Nuh and Alwar provided ~270 million litres of additional water storage, improving average groundwater depth from 560.7 feet to 528.3 feet across farmers' fields.
- Enhanced water availability enabled farmers to increase irrigation frequency from 2.09 to 3.80 in Kharif and 3.00 to 4.76 in Rabi, while expanding average cultivated and irrigated land from 1.93 to 2.05 acres.
- Improved groundwater recharge reduced reliance on costly water tankers, with private tanker prices dropping from ₹3,000 to ₹1,000 per load (67% reduction) and 76% of farmers reporting reduced irrigation costs.

- The intervention contributed to a ~26% increase in average annual agricultural income (₹32,607 to ₹41,019) and revived water-sensitive crops such as tomato in areas where cultivation had nearly disappeared.

Improved Drinking Water Access and Reduced Household Drudgery

- Construction of 40 household water storage tanks added 4,00,000 litres of storage capacity, prioritising vulnerable families including widows and low-income households across water-stressed areas.
- Daily water collection trips were eliminated entirely (from an average of 6 trips and 2.3 km daily walks), and time spent on water procurement reduced sharply from 188 minutes to just 35 minutes per household.
- Household storage capacity rose from ~158 litres to 17,000 litres collectively for 4–6 families per tank, ensuring reliable access during dry periods and enabling water sharing with neighbours.
- 100% of beneficiary households reported a high positive impact on their quality of life, with women and girls particularly benefiting through reduced drudgery and improved school attendance.

Enhanced Agricultural Water-Use Efficiency through Sprinkler Adoption

- Distribution of 100 sprinkler systems benefiting 200 farmers, supported by 25% beneficiary contribution to ensure ownership, technical training, and sustained adoption.
- Irrigation time per acre reduced from 7.8 hours to 4.03 hours, while monthly irrigation costs per acre dropped by 53% (₹2,258.6 to ₹1,072.4), making farming more affordable and efficient.
- Average irrigated area expanded by 12.9% (3.17 to 3.58 acres), and farmers reported the ability to secure additional irrigations during the critical Rabi season due to improved water-use efficiency.
- 100% of farmers reported significantly improved water-use efficiency, with strong interest expressed in adopting additional sprinkler sets, indicating high satisfaction and potential for sustained uptake.

Strengthened Community Capacity and Water Conservation Awareness

- Conducted 2 Kisan Jagruti Shivirs and 4 Yuva Jagruti Shivirs reaching 608 farmers and youth, fostering deeper understanding of groundwater recharge, rainwater harvesting, and efficient irrigation practices.
- 2 Exposure visits to successful water conservation and river revival models in Karauli and Alwar inspired 114 farmers, strengthening belief in the transformative potential of community-led water conservation efforts.
- Engagement with school students of grades 6th–8th sensitised the younger generation to water stewardship, with knowledge cascading from students to family members and broader community.
- Outreach was further amplified through 200 wall paintings, 2,000 calendars, and printed IEC material, embedding water conservation messages across project villages and reinforcing collective responsibility for long-term water security.

Key recommendations:

Scaling Up the Integrated Water Security Model: In view of the project's demonstrated results across groundwater recharge, household water access, irrigation efficiency, and community awareness, the integrated intervention model presents strong potential for scale. Expanding this approach across additional water-stressed villages would help address continuing gaps through a combination of community assets, household-level infrastructure, and sensitisation efforts, while extending water security benefits to a larger rural population.

For the detailed findings, please refer from Section 4 (Project-wise Findings) onwards.

02

Introduction and Background

About SBI Card and Payment Services Limited and its CSR

SBI Cards and Payment Services Limited, also known as SBI Card, is committed to **simplifying the lives of its stakeholders through trust and excellence**. Being a responsible corporate citizen, it has **integrated Corporate Social Responsibility** in the way it conducts its business. It has taken up innovative CSR projects with an aim to **create sustainable impact by facilitating access, enhancing collaboration, and building capacity**. Its CSR vision & mission is mentioned below[1].

Figure 1: SBI Card CSR Vision and Mission

CSR Vision

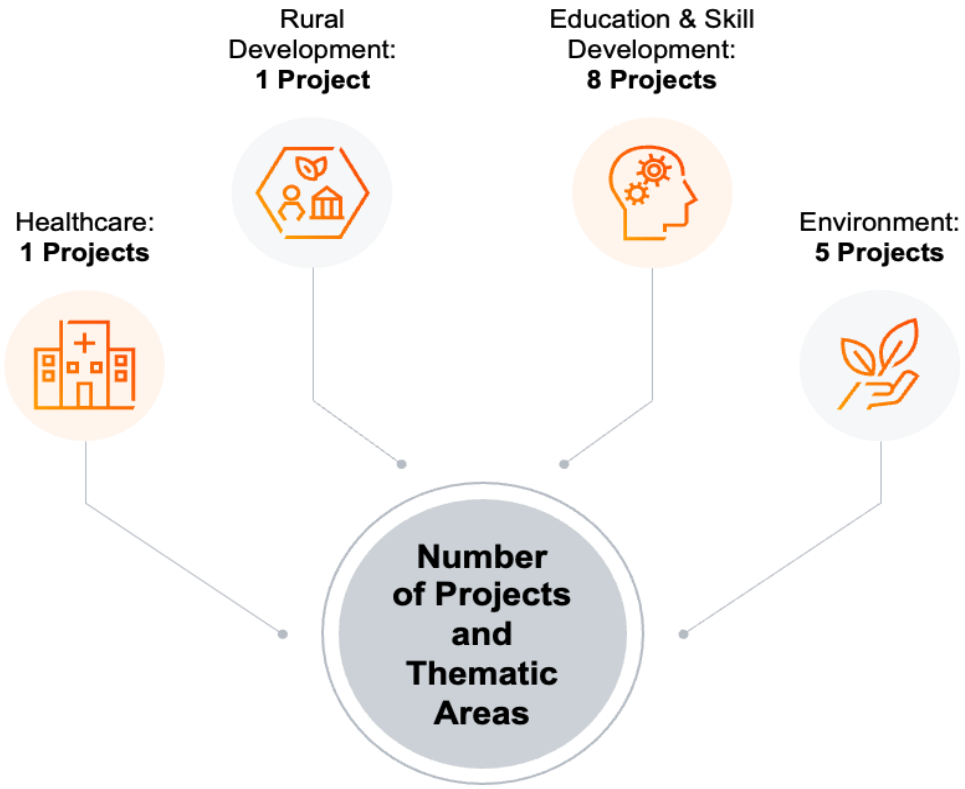
The Company's CSR vision is for an inclusive society where everybody has access to opportunities, financial security and quality life.

CSR Mission

The Company's CSR mission is to be a significant contributor in India's growth story, by undertaking innovative, technology driven and impactful CSR programs with underprivileged communities.

As part of its CSR obligation, SBI Card implements variety of projects in multiple thematic areas. The below **infographic represents** the **number of CSR projects** which formed a part of the current impact assessment study (conducted by PWCALLP) **as per their thematic areas:**

Figure 2: Number of projects and thematic areas



[1] Source: https://www.sbicard.com/sbi-card-en/assets/docs/html/personal/csr/about-csr.html

About the Projects under review

SBI Cards and Payment Services Limited (SBI Card) has been implementing a gamut of CSR interventions for communities across multiple regions of the country in & around their geographical presence. PWCALLP has been engaged by SBI Card to provide support and assistance for an independent review and impact assessment of its multiple Corporate Social Responsibility (CSR) Projects as identified by the Management to be carried out in several phases. **Phase I** of this project was completed wherein an **Impact Assessment of 8 CSR projects** was carried out. Further, in **Phase II** of the project, the study was commissioned to carry out an **Impact Assessment of 10 CSR projects**. The **Phase III** of the project was completed with Impact Assessment of 10 CSR projects

At present, this report highlights the findings of Phase IV of the project which comprises of an Impact Assessment of 15 CSR projects that was implemented by SBI Card across India to understand the direct and indirect impacts of their CSR interventions on the communities. Memorandum of Understanding (MoU's) with the implementing partners were signed by SBI Card who supported them to implement these CSR programmes on ground. As highlighted by SBI Card, their role was to assess the relevance, impact, sustainability, need & strength of implementing partners, design the projects, provide financial support, and undertake continuous monitoring. The following table depicts the overview of the **15 CSR projects** which were covered under the impact assessment study in this phase. Further, the projects are discussed in detail in respective project sections.

Table 1: Overview of CSR Projects under evaluation[2]

S. No.	Thematic Area	Project name	Review period	Partner	Research Method	Project location	Total reach	Objectives	Achievements	Sample (Quant and/or Qual)
1	Healthcare	Cancer Awareness and Early Detection Project in Malwa Belt	Dec 2023 – Nov 2024	Cancer Care Charitable Society	Mixed Method	Punjab (Bathinda, Mansa, Moga, Ferozepur, Faridkot, Muktsar, Barnala, Sangrur, Fazilka)	38,484+ Beneficiaries	The primary objectives of the project were: 1. To enhance cancer awareness 2. To enable early detection in high-risk areas of the Malwa Belt in Punjab	• Community-based cancer screening significantly improved access, achieving 92% awareness and 47% screening uptake, with 83% reporting no alternative access to screening services. • Achieved effective early detection through universal screening (n = 138), identifying a substantial proportion of at-risk individuals, with 47% requiring further diagnostic testing and 38% of those tested found to be symptomatic, highlighting the programme's effectiveness in uncovering potential cases beyond typical population-level detection. • Structured follow-up and referral pathways were established, with 18% referred to higher-level facilities and 71% receiving diagnostic reports physically. • Strong convergence with financial support systems, with 100% of symptomatic individuals informed about schemes and 72% successfully availing benefits. • High retention of awareness messages observed, with over 85–90% recall on cancer risks, symptoms, and preventive practices.	Quantitative Sample: 138 Qualitative Sample: 9

[2] Source: As per project documents shared by SBI Card team

S. No.	Thematic Area	Project name	Review period	Partner	Research Method	Project location	Total reach	Objectives	Achievements	Sample (Quant and/or Qual)
									• Positive shift in health-seeking behaviour, with 88% improving lifestyle practices, 76% reducing tobacco/alcohol use, and 72% expressing willingness for regular screening. • Improved confidence and comfort in seeking care, with all beneficiaries reporting ease in discussing symptoms and engaging with healthcare providers.	
2	Rural Development	SAMRIDDH (Smart and Modern Rural Infrastructure for Development, Diversity, and Harmony)	Oct 2023 – Nov 2024	Manjari Foundation	Mixed Method + SROI	Dholpur, Rajasthan	13,000+ Beneficiaries	The primary objectives of the project are: • Provide the basic needs: quality education, healthcare, access to clean water etc. • Provide better facilities and harmonious healthy places for the community through well-functioning and better equipped AWCs/PHC. • Promote economic growth and prosperity, in targeted villages through the development of rural infrastructure. • Enhance the income of the women through their enterprises and market-led livelihoods interventions.Sustain the environment through rainwater harvesting and promoting traditional water harvesting structures (ponds) and practices and recharge ground water table as well.	• The SRoI value created under the project is 2.47. • Established Pickle and Stitching Units along with vocational training in beauty services, agarbatti, and tulsi bead making, collectively training 440+ women and turning 100+ homemakers into earners (₹4,500–₹6,000/month), with production scaling backed by FPO market linkages. • Pond rejuvenation added ~42.34 lakh litres of storage, cut water collection time by 75% and monthly expenses by 79%, with 99% of farmers reporting improved crop yields. • Smart classrooms, solar power, and modern sanitation across 2 schools, 2 Anganwadi Centres, and 1 girls' hostel drove enrolment growth and 100% student-reported learning improvement. • PHC upgrades eliminated 40 km critical referrals, while 175 solar streetlights enabled 100% safer mobility for women and a 98% drop in fear of crime.	Quantitative Sample: 153 Qualitative Sample: 19
3	Education & Skill Development	Rural Development through Education, Employment & Empowerment of Girls and Women	Dec 2023 – Dec 2024	Pardada Pardadi Educational Society	Mixed Method	Pardada Pardadi Educational Society School, Anupshahr, Bulandshahr	3,500+ Beneficiaries	The primary objectives of the project were to enhance the existing facilities of school. The support provided will improve the learning outcomes and provide	• Established 16 digital classrooms with trained teachers, with 97% of students attending smart board-enabled classes daily and 98.5% reporting improved academic performance through interactive and visual learning. • Set up a new computer lab, dedicated music room, and upgraded chemistry lab, enabling 100% computer lab access, stronger practical	Quantitative Sample: 134 Qualitative Sample: 5

S. No.	Thematic Area	Project name	Review period	Partner	Research Method	Project location	Total reach	Objectives	Achievements	Sample (Quant and/or Qual)
						district of Uttar Pradesh		holistic development of the girl students that access free education.	engagement, and progressive skill development with 53% of music room users now comfortable with one or more instruments. • Installed a 78-kW solar power system with net metering, reducing monthly electricity bills from ~₹2–2.2 lakhs to ₹95,000–₹1.5 lakhs, with savings redirected towards other school requirements. • Strengthened safety, communication, and student well-being through expanded IP-based CCTV surveillance, a school-wide PA system, two new buses (improving attendance for 97% bus users), roti makers enhancing meal nutrition, and renovated playground facilities. • Delivered holistic transformation of the school experience, with 98% of students reporting a more positive attitude towards attending school and 98% rating the overall improvements as excellent or significant.	
4	Education & Skill Development	Sponsoring Four School Buses and Solar Street Lights Enabling Safe Access to Education for Underserved Children	Jan 2024 – Jan 2025	Lotus Petal Foundation	Mixed Method	Lotus Petal Senior Secondary School, Dhunela, Gurugram, Haryana	800 students	The primary objective of the project is to ensure that will enhance the existing facilities of school. The support provided will improve the attendance and provide holistic development of the students	• Lotus Petal Foundation project significantly improved safe access to education by providing 4 school buses and 90 solar streetlights, benefiting 800 students overall, including 208 direct bus beneficiaries. • Through the free bus service, the project reduced access barriers for children from low-income families, with 91% students saying commuting became very easy and 94% reporting they now arrive on time regularly. • The transport intervention also strengthened continuity in education, with average attendance among bus-commuting students reaching 88%, exceeding the target and helping students continue schooling after the campus shift to Dhunela. • The solar streetlights improved campus safety and visibility, especially during low-light conditions and power cuts; all surveyed students said school areas are now well lit, making movement within the campus safer.	Quantitative Sample: 86 Qualitative Sample: 7
5	Education & Skill Development	To establish 25 Tinkering Labs across different locations in Assam, Punjab & Uttar Pradesh	Nov 2022 – Nov 2024	Sumangal Foundation	Mixed Method	Assam, Punjab & UP	5407 students	1. The students shall be able to emphasize creative learning through practical exposure by using the equipment kits provided. 2. To impart training for school students in computational-thinking, problem solving, and programming concepts using the AI & Coding platform.	• Sumangal Foundation project transformed STEM learning in government schools by establishing innovation/tinkering labs with tools such as Arduino kits, sensors, robotics equipment, AI kits, 3D printers, and laptops, reaching 5,407 students across 25 schools, well above the original target of 3,750. • The intervention shifted students from theory-based learning to hands-on exploration, with 96% students reporting weekly access to labs and 96% saying the kits strongly enhanced their learning experience. • It built stronger conceptual understanding and engagement in science and technology, with 89% students saying lab activities improved their understanding and many students developing practical skills in coding, robotics, electronics, and prototyping. • The project encouraged creativity and innovation through active project work and competitions: 88% students developed 1–5 projects, 12% developed 5–10 projects, and 66% participated in competitions at school or district level. • It also strengthened teacher capacity and sustainability of the intervention through training, ongoing technical support, and AMC-backed	Quantitative Sample: 135 Qualitative Sample: 24

S. No.	Thematic Area	Project name	Review period	Partner	Research Method	Project location	Total reach	Objectives	Achievements	Sample (Quant and/or Qual)
									maintenance, helping government schools become more future-ready learning spaces.	
6	Education & Skill Development	Smart Green Power Schools – Installation of off-grid solar system in 20 Government Schools of Delhi & Haryana	Nov 2022 – Nov 2024	Yuva Unstoppable	Mixed Method	Haryana & Delhi	20 Government Schools	To provide off-grid solar system at 20 government schools of Delhi & Haryana was installed which were among the 51 schools supported by SBI Card under Future Classroom Initiative. Objective was to substitute existing consumption of electricity with clean and green electricity.	• Among students who were enrolled before the project started, 97% are now engaged, indicating a significant rise in usage. Daily use of digital classrooms jumped from just 3% before installation to 93% after installation- about a 30-times increase. • The initiative extends beyond educational benefits to deliver measurable economic impact, generating monthly cost savings of INR 10,000–12,000 during peak consumption periods, as stated by one of the School Principals. • The solar installations across 20 schools have significantly reduced carbon emissions, cutting about 36.5 tonnes of CO_2 per quarter and nearly 292 tonnes overall. This shift lowers reliance on fossil fuels and supports climate change mitigation. It also promotes environmental awareness, encouraging students to contribute to a sustainable future. • Teachers reported that student participation in technology-enabled sessions remains strong, with attendance consistently around 80% in smart classrooms. Compared to conventional classrooms, students show noticeably higher engagement and active participation during smart class sessions	Quantitative Sample: 75 Qualitative Sample: 12
7	Education & Skill Development	Digital Shaala- Enabling digital learning opportunity in 100 Govt Schools	Nov 2023 – Nov 2024	Muskaan Dreams	Mixed Method	Jaipur & Ranchi	• 50 Govt. schools in Jaipur • 50 Govt. schools in Ranchi	• To integrate the use of technology for improving the overall reach and quality of education in government schools. • To enable access to quality education through provision of teaching and learning tools. • To enhance the student's learning outcomes, digital literacy, and classroom engagement through innovative teaching and learning.	• 100% of students (n=138) reported improved academic performance in STEM subjects after learning through Digital Classrooms. • 70% stated that audio-visual content helped them better understand complex topics. • 99% of students now attend school for more than 20 days a month post-intervention. • 96% of students (n=138) affirmed that their teachers now excel in leveraging digital tools within the classroom ranging from audio visual content and images to practical demonstrations, storyboards, and YouTube videos making lessons more engaging, dynamic, and easier to comprehend. • All 10 teachers confirmed that Digital Classrooms have improved student attendance and engagement. The addition of new desks, benches, and fresh paintwork in classrooms has created a more welcoming and functional learning environment. • Training teachers and upgrading their IT skills from basic to intermediate or advanced levels has ensured that the use of digital infrastructure will continue beyond the project period.	Quantitative Sample: Students – 138 Teachers – 10 Qualitative Sample: 14
8	Education & Skill Development	Mainstreaming Deaf youth through Pre-Vocational, Skill Development and suitable Livelihood	Feb 2021 – June 2024	Noida Deaf Society	Qualitative Approach	Noida	1071 Beneficiaries	Phase 1: • Skill development and workplace readiness training for 1000	The project successfully trained 1,071 Deaf youth, secured employment for 573 students, and sensitized 100 corporates on disability hiring, surpassing all KPI targets.	Qualitative Sample: 11

S. No.	Thematic Area	Project name	Review period	Partner	Research Method	Project location	Total reach	Objectives	Achievements	Sample (Quant and/or Qual)
								students over a two-year period • Employment facilitation for 500 students across diverse industries. • Corporate engagement with 40 companies to raise awareness and explore sustainable job opportunities.		
9		Mainstreaming Deaf youth through Pre-Vocational, Skill Development and suitable Livelihood				Noida & Badarpur	728 Beneficiaries	Phase II: • Adequate skill training and development of 650 deaf youths over the project period. • Employment opportunities for youths in suitable job roles across all locations. • Raising awareness and sensitizing society through corporate workshops, PTM's, exposure visits etc.	The project successfully trained 728 Deaf youth, secured employment for 358 students, and sensitized 110 corporates on disability hiring, surpassing all KPI targets	Qualitative Sample: 11

S. No.	Thematic Area	Project name	Review period	Partner	Research Method	Project location	Total reach	Objectives	Achievements	Sample (Quant and/or Qual)
10	Education & Skill Development	To skill 558 youths in HealthCare job roles of Phlebotomist, General Duty Assistant- Advanced and Dresser (Medical) in residential mode in Gurugram, Sadiya and Silchar.	May 2023 – July 2024	Healthcare Sector Skill Council	Mixed Method	Haryana & Assam	558 Youths trained & assessed 414 placed (74%)	The project will train a total of 558 eligible candidates in residential mode under 3 different job roles in: Phlebotomist General Duty Assistant, Advanced and Dresser (Medical). The project will be executed in Haryana, Uttar Pradesh & Assam. The training consists of theory and practical based classroom training followed by On-the-Job Training (OJT) in healthcare facilities such as Primary Health Centers (PHC), hospitals, diagnostic facilities, sample collection centers etc.	• Successfully trained 558 youth in healthcare roles, with strong inclusiveness reflected in 86% women participation and 91% representation from BPL households. • Achieved strong placement outcomes, with 100% trainees offered placements and 91% of placed candidates employed at the time of assessment. • Enhanced earning potential, with average salaries (~₹20,000/month) approximately 30% higher than pre-training expectations. • Strengthened practical skills through hands-on training, with 100% participation in On-the-Job Training and 93% reporting high satisfaction. • Ensured sectoral alignment and progression, with 91% (n = 100) of placed trainees employed; among these, 67% continued in healthcare roles and 29% engaged in healthcare-linked entrepreneurship, while only 4% exited the sector demonstrating both effective job placement and support for sector relevant self-employment pathways. • Among trainees continuing in healthcare, 96% reported career advancement, indicating strong role progression and workplace readiness. • Enabled livelihood diversification, with 29% of trainees engaging in healthcare-related entrepreneurial activities. • Improved financial stability and quality of life, with 94% reporting better lifestyle, 89% achieving financial independence, and 77% initiating savings or investments. • High perceived value and sustainability of skills, with 95% reporting meaningful employment, 89% identifying long-term career pathways, and 94% expressing confidence in future skill relevance.	Quantitative Sample: 111 Qualitative Sample: 8
11	Environment	BHAVNAM 2.0 – Tree Plantation Project in Aravalli Hills, Delhi NCR	Nov 2021 – Nov 2024	Sankalptaru Foundation	Qualitative Approach	Haryana	30,000 trees	Plantation of 30,000 saplings over the period of the project. Awareness generation among local communities on environment conservation	• Under the project 30,175 saplings were planted in 30 hectares. • There is visible transformation through increase in green cover, restoration of degraded land, improved biodiversity and improvement in ecological conditions. • The project led to early signs of micro-climate regulation, with noticeably lower temperatures and a rise in the water table by 20-30 meters • Significant reductions in dust pollution and improvements in overall air quality were observed post-intervention • The reliable irrigation infrastructure and protective fencing contributed to an exceptionally high sapling survival rate of 100%, supported by consistent maintenance and need-based watering throughout the project duration	Qualitative Sample: 8

S. No.	Thematic Area	Project name	Review period	Partner	Research Method	Project location	Total reach	Objectives	Achievements	Sample (Quant and/or Qual)
12	Environment	Mantra for Advance Sustainable Solution, Ghaziabad – Phase III	Jan 2023 – Sept 2024	Indian Pollution Control Association	Mixed Method +SROI	Ghaziabad	3500	To set up and operate 50 TPD MRF and decentralized solid waste management system through Aerobins in 23 residential societies and 2 educational institutions in Ghaziabad.	• The SRoI value created under the project is 13.02 • Under the project 50 TPD Material Recovery Facility was sucessfully established in Ghaziabad which processes approximately 20 TPD of wet waste through the Organic Waste Convertor machines, while the remaining 30 TPD primarily consists of dry waste and rejects. • MRF in Ghaziabad is handling 50 MT of waste per day contributing to large scale waste diversion from open dumping sites. • 4 Aerobin Composters of 400 litres capacity were installed in 23 residential socities and 2 educational inistitutes under the project for converting wet waste to compost • 100% of the resident respondents reported being aware of waste segregation • 88% reported practicing waste segregation at their household level. • Waste workers reported that post establishment of the MRF, they can finish their work earlier and earn increased income between INR 6,000-7,000 per month, allowing them to save money as well.	Quantitative Sample: 50 residents Qualitative Sample: 14
13		Mantra for Advance Sustainable Solution, Uttarakhand				Uttarakhand	452 Schools	To successfully recycle 350 MT multilayer plastic waste and repurpose it into 10,000 desks, benefiting 452 government schools in 12 districts (divided into 4 zones) of Uttarakhand and to spread awareness on usage of recycled plastic waste products for sustainable future	• The SRoI value of the project created under the project is 1.39 • 96% of students reported feeling very comfortable with the new benches, demonstrating a strong fit between the product and daily user needs. • All the students (100%) have a clear understanding that the benches are made from recycled plastic materials, reflecting clear communication about sustainability. This awareness lays a foundation for integrating broader lessons on the circular economy into the curriculum. • 71% of students reported increased focus due to comfortable seating, directly impacting their engagement and concentration. • Improved infrastructure encouraged regular class attendance, with 63% of students feeling motivated by the better environment. • 86% of students found them comfortable or very comfortable (28% comfortable, 58% very comfortable)	Quantitative Sample: 139 Qualitative Sample: 11
14		Mantra for Advance Sustainable Solution, Patiala				Patiala	1600	To set up and operate 10 TPD MRF and 10 TPD Plastic Recycling Facility along with decentralized solid waste management system through Aerobins in 10 residential colonies of Patiala.	• The SRoI value created under the project is 7.94 • Under the project 10 TPD Material Recovery Facility & 10 TPD Plastic Recycling Facility was successfully established in Patiala • The Material Recovery Facility in Patiala handles 8-9 TPD of wet waste and 3 TPD of dry waste. The MRF's capacity is divided equally, with 5 TPD allocated for wet waste processing and 5 TPD for dry waste processing. Approximately 2-3 TPD of plastic waste is sent from the MRF to the PRF for further processing and recycling into end products every month	Quantitative Sample: 50 residents Qualitative Sample: 16

S. No.	Thematic Area	Project name	Review period	Partner	Research Method	Project location	Total reach	Objectives	Achievements	Sample (Quant and/or Qual)
									• Under the project 4 Aerobin Composters of 400 litres capacity were installed in 10 residential socities under the project for converting wet waste to compost. • 100% of the resident respondents reported being aware of waste segregation, with 96% actively practicing it at the household level as compared to only 2% segregating waste prior intervention. • 54% of respondents indicated that they have been practicing waste segregation at the household level for 1-2 years, while 44% mentioned they have been doing so for more than 2 years.	
15	Environment	Ensuring sustainable water security for rural communities through rainwater harvesting	Nov 2022 – Nov 2024	Tarun Bharat Sangh	Mixed Method	Alwar District of Rajasthan & Nuh District of Haryana	7,000+ Beneficiaries	The primary objectives of the project were: • To enhance the capacity of the indigenous communities in water conservation and management • To ensure water security for drinking and irrigation with indigenous communities in the project area for sustainable development and livelihood generation. • To implement an efficient model of water consumption in agriculture with farmers.	• Constructed 27 Rainwater Harvesting Structures providing 270 million litres of additional water storage, improving average groundwater depth from 560.7 to 528.3 feet and boosting average annual agricultural income by 26% (₹32,607 to ₹41,019). • Built 40 drinking water tanks adding 4,00,000 litres of storage capacity, eliminating daily water collection trips and reducing time spent on water procurement from 188 minutes to 35 minutes per household. • Distributed 100 sprinkler systems benefiting 200 farmers, reducing irrigation time per acre from 7.8 hours to 4.03 hours and monthly irrigation costs by 53% (₹2,258 to ₹1,072), while expanding irrigated area by 13%. • Strengthened community capacity through Kisan and Yuva Jagruti Shivirs, exposure visits, 200 wall paintings, and 2,000 calendars, fostering long-term water stewardship and collective responsibility across project villages.	Quantitative Sample: 132 Qualitative Sample: 6

03

Approach and Methodology for Impact Assessment

Scope of Work

PWCALLP was engaged to conduct an independent impact assessment study of the **15 CSR projects** mentioned in the above section. The scope of work includes understanding the project implementation plan and reviewing the Key performance indicators (KPIs) as defined by the Management under the framework for implementing the CSR project for the outputs, outcomes, and impact of the Project's, i.e. Inclusiveness, Relevance, Efficiency, Convergence, and Sustainability framework (the 'IRECS') (defined later) as agreed with the Management was used. The objective of the study was to assess the outcomes and impact created on the stakeholders covered under the projects and provide recommendations on the project performance for Management's evaluation. The scope of work included the following:

01	To assess SBI Card's CSR initiative performance as per the pre-defined targets defined in the MoU signed with Implementing Agency for the respective CSR Project's under review.
02	To assess the impact created by the Project's on ground and on larger ecosystem, as applicable.
03	To gather feedback of key stakeholders for respective CSR project's and to provide the feedback to the Management for their further incorporation of the same in implementation of the programme, if any.
04	Further, how respective CSR Project's undertaken by the Company are broadly mapped with the Sustainable Development Goals (SDGs) and CSR policy of the Company.
05	To provide recommendations for the respective CSR Projects on the project's performance for Management's evaluation.

This report intends to **provide findings/recommendations** and to assess the impact, conducted from assessments by PWCALLP for the 10 CSR projects covered under the study.

Detailed Methodology

To assess the impact of CSR projects (as mentioned in Table 1), the PWCALLP team undertook an integrated and cohesive approach in consultation with SBI Card team. The following step by step approach enabled the research team to assess and evaluate the direct impact on the lives of project beneficiaries and other project stakeholders coming from the marginalised sections of the society.

Figure 3: Broad approach followed

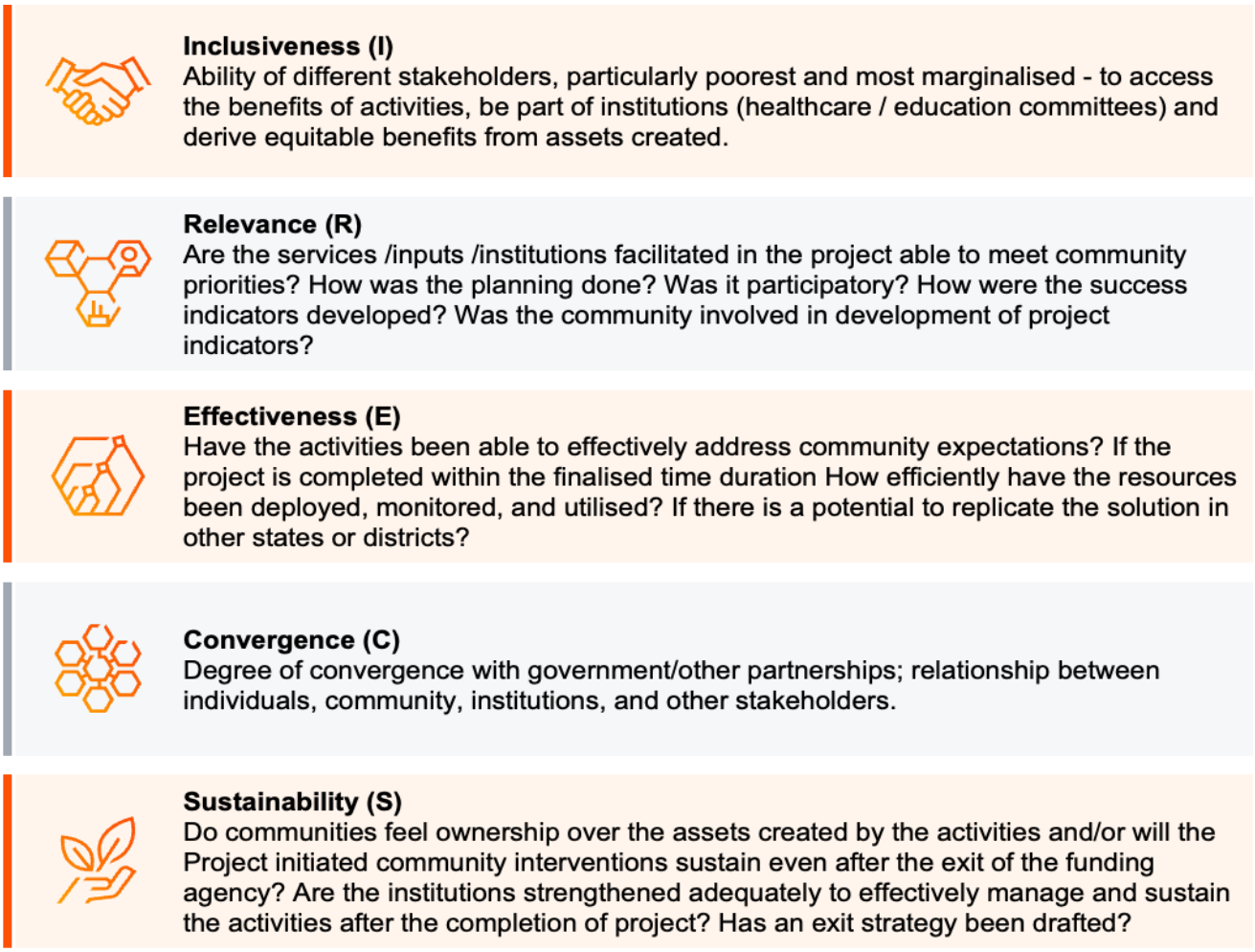
Workstream 1: Engagement Kick-off and Desk Review

The impact assessment was initiated with a kick-off meeting with the project team from SBI Card. The meeting was organised to primarily gain a detailed understanding of CSR projects. The team prepared a list of documents required for initiating the impact assessment and shared with the respective project SPOCs. Once the documents were received (i.e., MoUs with the implementing agency, brief of CSR projects etc.), team initiated the desk review of the documents. The preliminary queries in relation to strengthening the understanding of the projects and its assessment were discussed. The SBI Card team was aligned on the overall approach for undertaking the assessment study.

Workstream 2: Research design and tool development

The research team from PWCALLP reviewed and understood the implementation processes for all the projects. The present impact assessment study was guided by the IRECS assessment framework which was used to provide overall feedback on the efficacy of implementation, as well as the project efficiency in terms of achievement of the desired project outputs with reference to inputs. This framework helped in providing overall feedback on the efficacy of the implementation process and its efficiency in terms of achieving the desired program outputs. The study further employed the Social Return on Investment (SROI) methodology for select CSR projects, as outlined in Table 1. IRECS framework measured the performance of the projects on five parameters – Inclusiveness, Relevance, Effectiveness, Convergence and Sustainability. Overview of areas assessed under each of these five parameters is provided in Figure 4.

Figure 4: IRECS Assessment Framework



Post finalising the assessment framework in consultation with the SBI Card team, PWCALLP initiated the mapping of the stakeholders to draw the sample size for the purpose of impact assessment. Table 1 provides a broad overview of the sample size for each of the CSR projects. A draft impact map for SROI was created for projects having SROI analysis.

Quantitative sample for individual projects was calculated using 95% Confidence Interval and 5% Margin of Error (with population proportion of 90%), subject to the availability of the stakeholders and mobilization support from SBI Card and implementation partners. The key stakeholders' groups were identified for each of the projects to undertake the quantitative and qualitative interactions with the project stakeholders. Post-mapping of the key stakeholder groups in consultation with the SBI Card team, PWCALLP started developing the research tools for data collection from beneficiaries for all the projects.

Workstream 3: Field visit & data collection

PWCALLP team also ensured to sensitise the implementing agencies and SBIC project team on the requirements from impact assessment study and communicate the dates for the field visits (for each individual CSR project). Post finalisation of the field plan, the research team, from PW, was oriented on the research tools (quantitative and qualitative) and dos and don'ts on the field. Project wise research teams were formed to collect data from the field for the respective projects within the stipulated timeline. Once the quantitative and qualitative data was received from the field, data entry and cleaning were carried out.

Workstream 4: Analysis & report writing

After the data entry and data cleaning, the analysis was carried out to arrive at the insightful findings for each of the projects. The SROI analysis was carried out using primary and secondary data, wherever applicable, to estimate the SROI values for the respective projects. The draft consolidated report was prepared accordingly, and key findings were discussed with the SBIC team for obtaining their feedback and inputs.

The following sections discusses the detailed project-wise key findings and IRECS analysis based on the desk review and stakeholders' interactions carried out for respective CSR projects.

Assumptions and Limitations

General:

- The information transmitted, including any attachments, are intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. Any review, retransmission, dissemination, copying, paraphrasing, reproduction, or distribution in any manner or form, whether by photocopying, electronically, by internet, within another document or otherwise; or other use of or taking of any action in reliance upon this information by persons or entities other than the intended recipient or for purposes other than as stated in the Agreement, is prohibited. Further, any quotation, citation, or attribution of this publication, or any extract from it to any third party unless expressly agreed in the Agreement is strictly prohibited. PWCALLP makes no representations or warranties regarding the information and expressly disclaims any contractual or other duty, responsibility or liability to any person or entity other than its client in accordance with the agreed terms of engagement.

- The nature of service provided under this engagement does not in any manner constitute provision of legal service or/ advice as the term is generally understood under various laws for the time being in force. The intent of PWCALLP was to provide assistance and support in accomplishing the stated objective of the assignment and as an adjunct activity may have included research of applicable laws, regulatory compliance requirements and an understanding of the process and procedure as per local statutory enactments without in any way rendering any specialist legal advice. Our report is not a substitute for legal advice, that may be provided by a duly qualified independent legal practitioner.
- Our scope of work, including any advice/ assistance, was limited to the scope of services specifically defined in the Letter. We were not responsible for the implementation of our recommendations.
- By giving our consent to the publication of our report and opinion on the Company's website ('your website') we do not accept any duty of care and deny any liability.
- You are responsible for the controls over and the security of your website and, where applicable, for establishing and controlling the process for electronically distributing Impact Assessment Report. We remind you that the examination of controls over the maintenance and integrity of your website is beyond the scope of our examination. Accordingly, we accept no responsibility for the completeness and accuracy of the Impact Assessment Report as they appear on your website.

Pertaining to this report:

- The report prepared by the PWCALLP is based upon the (a) information/ documents provided by SBI Cards and Payment Services Limited and its implementing and/or technical partner and (b) data collected during the field visit to the project location by the PWCALLP team. PWCALLP performed and prepared the Information at the client's direction and exclusively for the client's sole benefit and use pursuant to its client agreement. Our report is based on the completeness and accuracy of the above-stated facts and assumptions, which if not entirely complete or accurate, should be communicated to us immediately, as the inaccuracy or incompleteness could have a material impact on our conclusions.
- PWCALLP's work was limited to the samples/ specific procedures described in this report and were based only on the information and analysis of the data obtained through interviews of beneficiaries supported under the project, selected as respondents. Accordingly, changes in circumstances/samples/ procedures or information available could affect the findings outlined in this report.
- The projects assessed as part of this report were identified and selected for impact assessment by SBI Cards and Payment Services Limited management. PWCALLP has relied on the information and representations provided by SBI Cards and Payment Services Limited in this regard and has not independently verified the applicability or eligibility of the selected projects under the provisions of the Companies (Corporate Social Responsibility Policy) Rules, 2014, or any subsequent amendments thereto.
- For SROI based study of select CSR projects:
    - The method has high data dependency, and the results may impact if the correct data is not available/ provided.

- For a strong SROI study, the use of factual, documented & time bound data is essential. For the same, robust data processes and M&E framework (or result based framework) is required.
- Specific areas such as deadweight, attribution and drop off has considerable subjectivity.
- Since outputs and outcomes are valued at each level of stakeholder engagement, it is difficult to capture all aspects and arrive at holistic results.
- The calculations to estimate the SROI value of the project have made use of either the extrapolation of the quantitative survey results on the total population or the data on the project reach or benefits provided by SBI Cards and Payment Services Limited as part of its monitoring reports. The exact number of community members or the entire quantum of benefits has not been validated or verified independently on ground.
- The proxy values for the calculations have been referred to from quantitative results of the study and information shared by key stakeholders during the interactions. PWCALLP does not claim the responsibility for the correctness of data shared by the stakeholders.
- The data on project investment is shared by the SBI Cards and Payment Services Limited team. PWCALLP has not verified the investment figures independently.

04

Project 1: Cancer Awareness and Early Detection Project in Malwa Belt

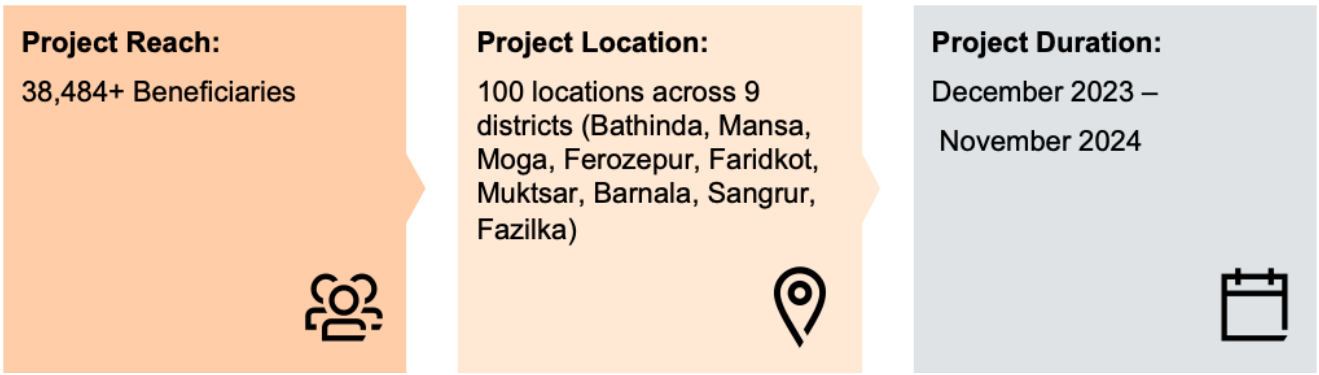
About the Project

Cancer poses a significant public health concern in India, particularly in regions with high exposure to environmental and lifestyle risk factors and limited access to preventive healthcare services. The Malwa Belt of Punjab has been widely recognised as a high-risk zone for cancer, with several districts reporting elevated incidence rates. Factors such as intensive agricultural practices, potential environmental contamination, low levels of preventive screening, and delayed care-seeking behavior continue to exacerbate the burden of cancer in this region[3].

Early detection and timely treatment remain critical in reducing cancer-related morbidity and mortality. However, in many underserved and rural pockets of the Malwa Belt, barriers such as lack of awareness, social stigma, distance from diagnostic facilities, and financial constraints significantly limit access to cancer screening and follow-up care.

In response to this need, **SBI Card & Payment Services Ltd.**, in partnership with **Cancer Care Charitable Society**, supported the implementation of a **Cancer Awareness and Early Detection Project** aimed at enhancing cancer awareness and enabling early cancer detection in high-risk districts of the Malwa Belt though mobile buses with cancer screening facility. Through a decentralised, outreach-based approach, the project addressed structural barriers to access by delivering screening services directly at the community level. The infographic below provides an overview of the **Cancer Awareness and Early Detection Project**:

Figure 5: Project overview



The Cancer Awareness and Early Detection Project was designed as an **integrated cancer prevention intervention**, combining awareness generation, multi-cancer screening, and follow-up support within each camp. Given the one-time visit model, the project focused on delivering multiple services in a structured and coordinated manner, ensuring both immediate screening and continuity of care beyond the camp day.

By deploying specialised mobile units, conducting symptom-based diagnostic tests, and establishing digital and follow-up mechanisms, the programme addressed critical gaps in access to preventive cancer care in high-risk regions of the Malwa Belt. **The infographic below outlines the key activities undertaken under the project across awareness, screening, follow-up, and monitoring components.**

Overall, the Cancer awareness and early detection project followed a **doctor led, community-based service delivery model** to address critical gaps in cancer awareness and early detection across high-risk districts of the Malwa Belt. While each village was covered through planned outreach, the

[3] Source: https://www.allresearchjournal.com/archives/2015/vol1issue3/PartC/3-10-5-500.pdf

programme ensured clinical rigor through **risk based screening, systematic reporting, and structured post-camp follow-up**, allowing beneficiaries requiring further care to be identified and supported appropriately.

Figure 6: List of activities undertaken in the programme

Venue identification/ Finalisation	• Camp location and venue identified and finalised • Volunteers mapped, with roles and responsibilities assigned • Camp information disseminated (date, time, objectives, benefits of early screening) • Screening buses deployed and camp setup completed,
Type of Screening/ Tests	• Digital mammography (breast cancer) • Pap smear tests (cervical cancer) • PSA tests (prostate cancer) • Oral cancer screening • Blood tests and Bone Mineral Density (BMD) tests • Diabetes and blood pressure screenings
Awareness Activities	• Cancer awareness sessions conducted at each camp. • Audio-visual documentaries on cancer prevention and early detection • Education on breast self-examination and symptom recognition • Distribution of pamphlets / flyers for cancer awareness.
Reporting	• Test reports generated post-camp • Identification of suspected and high-risk cases • Test reports shared with beneficiaries through mobile links on their registered numbers.
Follow Up & Care	• Suspicious / positive cases identified • Follow-up initiated by project team • Guidance for referrals to nearby cancer care facilities • Support to avail government health schemes and financial support

By integrating on site consultations, risk based diagnostic testing, digital sharing of reports, and continued care navigation including referral guidance and support for accessing government health schemes the programme extended its reach beyond the camp day. This approach strengthened linkages to cancer diagnosis and treatment services, promoted improved health-seeking behavior among underserved communities, and enhanced chances of survival through early detection and timely intervention.

Image 1: Mobile Cancer Screening Van used for community-based cancer screening camps

Method of Impact Assessment

The impact assessment study leveraged an integrated and cohesive approach to assess the social impact transpired since project's implementation. A kick-off meeting was held with SBICPSL and the Cancer Care Charitable Society team to understand the nature of support for this project and align the requirements for starting the assessment exercise.

Following the meeting, PWCALLP received following **project documents**:

- Memorandum of Understanding (MoU) containing project details agreed with Cancer Care Charitable Society and SBICPSL
- Closure report
- Project Activity summary report
- Annual Programmatic Report

PWCALLP team then began the project's **desk review** based on the information collected during the kick-off meeting and from the project documents. This helped our team in designing the assessment framework and **finalising the key stakeholders** for the interactions.

In consultation with SBICPSL, **a mixed-methodology approach combining quantitative and qualitative research** was deployed for the assessment. The quantitative study generated evidence-based insights, while qualitative methods captured stakeholder perspectives and experiences to validate findings and understand actual impact. Research techniques included surveys, Focus Group Discussions (FGDs), and In-depth Interviews (IDIs) to ensure comprehensive evaluation.

Based on data provided by Cancer Care Charitable Society, th**e project impacted 38,484 direct beneficiaries**. A sample size of **138 beneficiaries was determined using a 95% confidence level, a 5% margin of error**. The sample was distributed among these three districts namely Bathinda, Muktsar, and Moga. However actual number of interactions varied basis mobilisation at each location. The Quantitative sample distribution is shared below:

Table 2: Quantitative Sample Distribution

District Name	Camp Location	No of Interactions
Bathinda	Nehianwala	27
	Deon	19
Moga	DM Ved College	36
Muktsar	Gidderbaha	22
	Malout	34
Total		**138**

During the field visit, a total of five villages were covered: two each from Bathinda and Muktsar, and one from Moga district. In addition to the quantitative survey, qualitative interactions were conducted with key stakeholders, including doctors, community organisers/volunteers, the implementation partner, and the SBIC team. The quantitative and qualitative sampling plans are detailed in the table below:

Table 3: Qualitative Sample Distribution

Stakeholders	In-Depth Interviews	No of Interactions
Doctor & Nurse	✓	2
Community Mobiliser	✓	5
IP national team member	✓	1
SBI Card team	✓	1

The responses collected from the stakeholders' interactions were analysed to arrive at detailed findings as depicted in next section.

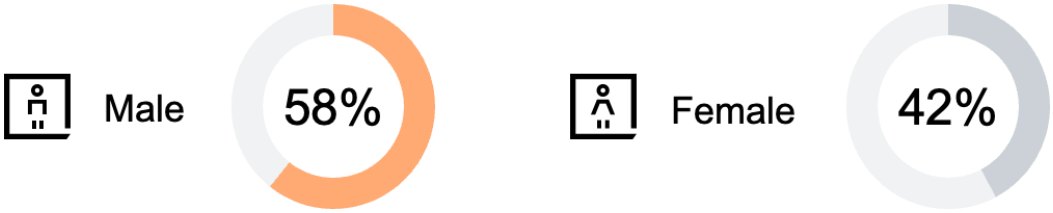
Analysis and Findings

This section summarises the findings from the desk review and interactions:

1. **Respondent Profile**

This section presents the socio-demographic profile of the respondents, emerging from quantitative interactions carried out with beneficiaries (community members) (n=138) across 5 villages to understand the impact of project.

Figure 7 : Gender distribution of the respondents (n=138)



- The beneficiary composition reflected a mix of male and female participants, with men accounting for 58% and women 42% of respondents, indicating balanced reach across genders while engaging both population groups in cancer screening services.
- The average age of beneficiaries surveyed under the impact assessment was **51 years**, indicating that the programme largely reached adults within age groups that are **clinically relevant for cancer screening interventions**. This aligns with medical screening protocols, as the risk of cancers such as breast, cervical, and prostate cancer typically increases after a certain age, making targeted screening more effective among middle-aged and older populations.

Figure 8: Respondents age distribution (n=138)

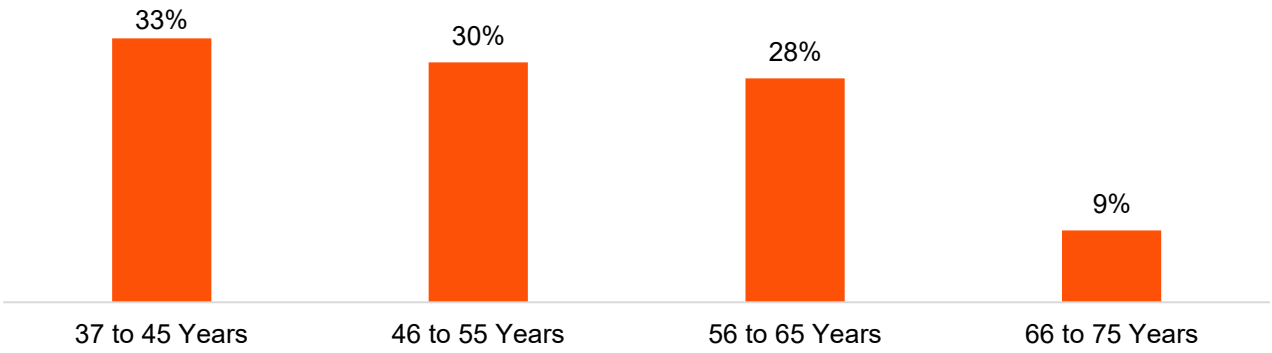
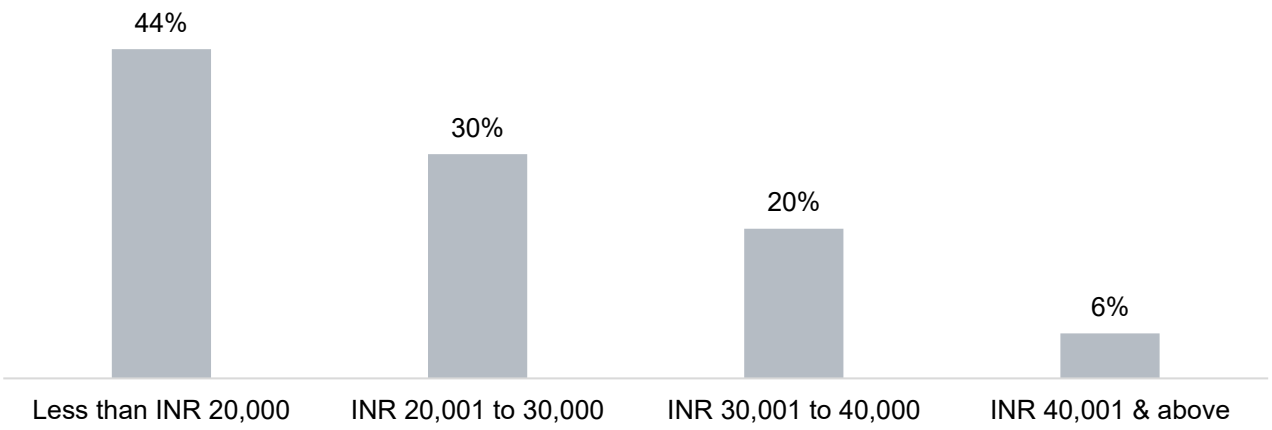


Figure 9: Respondents Monthly income (n=138)

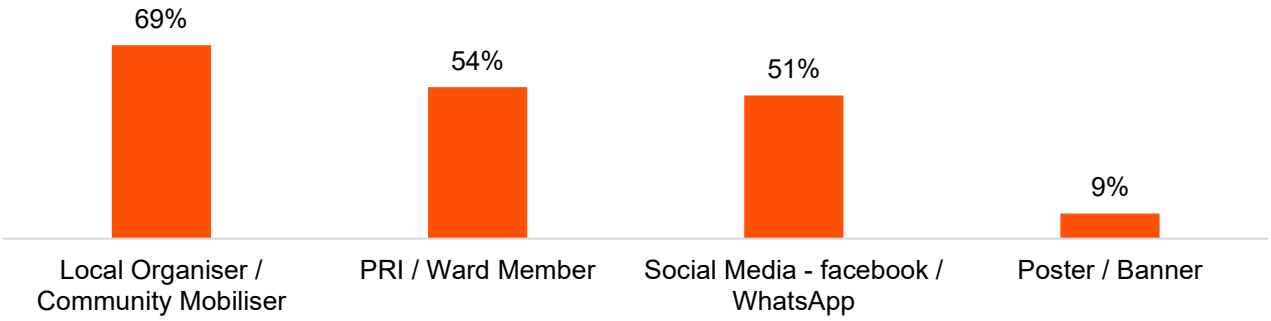


- A large proportion of beneficiaries belonged to low-income households, with approximately **44% reporting a monthly family income below INR 20,000**, indicating the programme's reach among economically vulnerable populations.
- Doctor during interaction also added that many beneficiaries belonged to groups that typically face barriers in accessing preventive health services outside the village, which may have contributed to their participation in the on-site screening camps.

2. Programme Awareness and Access to Cancer Screening

- At the outset, findings indicate a high level of awareness regarding the cancer screening camps, as around 92% of the respondents reported their awareness about a camp that was going to be organised in their village and confirmed receiving prior information about the date and venue of the programme.
- This awareness was largely driven by local outreach mechanisms. **Local organisers and community mobilisers emerged as the most prominent source of information (69%)**, followed by PRI members and ward representatives (54%), underscoring the importance of trusted, community-based channels in mobilisation. Informal networks also played a supportive role, with friends and relatives cited by 37% of beneficiaries. In addition**, social media platforms accounted for 51% of awareness, indicating the complementary role of digital outreach alongside community engagement**. Traditional IEC methods such as posters and banners were reported by 9% of beneficiaries.
- The community mobilisers further support this observation, as many shared that **personal outreach and word-of-mouth communication helped address hesitation and fear associated with cancer screening,** particularly during initial mobilisation.

Figure 10: Sources of awareness reported (n=138)



Multiple Choice Question, responses may add up to more than 100%

- As a result of the outreach and mobilisation efforts, **47% of surveyed beneficiaries (n=138) reported availing at least one cancer screening service at the camp, including mammography, Pap smear, PSA testing, or oral cancer screening.** This indicates that the camp served as a key point of access for a substantial proportion of participants.
- Among those who underwent screening (n = 65), **83% stated that they would not have gone anywhere for cancer screening had the camp not been organised.** This suggests limited

alternative access pathways and highlights persistent barriers such as distance, cost, and lack of available facilities.

- In addition to improving access, the camp model was also time efficient. Around **78% of beneficiaries were able to complete registration, consultation, and screening within one hour**, indicating that services were delivered in a manner that minimised disruption to daily routines.

Summary of Impact Created

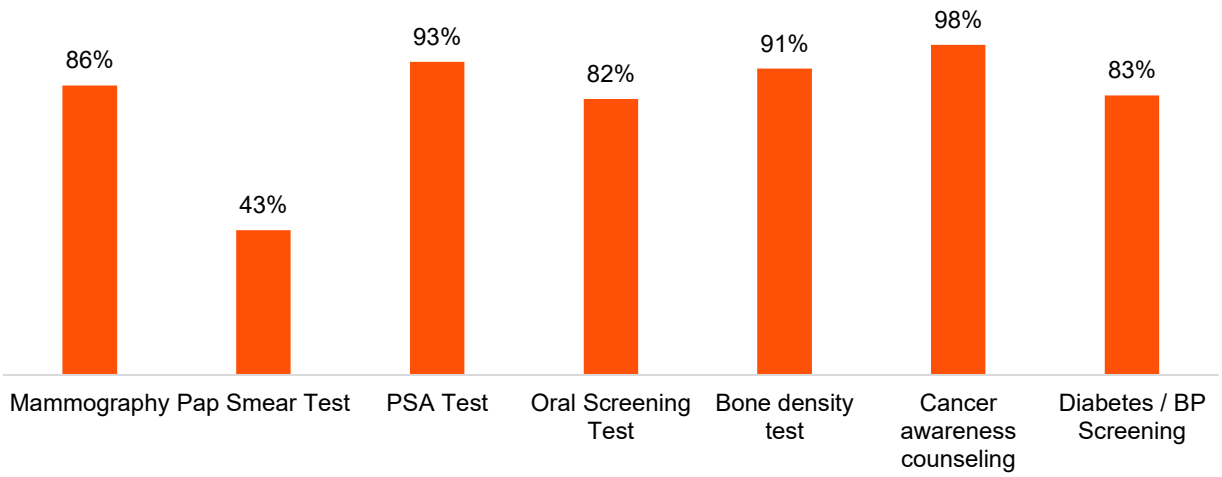
This section presents key findings from the impact assessment study, providing an evidence-based foundation for strategic recommendations and future project improvements.

1. Improvement in screening behavior and service utilization

Building on the improvements in screening uptake highlighted above, the assessment shows that the camp also contributed to strengthening beneficiaries' awareness of specialised cancer screening services. When asked about the services that were available at the camp, beneficiaries were able to recall multiple clinical tests with a high degree of accuracy, an indication that exposure to the camp expanded their understanding of screening options.

- A large majority of respondents recalled the availability of key screening services, including PSA testing (93%), bone density assessment (91%), mammography (86%), oral cancer screening (83%), and Pap smear services (43%). Nearly all respondents (98%) also remembered receiving counselling on cancer prevention, while 83% recalled diabetes and BP screening services being offered. These high recall levels suggest that the camp did more than facilitate service uptake, it familiarised community members with the range of screening options relevant to early cancer detection.

Figure 11: Recall of services available in the camp (n=138)



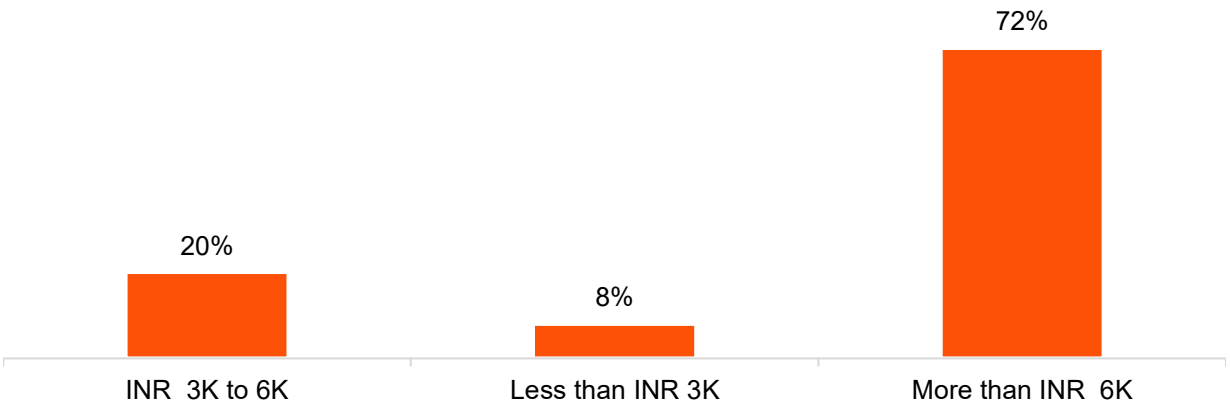
- Doctor and community mobilisers also shared that, prior to the camp, many individuals were unfamiliar with tests such as mammography or PSA screening, often believing that cancer testing required invasive procedures or referral to distant hospitals. The strong recall of multiple tests during the survey suggests that the camp helped demystify screening and broadened understanding of what preventive cancer care entails.

- This improved awareness also helped bring into focus the broader gaps in the formal health system. While several respondents were aware of government facilities that provide cancer screening, many reported that these centres were located far from their villages, with the **average distance being around 24 KMs** based on survey responses. Field staff shared that such distances, combined with travel costs, long queues and limited diagnostic bandwidth at public hospitals, discourage routine screening particularly for older adults and low-income households.

Image 2: Digital mammography X-ray unit installed inside the mobile cancer

- **Perceived cost also emerged as a major barrier** in the absence of the camp. When asked about the expected cost of these tests at a private facility, most beneficiaries significantly overestimated the expense. As illustrated in the figure, **72% believed it would cost more than INR 6,000 (n=138)**. Such perceptions indicate that many **community members viewed cancer screening as unaffordable** and therefore unlikely to be pursued independently. According to field staff, cost-avoidance acted as a strong motivator, particularly for first-time screeners and older adults. Doctors noted that during counselling, correcting these misconceptions formed an important part of the discussion, with several beneficiaries expressing relief that they now better understood which tests are needed, when to seek them, and what they typically cost in the formal health system.

Figure 12: Perceived cost for cancer screening in a private facility (n=138)



- Doctors highlighted that the counselling component of the camp helped beneficiaries understand the purpose of screening tests such as mammography and PSA, while also **improving recognition of early warning signs including breast lumps, oral lesions, unexplained bleeding and urinary difficulties, etc. that require medical attention**. These messages, reinforced through printed IEC material that participants often carried home, appeared to enhance beneficiaries' ability to identify early symptoms and understand when screening is necessary. Several respondents noted that these symptoms might otherwise have been ignored or associated only with advanced illness.

- In addition, **all respondents reported feeling comfortable discussing potential symptoms with a doctor or health worker**, reflecting a marked change in their confidence and willingness to seek timely advice. Mobilisers noted that this was a visible shift from earlier patterns, where many individuals delayed seeking care until pain or discomfort became severe. Post-camp, beneficiaries appeared more proactive in asking questions, interpreting symptoms and deciding when to visit a nearby facility.

  Overall, the intervention reduced key barriers related to distance, cost and time, while improving access to quality screening services in underserved areas. It also contributed to increased awareness, confidence and health seeking behavior among beneficiaries, supporting earlier detection and more timely engagement with cancer care services.

Image 3: Sample Pamphlet handed over to the beneficiaries during counseling sessions

2. Strengthened Pathways for Early Detection and Follow-Up Care

The intervention helped beneficiaries understand what steps to take after screening, addressing a longstanding tendency among communities to rely on symptoms rather than preventive guidance. Survey data and field interactions show that the camp supported clearer navigation of follow-up care, improved trust in medical advice, and reduced anxiety around the next steps after screening.

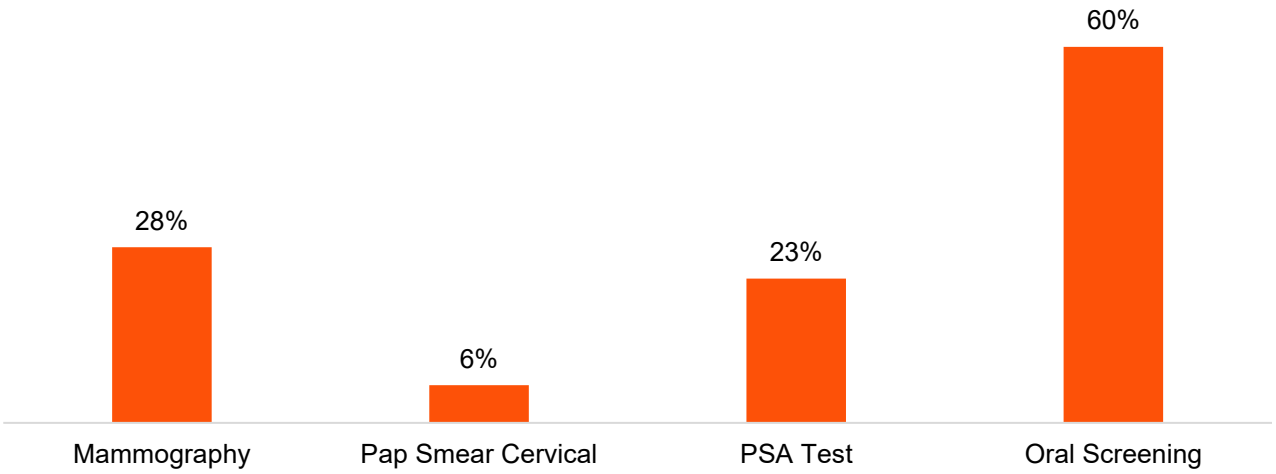
In the context of Punjab's documented cancer burden—reflected in a crude cancer incidence rate of approximately 92.7 per 100,000 population—timely access to screening and follow-up assumes critical importance[4]. Against this backdrop, the programme's findings highlight its relevance in facilitating early identification within the community.

All 138 beneficiaries underwent initial screening, based on which doctors identified 65 individuals (47%) who required further diagnostic testing due to observed risk factors or symptoms. Among those who underwent testing (n = 65), 38% among them were found to be symptomatic.

These findings indicate that a meaningful proportion of at risk individuals can be identified through targeted screening efforts, in contrast to the relatively low proportion reflected in population level incidence rates. This suggests that community-based interventions are effective in actively uncovering potential cases that may otherwise remain undetected. The results reinforce the importance of such outreach models in strengthening early detection and bridging access gaps in high burden states such as Punjab.

[4] Source: https://pdfs.semanticscholar.org/37d0/dacc6d4681a57af39b29c2ab8c92d8abe185.pdf

Figure 13: % of respondents screened across different diagnostic tests (n=65)



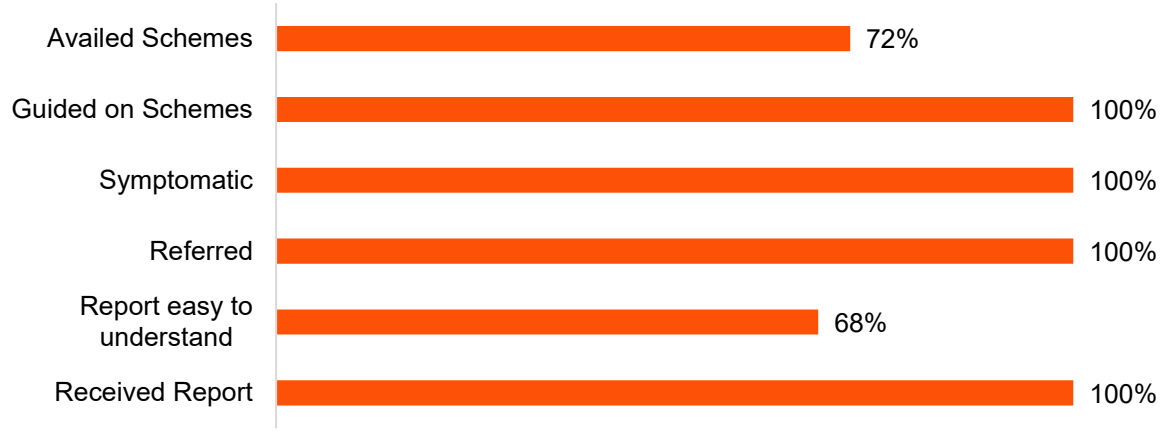
Multiple Choice Question, responses may add up to more than 100%

- The camp also strengthened the follow up pathway for individuals identified as at risk. Among those requiring further evaluation (n = 65), beneficiaries underwent risk based diagnostic screening guided by clinical assessment and doctor discretion across multiple services. As testing was tailored to individual risk profiles, some beneficiaries received more than one diagnostic test.
- Among those tested, individuals whose results indicated the need for further evaluation were contacted telephonically by the Cancer Care Charitable Society follow up team, informed about the significance of their findings, and guided to appropriate facilities for continued care. **Beneficiaries reported that this direct engagement reduced uncertainty and helped them make informed decisions on next steps**.

> "When we explained the reports in simple terms and highlighted only what needed urgent attention, many patients who were initially anxious said they finally understood what the findings meant and felt more willing to go for further testing."
>
> **Narrated by one of the Doctor**

- **Most beneficiaries who were tested (n= 65) confirmed receiving their reports**, with **71% receiving them physically through mobilisers** and the remainder through WhatsApp. Respondents reported that having reports in hand whether digital or physical allowed them to consult family members and plan next steps without additional travel. **68% said the report was easy to understand**, suggesting that explanations given during on-site consultations helped reduce anxiety around medical terminology.
- A smaller subset required structured referrals. **Among those tested, 18% formally reported being referred to district-level or specialised hospitals** for further diagnostics. Structured explanation at the camp influenced this shift beneficiaries shared that the **on-site doctor's verbal interpretation of their symptoms** and test results made referral decisions clearer, contrasting earlier behavior where care was sought only at advanced stages.

Figure 14: Follow-up and referral outcomes among Symptomatic Subgroup (n=25)

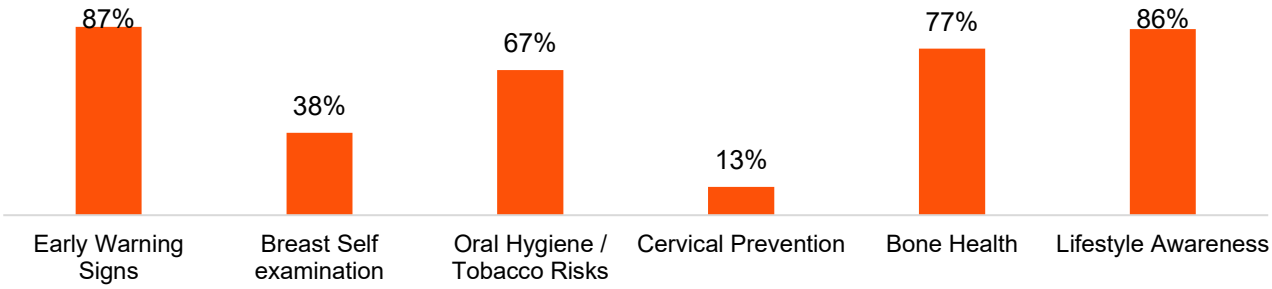


- Above figure presents a comparison of follow up outcomes reported by the symptomatic subgroup of beneficiaries (n = 25). Looking at this group separately helps in understanding how the programme functioned for individuals who required more intensive care beyond initial screening, and where its support translated most effectively into action.
- **Guidance on financial support was also a critical enabler.** All 25 symptomatic individuals reported being informed about government schemes, and **72% (n=25) of them were able to successfully achieve benefits** through available programmes. This suggests that the programme was not limited to clinical identification but also played an important role in helping beneficiaries navigate the cost-related barriers that often delay or interrupt care. This included information on Ayushman Bharat Card and state level support scheme namely "**Mukh Mantri Punjab Cancer Raahat Kosh"**, a state level **financial aid scheme that offers a sum of INR 1.5 lacs for cancer patients**, which helped reduce concerns about out-of-pocket expenditure for further evaluation or treatment.
- Despite these gains, some beneficiaries expressed a preference for in-person explanation of test results by a doctor, noting that direct interaction provided greater reassurance and clarity regarding next steps compared to telephonic guidance alone.
- Overall, the intervention strengthened early detection pathways by ensuring symptomatic beneficiaries received timely report-based guidance, referral support and financial information. These measures contributed to reduced anxiety after screening and improved readiness to pursue further diagnostic and treatment services.

3. Enhanced Awareness, Confidence, and Health-Seeking Behavior

The camp contributed to important shifts in beneficiary understanding of cancer risks, early warning signs, and preventive behaviors. These changes are especially relevant in communities where late-stage detection is common and conversations around cancer are often limited to advanced illnesses.

Figure 15: Topic beneficiaries recalled from awareness sessions (n=126)



Multiple Choice Question, responses may add up to more than 100%

- **Awareness outreach during the camp was well-retained by beneficiaries**, with **91% (n=138) recalling attending a group meeting or awareness interaction**. Recall levels were high across specific topics: **early warning signs (87%, n=126)**, **lifestyle-related cancer risks (86%)**, and **bone health (77%)**, among others. These high recall rates suggest that beneficiaries were not merely exposed to the messages but were able to retain and repeat them several weeks later, indicating deeper understanding rather than surface-level recall. Doctors and mobilisers shared that the combination of brief counselling sessions, short video demonstrations and printed IEC materials helped simplify information that many residents previously found difficult to grasp.

- **Beneficiaries also demonstrated strong recall of the formats used (n=126)**, with **video documentaries (92%)**, **pamphlets/brochures (79%)**, and **miking activities (38%)** cited as the most memorable channels. A majority found these materials easy to understand, attributing this to **local language use (93%)**, **simple wording (70%)**, and **use of visuals (95%)**. These responses indicate that the communication style matched the needs of rural audiences.

Image 4: Audio-visual documentary setup used for cancer awareness sessions inside the mobile screening van

- **Early indications of stronger attention to personal health emerged across several areas**, as reflected in the graph. While these patterns should not be interpreted as long-term behavior change, survey responses suggest that the camp encouraged beneficiaries to be more attentive to preventive actions. Among respondents (n=138), **88% reported paying greater attention to diet or physical activity**, **76% indicated reducing tobacco or alcohol use**, and **54% expressed a higher intention to follow up with doctors when needed**. IP shared that families who rarely discussed symptoms earlier were now seeking clarifications more promptly, signaling greater openness to preventive care.

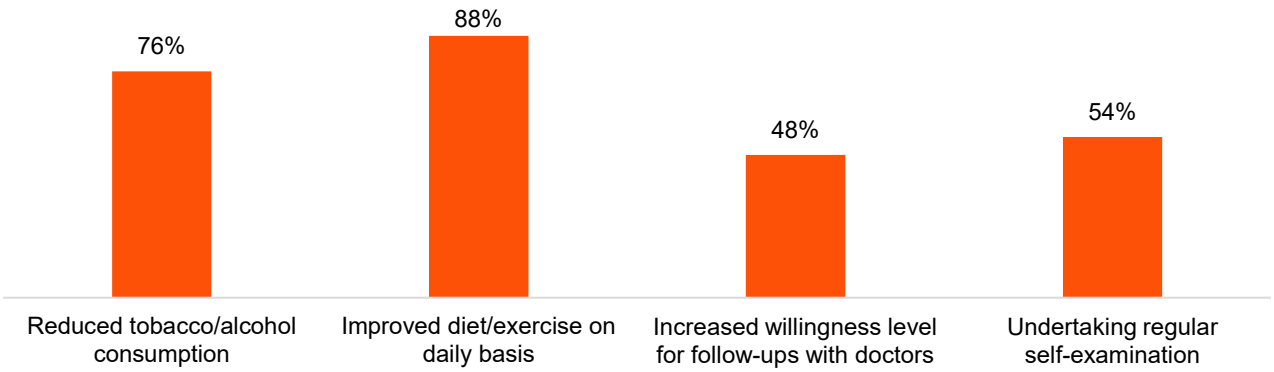
- Doctors and field teams added that these responses may also reflect a clearer understanding of how everyday habits relate to cancer risk, a connection that many beneficiaries said they had not considered prior to the camp.

- Mobilisers supported these insights, noting that families who typically did not discuss symptoms were now more inclined to clarify doubts or seek reassurance. A total of **72% reported they were more likely to undergo regular cancer screening** after attending the camp rather than waiting for a problem to

worsen. Several individuals were observed to initiate conversations about symptoms even after the camp, an interaction pattern that mobilisers described as uncommon in the past.

- The IP team shared that these shifts were expected, as integrating awareness with screening creates a starting point for communities to think differently about preventive care. During discussion, SBI Card team also shared that beneficiaries appeared more attentive to preventive actions such as self-examination and lifestyle moderation, which they viewed as encouraging signs of improved health-seeking intent.

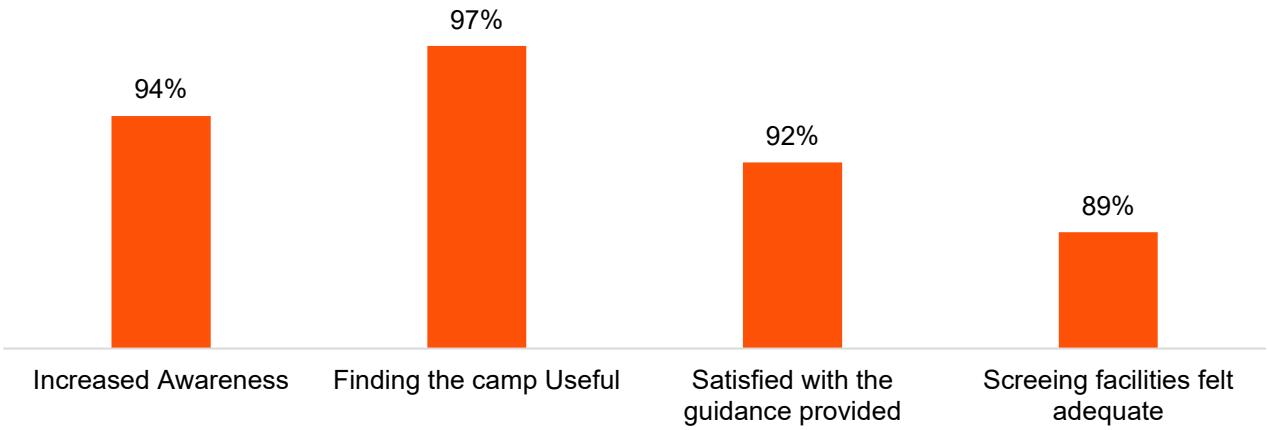
Figure 16: Beneficiaries reporting change in lifestyle (n=138)



Multiple Choice Question, responses may add up to more than 100%

- **The intervention strengthened willingness for preventive screening.** Mobilisers confirmed this shift, noting increased openness among residents to attend future health events or screenings organised locally.
- SBI Card team emphasised that one of the programme's objectives was to improve preventive health seeking behavior among underserved communities. As the team shared, that when people begin viewing screening as routine and not as a last resort, it strengthens long-term community health outcomes." SBI Card representative highlighted that the observed behavioral shifts validate the programme's design and community engagement strategy.

Figure 17: Respondents overall feedback on the camp (n=138)



- **Satisfaction levels further underline programme acceptability,** as reflected in the accompanying graph. Beneficiaries consistently reported that the screening process, guidance from doctors, and on-site facilities met their expectations and were delivered in a manner they found reassuring and helpful. SBI Card team shared that this feedback reflects the importance of pairing clinical services with clear communication and counselling and further added that the recommendation scores indicate that the model resonated well with communities that typically have limited access to structured cancer screening.
- Taken together, these insights suggest that the camp helped deepen awareness and build greater comfort with preventive care, creating conditions that may support timelier screening in the future. Beneficiaries also demonstrated clearer recognition of symptoms, greater ease in discussing cancer-related concerns, and a stronger inclination to seek early evaluation when required.

IRECS Analysis

Parameters	Assessment from study
Inclusiveness	• The camps saw participation across both men (58%) and women (42%), indicating reach across different population groups within the villages. • The average age of respondents was 51 years, **reflecting engagement from adults in age brackets where cancer risk is typically higher**. • Participation from low-income households (44% below INR 20,000 monthly income) shows that economically vulnerable groups were able to access screening without financial barriers. • Doctors shared that many of the **community members who attended the camp belonged to groups that usually face challenges accessing preventive services outside the village**, and the on-site format supported their participation.
Relevance	• Beneficiaries reported that government facilities offering cancer screening were located far from their villages, with an **average distance of about 24 km**. • A majority of those **screened, 83% of them shared that they would not have gone anywhere for cancer screening had the camp not been organised**, indicating limited alternatives in their area. • Most **respondents expected private screening to cost above INR 6,000, suggesting that perceived affordability was a barrier to seeking tests independently**. • Doctors and mobilisers mentioned that several **tests such as mammography, PSA and Pap smear, etc. were not well understood before the camp,** and many residents associated cancer testing only with late-stage care.

Parameters	Assessment from study
	• Field teams added that travel costs, long queues and limited diagnostic infrastructure at nearby health facilities discouraged early screening in these communities.
Effectiveness	• **Cancer screening services were diagnosed for 47% of respondents**, covering tests such as mammography, Pap smear, PSA and oral cancer screening. • **Awareness interactions held at the camp were well-retained, with strong recall of early warning signs, lifestyle-related risks** and bone health topics. • Among those screened (n=65), **38% received reports showing symptoms requiring follow-up**, and most confirmed receiving their reports either through mobilisers or digitally. • Report comprehension was relatively high, with 68% finding their results easy to understand due to clear explanations given during consultations. • Structured referrals were provided where needed, with **18% reporting that they were advised to visit higher-level facilities for further evaluation.** • **All symptomatic individuals received information on how to access government schemes, and 72% were able to avail financial assistance**. • Respondents reported greater attention to daily health practices such as diet, physical activity and tobacco/alcohol reduction after the camp. • Satisfaction with the camp was high, with beneficiaries noting usefulness of the services, clarity of guidance, and adequacy of facilities.
Convergence	• Symptomatic beneficiaries were guided on accessing government schemes such as **Ayushman Bharat and Punjab's Mukh Mantri Punjab Cancer Raahat Kosh**, which support financial protection for further diagnostics and treatment. • Doctors and mobilisers directed families towards nearby government hospitals and district-level facilities that offer diagnostic services, strengthening linkage with public health pathways. • The referral and scheme-linkage process served as a functional bridge between the camp and government-supported cancer care services.
Sustainability	• Beneficiaries showed clearer recognition of symptoms and greater ease in discussing concerns with health workers, which may support more timely screening in future.

Parameters	Assessment from study
	• High recall of awareness topics and materials indicates retention of key messages beyond the camp day. • Mobilisers observed increased willingness among residents to participate in future screening events held locally. • Doctors and field staff shared that several beneficiaries were now seeking clarifications earlier, rather than waiting for symptoms to worsen.

Alignment to UN SDGs & SBI Card's ESG Goals

- The project is aligned with the **following UN Sustainable Development Goal (SDGs)**: 3 - Good Health and Well-being, and 10- Reducing inequalities.

- The project is also **aligned with SBI Card's internal ESG goal** of "Providing quality health care services to at least 50,000 individuals by strengthening health infrastructure by FY 2027".

Project Recommendations

The study identified the following project level recommendation which has been summarised below:

Expand Geographic Coverage to Increase Beneficiary Reach: While the intervention demonstrated strong outcomes in awareness, screening uptake and follow up care in the covered locations, there is an opportunity to further strengthen its impact by expanding coverage to surrounding villages. Programme findings suggest that targeted outreach is effective in identifying at-risk individuals who may not be captured through routine care pathways, highlighting the value of broader geographic reach in high-burden settings.

- Camp planning can therefore build on existing efforts by progressively extending coverage to additional underserved villages within high-risk districts through a phased approach. This may include identifying new clusters, planning recurring camp cycles, and strengthening mobilisation efforts to ensure screening services increasingly reach previously uncovered populations over time.

Case Story

Case Story: Early Detection Helped Him Regain Control of His Health

- During the cancer screening camp organised in his village, Gurbaksh Singh, 67 years old (name changed), a retired elderly resident with limited means of earning, decided to undergo screening after learning that prostate cancer tests were being offered on site. Until then, he had never undergone a PSA test and usually visited a health facility only when physical discomfort became severe. The availability of doctor consultation, screening, and guidance within the village encouraged him to participate.

- As part of the screening, he underwent a PSA test, following which his report indicated findings that required further evaluation. The Cancer Care Charitable Society team contacted him through a follow-up call, explained the results in simple terms, and guided him on the next steps. He was advised to visit AIIMS Bathinda for confirmatory tests and further medical consultation. He was also informed about available government support mechanisms to manage the cost of treatment, which reduced his initial apprehension.

- Following this guidance, he visited AIIMS Bathinda and adhered to the treatment pathway recommended by the doctors there. He shared that without the screening camp, he would not have known about the condition at this stage. Reflecting on his experience, he said, **"If I had not come to the camp that day, this could have ended in a disaster. After the guidance I received, I followed the treatment sincerely."** He later underwent repeat testing and was informed that there are currently no PSA-related symptoms, which gave him significant reassurance.

- Today, he pays closer attention to his health, follows the lifestyle advice shared during counselling, and practices simple exercises recommended by doctors. He mentioned feeling more energetic and hopeful and shared that he wants to **"live a long life ahead."** For him, the camp was not just a one-day intervention—it became a turning point that helped him identify risk early, access appropriate care, and regain confidence about his health.

05

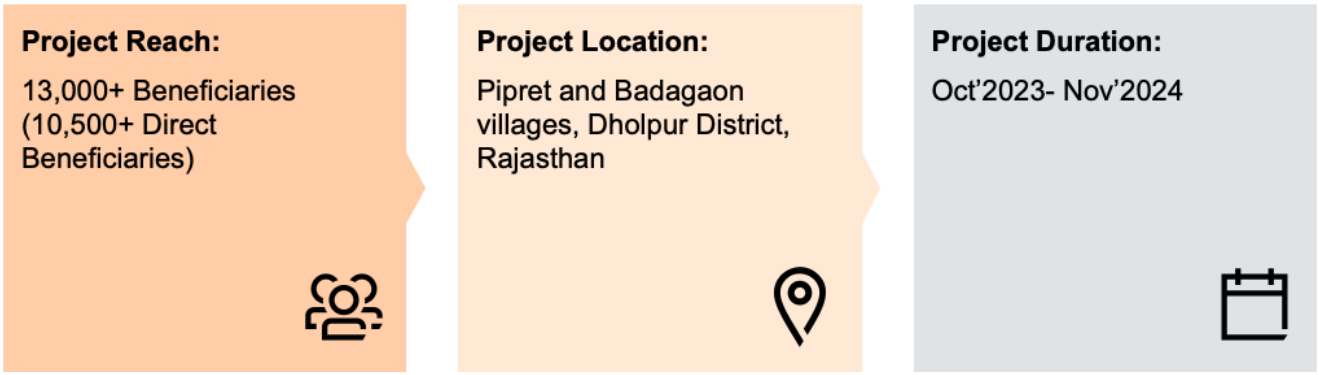
Project 2: SAMRIDDH (Smart and Modern Rural Infrastructure for Development, Diversity, and Harmony)

About the Project

SBI Card, in partnership with Manjari Foundation, launched Project SAMRIDDH (Smart and Modern Rural Infrastructure for Development, Diversity, and Harmony) to enhance educational and healthcare access, foster women's empowerment, and catalyze economic growth and prosperity in villages **Pipret and Badagaon, Dholpur** district, Rajasthan. Dholpur, designated as an aspirational district by NITI Aayog, is among India's under-developed districts targeted for rapid transformation[5].Dholpur, like other aspirational districts, has deprivation enumerated under Socio-Economic Caste Census, Health & Nutrition, Education and Basic Infrastructure.[6]

Below figure provides an overview of the project specifics[7]:

Figure 18: Project overview



The primary objectives of the project are[8]:

- Provide the basic needs: quality education, healthcare, access to clean water etc.
- Provide better facilities and harmonious healthy places for the community through well-functioning and better equipped AWCs/PHC.
- Promote economic growth and prosperity, in targeted villages through the development of rural infrastructure.
- Enhance the income of the women through their enterprises and market-led livelihoods interventions.
- Sustain the environment through rainwater harvesting and promoting traditional water harvesting structures (ponds) and practices and recharge ground water table as well.

To fulfil these project objectives, multiple activities were implemented. To simplify assessment, these diverse activities have been organised into four thematic pillars: Education, Healthcare, Holistic Village Development, and Micro-Entrepreneurship Development. Each thematic area incorporates various activities deployed across Pipret and Badagaon villages, with some activities implemented uniformly in both locations and others tailored to village-specific requirements, as detailed in the following table.

Table 4: Overview of Project SAMRIDDH[9]

5 Source: https://www.niti.gov.in/sites/default/files/2022-09/List-of-Aspirational-Districts.pdf
6 Source: https://niti.gov.in/sites/default/files/2018-12/AspirationalDistrictsBaselineRankingMarch2018.pdf
7 Source: MoU signed between SBICPSL and Manjari Foundation (2023-2024)
8 Source: MoU signed between SBICPSL and Manjari Foundation (2023-2024)
9 Source: As per documents (MoU, Closure Reports, Asset List) shared by SBICPSL and Manjari Foundation

Thematic Area	Activities	Sub Activities	Pipret	Badagaon
Education	Anganwadi Kendra Infrastructure Development	Upgraded flooring, walls, and roofing completed; safe drinking water facilities installed; child-friendly furniture provided; educational wall paintings and visuals created; clean and safe play areas developed. Key assets provided in both Pipret and Badagaon include health & measurement equipment (Stadiometer, Femtometer, Weighing Scale, Electronic Weight Machine, MUAC Tape); child & staff furniture (20 kids chairs, 4 centre tables, 1 table, 2 chairs, 1 book rack); and outdoor play equipment (slider/swinger/see-saw).	✓	✓
	School Infrastructure Development	Classrooms equipped with smart boards, desks, and lighting; 25 rooms upgraded with furniture and CCTV surveillance; playground and garden developed; Mid-Day Meal kitchen constructed with toilet and washroom facilities; RWHS storage tanks, recharge pits, and rooftop systems installed. Assets provided in both Pipret and Badagaon include: classroom furniture (300 units each), smart panels, computer systems, water coolers with RO, chimney, fridge, fans (12 in Pipret; 24 in Badagaon), whiteboards (14 in Pipret; 20 in Badagaon), CCTV (8 each), sanitary pad dispenser & disposer, podium & sound system with mike, teacher furniture sets (15 each), computer lab furniture sets (15 each), and 5KW solar panel (1 each).	✓	✓
	Girls Hostel Infrastructure Development	Equipped with desks and lighting; 10 rooms upgraded with furniture and CCTV surveillance; playground and garden developed; toilet and washroom facilities constructed. Assets provided in Pipret include: fans (20), dining stools (60), sanitary pad dispenser & disposer (2),	✓	-

Thematic Area	Activities	Sub Activities	Pipret	Badagaon
		plastic dining tables (15), room cupboards (8), CCTV cameras (8), 5KW solar panel (1), outdoor play equipment (slider/swinger), bed sheets (50), pillows (50), blankets (50), mattress covers (50), tables (20), and chairs (50).		
Healthcare	Public Health Center Development	Neonatal care equipment and essential medical devices were installed; wheelchair, stretcher, tables, and waiting chairs provided; garden developed along with toilet and washroom facilities. All assets provided exclusively in Badagaon include Neo Natal Respirator (1), Structure (1), Wheelchair (1), Attendant Stools (10), and Nebulizers (2).	-	✓
Holistic Village Development	Pond Development	Holistic Village Development initiatives were implemented across both Pipret and Badagaon villages with the following key interventions: Pond renovation and deepening were completed to enhance overall village infrastructure and water management systems. Open gym equipment including Dual Sky Walker, Dual Chest Press, Bicycle, Air Walker, Surfboard, Twister, Acupressure Track, and other fitness apparatus was set up in both villages (1 set each). Solar streetlights were installed (75 in Pipret and 100 in Badagaon) to improve community safety and visibility. Bus stop and village gate construction with attractive paintings were completed to enhance overall village infrastructure and aesthetics.	✓	✓
	Open Gym Development			
	Solar Street Light			
	Bus Stop and Village Gate Development			
	Dustbin Distribution			
	Waste Collection Cart			
	Public Announcement System			

Thematic Area	Activities	Sub Activities	Pipret	Badagaon
	Plantation Drive	Dustbins were distributed for improved sanitation: 100 units in Pipret and 450 units in Badagaon. Waste collection carts were provided (2 in Pipret and 4 in Badagaon) to support the waste management system. Public announcement systems were installed in both villages (1 each) for effective community communication. Plantation drives were conducted with 280 saplings in Pipret and 450 saplings in Badagaon to promote environmental sustainability. Community Resource Centres were established in both villages, each equipped with a Desktop, MFP Printer, Webcam, LED, MANTRA device, Table & Chair, and a 2KW solar panel.		
	Community Resource Centre Development			
Microentrepreneur Development	Pickle Unit	A fully operational pickle unit has been established with 30 trained women working while 100 were trained, equipped with processing machinery, storage equipment, packaging machines, CCTV, and inverter. Women received training and completed a 7-day exposure visits as well. All assets provided in Pipret include Heavy Weight Machine (1), Weight Machines (3), Mixer (1), Foil Sealing Machines (2), Induction Machine (1), Shrink Machine (1), Hot Gun (1), Iron Racks (15), Store Boxes (5), Drums for Storage (25), and 5KW Solar Panel (1).	✓	
	Stitching unit	A stitching training center was established in Badagaon village to empower rural women with skills for self-reliance and livelihood generation. The center has successfully trained 250 women in	-	✓

Thematic Area	Activities	Sub Activities	Pipret	Badagaon
		stitching, clothing design, and production, with 40 women currently employed there. All assets provided in Badagaon include Swing Machines (6), Iron (1), Juki Machines (3), Cutting Machine (1), Pico Machines (1), CCTV (5), Furniture set — 3 tables, 20 stools, 1 cutting table (1 set), and 5KW Solar Panel (1).		
	Beauty Parlor and Agar Batti Making Training	30 women trained in beauty parlor services; 30 women trained in agarbatti manufacturing. Beauty parlor equipment including chair, trolley, stool, and chair set provided exclusively in Badagaon (1 set).		✓
	Tulsi Beads Training	30 women trained in Tulsi bead making. Tulsi Mala Making Machines (15 units) are provided in Pipret to support bead-making livelihood activities.	✓	

The project achieved comprehensive impact, reaching 13,000+ beneficiaries across all thematic areas and activities in both villages, including 10,500+ direct beneficiaries.

Method of Impact Assessment

The impact assessment study leveraged an integrated and cohesive approach to assess the social impact transpired since project's implementation. A kick-off meeting was held with SBICPSL and the Manjari Foundation team to understand the nature of support for this project and align the requirements for starting the assessment exercise.

Following the meeting, PWCALLP received following **project documents**:

- Memorandum of Understanding (MoU) and its addendum containing project details agreed with Manjari Foundation and SBICPSL
- Closure report of Project SAMRIDDH
- Quarterly reports of Project SAMRIDDH
- Beneficiary details of the Project SAMRIDDH

Desk review was conducted project documents received. This helped our team in designing the assessment framework and **finalising the key stakeholders** for the interactions.

In consultation with SBICPSL, **a mixed-methodology approach combining quantitative and qualitative research** was deployed for the assessment. The quantitative study generated evidence-based insights, while qualitative methods captured stakeholder perspectives and experiences to validate findings and understand actual impact. Research tools included surveys, Focus Group Discussions (FGDs), and In-depth Interviews (IDIs) to ensure comprehensive evaluation. Social Return on Investment (SRoI) estimation was additionally carried out as part of the study.

A **sample size of 136 was calculated** at 95% confidence level, 5% margin of error. This sample was proportionately distributed across three thematic areas (Education, Healthcare, Holistic Village Development) suitable for quantitative surveys based on the number of direct beneficiaries covered under the project. To enhance beneficiary coverage, **a booster sample of 17** was added for the education thematic area, increasing the sample from 13 to 30 and raising the overall sample size from **136 to 153.** For Microentrepreneur Development, a qualitative assessment methodology was adopted, and stakeholders across all other thematic areas were identified for qualitative interactions.

The quantitative and qualitative sampling plans are detailed in the table below:

Table 5: Quantitative Sampling Distribution

Thematic Area	Direct Beneficiary Universe for Quantitative Sampling	Sample Distribution
Education	1,000	30
Healthcare	2,200	29
Holistic Village Development	7,100	94
Total	**10,300***	**153**

*200 direct beneficiaries of SHG are not included here because they were covered/sampled as a part of qualitative interactions during the study.

Table 6: Qualitative Sampling Distribution

Thematic Area	Qualitative Stakeholder	Type of Interaction	No of Interactions
Education	Anganwadi Staff	In-Depth Interview (IDI)	1
	School Administration and Teachers	In-Depth Interview (IDI)	2

Thematic Area	Qualitative Stakeholder	Type of Interaction	No of Interactions
	Students	Focused Group Discussion (FGD)	2
	Girl Hostel Beneficiary and Administration	Focused Group Discussion (FGD)	1
Healthcare	PHC Doctor	In-Depth Interview (IDI)	1
	PHC Beneficiary	Focused Group Discussion (FGD)	1
Holistic Village Development	Panchayat Representative	In-Depth Interview (IDI)	2
	Community	Focused Group Discussion (FGD)	2
	Village Development Committee	In-Depth Interview (IDI)	2
Microentrepreneur Development	Pickle Unit	Focused Group Discussion (FGD)	1
	Stitching Unit	Focused Group Discussion (FGD)	1
	SHG members who received training	Focused Group Discussion (FGD)	1
Total			**17**

Additionally, two interactions were conducted with SBIC Team and Manjari Foundation team to understand the project's impact, bringing the **total qualitative interactions to 19.**

The responses collected from the stakeholders' interactions were analysed to arrive at detailed findings as depicted in next section:

Analysis and Findings

This section summarises the findings from the desk review and interactions:

Summary of Impact Created

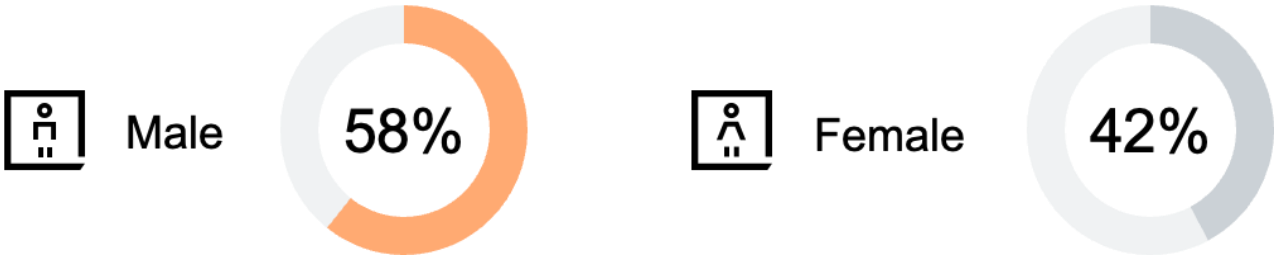
This section presents key findings from the impact assessment study, providing an evidence-based foundation for strategic recommendations and future project improvements.

Holistic Village Development and Healthcare

1. Profile of the respondents

This section presents the socio-demographic profile of the respondents, emerging from quantitative interactions carried out with beneficiaries (community members) (n=123 excluding sample covered under education theme) of village development and healthcare activities to understand the impact of project.

Figure 19 : Gender distribution of the respondents (n=123)



- 29% of respondents fall within the 25-34 years age bracket, while 25% are aged 35-44 years. Additionally, 16% represent the 45-54 and 18-24 age groups, with 14% from older demographics (55+). This distribution demonstrates representation across all age cohorts, ensuring diverse generational perspectives on project outcomes.
- 40% of respondents completed secondary education (10th pass) and 20% are graduates, representing the majority with formal education. However, 32% lack formal education entirely, while higher secondary (7%) and postgraduate (1%) remain minimal, highlighting educational accessibility challenges in the target communities.

Figure 20: Age of the respondents (n=123)

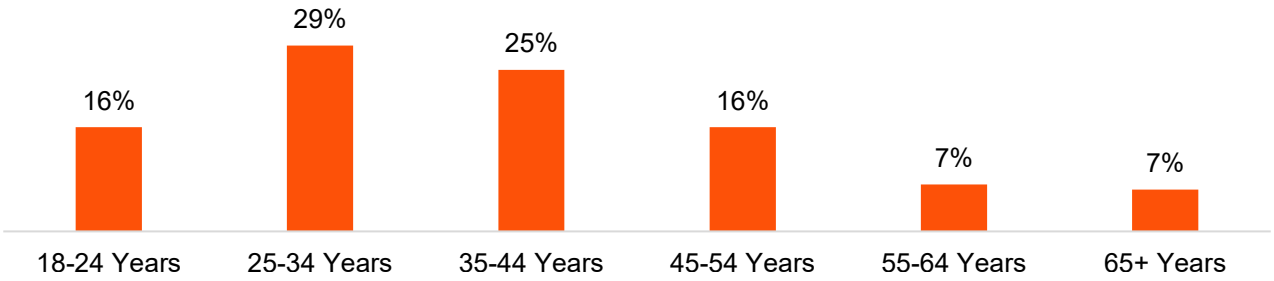
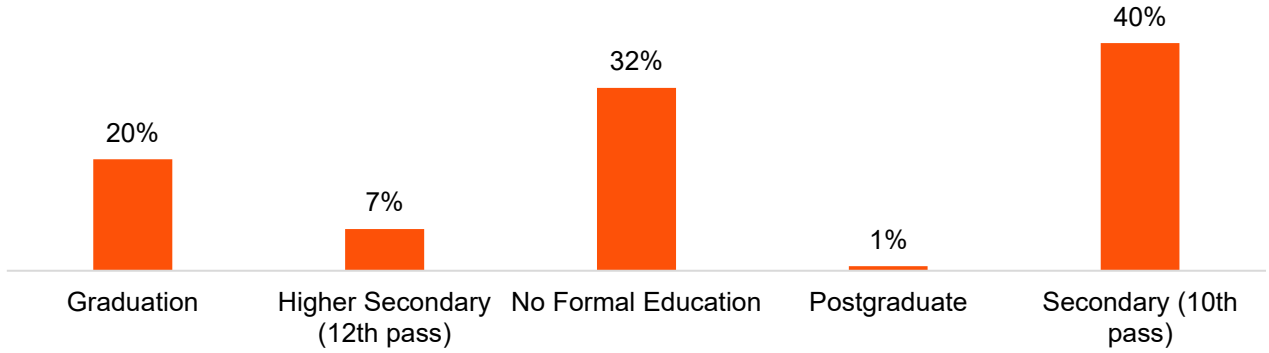
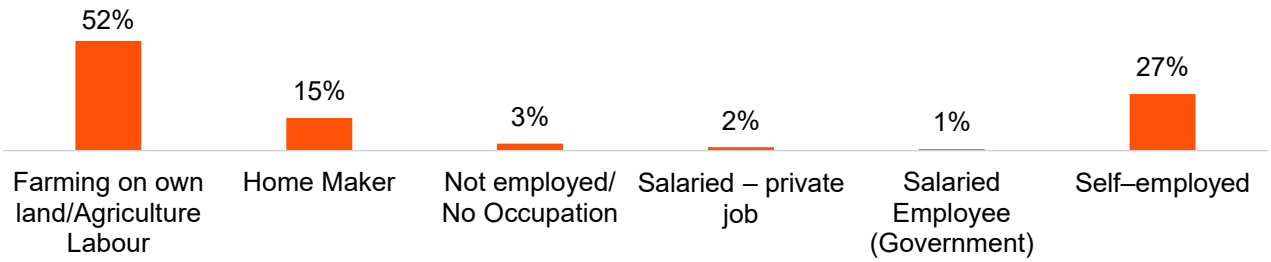


Figure 21: Education level of the respondents (n=123)



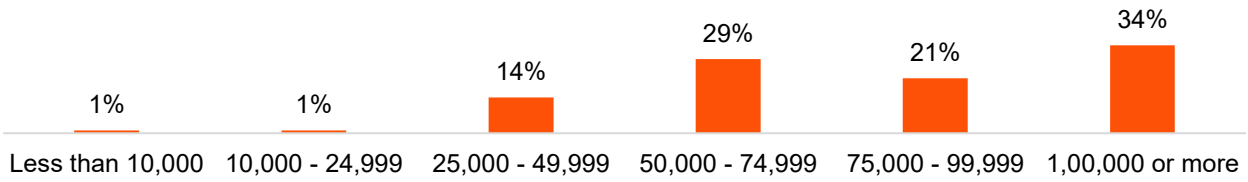
- The occupational profile reveals 52% are engaged in **farming/agricultural labour** and 27% are self-employed, indicating **strong reliance on agriculture and informal sectors**, while 15% are homemakers and only 3% hold formal salaried positions, underscoring the community's dependence on traditional livelihoods.

Figure 22: Occupation of the respondents (n=123)



- The annual income distribution reveals **economic vulnerability**, with 66% of respondents earning less than ₹1 lakh annually and 45% earning below ₹75,000, **indicating low-income household conditions**.

Figure 23: Annual income of the respondents (n=123)

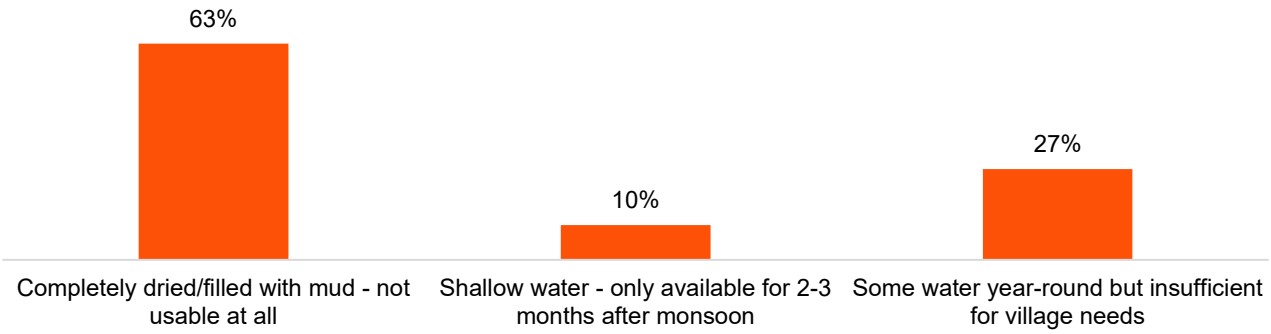


- 100% (n=123) of respondents **demonstrated complete awareness** of Project SAMRIDDH development initiatives in their village, indicating highly effective community outreach and communication regarding SBI Card funding support.

2. Village Pond Restoration and Water Resource Enhancement

- Both Badagaon and Pipret villages had deteriorated ponds that underwent deepening, cleaning, and rejuvenation under the project. For this activity, 94 respondents were interviewed.

Figure 24: Condition of pond before project (n=94)



- Community interactions revealed **that ponds water before intervention were inadequate,** with survey data showing 63% (n=94) of respondents reported **ponds were completely dried**

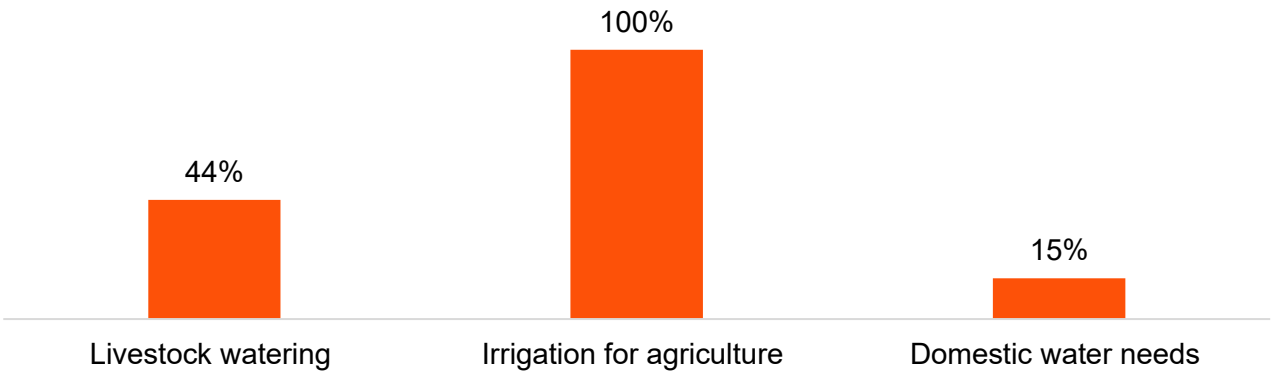
or mud-filled before intervention, while 27% indicated **some water availability year-round but insufficient for village needs.**

- **Pond utilization was previously non-existent as they remained unusable and dry year-round**, as revealed through community interactions. Post-intervention assessment shows a **positive transformation**, with 84% of respondents (n=94) now confirming active water utilisation from the restored pond.

Image 5: Revived Pond with water retention

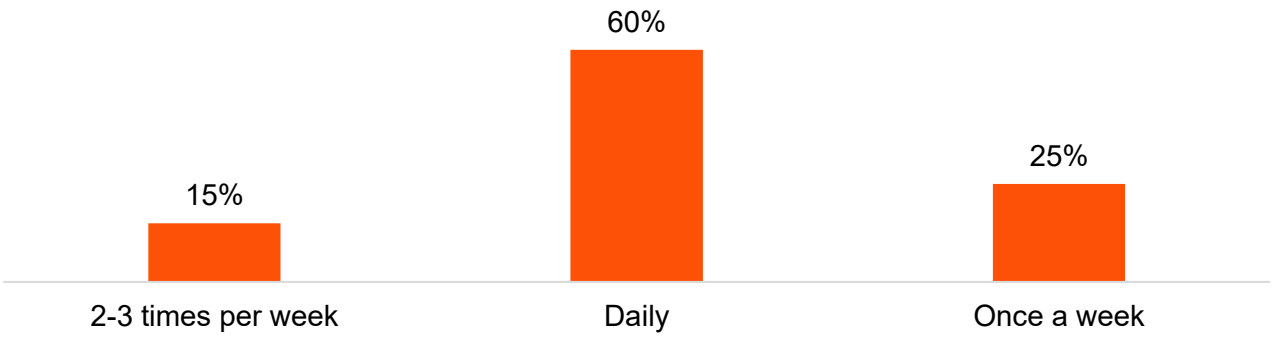
- When examining usage patterns of the restored pond, 100% of respondents **utilize water for irrigation**, while 45% also use it for **livestock feeding**.
- Regarding frequency, 60% of respondents access the pond water daily, **indicating regular dependence on this restored water source**. The purpose and frequency of usage distribution is represented below.

Figure 25: Purpose of usage (n=79)



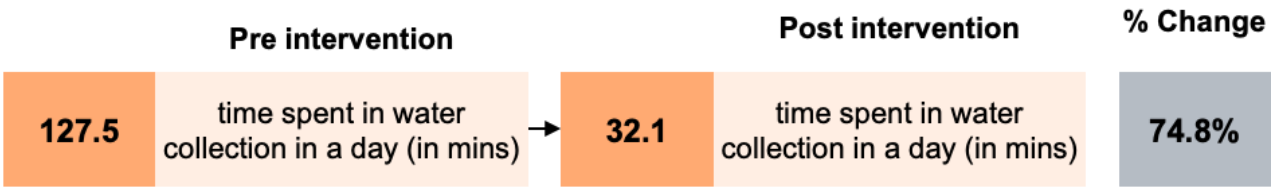
Multiple choice question, and total may not add upto 100%

Figure 26: Frequency of usage (n=79)



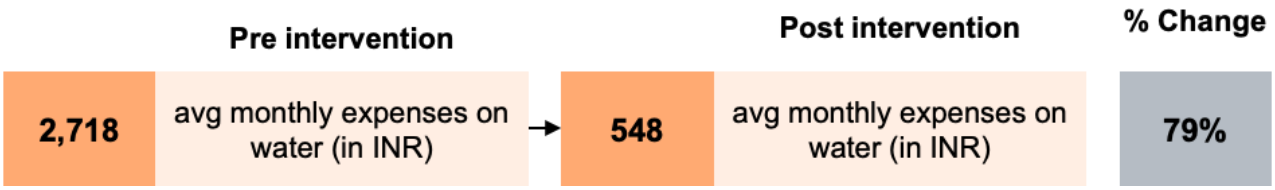
- When examining the restoration's impact on agriculture, 99% of respondents (n=79) reported significant improvements in their farming outcomes. In interactions with community members, it was revealed that Wheat and Millet (Bajra) are the major crops grown for Rabi and Kharif seasons respectively. Regarding yield changes for their majorly grown crops, **81% experienced increases of 10-25%,** while **19% reported yield improvements exceeding 25**%, demonstrating **substantial agricultural benefits from the pond restoration initiative.**
- Pond restoration has substantially eased water accessibility challenges, with community members reporting elimination of previous hardships including borrowing water from neighbouring farmlands with borewells, purchasing expensive water tankers, and traveling to river for farming and livestock needs.
- This time-intensive process of securing water for **each irrigation cycle has been substantially streamlined**. Survey data corroborates these findings, showing average daily water collection time decreased from approximately 2 hours (127 minutes) to just half an hour (32 minutes).

Figure 27: % change in water collection time in a day (n=79)



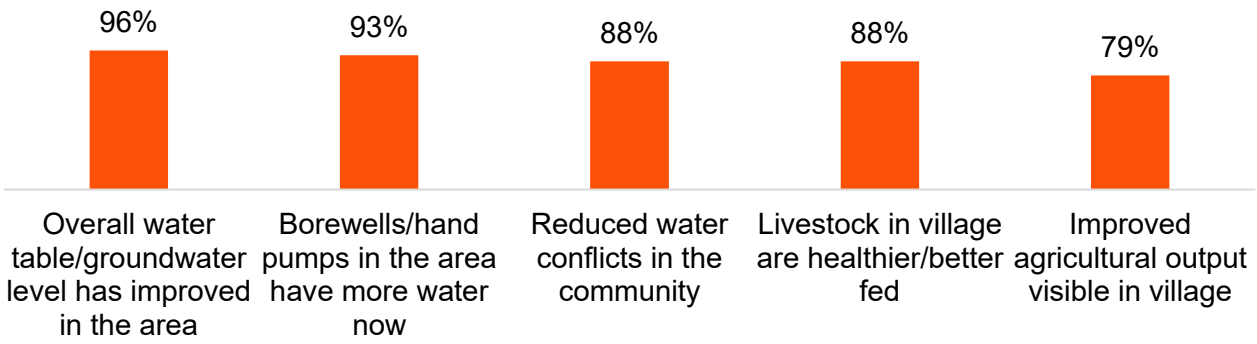
- When asked about water-related expenses, 49% of respondents (n=79) confirmed spending on water for various purposes. Discussions with community members revealed that **pond construction has provided water security and eliminated their previous dependency on purchased water tankers during irrigation periods, resulting in cost reductions**. This is substantiated by survey data showing average monthly water expenditure decreased from ₹2,718 to ₹548, representing 79% reduction in water costs.

Figure 28: % change expenditure on water (n=39)



- Community members expressed high satisfaction with the pond restoration and its comprehensive impact. Survey data reveals 96% of respondents (n=94) observed overall water table/groundwater level improvements in the area, while 93% reported that borewells and hand pumps now have increased water availability due to prolonged water retention in the ponds. According to data shared by the implementing partner, the restoration work enhanced the ponds' water retention capacity **Badagaon's pond now holds an additional ~31.17 lakh litres of water**, while **Pipret's capacity increased by ~11.17 lakh litres**. This expanded storage capacity has strengthened year-round water availability for agriculture, livestock, and community use. Additional impact indicators are depicted below.

Figure 29: Overall impact of Pond Rejuvenation on community (n=94)



Multiple choice question, and total may not add upto 100%

3. Solar Street Lighting: Ensuring Sustainable Community Illumination

- Under the project, 100 solar streetlights were installed in Badagaon and 75 in Pipret village, totaling 175 units across both villages. Community interactions revealed that villages previously had very **limited street lighting infrastructure**, **with existing lights largely non-functional due to inconsistent electricity supply, creating safety and mobility challenges during evening hours**.

- The lights were installed across villages to **cover maximum priority areas** like schools, near the ponds, PHC etc. with locations determined **through community consultation** as mentioned by Village Development Committee members during interactions.

- Survey data shows accessibility, with 85% of respondents (n=94) having solar streetlights **within 100 meters from their homes**, 12% **within 300 meters**, and only 3% located farther than 500 meters. During interactions, the community expressed **satisfaction with the operational duration of the lights**.

Image 6: One of the many solar streetlights installed in the Badagaon village

97% of respondents (n=94) reported that solar streetlights **operate for 8+ hours (full night),** demonstrating efficient performance and reliability of the installed lighting infrastructure.

- Nighttime mobility has been improved, with 100% of respondents (n=94) reporting they **now move freely after dark**. Notably, 100% interviewed female respondents (n=23) confirmed **significant improvements in evening mobility comfort and safety**, **highlighting enhanced women's security**.

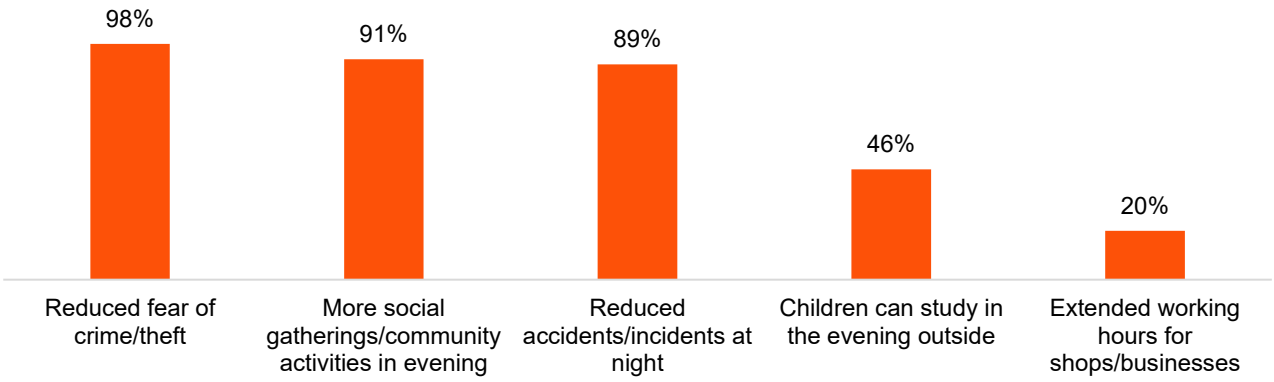
- Streetlights have **generated savings**, with 55% of respondents (n=94) previously spending on batteries, torches, and emergency lights for nighttime illumination, **costs now completely**

eliminated. Respondents reported **average monthly savings of ₹241 following solar streetlight installation**.

20% of respondents (n=94) reported engaging in **additional hours of shop operation for 1-2 hours after dark, facilitated by improved street lighting, resulting in an average supplementary monthly income of ₹1,468.**

- The lighting installation enabled 97% (n=94) of respondents to utilize shorter routes that were previously avoided due to poor illumination, resulting in time efficiency. Respondents reported average daily time savings of approximately 20 minutes due to improved lighting accessibility.
- Interactions with VDC and gram panchayat members revealed that maintenance activities are conducted jointly with the community. Repairs are presently covered under the Annual Maintenance Contract (AMC) provided by vendors for 3 years, following which the gram panchayat and community will take over maintenance responsibilities.
- The community expressed great satisfaction with the impact of the lighting infrastructure, with 98% reporting reduced fear of crime and theft, while 91% noted increased social interactions during evening hours compared to before. Additional impact indicators are depicted below.

Figure 30: Overall impact of solar streetlights on community (n=94)

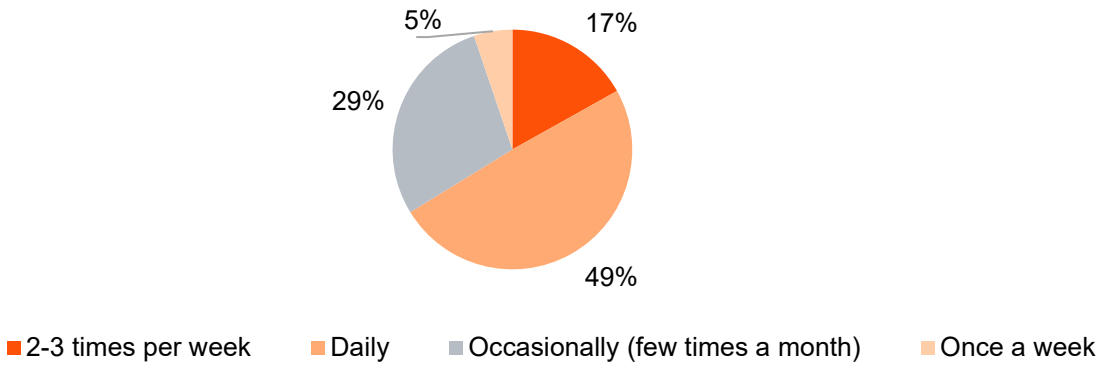


Multiple choice question, and total may not add upto 100%

4. Community Amenities Development: Enhanced Recreation and Village Aesthetics

- Under the project, both villages received comprehensive infrastructure improvements including open gym-park facilities, plantation drives with diverse tree saplings throughout the village, decorative wall paintings, and construction of village bus stops and entrance gates, distribution of dustbins, improvement of village community resource centre for enhanced community benefit and local visual appeal.
- 82% of respondents (n=94) reported using the open gym facility, with 49% utilizing it daily, demonstrating high community engagement.

Figure 31: Frequency of usage of open gym (n=77)



- During community interactions, members shared that **earlier there was no dedicated wellness or fitness facility available within the community**. With the establishment of the open gym and park, both older and younger residents **now have access to a shared space where fitness equipment can be used, morning walks can be undertaken, and evening leisure activities can be enjoyed**.
- Community members also noted that the park is **being used consistently, highlighting its role in promoting regular physical activity, recreation, and overall community well-being**.
- Additionally, 15 respondents (specifically youngsters) who previously had to travel to another town (Sarmathura) for gym memberships **now save an average of ₹1,346 monthly due to the local open gym facility**. When examining the **impact on health and fitness**, 82% of respondents (n=77) reported **significant improvements while 18% noted moderate improvements**.
- Interactions with VDC and gram panchayat members revealed that maintenance activities are conducted jointly with the community for the open gym and the park.
- For the plantation drive, 100% of respondents (n=94) were aware of it, with 63% **regularly watering saplings on a daily or alternate-day basis**. When examining community participation in plant care, 49% of respondents described it as **"very active," noting that many villagers regularly participate in watering and maintaining the planted saplings**.
- The current condition of saplings was reported as "some are surviving (25-50%)" by 62% of respondents and 22% reported that “many are surviving (50-75%)”. Interactions with VDC and gram panchayat members revealed that **difficult local terrain conditions and off-season planting** contributed to plant mortality, highlighting environmental challenges affecting the plantation initiative's success rate.
- Community interactions indicated that, despite the sapling survival rates, **the surviving plants are expected to provide shade, greenery, and ecosystem benefits in the region’s harsh terrain and extreme heat conditions, with community members optimistic about increased future greenery**.
- To further improve village surroundings and household waste management, dustbins were distributed across **households in both villages, along with waste collection carts handed over to the gram panchayat for systematic waste collection.** VDC and community members shared that the **majority of households are still using these dustbins**. This has helped

households **manage waste in a more structured manner, while also streamlining the waste collection process for the panchayat**, collectively contributing to cleaner homes and a healthier village environment**.**

- Considering the intense heat conditions of the local region, the project also constructed **bus stops for community comfort along with village entrance gates for both villages**. Both village communities **expressed high satisfaction** with the bus stop facilities and reported **feeling a strong sense of pride due to the village gates, enhancing community identity and dignity**.

Image 7: Developed Bus stop at Badagaon village

> The bus stops are **extremely beneficial as we previously had to search for shade and endure long waits** for buses, given the 30-40 minute intervals between buses, our primary mode of transportation. Now we can **arrive early, sit comfortably in the shade**, and wait without the stress of last-minute rushing to avoid prolonged outdoor exposure.
>
> **As narrated by a village local during FGD interaction**

- Both villages community resource centers underwent upgrades including building refurbishment, solar panel installation, public announcement systems and computer systems set up to provide technology services **such as printing, photocopying, and e-KYC for various government schemes to community members**.
- The centers are currently **managed by two women from village SHGs in collaboration with gram panchayats**. Gram panchayat members revealed that the centers now experience steady community footfall with a monthly average of 25-30 villagers, **generating ₹1,000-1,500 monthly income** for the women managers after expenses.
- These previously dilapidated buildings have been **transformed into internet/computer service delivery hubs**, providing **basic digital services while creating meaningful economic opportunities for the women managing them**.

5. Healthcare Infrastructure Development: PHC Upgrades for Improved Patient Care

- Badagaon PHC received a comprehensive **infrastructure upgrade**, including the addition of essential medical equipment like a neonatal respirator, stretchers, and wheelchairs, improved sanitation facilities, comfortable waiting areas, colourful wall artwork, and a garden, together creating a more welcoming and patient-friendly healthcare environment for the community.
- All respondents (100%, n=29) were **aware of the improvements made at the PHC** and had visited the post-intervention facility. They reported utilizing the PHC for a range of services including general OPD consultations, medicine collection, and child healthcare.

- Regarding the upgraded waiting area, all respondents (100%, n=29) **expressed satisfaction with the newly installed seating**, noting that the comfortable chairs have significantly enhanced their waiting experience, eliminating the discomfort previously faced during visits.

Image 8: Improved PHC Badagaon village

- The addition of the neonatal respirator has strengthened critical care capabilities at the PHC. Among the respondents, 28% (n=29) expressed full awareness of the equipment, stating it **boosts their confidence in safe deliveries**, while 17% had heard about its availability, reflecting growing community awareness. Notably, among those aware, 54% (n=13) reported that the respirator was used during their own delivery, underscoring its **active utilization and tangible impact on neonatal healthcare** at the facility.
- All respondents (100%, n=29) reported that **toilet facilities are now clean, functional, and regularly used**. Community members shared that prior to the intervention, facilities were in poor condition, often forcing visitors and patients awaiting treatment to resort to open defecation. Majority (97%, n=29) of respondents found the **improved toilet facilities extremely beneficial, particularly during extended waiting periods for treatment/consultation**.

Pre-intervention, 62% rated toilet functionality and accessibility as Poor and 38% as Average. Post-intervention, **100% rated it as Excellent**, reflecting a complete transformation in sanitation infrastructure at the PHC.

- The addition of wheelchairs and stretchers has improved patient mobility at the PHC. As shared by the PHC doctor, the **facility had no wheelchair and only one stretcher prior to the intervention**. Post-intervention, the PHC now has one wheelchair and three stretchers, enhancing its capacity to handle patient movement and emergency care.
- All respondents (100%, n=29) affirmed the usefulness of stretchers and wheelchairs, with **62% having personally used them for themselves or a family member**, while 38% reported witnessing others benefit from them, highlighting their significant role in supporting elderly patients and emergency care at the PHC.

Prior to the intervention, our **facility lacked any respiratory care infrastructure**, and patients had to be referred to the district hospital in Karauli, 40 km away. The neonatal respirator has been a significant addition, **proving useful** during deliveries, for children presenting with pneumonia and breathing difficulties during winters, particularly those under 5 years of age. We are now **able to provide timely care at the facility level, reducing critical referrals.**

As narrated by Medical Officer, Badagaon PHC

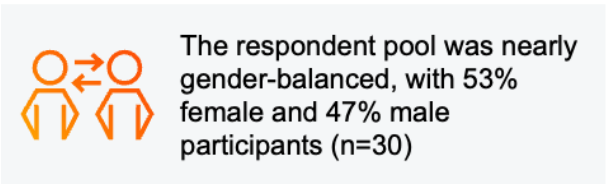
- Overall, community members expressed strong satisfaction with the improvements made at the PHC, sharing that their treatment experience has transformed significantly and positively

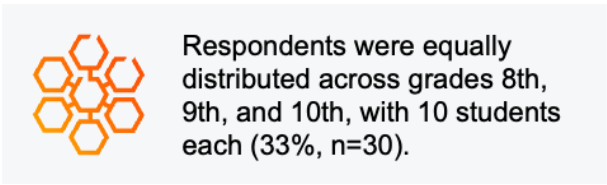
impacted the community. This was further reinforced by all respondents (100%, n=29) rating the impact of the upgraded PHC on their families as **High Impact**.

Education

1. **Smart School Development: Enhancing Educational Infrastructure and Learning Environment**

- Two higher secondary schools in Pipret and Badagaon were supported under the project, **receiving comprehensive infrastructure upgrades**. These included refurbishment of school buildings, addition of 31 computer systems, 5 smart panels, 3 RO systems, two solar panels, CCTV systems, improved toilet facilities, installation of handwashing platforms, drinking water stations, kitchen and mid-day meal area development, new furniture, sanitary pad dispensers and disposal machines, development of green areas, and installation of play equipment for children etc, collectively creating a safer, modern, and conducive learning environment.





- **Infrastructure:** Both schools underwent infrastructure upgrades with refurbished buildings and new furniture addition of fans, enhancing the overall classroom environment. 83% (n=30) of respondents reported that **improved classrooms with better lighting, ventilation, and seating made it much easier to study and concentrate**, while 17% found it somewhat easier.

- All respondents (100%, n=30) found the new furniture very comfortable, stating they can **now sit and study for extended hours without discomfort.** Both schools also added furniture**,** including tables and chairs for teachers, **who expressed satisfaction with the addition, noting that they previously had to manage with limited and inadequate furniture.**

- **Smart Panels and Teaching:** The introduction of smart panels in both schools has enabled access to video-based lessons and smart whiteboards, **enhancing conceptual understanding among students** across grades 8th, 9th, and 10th.

- All respondents (100%, n=30) expressed strong satisfaction, stating that **learning with smart boards is much better compared to traditional blackboard teaching** and help them understand lessons more easily.

Image 9:Ongoing class using smart panel in a school in Pipret

- 67% of respondents (n=30) from Grades 9th and 10th reported that smart panels are used for teaching 3-4 times per week, while 33% of respondents from Grade 8th reported a usage frequency of 1–2 times per week.

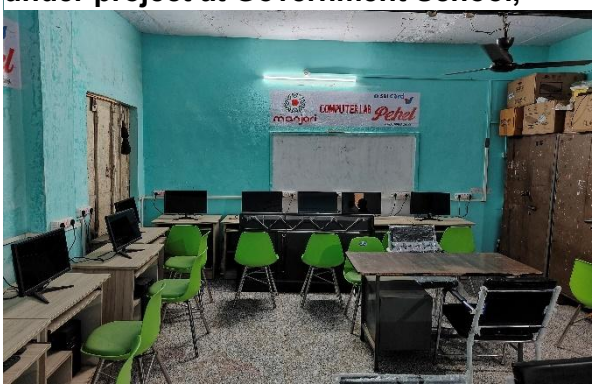
- Students shared in interactions that teachers now use smart panels regularly, **making learning more engaging and fun, and helping them grasp difficult concepts with ease**. In Badagaon, the principal shared that smart panels are being used to conduct biology lectures

due to the unavailability of a biology teacher, ensuring learning continuity despite teacher shortages.

- Further, to enhance the teaching process, schools were also equipped with whiteboards. Teachers shared that whiteboards offer a **better teaching experience compared to traditional blackboards, as they eliminate issues related to chalk dust exposure and make cleaning considerably easier and more efficient**.

- **Computer and CCTV Systems:** Both schools received computer systems to **strengthen digital learning infrastructure**. In Badagaon, the **existing computer lab capacity was expanded for a smoother learning experience**, whereas in Pipret, **where no computer lab existed prior to the project, an entirely new facility was established under the intervention.**

Image 10: Computer lab established under project at Government School,



- Principal of Badagaon shared that the improved computer-to-student ratio has significantly enhanced access: from three students sharing one computer to two sharing, it now, and sometimes even individual access during computer periods, enabling a more effective and hands-on learning experience.

- Pipret's principal and teachers shared that the computer lab was a long-awaited need for their school. They mentioned that students now effectively access the lab during computer periods, making learning hands-on and practical, and bringing their school at par with other local schools in the area.

- CCTV cameras with recording capabilities were installed across both school premises, with live feed accessible for real-time monitoring. Students shared that the mere presence of CCTVs is reassuring, knowing that any incident would be recorded.

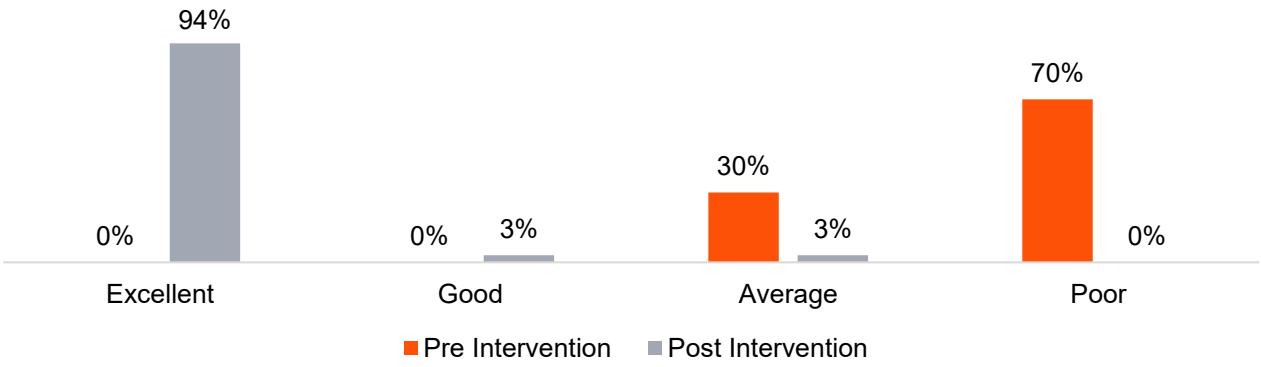
- All respondents (100%, n=30) reported feeling much safer post CCTV installation. In Pipret, the principal shared how he linked the CCTV live feed to his phone, enabling him to remotely monitor school premises even when away on official duties.

Image 11: CCTV live feed linked to principal's mobile in Pipret School

- **Sanitation and School Environment:** Under sanitation, school toilets were upgraded and sanitary pad dispensers and disposal machines were installed in both schools. Students shared that **prior to the intervention, toilets were in poor condition with broken infrastructure and dysfunctional plumbing, making it a very unpleasant experience**.

- Post-intervention, 100% (n=30) of respondents reported that toilets are **now fully functional and they use them comfortably.** The staff toilets were also upgraded, with **the school administration expressing high satisfaction** with the improvements during interactions.

Figure 32: Pre vs Post Rating of Overall Toilet Functionality and Accessibility (n=30)



- The sanitary pad dispensers have been a significant addition for both schools, with principals noting their positive impact on **female students' hygiene and convenience, as well as improved waste management**.

Image 12: Improved students' toilet at Pipret school

- Pre-intervention, 70% of respondents rated toilet overall functionality and accessibility as Poor and 30% as Average. Post-intervention, **94% rated it as Excellent, with 3% each rating it as Good and Average**, reflecting a **positive transformation in sanitation infrastructure across both schools**.

- Both schools were equipped with RO filters, water coolers, and dedicated handwashing stations, none of which existed prior to the intervention. Principals shared that the RO systems have substantially improved drinking water quality for students, replacing previously basic purification methods. The water coolers have proven particularly beneficial during the intense summer months, ensuring students have access to purified and cool drinking water.

Image 13: Improved staff toilet at Badagaon school

- Additionally, well-structured handwashing stations with proper taps and drainage are fostering better hygiene practices among students and contributing to a cleaner school environment. These sanitation improvements have led to healthcare expense reductions, with students and teachers reporting average monthly healthcare savings of INR 100-200 that were formerly required for treating waterborne illnesses resulting from poor sanitary conditions.

- School kitchens were upgraded with chimneys, elevated slabs, washing sinks and additional utensils for mid-day meal preparation, positively improving hygiene standards. Two fridges were also provided to the schools for better storage. Kitchen staff expressed high satisfaction with the improvements, highlighting the complete transformation of their workspace, cooking processes and their ability to maintain better hygiene practices now.

- The principal of Badagaon school shared that prior to the intervention, mid-day meals were prepared in open area and classrooms as per requirement, occupying valuable space and causing discomfort to students due to strong cooking fumes.

Image 14: Upgraded kitchen with slabs, chimney and sink in Badagaon school

- The project also installed a proper tin shed and upgraded flooring creating a dining area, enabling students to sit and eat comfortably during midday meals. The principal of Badagaon noted that prior to the project, students had to eat in the open on school grounds.
- A Rainwater Harvesting Structure (RWHS) was installed at Badagaon school, serving as both a functional and educational initiative, with students being taught about water conservation and its practical application. The principal noted that the RWHS functions efficiently, fulfilling its intended purpose of water storage through the storage tank. The school also utilises the stored water for gardening, cleaning, etc purposes within the school premises. During the field visit, the tank was observed to be filled with water.
- **Solar Panel System:** Both schools saw the installation of solar panels, sustainably powering the entire premises. Principals shared that the panels, equipped with high-capacity batteries, can support the school's infrastructure throughout the day.
- The principal of Piprets school noted that the school has significantly reduced its dependence on external electricity, now relying primarily on solar energy for its power needs, resulting in substantial savings on electricity bills.

From a monetary perspective, Badagaon's principal shared that the school's annual electricity bill has **dropped from ₹35,000-37,000 to just ₹5,000-6,000**, while Pipret's principal noted that after fully transitioning to solar energy, their bill has **reduced from ₹21,000-23,000 to nearly negligible** over the last 6-8 months.

- Teachers and principals highlighted that 24x7 electricity availability has enabled seamless access to computer labs, smart TVs, and panels, creating a smooth ecosystem for learning. This was corroborated by students, with 100% (n=30) confirming that there are no electricity disruptions during school hours. The ownership of the solar plant was handed over to the school management, along with the responsibility of its maintenance and upkeep.

Image 15: Solar Panel installed at Badagaon school

- **School Beautification:** The principals and teachers mentioned in interactions that school grounds, parks, and walls were enhanced with aesthetic and informative artwork. Additionally, the school stage was upgraded with a podium and sound system, enabling smoother conduct of morning assemblies and events.

- In Badagaon, the ground was levelled to create a functional space for sports and outdoor activities. Students expressed high satisfaction with the improved grounds, park, and overall appearance of the school, with 100% (n=30) of respondents reporting that the school feels much cleaner.

Image 16: Upgraded and Clean School Environment at Pipret

- Overall, both schools witnessed a complete transformation through comprehensive infrastructure upgrades and beautification, **enhancing the learning experience**.
- Principals of both schools reported **increased attendance, higher admissions, learning engagement and improved student retention post-intervention**, with some students even choosing these schools over those in the nearby town of Sarmathura.
- This was reinforced by students, with 100% (n=30) expressing that they **now significantly look forward to coming to school**. Further, 100% of respondents reported a **significant improvement in their overall educational experience post the school development interventions.**

2. Pipret Girls' Hostel Upgradation: Enhancing Living Conditions

- The project supported a government girls' hostel accommodating 50 students across 8 rooms, which underwent a comprehensive upgrade including the refurbishing of buildings, new furniture, bedding, almirahs, study tables, solar-powered 24x7 electricity and beautification. Students shared that **previously, basic amenities were severely lacking**, with **limited study tables and inadequate bedding** where two students had to share one blanket.
- Prior to the intervention, girls used boxes to store their belongings and clothes. Post-upgrade, each room was allotted an almirah, furnished with 3 tables and 6 chairs, and each student was provided with an individual blanket. These improvements have significantly enhanced **their study routines** and overall **daily living experience**.

Image 17: Hostel room with new tables, chairs and blankets

- Previously deteriorating toilet facilities were **renovated** with new tiles and seats, along with the addition of sanitary pad dispensers and disposal machines, significantly **upgrading washroom hygiene and cleanliness.**

- The dining area was furnished with tables and chairs, **replacing the earlier practice of eating on the floor**, shared the girls during an interaction. Further, the addition of a landscape **garden and badminton facilities has improved our recreation opportunities**, collectively creating a more hygienic and dignified living experience for us.

Image 18: Improved dining area with tables and chairs

- The hostel's **safety infrastructure** was extensively **enhanced** through CCTV installation with **regular footage monitoring, window nets, glass panes, and terrace improvements, addressing previous concerns including vulnerability to animal intrusions**. These updated measures have further **increased reassurance for parents**, making them more comfortable with their daughters staying away from home for education, shared the hostel administration representative during an interaction.

Image 19: Solar Panel and Beautified Walls at Girls' Hostel, Pipret

- The installation of solar panels has **reduced the hostel's monthly electricity bill from ₹12,000-15,000 to approximately ₹6,000, ensuring significant operational savings for the hostel facility**. This has enabled better allocation of resources towards hostel upkeep.

- The girls in interaction mentioned that electricity is now available 24x7 and doesn't hamper our study routine like before the intervention, when frequent power cuts used to disrupt our routine.

- The upgraded infrastructure has reduced risks and discomforts linked to safety, and lack of basic amenities. According to the Hostel admin, these improvements have triggered a positive shift in community perception, with increased enrolment inquiries from surrounding villages and students viewing the facility favourably compared to hostels in nearby Sarmathura.

- Growing parental trust and rising demand for admission reflect the project's broader impact in strengthening and complementing the government's efforts in promoting marginalised girls' education across the region.

3. Anganwadi Centre Upgradation: Enhancing Early Childhood Care and Development Infrastructure

- The Anganwadi centre **underwent comprehensive upgrades** including refurbishment of flooring, terrace, and roofing, provision of utensils, solar panel connections (AWC in Pipret connected to CRC solar panels, AWC in Badagaon connected to school solar panels), installation of play equipment, essential health monitoring equipment (stadiometer, femtometer, weighing scale, electronic weight machine, and MUAC tape), and vibrant wall paintings with

educational artwork, and slogans, **transforming a previously dilapidated facility into a safe, child-friendly space**.

- The Anganwadi worker of Pipret shared during an interaction that prior to the intervention, the centre was in a poor state with damaged flooring, a deteriorating terrace, and an overall environment that was unsuitable for young children.

Image 20: Pipret Anganwadi with improved floors, walls and child friendly furniture

- The Anganwadi worker added that the addition of age-appropriate play equipment and a clean play area have encouraged physical activity and play-based learning among attending children. Child-friendly furniture, including kid-sized tables and chairs, has also improved the conduct of daily learning sessions, mealtimes, and other activities at the centre.
- The Anganwadi worker also mentioned that the centre previously lacked essential equipment. The provision of critical health monitoring equipment including stadiometers, femtometers, weighing scales, electronic weight machines, and Mid-Upper Arm Circumference (MUAC) tapes has strengthened the Anganwadi centre's capacity to conduct accurate growth monitoring and nutritional assessments of children and pregnant women. These tools enable early identification of malnutrition and growth abnormalities, facilitating timely intervention and referrals, thereby improving overall maternal and child health outcomes in the community.
- The installation of educational wall paintings, slogans, and artwork has created a **vibrant, stimulating learning environment for the children and mothers** said the community members in an interaction. Further, the Anganwadi worker shared that the visual aids have **facilitated interactive, play-based learning, enhancing children's engagement** and making the centre more **inviting for both children and caregivers visiting the facility.**

Image 21: Interior view of upgraded Pipret Anganwadi Centre with enhanced walls and ceiling infrastructure

- The Anganwadi worker shared that the solar panel installation has **ensured uninterrupted power supply and enabling extended operational hours**. She also mentioned that the provision of utensils has further strengthened the center’s capacity to **effectively deliver supplementary nutrition programs**.
- In a discussion with gram panchayat and the VDC members, it was revealed that the upgrades at the AWC have **positively shifted community perception, with increased willingness among mothers and pregnant women to visit the centre for health and nutrition services**. The transformed environment has also enhanced the **Anganwadi workers’ motivation and**

efficiency, strengthening the overall delivery of government schemes and building greater community trust.

Microentrepreneur Development

1. **Pickle Processing Unit Pipret: Empowering Rural Women Through Collective Entrepreneurship**

Image 22: Pickle Unit Pipret with solar panels

- The project established a pickle processing unit in the village, equipping it with machinery including processing equipment, storage facilities, packaging machines, and CCTV systems, while training 100 women in pickle making through hands-on training, transforming them from **homemakers into confident skilled women.**
- Women revealed during interactions that they underwent comprehensive **11-day training covering 15 varieties of pickle making**, complemented by a 7-day exposure visit to Sakhi Achar Unit, Ajmer in later phase of the project. This hands-on training has built **strong technical capabilities, with the unit now producing various types of pickles daily**, with demand throughout the year ensuring product diversification and market competitiveness.

- The pickle unit has **retained 30 core members** from a pool of 50 women shortlisted from the initial 100 trained, **transforming them from homemakers into active earning members**. During interactions, the women shared that their individual monthly incomes have **gradually risen from zero to ₹5,000-6,000 per month over the past two years**.

Image 23: Pickle produce ready for market

- Further, they highlighted the flexibility of working arrangements, where remuneration is paid on an hourly basis, allowing **women to plan their work schedules around domestic obligations and production demand**, ensuring a healthy balance between professional and personal responsibilities.
- Respondents also highlighted during interactions that the unit's **production capacity has grown tenfold, from 100kg to 1 ton monthly**, **enabled by appropriate machinery provided under the project and uninterrupted electricity through installed solar panels**. This enhanced capacity, coupled with market and credit linkages facilitated by Katori Foods (a brand of local FPO), has **helped the unit generate healthy and consistent revenue**. Further, during peak seasons, the women shared that additional women workers who

were trained earlier under the programme are hired for short-term periods, averaging about four months in a year, to meet high demand in a way that suits their availability and comfort.

- Women shared during interactions that they are primarily **channelling their earnings towards children's education and agriculture**, **with a focus on providing their children access to quality and higher education**. The financial independence has elevated their role in household decision-making, with **all women unanimously attributing the positive changes in their lives solely to the pickle unit**, with no contribution from alternative income sources or government schemes.

> We previously observed strict purdah and never stepped out alone. Now we **confidently interact with the community and external stakeholders**. This change has also inspired younger girls in our village to step out, creating a ripple effect of empowerment across the community.
>
> **As narrated by women during FGD at Pickle Unit, Pipret**

- Women also reported a notable shift in their confidence levels and mindset. They expressed that they are now able to take independent decisions pertaining to their livelihood, household, and finances, which was previously not the case. This shift in agency and self-reliance marks a positive change in both social and personal aspects of their lives.

- Governed by a 10-member board, the unit operates with strong collective ownership and camaraderie among women. During interactions, the women revealed that they themselves conceptualized the pickle venture during initial community discussions, reflecting a deep sense of ownership. With established market linkages, growing production capacity, and women valuing the work beyond just income for its camaraderie and long-term association, the unit demonstrates strong potential for sustained impact.

2. Stitching Unit Badagaon: Empowering Rural Women Through Collective Entrepreneurship

- The project established a stitching training centre in Badagaon village, equipping it with 20 stitching machines and providing comprehensive training to 250 women, with 40 currently working at the centre, transforming **rural homemakers into skilled, self-reliant earning members.**

Image 24: Stitching Unit Badagaon

- Women shared during interactions that the stitching unit has enabled them to **earn ₹4,500-5,500 monthly** through shirt and suit-based orders, transforming them from **zero-income homemakers into active earning members**.

- The unit is supported by market linkages provided by Jhulki, a local FPO brand, **ensuring a consistent demand and steady income stream for the women**, thereby **strengthening the long-term sustainability of the initiative**. The unit is also equipped with **good quality tailoring machines, including electric ones, powered by solar panels** installed under the project, ensuring uninterrupted electricity.

- During interaction women revealed that **market linkage and such infrastructure have enabled us to take large to medium orders and maintain healthy revenue for our unit.**

- The women revealed in interaction that they received **comprehensive training in stitching, clothing design, and production, building capabilities beyond basic tailoring**.

- They unanimously **valued this as a lifelong skill**, expressing confidence in independently taking orders and potentially establishing their own micro-enterprises, ensuring **long-term self-sufficiency beyond the project**.

Image 25: Tailoring stations inside the stitching unit Badagaon

- The **unit-based pricing model and flexible working hours** allow them to **balance domestic responsibilities while generating consistent income**.

- In an interaction with gram panchayat and VDC members, it was revealed that the **centre has catalysed a positive social change, bringing together women who were previously confined to household chores, farming, and animal husbandry**.

- Working collectively has fostered **strong camaraderie and confidence**, enabling women to step out of traditional roles **positively changing the community's perception towards working women**.

- Women are primarily channelling their **earnings towards children's education**, making it a top priority. With **almost all women attributing positive life changes to the stitching unit** and no displacement of previous income activities, the project has created **a net positive economic impact on household well-being and financial stability**.

- The voluntary participation and flexible working arrangements have ensured strong retention and commitment among women. With an established **order-based production system, growing skill sets, and women valuing the work as a lifelong asset, the unit demonstrates strong potential for sustained impact and scalability.**

3. SHG Skill Development: Empowering Women Through Diversified Vocational Training

- The project provided **diversified vocational training to 90 SHG women** from SHG gram sanghathans in both the villages across three trades: Beauty Parlor services, Agarbatti/Dhoop Batti making, and Tulsi Bead Mala crafting. Women received comprehensive **three-month training** in Beauty Parlor and Agarbatti, and one month in Tulsi beads, **equipping previously unskilled homemakers with practical, market-oriented entrepreneurial skills**.

- The 3-month intensive training **equipped women with skills from scratch**, through practical, hands-on sessions. During the training, 15 Tulsi bead mala making machines and one beauty parlour chair were used **for practical demonstrations**. These were later handed over to the Gram Sangathan for **regular production and service delivery by the trained SHG groups**.

- SHG women reported that, after completing the training, they are now **able to earn a steady average monthly income, marking a clear shift from financial dependence to active economic contribution within their households**.

The Beauty Parlor trained women's group present during the interaction shared that they earn ₹5,000-7,500 per month through **door-to-door and home-based services**. The Agarbatti trained women reported earnings of **₹4,000-6,500 per month from local markets, melas, and wholesale linkages via Katori and SHG networks**, while Tulsi bead mala trained women reported **monthly incomes of ₹4,000-6,000 through market linkages established under the project**.

- Women reported **improved domestic budgeting and financial planning post-training**. Some shared that with initial investments as low as ₹5,000, they generate ₹10,000 in sales and ₹5,000 in profit, **enabling consistent monthly returns unlike seasonal agricultural income, providing greater financial stability** and **a stronger voice in household decision-making**. A few women also expressed **aspirations to establish a permanent beauty parlour shop in Sarmathura, reflecting their growing entrepreneurial confidence and ambition.**

Earlier they used to **refuse and were hesitant about us stepping out to work**. But now they have faith in us, **when you earn, everyone appreciates it**. We can clearly see the positive shift in our families and husbands' perception towards women working.

As narrated by women during FGD with SHG members

- Women unanimously view the **acquired skills as lifelong assets**, with many **already sharing knowledge with other community women**. The training with essential skills, and with established market linkages, SHG loan support, and family backing in logistics, the micro enterprises **demonstrate strong potential for sustained growth**.

SROI Analysis

The Social Return on Investment (SROI) Framework design helps us measure and account for value in a broad sense. The overall impact and the subsequent calculation of the return was done after preparing an impact map for the programme. Thereafter, the cumulative benefit was derived after adjusting the deadweight, displacement, attribution (by others) and drop-off factors from the year wise benefits. These factors are defined in detail as follows:

Deadweight	Deadweight is the estimation of the benefits which would have occurred even in the absence of the programme. For the benefits attributable to this project, dead-weight has been considered to be between 0% to 5% based on the interaction with the stakeholders on-ground. A uniform 5% dead-weight loss is applied across all livelihood and infrastructure interventions to account for outcomes that would have occurred even without project intervention. For income-generating activities (SHGs, training programs), this reflects that approximately 5% of participants would have independently pursued alternative income sources, accessed existing government schemes, or achieved similar economic improvements through family support or market opportunities.
Displacement	Displacement is the component which informs the assessor on how much one outcome of the project may influence any other outcome. During the assessment for this project, there was no evidence of any displacement noted or reported. Hence, the displacement factor is taken to be 0% for the calculations based on the interaction with the stakeholders on-ground.
Attribution (by others)	Attribution (by others) is an estimate of what proportion of the impact may be attributed to the efforts of other stakeholders involved. Infrastructure projects (Anganwadi, Schools, CRC solar installations) show 10% attribution recognizing concurrent government schemes and other development partners providing complementary services. Livelihood interventions (SHG enterprise creation, skill training) carry 5% attribution accounting for the participants' own intrinsic motivation, entrepreneurial drive, and pre-existing skills that contribute to their economic success beyond project inputs alone.
Drop Off	Dropoff is factored in as in the subsequent years, the benefit or the impact would be slightly less than the previous year. During the interactions with respondents, it was found that around 0-5% of the beneficiaries have either stopped practicing/ using the trainings/ supports promoted under the project. Accordingly, a drop-off of 0-5% has been considered for calculations.

The impact of the project has been arrived at based on the following calculations:

- **Impact Value for the first year:** Quantity of change or Number of beneficiaries or Number of benefit units x Financial Proxy (FP) value x (1- deadweight) x (1- displacement) x (1- attribution)
- **Impact value for subsequent years:** Quantity of change or Number of beneficiaries or Number of benefit units x Financial Proxy (FP) value x (1- deadweight) x (1- displacement) x (1- attribution) + [impact of previous year] x (1-drop off)]

Based on the above calculations, the cumulative benefit or impact generated by the project from the year 2023-24 till the end of the financial year 2025-26 comes out to be ₹ 11,70,13,589/-. The detailed calculations and year-wise values can be referenced in text and table below:

The SRoI value is expressed as a ratio of the return and is calculated by dividing the net present value of total Impact value (or cumulative benefit) divided by the net present value of the total investment or funds utilized for the project.

Net Present value of total impact value (or cumulative benefit) is ₹ 10,47,95,622/- whereas the net present value of **Total Utilization or Investment (till the time of survey) is ₹ 4,24,51,789/-.**

Now, to calculate the SRoI following formula has been used:

SRoI = Net Present value of benefits/ Net Present Value of Investment

Net Present Value has been calculated using the formula below:

Net Present Value of benefits = Cumulative benefits*POWER ((1+r) time) where ‘r’ has been taken as per national inflation rate during the programme period

SRoI	Net Present value of Benefits Net Present Value of Investment
NPV of Benefits	₹ 10,47,95,622/-
NPV of Investment	₹ 4,24,51,789/-
SRoI Value*	2.47

*SRoI value of 2.47 indicates that an investment for every Re. 1 invested in the project, a social value of Rs.2.47 is generated. The current SROI ratio clearly evidences the meaningful impact the project has generated, both at the community level and within the wider ecosystem.

SRoI Estimation – Impact Values

Project Activity	Stakeholder	Benefits	Dead weight	Displacement	Attribution (by others)	Drop-off	Total value created across years (Value in ₹)			Total Cumulative benefit
							2023-2024	2024-2025	2025-26	
Anganwadi Kendra Infrastructure Development (Pipret & Badaganv)	Community Members (Mothers)	Annual electricity cost saving due to solar (₹/year) in AWC + 1 CRC (Pipret village)	5%	0%	10%	0%	₹ 23,520	₹ 47,040	₹ 47,040	₹ 1,17,600
		Value of Health and Nutrition services availed by new yearly beneficiaries	5%	0%	10%	0%	₹ 5,14,539	₹ 10,29,078	₹ 10,29,078	₹ 25,72,695
School Infrastructure Development (Pipret & Badaganav)	Students and Teachers	Annual savings on health expenses per child	5%	0%	10%	0%	₹ 7,69,500	₹ 15,39,000	₹ 15,39,000	₹ 38,47,500
		Annual value of clean RO Drinking Water	5%	0%	10%	0%	₹ 7,52,400	₹ 15,04,800	₹ 15,04,800	₹ 37,62,000
		Annual electricity cost saving due to solar (₹/year) for School + AWC	5%	0%	10%	0%	₹ 52,500	₹ 52,500	₹ 52,500	₹ 1,57,500
Girls' Hostel Infrastructure Development (Pipret)	Girls	Annual electricity cost saving due to solar (₹/year).	5%	0%	5%	0%	₹ 50,055	₹ 1,00,110	₹ 1,00,110	₹ 250,275
Pond Development	Community Members	Average annual incremental farm income per farming household due to pond water (₹/year).	5%	0%	10%	5%	₹ 88,94,570	₹ 84,49,842	₹ 80,27,350	₹ 2,53,71,762
		Annual saving in water-related expenditure per household (₹/year).	5%	0%	10%	5%	₹ 1,12,87,949	₹ 1,07,23,552	₹ 1,01,87,374	₹ 3,21,98,876
Open Gym Development	Community Members	Savings due to monthly gym-fee and travel savings	5%	0%	0%	5%	₹ 28,38,714	₹ 26,96,778	₹ 25,61,939	₹ 80,97,432

Project Activity	Stakeholder	Benefits	Dead weight	Displacement	Attribution (by others)	Drop-off	Total value created across years (Value in ₹)			Total Cumulative benefit
							2023-2024	2024-2025	2025-26	
Solar Street Light (Pipret & Badaganav)	Community Members	Annual lighting-related savings per household (torches/batteries) (₹/year).	5%	0%	0%	5%	₹ 24,69,913	₹ 23,46,417	₹ 22,29,096	₹ 70,45,426
		Annual value of additional business done due to increased hours of operation (₹/year).	5%	0%	0%	5%	₹ 54,97,513	₹ 52,22,638	₹ 49,61,506	₹ 1,56,81,656
Plantation Drive (Pipret & Badaganav)	Community Members	GHG emission due to tree plantation	0%	0%	0%	0%	₹ 5,12,017	₹ 5,12,017	₹ 5,12,017	₹ 15,36,050
Community Resource Centre Development (Pipret & Badaganav)	Community Members and Centre Staff	Annual electricity cost saving due to solar (₹/year) in CRC in Badgaon village	5%	0%	5%	0%	₹ 23,520	₹ 47,040	₹ 47,040	₹ 1,17,600
		Creation of Earning source for SHG women	5%	0%	5%	5%	₹ 13,538	₹ 12,861	₹ 12,218	₹ 38,616
Pickle Unit (Pipret)	Beneficiary Women	Creation of Earning source for SHG women	5%	0%	5%	5%	₹ 8,93,475	₹ 8,48,801	₹ 8,06,361	₹ 25,48,637
Stitching Unit (Badaganav)	Beneficiary Women	Creation of Earning source for SHG women	5%	0%	5%	5%	₹ 10,83,000	₹ 10,28,850	₹ 9,77,408	₹ 30,89,258
Pickle & Stitching Unit	Beneficiary Women	Creation of earning source for additional women during peak season	5%	0%	5%	5%	₹ 9,47,625	₹ 9,00,244	₹ 8,55,232	₹ 27,03,100
Beauty Parlour	Beneficiary Women	Creation of Earning source for SHG women	5%	0%	5%	5%	₹ 10,55,925	₹ 10,03,129	₹ 9,52,972	₹ 30,12,026
Agarbatti-Making Training	Beneficiary Women	Creation of Earning source for SHG women	5%	0%	5%	5%	₹ 8,93,475	₹ 8,48,801	₹ 8,06,361	₹ 25,48,637

Project Activity	Stakeholder	Benefits	Dead weight	Displacement	Attribution (by others)	Drop-off	Total value created across years (Value in ₹)			Total Cumulative benefit
							2023-2024	2024-2025	2025-26	
Tulsi Beads Training	Beneficiary Women	Creation of Earning source for SHG women	5%	0%	5%	5%	₹ 8,12,250	₹ 7,71,638	₹ 7,33,056	₹ 23,16,943
Total Benefits							**₹ 39,385,998**	**₹ 39,685,134**	**₹ 3,79,42,457**	**₹ 11,70,13,589**

IRECS Analysis

Parameters	Assessment from study
Inclusiveness	• The project **meaningfully reaches diverse groups**: women, farmers, young children, adolescent girls, and low-income households through education, healthcare, village infrastructure, and enterprise support, **reflecting strong social inclusion**. No **demographic cohort is excluded**, ensuring comprehensive life-cycle coverage across both villages. • **Gender inclusion is visible** beyond participation metrics, with **women gaining safer mobility through solar lighting, improved menstrual hygiene infrastructure in schools and hostel, and targeted livelihood pathways** that convert homemakers into earners and decision influencers. • Dholpur's NITI Aayog aspirational status, combined with 66% respondents earning below ₹1 lakh and 33% lacking formal education, confirms **interventions reach populations facing compounded disadvantages**, **maximizing impact in a context where baseline conditions were starkly inadequate**.
Relevance	• **Interventions directly match core rural constraints in an aspirational district context**: water scarcity, weak public infrastructure, education quality gaps, and limited women's livelihood options, **making the thematic design highly aligned to local development priorities**. • In an agriculture dependent, low-income setting, water security measures and time or cost savings (68 % reduction in water expenditure and irrigation time drop from 127 to 32 minutes) are **highly relevant to household resilience and agricultural productivity**. • The **focus on women's economic empowerment through locally suitable activities** such as pickle making, stitching, agarbatti, beauty services, and tulsi beads matches women's skills, mobility constraints, and market demand, ensuring both **cultural acceptability and income-generating potential**. • The project addresses not only physical infrastructure deficits but also **social and behavioural outcomes** such as, **improving safety, dignity, confidence, health seeking behaviour, and school attendance**, directly responding to community voiced needs captured through VDC, Panchayat, and beneficiary interactions.
Effectiveness	• Water security impact is strongly evidenced as most users now **actively use the restored pond**, **time spent collecting water dropped from about 127 minutes to 32 minutes daily**, and average **monthly water expenditure reduced** from ₹2,718 to ₹548. • Agricultural effectiveness is high, with nearly **all users reporting improved farming** outcomes and **yield gains largely in the 10 to 25% range**, indicating the pond intervention translated into **measurable productivity improvements**, not only infrastructure completion.

Parameters	Assessment from study
	• Solar lighting shows clear functional and social results, **near universal confidence to move after dark**, strong **reductions in fear of theft**, elimination of emergency lighting costs with **average savings of ₹241 monthly** and reported **time savings through safer shorter routes**. • Community amenities drove **strong utilisation and practical benefits**. Open gym and park **usage was high** (82% users, 49% daily) and **former town gym users saving** ₹1,346 monthly. Bus stops **improved heat comfort**, while women managed resource centers served 25–30 users monthly and **earned ₹1,000–1,500.** • Education effectiveness is strong across the continuum. Upgraded schools **improved classroom comfort**, **reliable power**, **universal satisfaction with smart board learning**, and **functional toilets and hygiene facilities**, resulting in **higher attendance and retention**. Anganwadi became a **safer, play based learning space** with solar enabled operations. The girls' hostel **strengthened study routines and dignity** through better furniture, bedding, sanitation, 24x7 electricity, and CCTV backed safety, **increasing parental trust and enrolment interest**. • Healthcare effectiveness is demonstrated by **universal satisfaction** with seating and sanitation, **improved emergency handling** through added stretchers and wheelchair, and active use of neonatal respiratory care that **reduced critical referrals**, **strengthening local service capability**. • Microentrepreneur development effectiveness is strongly evidenced through **sustained, diversified earnings and capability gains**. The pickle and stitching collectives converted **previously non-earning homemakers into regular income earners with flexible work models**. SHG trainees **launched micro ventures reporting repeat sales and profits**, enabling **steadier cash flow than seasonal farm income** and **strengthening women's agency** in household decisions.
Convergence	• The project **effectively converges with government systems**: Anganwadi, government schools, PHC, CRC, and girls' hostel are state assets whose **functionality and attractiveness are enhanced**, **complementing government efforts and increasing public trust**. • **Institutional convergence** is visible through active roles of Gram Panchayat, Village Development Committees, SHGs, and FPO brands (Katori, Jhulki) in planning managing centers, and ensuring market linkages for products, **embedding the project in existing local structures**.
Sustainability	• Solar powered systems across schools, hostel, and village lighting **reduce recurring costs and increase reliability**, shown by drops in electricity bills and **uninterrupted power for education and production**, **creating financial and operational conditions for long term functioning**.

Parameters	Assessment from study
	• Livelihood sustainability is supported by **collective enterprise structures**, **governance arrangements, flexible work models, and established market linkages**, making **incomes less seasonal than agriculture** and building women's skills as **lifelong assets that can scale beyond the project**. • Governance and management arrangements involving SHGs, VDCs, and Panchayats managing resource centres, community assets, and enterprises **create local stewardship**, increasing the **likelihood of upkeep**, **faster issue resolution**, and the **long-term continuity of services** beyond the project period.

Alignment to UN SDGs & SBI Card's ESG Goals

The project is **aligned with the following UN Sustainable Development Goal (SDGs)**: 3 - Good Health and Well-being, 4 - Quality Education, 5 - Gender Equality, 6 - Clean Water and Sanitation, 7 - Affordable and Clean Energy, 8 - Decent Work and Economic Growth, 9 - Industry, Innovation and Infrastructure, 11 - Sustainable Cities and Communities. This demonstrates alignment with 8 out of 17 SDGs, highlighting the project's comprehensive impact across multiple development dimensions.

The project is also **aligned with SBI Card's internal ESG goals of** "Give Rs. 50 Crores contribution to environment initiatives by FY 2029, Transform the education of 1 lakh individuals by FY 2027 and 5 lakh individuals by FY 2030 through Corporate Social Responsibility (CSR) programmes, Providing quality health care services to at least 50,000 individuals by strengthening health infrastructure by FY 2027".

Project Recommendations

The study identified the following project level recommendation which has been summarised below:

- **Integrating Climate-Smart Agriculture for Sustainable Rural Livelihoods:** Future projects, alongside water recharge interventions such as the pond rejuvenation undertaken in Project SAMRIDDH, can also integrate and explore **Climate-Smart Agriculture (CSA) practices** tailored to the geography, terrain, and water-stressed conditions of the project area. Based on a scientific landscape analysis and farmer needs assessment, proven modern practices such as **Direct Seeded Rice (DSR), Zero Tillage, micro-irrigation (drip and sprinkler), laser land levelling, etc.** can be incorporated to **enhance productivity, optimise water use, and strengthen climate resilience**. Linking these practices with water recharge structures will create a **complementary ecosystem that supports farmers**, improves agricultural outcomes, and **expands the long-term impact of holistic village development projects**.

Case Stories

Case Story: Rajkiya Uchch Madhyamik Vidyalaya, Pipret – A School Reimagined

- Rajkiya Uchch Madhyamik Vidyalaya, Pipret, has undergone a remarkable transformation under Project SAMRIDDH, supported by SBICPSL. Earlier constrained by poor infrastructure, irregular electricity and basic facilities, it now stands out as a model government school in the area.
- Under the project, almost every core aspect of the school environment was upgraded. Classrooms were refurbished and equipped with new benches and desks, improving comfort and concentration. Fully functional, clean toilets were constructed for students and staff, addressing a long-pending need for dignity and hygiene. Safe drinking water was ensured through RO systems, and dedicated handwashing stations were installed, reinforcing healthy habits among children.
- The learning ecosystem has become significantly more modern and engaging. Smart TVs and smart panels are now regularly used for teaching, while the computer lab has been strengthened with additional systems, enabling more hands-on practice. Artwork and educational wall paintings across the campus have created a bright, welcoming atmosphere that students are proud of.
- A game-changing intervention has been the installation of solar panels, which now power the entire school. This ensures uninterrupted power for fans, lights, smart boards, computers and RO systems, while sharply reducing electricity bills. The impact is clearly visible in enrolment. Student strength has risen from 109 to 286, with children from neighbouring villages now preferring this school over going to Sarmathura. The principal, teachers, parents and students uniformly express pride in a school that now feels safe, modern and aspirational.

Case Story: Reena's Journey from Homemaker to Earning Member at the Pickle Unit

- Reena (Name changed for anonymity), a resident of Pipret, had never earned an income of her own before Project SAMRIDDH. She was a full-time homemaker, managing the household and children but with no financial contribution or say in key decisions at home. In her village, there was a strong purdah culture where women did not step out much and rarely interacted with new people.
- Her life began to change when the pickle processing unit was set up under Project SAMRIDDH. Encouraged by local women's groups, Reena joined the unit and received hands-on training in pickle making. Initially hesitant to leave home and work with others, she gradually became confident, learning technical skills and how to balance her time between the unit and her domestic responsibilities. Through regular work and market interactions, she now confidently engages with many people outside her home as part of the business.
- Today, Reena earns a minimum of ₹4,000 every month from the pickle unit. This income has eased her family's financial pressures and helped her contribute to household needs. More importantly, it has given her a stronger voice in family decisions. Earlier, seen only as a homemaker, she now feels recognised as an earning member, and she takes pride in this new identity.

Her main goal is to support her children's education and ensure they become successful. Reena also notes that as more women like her step out and work at the unit, community attitudes are slowly changing, opening new possibilities for the next generation of girls in the village.

06

Project 3: Rural Development through Education, Employment & Empowerment of Girls and Women

About the Project

Girl child education has emerged as a central priority for India's inclusive and sustainable development. The publication Women and Men in India 2024 by the Ministry of Statistics and Programme Implementation (MoSPI) highlights that gender disparities in education have narrowed significantly over the years, with the Gender Parity Index remaining close to or above parity across primary, upper primary, and secondary levels, reflecting improved participation of girls in schooling[10].

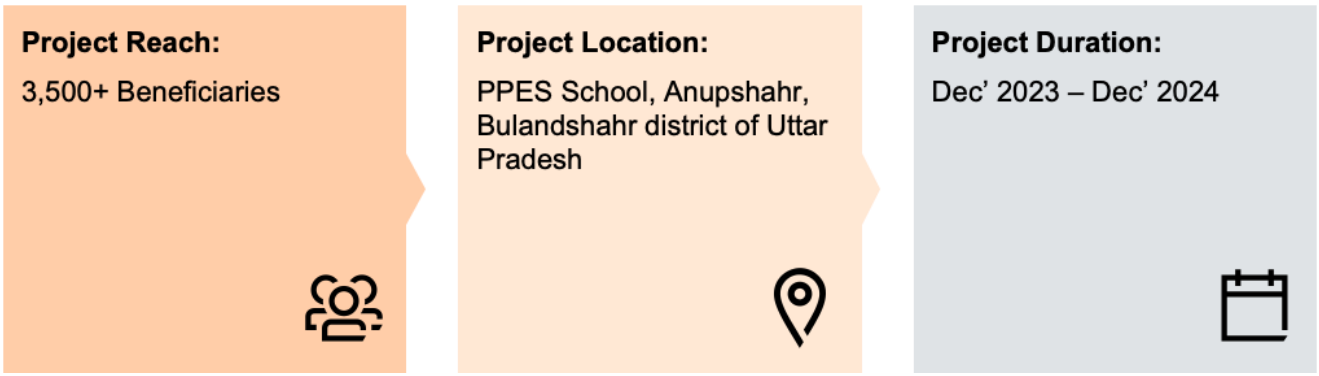
While access to education for girls has improved, challenges persist in ensuring retention, continuity, and completion of schooling. In this context, the Ministry of Education, through programmes such as Samagra Shiksha, emphasizes the importance of interventions including provision of free textbooks and uniforms, residential schooling, and improved school infrastructure to support girls' participation and reduce dropout rates[11].

States such as Uttar Pradesh, given their large population and diverse socio-economic profile, continue to play a critical role in advancing girl child education. The Government of Uttar Pradesh has implemented multiple initiatives aimed at promoting education, welfare, and empowerment of girls and women, reflecting the broader national commitment towards gender equality and inclusive growth[12].

In alignment with these national priorities, SBI Card, under its CSR initiative, has partnered with **Pardada Pardadi Educational Society (PPES)** to implement the project "**Rural Development through Education, Employment and Empowerment of Girls and Women**" at PPES School, Anupshahr, Bulandshahr district of Uttar Pradesh.

Below figure provides an overview of the project specifics[13]:

Figure 33: Project overview



The primary objectives of the project were to enhance the existing facilities of school. The support provided will improve the learning outcomes and provide holistic development of the girl students that access free education[14].

And to achieve the objectives of the project following project activities were carried out[15]:

- Setting up 16 digital classrooms along with teacher training on the digital learning software

[10] Source: https://www.mospi.gov.in/sites/default/files/reports_and_publication/statistical_publication/Women_Men/mw24/Education.pdf
[11] Source: https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=1882764&reg=3&lang=2
[12] Source: https://mahilakalyan.up.nic.in/en/OurProgram.aspx
[13] Source: MoU signed between SBICPSL and PPES
[14] Source: MoU signed between SBICPSL and PPES
[15] Source: MoU signed between SBICPSL and PPES

- Setting- up of specialized laboratories (Chemistry labs, Music room and Computer lab).
- Provision of two buses for secure transportation.
- Solarization in the school campus through the setup of 78 kw solar plant.
- Renovation of existing slides and expansion of the playground slides.
- Procurement of two Roti maker machines
- Installation of surveillance cameras and monitoring screens
- Setting up of public announcement system for improved communication within the school.

Method of Impact Assessment

The impact assessment study leveraged an integrated and cohesive approach to assess the social impact transpired since project's implementation. A kick-off meeting was held with SBICPSL and the Pardada Pardadi Educational Society (PPES) team to understand the nature of support for this project and align the requirements for starting the assessment exercise.

Following the meeting, PWCALLP team received following **project documents**:

- Memorandum of Understanding (MoU) containing project details agreed with Pardada Pardadi Educational Society (PPES) and SBICPSL
- Project Impact Annual report

PWCALLP team then began the project's **desk review** based on the information collected during the kick-off meeting and from the project documents. This helped our team in designing the assessment framework and **finalising the key stakeholders** for the interactions.

In consultation with SBICPSL, **a mixed-methodology approach combining quantitative and qualitative research** was deployed for the assessment. The quantitative study generated evidence-based insights, while qualitative methods captured stakeholder perspectives and experiences to validate findings and understand actual impact. Research techniques included surveys, Focus Group Discussions (FGDs), and In-depth Interviews (IDIs) to ensure comprehensive evaluation.

Based on data from PPES team, the project impacted **3,500+ beneficiaries**. A **sample size of 134 was calculated** at 95% confidence level, 5% margin of error, and 90% population proportion. Besides survey with beneficiaries, team engaged with other key stakeholders of the project to assess its holistic impact through qualitative interactions.

The quantitative and qualitative sampling plans are detailed in the table below:

Table 7: Quantitative Sampling Distribution

Respondent	Mode of interaction	Quantitative Sample
Students	In-depth (ID) structured quantitative questionnaire	134

Table 8: Qualitative Sampling Distribution

Qualitative Stakeholder	Type of Interaction	No of Interactions
Students	Focused Group Discussion (FGD)	1
Teachers	Focused Group Discussion (FGD)	1
Principal	In-Depth Interview (IDI)	1
PPES Project Team	In-Depth Interview (IDI)	1
SBIC Team	In-Depth Interview (IDI)	1
Total		**5**

The responses collected from the stakeholders' interactions were analysed to arrive at detailed findings as depicted in next section.

Analysis and Findings

This section summarises the findings from the desk review and interactions:

Summary of Impact Created

This section presents key findings from the impact assessment study, providing an evidence-based foundation for strategic recommendations and future project improvements.

1. **Profile of the respondents**

   This section presents the socio-demographic profile of the respondents, emerging from quantitative interactions carried out with beneficiaries (students) (n=134) of Pardada Pardadi Educational Society to understand their perception of the school-level development initiatives supported under the project.

Given that the school is dedicated solely to the education of the girl child, all respondents (100%) were female.

The student respondents were from Grades 8 to 12. The highest representation was from Grade 10, with 23% of the respondents (n=134). Grades 11 and 12 each accounted for 22% of the respondents, followed by Grade 9 with 16% of the respondents and Grade 8 with 17% of the respondents.

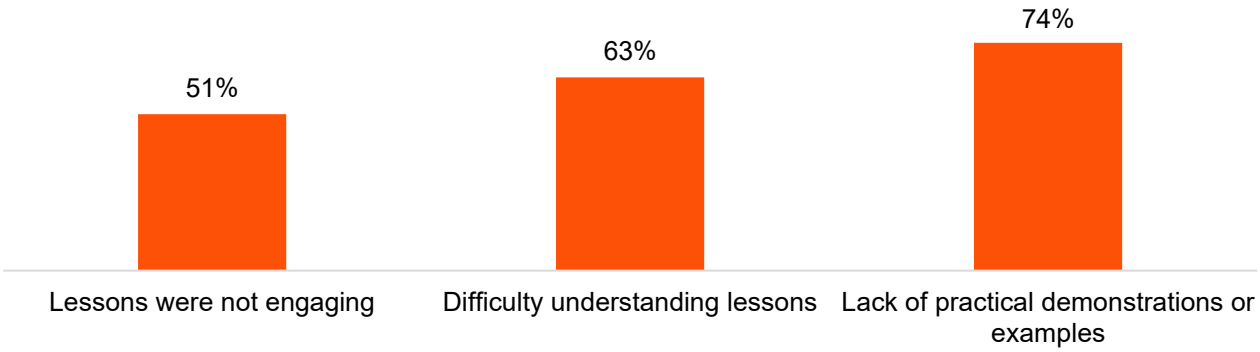
The respondents were between 13 and 17 years of age. The age distribution is consistent with the grade-wise profile of the sample, which included students from Grades 8 to 12.

Most respondents had been studying in the school for more than three years. 78% of the respondents (n=134) reported that they had been studying in the school for more than three years, while 22% of the respondents reported that they had been studying in the school for one to three years.

2. Strengthened Academic Performance and Digital Classroom-Based Learning

- The project supported the **establishment of 16 digital classrooms in the school**, along with teacher training on the use of digital learning software. During the field interaction, the school principal shared that prior to the project, the **school had limited classroom infrastructure equipped for digital teaching and learning**.
- Prior to the intervention, **students primarily depended on traditional teaching methods**. When asked if they faced any challenges with these methods, **74% of students (n=134) reported a lack of practical demonstrations or real-life examples**, **63% reported difficulty in understanding lessons**, while 51% felt that the lessons **were not engaging**.

Figure 34: Challenges with traditional teaching methods (n=134)



Multiple choice question, and total may not add up to 100%

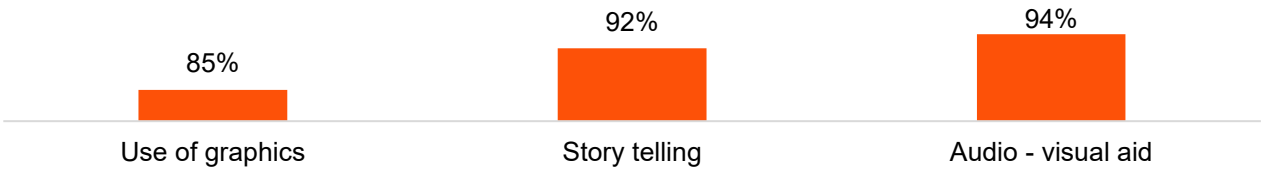
- The use of smart interactive boards was **found to be regular among students**, with 97% of students (n=134) reporting **that they attend classes with smart boards on a daily basis**. Only 1% reported using them in most classes, while 2% reported occasional use, indicating that smart boards have been well integrated into classroom teaching.
- During discussions, teachers shared that **students are highly engaged in digital classes**, and that they actively make

Image 26: Ongoing digital classroom session observed during the field visit

efforts to maximise the use of available digital classroom infrastructure. Teachers also **reported receiving three days of training (two hours per day) as part of the project** on the use of smart interactive boards and digital learning software.

- As this was a new experience for some teachers, the training helped them build confidence and integrate the technology effectively into day-to-day teaching. This was corroborated by the student survey, where **98.51% of students (n=134) reported that teachers use digital classes effectively**.

Figure 35: Digital tools used by teachers within the classroom



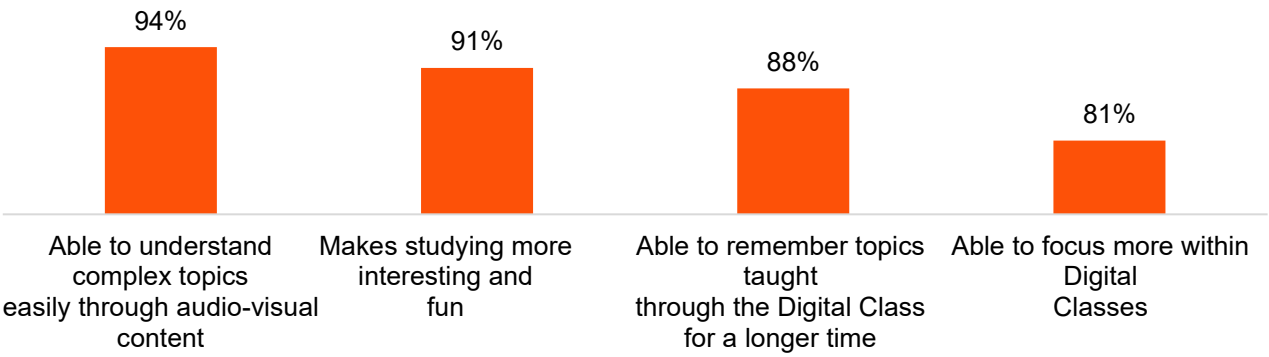
Multiple choice question, and total may not add up to 100%

- Students across grades shared that multiple subjects including Maths, Science, English, Hindi, and Social Science, etc. are being taught through digital classes. When asked about the teaching approach, students noted in discussions that their **teachers effectively use a range of digital tools in the classroom, including audio-visual content, images, practical demonstrations, storyboards, and YouTube videos**.

- One of the strongest areas of impact was observed in **academic performance and classroom learning**. Nearly all students, **98.5% (n=134), reported an improvement in their academic performance** after the implementation of the project.

- Students attributed **this improvement mainly to the use of interactive and visual learning methods**. 94% shared that audio-visual content helped them understand complex topics more clearly, while 91% felt that digital classes made studying more interesting and enjoyable. Additional reasons contributing to improved academic performance are shown in the adjacent graph.

Figure 36: Reasons for improved academic performance through digital classes (n=134)



Multiple choice question, and total may not add up to 100%

- Student discussions **reflected strong acceptance of digital classrooms**. Many students shared that digital lessons make classes more lively and easier to follow, which has increased their interest in attending classes and participating actively in school.

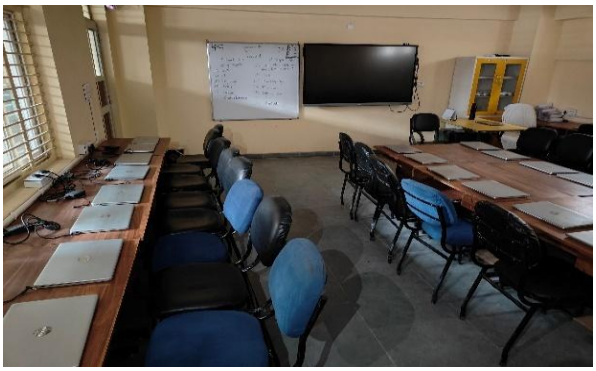
3. Improved Access to Practical, Digital, and Co-curricular Learning Opportunities

- The project **boosted the school's ability to deliver practical, hands-on learning through major improvements to its lab infrastructure**. According to teachers, dedicated computer lab and music room were newly established with all necessary equipment and resources, while the existing chemistry lab was scaled up with more space and improved facilities to support a richer practical learning experience.

- **Computer Lab:** The computer lab intervention achieved universal reach, with 100% of students (n=134) reporting use of the facility. Further, 97% confirmed that the upgraded lab can accommodate a full class of approximately 35-40 students, indicating that the intervention has delivered a spacious and inclusive lab environment.

- The computer teacher noted in interactions that prior to the project, limited lab facilities constrained students' access to hands-on, lab-based learning. With an additional computer lab set up under the project, access has improved considerably, allowing class schedules to be distributed more comfortably across grades.

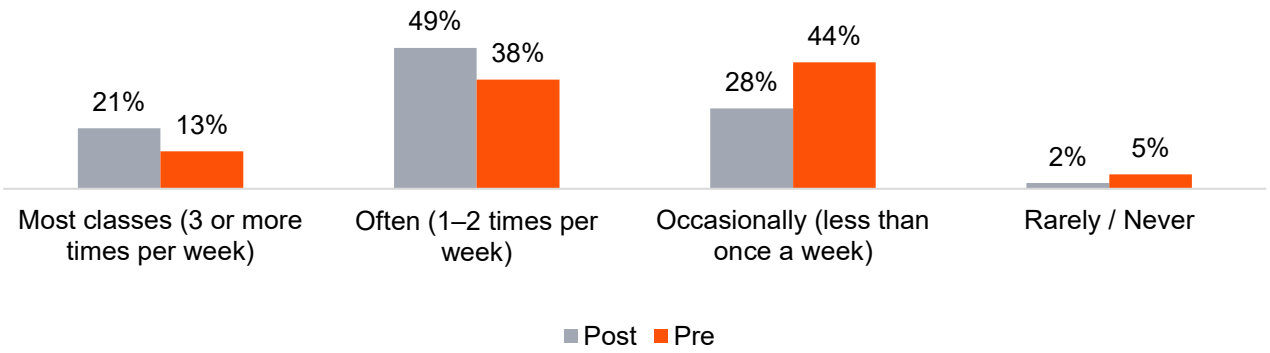
Image 27: Upgraded computer lab established under the project



- The survey data corroborates this, with students reporting computer lab usage in most classes (3 or more times per week) rising from 13% to 21%, and Often (1-2 times per week) increasing from 38% to 49%, together reflecting a clear shift towards more regular lab engagement.

- The decline in "Occasionally (less than once a week)" (44% to 28%) suggests **students have moved upward into higher-frequency usage**, while rare or no usage dropped from 5% to 2%, indicating improved integration of computer lab sessions into the school routine.

Figure 37: Pre- and post-project computer lab usage frequency (n=134)

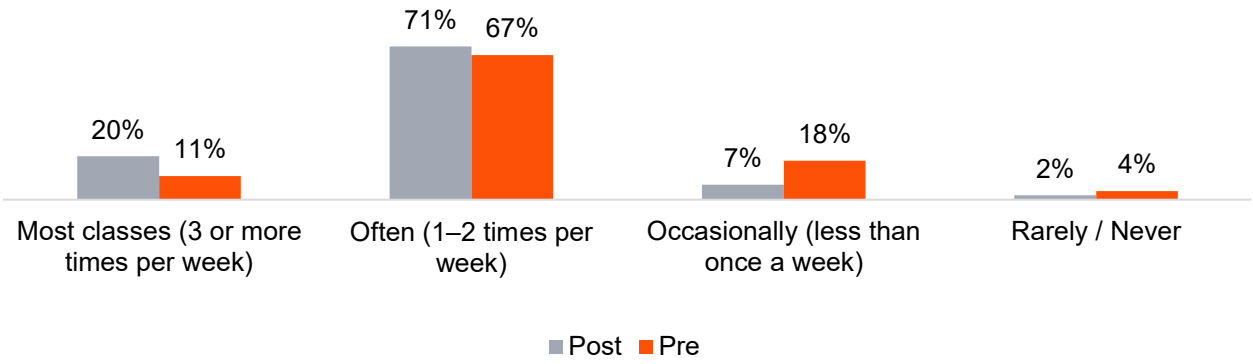


- **Chemistry Lab:** The chemistry lab was expanded to accommodate more students and upgraded with the necessary equipment and infrastructure to support practical learning sessions. The survey findings indicate that **68% of students (n=134) reported using the**

chemistry lab, with usage largely concentrated among students from Grades 10th, 11th, and 12th, where chemistry practical sessions form a key part of the curriculum.

- Chemistry lab usage improved notably after the intervention, with students using the lab in **most classes (3 or more times per week) increasing from 11% to 20%**, and **often (1-2 times per week) rising from 67% to 71%**, reflecting a clear shift towards more regular lab engagement. The share reporting **"Occasionally (less than once a week)" declined from 18% to 7%**, suggesting that students have moved upward into higher-frequency usage categories. At the same time, **rare or no usage halved from 4% to 2%**, indicating improved access to the upgraded chemistry lab.

Figure 38: Pre- and post-project chemistry lab usage frequency (n=91)



- The **improvement in usage was further supported by the expanded lab capacity**, with 97% of chemistry lab users (n=91) reporting that the **upgraded lab can now accommodate a full class of 35 to 40 students with enhanced safety**, enabling more students to participate in practical sessions together.
- The upgraded chemistry lab equipment **has strengthened students' practical learning experience** as 98% of students (n=91) shared that **with access to the necessary apparatus, experiments have become more effective and engaging**, enabling active participation in practical sessions, with only marginal scope for further enhancement.

Image 28: Upgraded chemistry lab under the project

Earlier, chemistry practicals were conducted using spirit lamps, which made **experiments slower and less convenient.** With the upgraded lab and piped gas supply for burners, **practical sessions have become smoother, safer, and more effective**, enabling greater student participation in experiments.

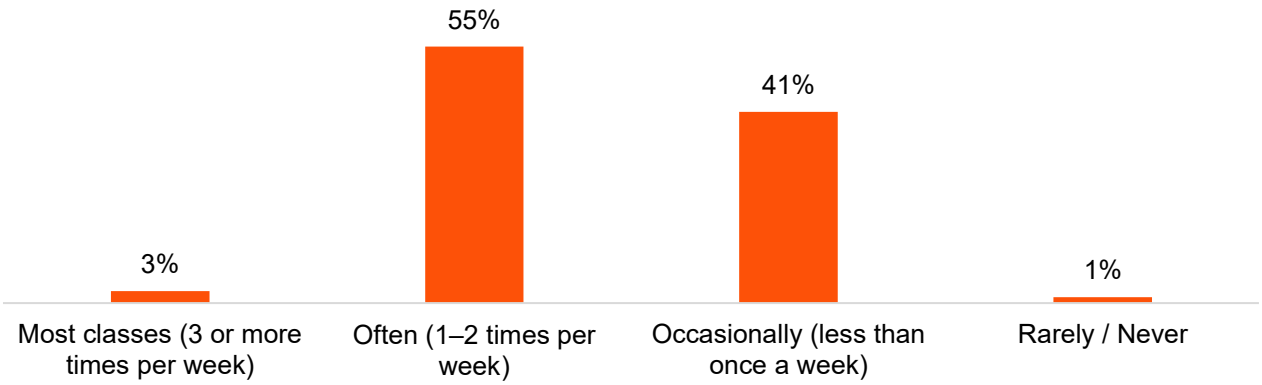
As narrated by a student during FGD interaction

- **Music Room:** The project supported the establishment of a dedicated music room, which, the principal shared during interactions, did not exist earlier. The school previously had very limited

musical equipment, used mostly for assembly events. 57% of students (n=134) reported using the music room, with usage being lower among higher grades (10th, 11th, and 12th) owing to academic commitments, as shared by teachers.

- Among students who reported using the music room, 58% (n=77) accessed it regularly, including 3% attending music room sessions three or more times a week and 55% attending one to two times a week. Another 41% reported occasional use, while only 1% reported rare or no usage, indicating that the newly established music room has been effectively integrated into students' co-curricular learning experience. Teachers further noted that, beyond its role as a co-curricular resource, the music room enables career exploration for interested students and serves as a platform for developing multi-skilling competencies.

Figure 39: Music room usage frequency post lab creation (n=77)

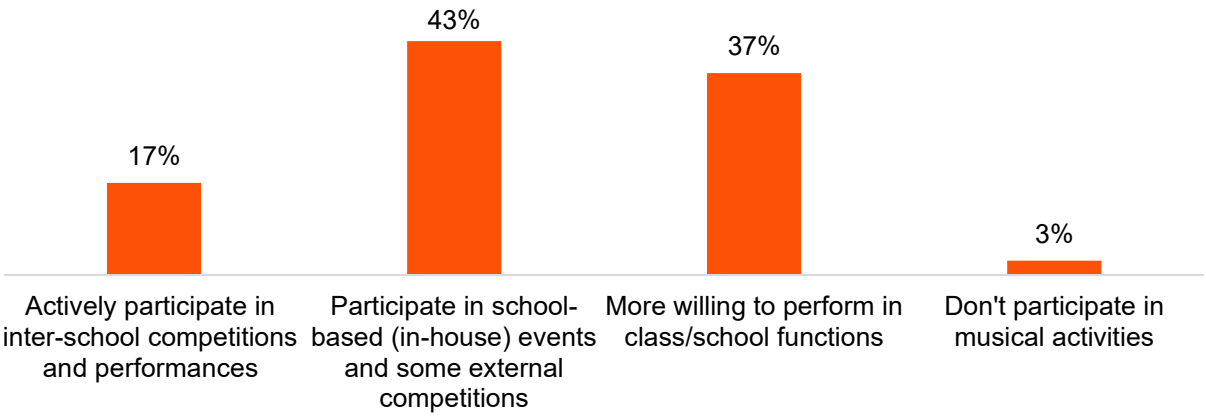


- Alongside increased usage, the quality of music learning has also improved. 96% of music room users (n=77) reported that better equipment is now available and has led to a noticeable improvement in learning, reflecting the value of dedicated infrastructure and instruments in supporting practical music education.

Image 29: Some of the musical instruments and equipment housed in the established music room

- The **improved infrastructure has translated into progressive musical skill development among students**. While 47% reported developing basic musical skills, 37% shared that they are now comfortable with at least one instrument, and 16% reported learning multiple instruments.
- The **music room has also encouraged greater confidence and participation in performances**. Students reported increased involvement in class activities, school events, and external competitions, indicating stronger engagement in co-curricular learning, as depicted in the graph below.

Figure 40: Student participation in musical performances and competitions (n=77)



- Taken together, the lab-related findings demonstrate that the project strengthened multiple forms of learning: digital learning through the computer lab, practical science learning through the chemistry lab, and creative development through the music room. This reflects a broad-based improvement in the learning environment.

4. Improved Energy Efficiency and School Communication Systems

- The project **strengthened school operations** through the installation of a 78 kW on-grid solar power system[16] and a school-wide public announcement system, **improving energy management and enabling faster communication across the school premises**.

Image 30: Solar panels installed on the school terrace under the project.

- A **high level of awareness was observed among students regarding solar intervention**, with 95% of students (n=134) confirming that they were aware of the solar power system installed under the project.
- During the discussion, the school principal shared that the installation aligns with the school's broader goal of becoming more sustainable and reducing dependence on conventional energy sources.
- The principal further shared that, following installation, the school formalised a tie-up with the local discom of Uttar Pradesh Power Corporation Limited for net metering[17]. This arrangement has enabled the school to receive benefits on its electricity bills while contributing to sustainability.

[16] A grid-connected solar system, also known as an on-grid or grid-tied solar system, is a photovoltaic (PV) system that is directly connected to the public utility grid. This system generates electricity from solar panels and feeds it into the grid.

[17] Net metering is a billing mechanism that allows solar energy system owners to receive credits for excess electricity they generate and send back to the grid.

Earlier, our monthly electricity bill used to be around ₹2 to 2.2 lakhs. After the solarisation project, and **once we tied up with the local discom for net metering, it has come down significantly, ranging between ₹95,000 to ₹1.5 lakhs depending on usage patterns and seasonal variation**. These **savings are now channelled towards meeting other requirements across the school**, and importantly, **they give us greater flexibility during budget planning**.

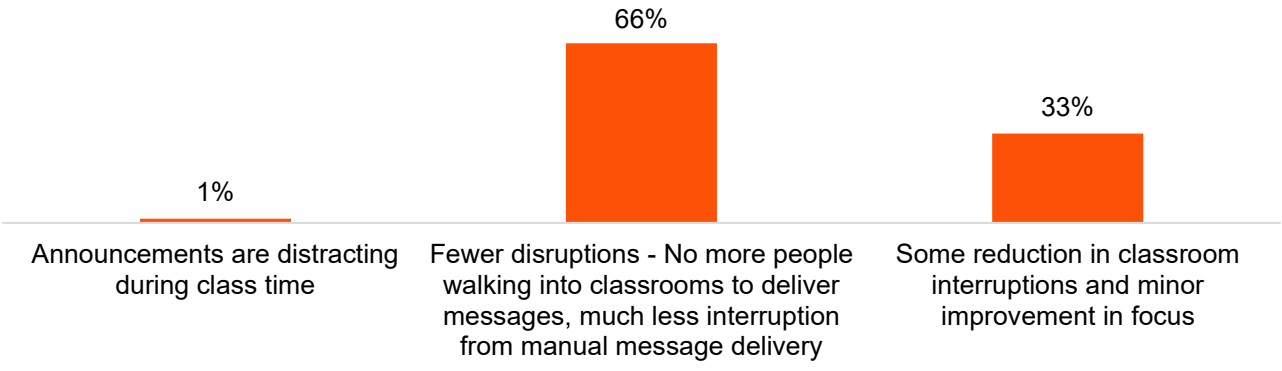
As narrated by the school principal during interaction

- The principal further shared that the solar power system is **maintained internally by the school's in-house electrician, with regular cleaning and upkeep** carried out to ensure efficient functioning and long-term performance. He also noted that all **assets provided under the project are being maintained in-house by the school**, reflecting institutional ownership and strengthening the long-term sustainability of the interventions.
- In addition to improving energy management through solarisation, the project also strengthened the **school's internal communication system through the installation of a school-wide public announcement system**.
- The public announcement system is being used regularly across the school. **60% of students (n=134) reported that announcements are made several times a day**, 29% reported usage once a day, and 11% reported usage a few times a week. This indicates that the **system has become an active and consistent part of the school's communication process**.

Image 31: Public announcement system installed under the project

- The system has improved the speed and reach of school communication, with 96% of students (n=134) reporting that messages now reach everyone instantly across the school. The system has also helped reduce classroom interruptions by minimizing the need for manual message delivery during lessons. The changes in classroom disruptions after the installation of the system are depicted in the graph below.

Figure 41: Classroom disruptions after installation of the public announcement system (n=134)

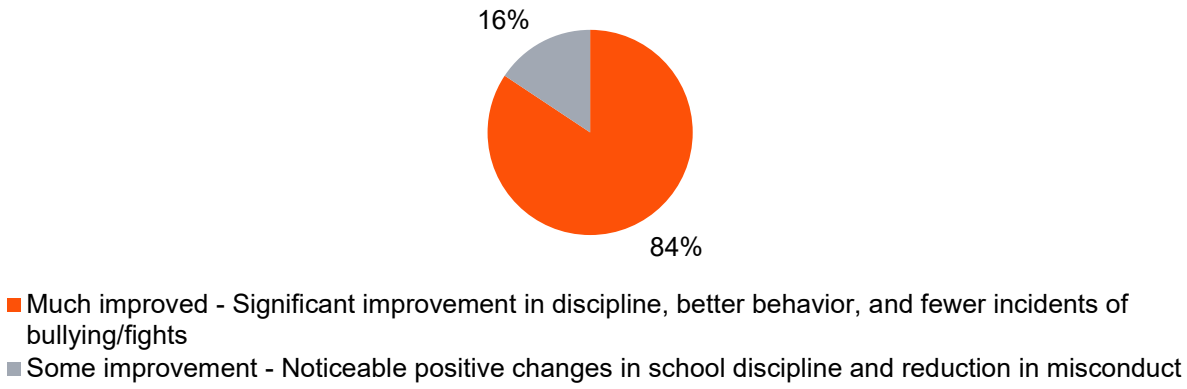


5. Enhanced Safety, Discipline, and Student Confidence within the School Environment

- The project strengthened the school's surveillance infrastructure through the addition of CCTV cameras, monitoring screens, and supporting storage and operating systems. During the discussion, **the principal shared that earlier surveillance coverage was largely limited to school corridors due to the limited number of cameras**. The **project helped expand coverage across the school and upgraded the system from existing HD CCTV cameras to better-quality IP camera-based surveillance**, enabling improved monitoring and oversight of the premises.

- **Student awareness of the surveillance cameras was universal**, with 100% of students (n=134) reporting that they were aware of the addition of cameras in the school premises. Further**, 71% strongly agreed** that camera surveillance made them **feel much safer,** while **29% agreed** that monitoring of the premises made them **feel safer**.

Figure 42: Improvement in school discipline after additional CCTV installation



- The intervention has positively influenced discipline and orderliness, with **84% of students (n=134) reporting significant improvement** and **16%** noting some improvement. This suggests that the **presence of surveillance cameras has supported greater behavioural accountability and helped create a more structured school environment**.

- Students also shared during interactions that the **expanded CCTV coverage has been helpful in locating misplaced belongings such as books and cash**. They noted that the **surveillance system provides reassurance**, as items can now be traced more easily within the school premises.

Image 32: Upgraded Surveillance Room with Additional Monitoring Screens and CCTV Camera Feed

- Overall, the surveillance intervention has strengthened everyday monitoring, student reassurance, and discipline across the school, contributing to a safer and more organized learning environment.

6. Improved Student Well-being, Access, and Recreation

- The project contributed to students' well-being, access, and overall school experience through targeted improvements in daily school services and recreational infrastructure. These included the introduction of a roti maker to strengthen the school meal system, renovation and expansion of playground slides, and provision of transport services to support students commute to school.

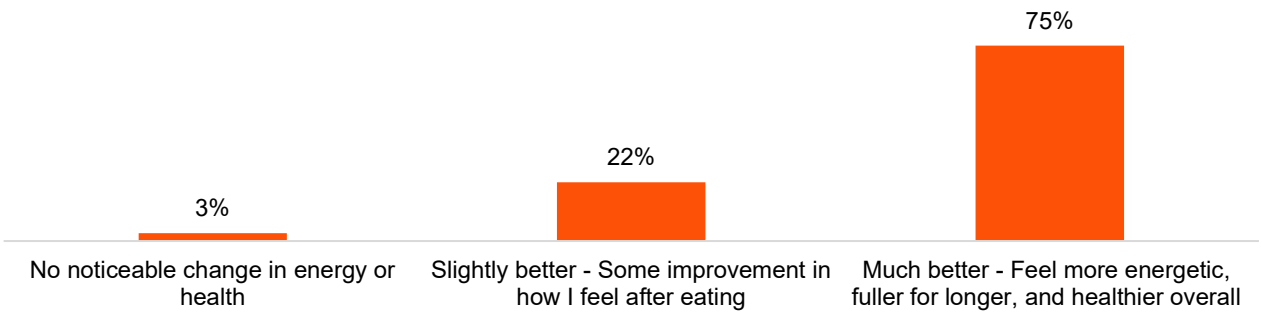
- During the interaction, the school principal shared that preparing rotis for the entire school lunch was earlier a time-consuming and labour-intensive process, as it involved multiple steps and significant staff effort. As a result, the school often relied on alternatives such as bread, pav, or idli in place of rotis; however, these substitutes were less preferred, as the local rural population traditionally favours both roti and rice as staple components of their meals.

- The principal also shared that with the **installation of the roti maker, the school has formally included rotis in the lunch menu twice, and sometimes thrice, a week**. This was corroborated by student responses, with 97% of students (n=134) reporting that they **receive rotis on the designated days in the school menu**. The addition of rotis was well received, with 94% of students (n=134) **stating that they liked rotis very much or somewhat**, **indicating strong student acceptance**.

Image 33: Fresh rotis being prepared using the roti maker provided under the project

- The addition of rotis to the school meal menu **positively influenced students perceived nutrition and energy levels**. 75% of students (n=134) reported feeling much better, stating that they felt more energetic, fuller for longer, and healthier overall, while 22% reported slight improvement.

Figure 43: Impact of roti addition in the meal menu on students' nutrition and energy levels (n=134)



- In addition to strengthening the meal system, the project enhanced students' recreational experience through the renovation of existing slides and expansion of playground facilities, majorly used by primary and pre-primary students.

- Teachers shared that children now use the playground more comfortably and actively. Earlier, some swings and slides were rusty or damaged, creating safety concerns and requiring close supervision. After the renovation, the equipment has become safer and more reliable, giving teachers greater assurance while students use the play area.

Image 34: Renovated Playground Slides and Swings Under the Project

- Beyond improvements within the school premises, the project also supported students' access to school through the addition of two buses, each with a seating capacity of 50+1, to the school's existing fleet. This helped the school cover additional routes, improving commute convenience and supporting regular attendance among students.
- The added buses have been widely used by students, with 80% of students (n=134) reporting that they travel through the buses provided under the project. This indicates that the transport support is being actively utilised and has helped strengthen students' access to school.
- Among bus users, 97% (n=107) reported an increase in attendance since the introduction of the buses. Notably, 33% reported a significant rise of more than on an average 20 extra days per year, 46% reported a moderate increase of 10-20 days, and 18% reported a slight increase of 5-10 days. Only 3% noted no significant change, indicating that reliable transport has directly translated into more consistent school participation.

Image 35: One of the two buses provided under the project

- All bus users (100%, n=107) reported a more comfortable and reliable commute compared to their earlier mode of transportation, with 42% finding it much more comfortable and convenient and 58% finding it somewhat more comfortable.

> Earlier, coming to school from far-off areas was difficult because we had to travel by e-rickshaw. The journey took a lot of time and was uncomfortable, and sometimes we had to change multiple e-rickshaws to reach school. With the bus service now available, travelling has become much more comfortable and convenient. The journey is so comfortable that we are sometimes able to study or revise while travelling in the bus.in experiments.
>
> **As narrated by a student during FGD interaction**

- In terms of seating and space inside the bus, **63% (n=107) of bus users reported very comfortable seating with adequate space for all students**, while **33%** described it as comfortable with occasional crowding. A small share (**4%**) noted that the buses**, though acceptable, are crowded and may warrant additional capacity**, **pointing to a potential area for further enhancement as ridership grows.** During interactions, students also shared that

although the bus service has improved commute convenience, the **pick-up points remain far for a few students, extending up to 10 km in some cases**, making the daily commute still somewhat challenging.

7. **Improved Student Well-being, Access, and Recreation**

- **The cumulative impact of the project is reflected in students' improved attitude towards attending school**. 70% of students (n=134) reported that they feel much more enthusiastic and look forward to school every day, while 28% reported a more positive attitude towards school. Overall, **98% of students reported a positive shift in how they feel about attending school**.
- Students also reported **high satisfaction with the improvements made under the project**. 58% of students (n=134) stated that the **additions have excellently transformed their overall school experience**, while 40% **reported that the improvements have made the school much better overall**.
- Together, these findings **indicate strong student acceptance of the project interventions**. Improved learning infrastructure, safety, transport, meals, recreation, and school operations have **collectively contributed to a more engaging, supportive, and student-friendly school environment**.

IRECS Analysis

Parameters	Assessment from study
Inclusiveness	• The project directly **targeted girl students in a rural school setting, addressing a critical beneficiary group for inclusive development**. Support such as digital classrooms, labs, transport, meals, recreation, and safety infrastructure collectively improved access, participation, and learning conditions for students across Grades. • **Transport support significantly strengthened inclusion for students from distant areas**, with 80% (n=134) respondents using project-supported buses and 97% of **bus users reporting improved attendance**. • The **interventions addressed both academic and non-academic needs of students,** including digital learning, practical labs, music education, nutrition, safety, and recreation. This reflects a **holistic inclusion approach, especially relevant for adolescent girls whose retention depends on supportive school environments beyond classroom teaching**.

Parameters	Assessment from study
Relevance	• The **selected interventions responded closely to school-level gaps identified before implementation**, including limited digital classrooms, constrained lab access, inadequate surveillance coverage, manual meal preparation, and transport challenges. This indicates that the **project design was need-based rather than generic**. • The **project's relevance is further reflected in high student usage and acceptance**. Digital classrooms, computer labs, buses, PA systems, and improved meals became regular parts of school life, **showing that the assets created were not peripheral but directly connected to daily student needs**.
Effectiveness	• The digital classroom intervention **was highly effective**, with 97% of students attending smart board-enabled classes daily and 98.5% **reporting improved academic performance**. Students **linked this improvement** to audio-visual learning, practical demonstrations, and more engaging classroom experiences. • Lab upgrades **improved practical and co-curricular learning outcomes**. **Computer lab usage increased** in higher-frequency categories, chemistry lab users reported **better practical engagement and safety**, and music room users **showed improved skills, confidence, and participation in performances and competitions**. • The project effectively **strengthened school operations through CCTV surveillance and the public announcement system**. All students were aware of CCTV coverage, all reported improved discipline, and 96% confirmed that announcements now reach everyone instantly, indicating **better safety, monitoring, communication, and day-to-day coordination**. • The solarisation intervention was **effective in improving operational efficiency and reducing recurring costs**. The 78-kW solar plant helped lower monthly electricity bills from around ₹2 to 2.2 lakhs to ₹95,000 to ₹1.5 lakhs, **enabling savings to be redirected towards other school requirements**. • The project **effectively improved student well-being and school experience**. Bus users reported **better attendance and commute comfort**, 97% students confirmed receiving rotis on designated days, and 98% students reported a **more positive attitude towards attending school after the interventions**.
Convergence	• The solar intervention **shows convergence with local public systems** through the school's tie-up with the Uttar Pradesh Power Corporation Limited discom for net metering. This enabled electricity bill reductions and linked the **project funded asset with a formal government utility mechanism, improving operational value.** • The project also **converges with broader education sector objectives under national programmes such as Samagra Shiksha**, particularly around

Parameters	Assessment from study
	improved infrastructure, digital learning, girls' participation, safety, and retention. Its activities **complement public policy priorities** while being implemented through a school-based civil society partner.
Sustainability	• The project demonstrates **strong sustainability as the supported assets have been integrated into routine school operations**. Digital classrooms, laboratories, buses, CCTV cameras, public announcement system, roti makers, playground infrastructure, and solar power are **being actively used**, **indicating continued relevance beyond initial installation**. • The solar power system **adds both operational and financial sustainability to the project**. By reducing monthly electricity bills, it lowers **recurring expenditure and enables the school to redirect savings towards other institutional needs.** • Institutional ownership is a key sustainability strength. The **school has taken responsibility for maintaining all project-supported assets internally**, with regular upkeep carried out by in-house staff to ensure their efficient functioning and long-term performance.

Alignment to the UN SDGs & SBI Card's ESG Goals

The project is also **aligned with the following UN Sustainable Development Goal (SDGs):** 3 - Good Health and Well-being, 4 - Quality Education, 5 - Gender Equality, and 7 - Affordable and Clean Energy.[18]

The project is also **aligned with SBI Card's internal ESG goal** of "Transforming the education of 1 lakh individuals by FY 2027 and 5 lakh individuals by FY 2030 through Corporate Social Responsibility (CSR) programme's".

Project Recommendations

The study identified the following project level recommendations which has been summarised below:

- **Scale Transport Support to Improve Last-Mile Access:** Given the strong uptake and positive impact of the buses on attendance, comfort, and regular school participation, transport support can be considered for scale-up in future phases. While most bus users reported improved commute convenience, a small share of students noted occasional crowding, and some students still travel long distances, up to 10 km, to reach pick-up points. Adding more buses or expanding routes can

[18] Source: https://www.un.org/sustainabledevelopment/

help reduce crowding, improve last-mile access, and further support attendance and retention among girls from distant rural areas.

Case Stories

Case Story: Rani's Journey to School Became Safer and More Comfortable

- Rani (Name changed for anonymity), a student of PPES School, lives in a village located more than 10 km away from the school. Earlier, her daily commute was difficult and tiring. Since the existing school bus on her route was already full and often crowded, she had to depend on e-rickshaws to reach school. The journey was uncomfortable, time-consuming, and sometimes unpredictable. On some days, she had to wait for long periods or change vehicles, which made her feel exhausted even before classes began.
- When Rani heard that the school was adding another bus on her route, she felt very happy and relieved. She knew that this would allow more students like her to travel safely and comfortably. Later, when the new bus started operating, she noticed SBI Card's branding on it and came to know that the bus had been supported by SBIC under the project.
- For Rani, the new bus has made a meaningful difference. Her struggle with e-rickshaw travel has ended, and she now reaches school in a more comfortable and reliable manner. She feels grateful for the support, as it has made her daily school journey easier, safer, and less tiring.

Case Story: A New Computer Lab, A New Aspiration - Meera's Growing Interest

- Meera (Name changed for anonymity), a student of PPES School, always had a strong interest in computers and wanted to spend more time learning practical computer skills. However, before the project intervention, the school had limited computer lab facilities, and many students had to share access. As a result, Meera could attend computer lab sessions only about once a week, which often felt insufficient for her learning needs.
- With support from SBI Card under the project, a new computer lab was established in the school. This significantly improved access for students like Meera. She now gets to use the computer lab multiple times a week, giving her more opportunities to practise, explore digital tools, and strengthen her understanding of technology.
- Meera shared that the increased lab access has made computer learning more engaging and enjoyable for her. She feels more confident while using computers and is excited to learn new concepts during practical sessions. For her, the computer lab is not just a classroom facility, but a space that brings her closer to her future aspirations.
- Meera hopes to work in the IT sector one day. She feels grateful to her school and SBI Card for creating this opportunity, which has helped nurture her interest and confidence in technology.

07

Project 4: Sponsoring Four School Buses and Solar Street Lights enabling Safe Access to Education for Underserved Children

About the Project

SBI Cards and Payment Services Limited, in partnership with Lotus Petal Charitable Foundation, supported the project titled "**Sponsoring Four School Buses and Solar Street Lights enabling Safe Access to Education for Underserved Children**" at Lotus Petal Senior Secondary School, Dhunela, Gurugram. The project was designed to strengthen quality education for students from underserved communities by addressing two critical barriers: safe transportation to school and secure, well-lit school infrastructure.

The intervention supported the procurement of **four school buses** and the installation of **90 solar streetlights** across the school's boundary wall and playground areas. The buses were introduced free of cost to improve access to the Dhunela campus for children from low-income households, many of whom live at a significant distance from the school. At present, the school operates a total fleet of 22 buses, of which 13 are hired and 9 are owned. The four buses supported under this project form part of the school's owned fleet and play an important role in strengthening its transportation capacity. The solar streetlights were intended to strengthen campus safety, improve visibility, support school operations during low-light conditions and power outages, and contribute to the school's broader sustainability orientation. This intervention was particularly relevant in the context of the Dhunela campus, where regular attendance depends significantly on safe and reliable access.

Lotus Petal Senior Secondary School serves children from economically vulnerable families, many of whom would face difficulty in reaching the campus consistently without organised transport support. At the same time, the scale of the campus requires adequate safety and lighting infrastructure to support student movement and school operations. In this context, the project addressed practical barriers that influence not only enrolment, but also regular attendance, parental confidence, and continuity of education[19].

Below figure provides an overview of the project specific:

Figure 44: Project Overview

The following infrastructure facilities were supported under the project for students of Lotus Petal Senior Secondary School, Dhunela:

[19] Source: As per the MoU and Annual Project Report (FY24-25) shared by SBIC and LPF respectively.

Figure 45: Facilities Provided in the School

School Buses:

The project supported procurement of four (4) Starbus Prime (51+A+D LP 910/52) CNG buses. The buses were intended to transport students from different locations to the Dhunela campus through fixed routes aligned with the school calendar.

The buses included associated components such as registration, insurance, CCTV cameras, GPS, and maintenance support. The intervention also included a four-year annual maintenance contract (AMC).

Solar Street Lights:

The project supported installation of 90 semi-integrated solar streetlights across the playground and boundary wall areas. The solar light systems included luminaries, LiFePO4 batteries, PV panels, GI poles, and fixing accessories.

The solar lights were installed to improve campus visibility, support safety during low-light conditions, and reduce dependence on grid electricity.

Method of Impact Assessment

The impact assessment study leveraged an integrated and cohesive approach to assess the social impact transpired since the project's implementation. A kick-off meeting was held with SBI Card and Lotus Petal Foundation to understand the nature of support for this project and align the requirements for starting the assessment exercise.

Following the meeting, PWCALLP received following **project documents**:

Following the meeting, PWCALLP received following **project documents**:

- Memorandum of Understanding (MoU) containing project details agreed with Lotus Petal Foundation and SBI Cards
- Closure report of the project
- Beneficiary details of the project

PWCALLP team then began the project's **desk review** based on the information collected during the kick-off meeting and from the project documents. This helped our team in designing the assessment framework and **finalising the key stakeholders** for the interactions.

In consultation with SBI Card, **a mixed-methodology approach combining quantitative and qualitative research** was deployed for the assessment. The quantitative study generated evidence-based insights, while qualitative methods captured stakeholder perspectives and experiences to validate findings and understand actual impact. Research techniques included student surveys and in-depth interviews with parents, teachers, school leadership, and the Lotus Petal Foundation team to ensure a comprehensive evaluation.

The project was implemented at **Lotus Petal Senior Secondary School, Dhunela, Gurugram**, with the objective of enabling safe access to education for underserved children through the provision of **four school buses** and **90 solar streetlights**. A sample size of 84 students was determined at a 95% confidence level with a 5% margin of error. Owing to mobilisation efforts during data collection, a slightly higher sample of 86 students was successfully covered. In addition, qualitative interactions were conducted with key stakeholders including **parents / guardians**, **teachers**, **school management**, and **representatives from Lotus Petal Foundation**. The assessment focused on understanding the project's contribution to access, attendance, punctuality, student safety, affordability, campus security, and sustainability outcomes.

The qualitative sampling plan is as follows:

Table 1: Sampling Distribution

Stakeholders	Quantitative	In-Depth Interview
Principal		✓
Teachers		✓
Students	✓	
Parents		✓
Lotus Petal Foundation Team Member		✓
SBIC Team Member		✓

The responses collected from the stakeholders' interactions were analysed to arrive at detailed findings as depicted in the next section.

Analysis and Findings

This section summarises the findings from the desk review and interactions.

Profile of the respondents

Figure 46: Gender profile of the respondents (n=86)

This section presents the socio-demographic profile of the respondents, emerging from quantitative interactions carried out with student beneficiaries (n=86) to understand the impact of the project.

Figure 47: Class of respondents (n=86)

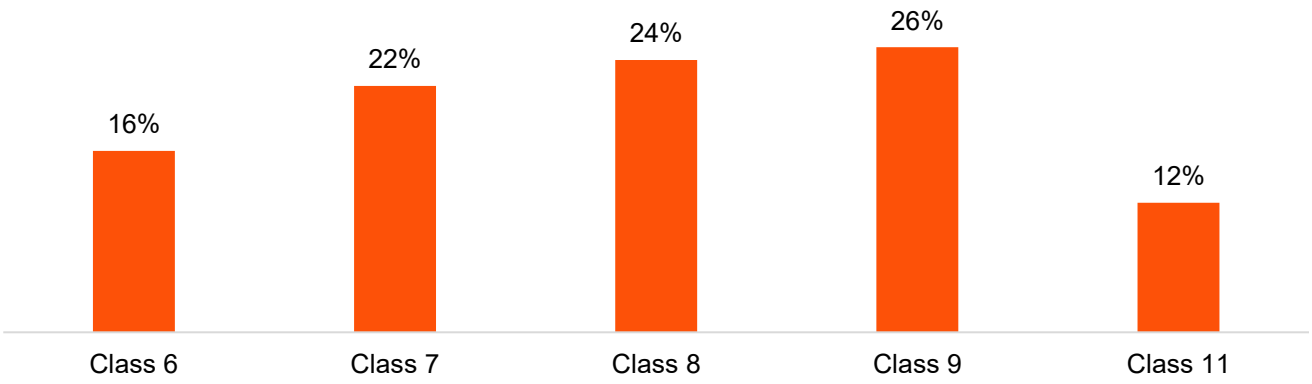
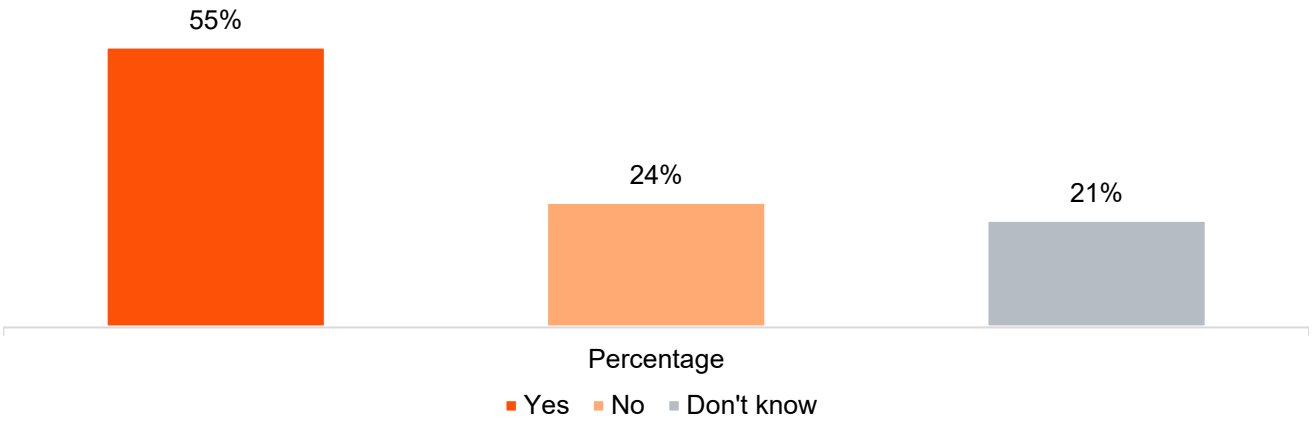


Figure 48: BPL card in the family (n=86)



The quantitative survey covered students from **Classes 6 to 11** (n=86), with the highest representation from Class 9, accounting for 26% of the total respondents. This was followed by Class 8 at 24%, Class 7 at 22%, Class 6 at 16%, and Class 11 at 12%. The distribution reflects participation across middle and secondary grades,

allowing the assessment to capture perspectives from students who regularly use the school bus and campus infrastructure.

The respondent group represents students who are direct beneficiaries of the project-supported infrastructure, particularly the school bus service and the solar lights at the campus. Since the school draws students from multiple locations, including areas situated at a distance from the Dhunela campus, the survey captured views of students for whom organised transport played an important role in ensuring regular and safe access to school.

The students primarily belong to economically vulnerable households. In the survey, **66% of respondents (n=86) reported that their families have a BPL card**. Qualitative consultations further indicate that many parents are engaged in occupations such as security work, housekeeping, driving, carpentry, construction work, domestic work, gardening, delivery services, and other support roles. This profile reinforces the relevance of the project in reducing transport-related barriers and supporting continued education for children from low-income families.

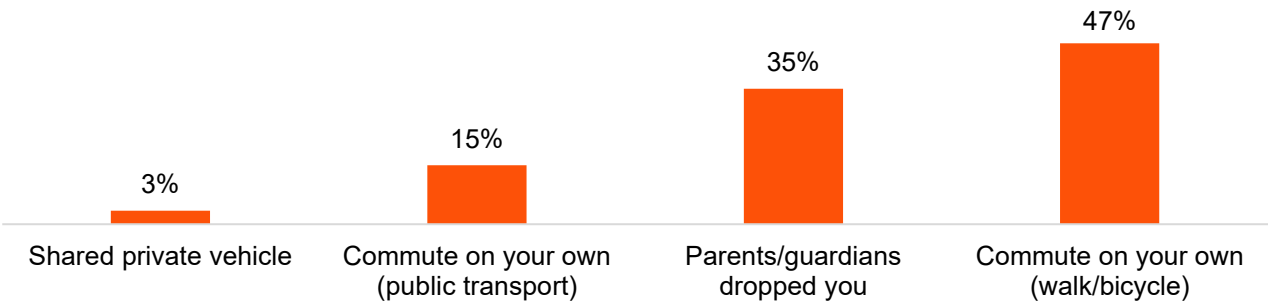
Summary of Impact Created

This section presents key findings from the impact assessment study, providing an evidence-based foundation for strategic recommendations and future project improvements.

1. Improved Affordability and Convenience of School Access for Families

- The project has generated important benefits for families by reducing the financial and practical pressures associated with sending children to school. This is particularly significant given that the beneficiary group includes children from economically vulnerable households, where education-related decisions are often shaped by daily costs, travel time, and safety considerations.

Figure 49: Mode of Transport Before School Bus (n=86)



Before the school bus facility was available, students relied on less convenient and, in some cases, less secure modes of transport. **Around 47% of students walked or cycled to school**, **35% were dropped by parents or guardians**, **15% used public transport,** and **3% travelled through shared private vehicles (n=86)**. The bus service has therefore replaced fragmented travel arrangements with a structured, predictable, and supervised mode of transport.

- This shift is important from both access and household convenience perspective. Walking, cycling, public transport, or parent-led drop-offs created daily strain for families, especially when parents are engaged in wage labour, shift-based work, or informal employment. A fixed and reliable bus service has reduced uncertainty and makes it easier for families to plan their day. This is reflected in the student responses, with **98% reporting that they found the bus schedule convenient** (n=86), indicating that the service was well aligned with student needs and school timings.

- The affordability benefit is equally evident. **Almost all the students reported that no separate fee is charged for using the bus facility**, while the remaining respondents appeared to be unsure about the fee arrangement. **80% (n=86) of the students said that this has reduced travel expenses for their families "very much"**. This suggests that the project has eased a recurring household cost that might otherwise affect school attendance and continuity.

- Parents also highlighted that the school's subsidised fee structure, with an **annual fee of INR 18,000 payable in three instalments**, made education relatively more manageable for them. The absence of a separate transport charge adds further value in this context. The bus service therefore functions not only as a mobility solution, but also as an affordability enabler. The findings suggest that, **without the bus facility, families may have incurred additional transportation costs, potentially increasing their financial strain on monthly basis**. For families from economically vulnerable backgrounds, such a recurring expense would have placed an additional burden on household budgets. The availability of safe and organised transport at no additional cost therefore reduces the need to spend on alternate travel arrangements, saves the time otherwise required for daily drop-offs, and makes continued schooling more feasible.

Image 36: School Bus Provided Under the Project

2. Improved Access, Attendance and Continuity of Education

- The school bus service addresses one of the most important operational requirements of the Dhunela campus: **enabling students from dispersed locations to reach school safely and regularly**. The bus service is not positioned as a limited or selectively allocated facility, but as an operational support system that enables regular access to the school for students commuting from different locations.

- Discussions with the school administration indicate that transport coverage is planned based on **route feasibility**, **school calendar**, and **student requirements**, and is reviewed periodically to align with demand. At present, the school operates a fleet of **22 buses,** of which **13 are hired and 9 are owned**. The **four buses supported under this project** form part of the owned fleet and have strengthened the school's transport capacity (n=86).

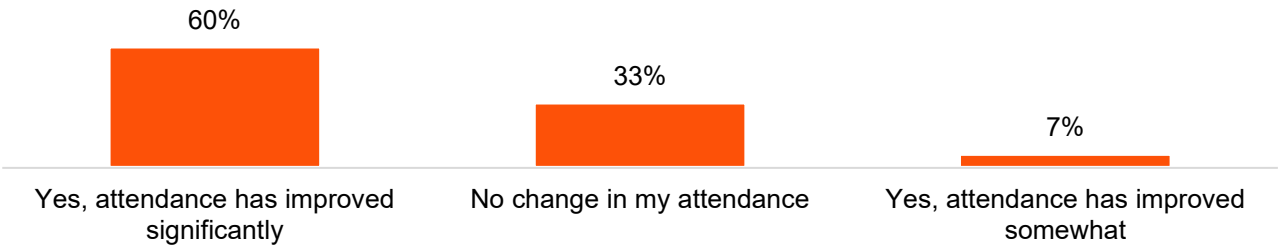
- Students also reported a clear improvement in the ease of commuting. About **91% said that coming to school is now "very easy"**, while **the remaining 9% said it is "easy"** (n=86). This

suggests that the intervention has reduced the difficulty associated with daily travel and made school access more predictable and manageable for students.

Figure 50: Arrival of School Bus on Time (n=86)

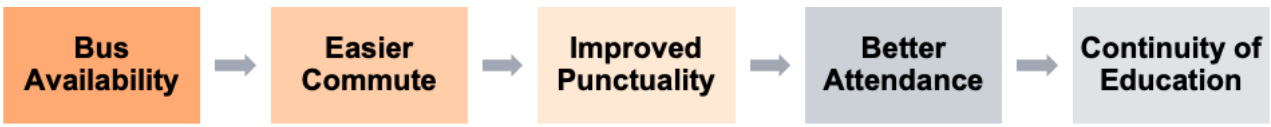
- The project has also contributed to improved punctuality. Around 94% of students reported that they always arrive at school on time since the bus service began, while the remaining 6% said they arrive on time on most days (n=86). This is an important outcome, as punctuality has a direct bearing on classroom participation, learning time, and overall school discipline.
- The attendance-related findings are also positive. About 60% of students (n=86) said that their attendance improved significantly after the introduction of the bus service, while another 7% said that it improved somewhat. This perception-based evidence is supported by project data, which recorded average attendance of bus-commuting students at 88%, exceeding the target of more than 80%.

Figure 51: Improvement in Attendance due to Bus Service (n=86).



- Discussions with the principal and the Lotus Petal Foundation team indicated that transport support became especially important after the school shifted from Silokra to Dhunela. Without a reliable transport system, some students may have found it difficult to continue at the new campus. **Parents also shared that the school's current location would have been difficult to access without the bus facility**.

Figure 52: Reliable transport helped convert physical access into educational continuity



3. Strengthened Student Safety and School Environment

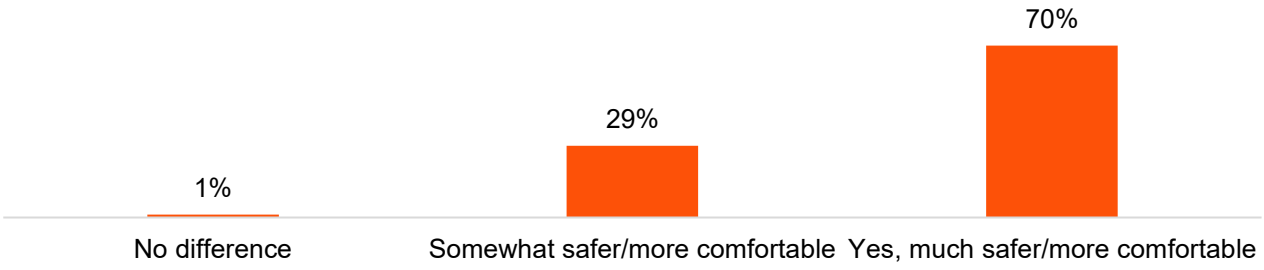
- Safety is a critical factor in ensuring regular school attendance, particularly for children travelling from low-income communities to a school located at a distance. In this project, safety was strengthened not through a single intervention, but through a combination of transport support

and campus infrastructure. The school buses, and solar streetlights together created a safer and more supportive environment for students both during their commute and within the school premises.

- The bus service played an important role in improving students' sense of safety while travelling to school. **All students reported noticing cameras installed on the buses**, and **92% said that these safety features make them feel much safer** (n=86). This is significant because for children travelling daily, the journey to school can influence not only comfort but also consistency of attendance. The presence of cameras appears to have functioned both as a monitoring mechanism and as a reassurance measure for students and parents.

- Students also reported positively on the quality and reliability of the bus service. Around **86% described the buses as always clean and well-maintained**, and **88% said they had not experienced delays or operational problems** (n=86). These findings suggest that the bus service is not only widely used but is also being delivered in a manner that supports student comfort and confidence. Teachers and school representatives added that each bus is supported by designated staff, including a teacher in-charge, didi, driver, and conductor, with first-aid support also available. This structured supervision reduces travel-related risk and adds a layer of assurance for families.

Figure 53: Comfort in movement in school due to solar streetlights (n=86).



- The solar streetlights added another important layer to the school's safety infrastructure. Installed across the boundary wall and playground areas, the lights improved visibility in key parts of the campus and strengthened safety during low-light conditions, particularly during winter mornings, power cuts, and activities extending beyond regular school hours. Almost all students were aware of the solar lights, and all of them said that school areas are well lit because of these lights. Around **70% of students (n=86) said the lights make movement in school during evening much safer or more comfortable**, while another **29% felt that they improve comfort and safety to some extent**. This indicates that solar lighting has become a visible and valued part of the school environment.

Image 37: Solar Streetlights at the school

- The usefulness of the solar lights was especially evident during power cuts and in supporting school activities beyond regular class hours. Around **77% of students said that the lights help a lot during electricity disruptions**, while **another 21% said they help a little** (n=86). School management also noted that the **lights support security checks and make it easier to conduct frequent evening activities on campus, including practice sessions for sports, preparations for school events, and visits held after regular school hours**. While most students leave school during daylight hours, the solar lights add value by improving visibility and safety whenever activities extend into the evening, while also helping maintain campus functionality during electricity disruptions.

- In addition to improving safety and visibility, the solar streetlights also appear to have contributed to operational and sustainability benefits for the school. The **LPF team members** indicated that the **solar lights helped reduce dependence on conventional electricity, particularly in keeping parts of the campus illuminated during power cuts and after daylight hours**. These perceived benefits are also highlighted by the principal, which estimate savings of around **690 units of electricity per month**, translating into approximately **INR 5,000 in monthly cost savings** and a **reduction of about 641 kg of CO_2 emissions per month**[20]. Taken together, these findings suggest that the intervention added an environmental dimension to the project and demonstrated how school infrastructure can create both social and sustainability value.

Figure 54: Student perception about the school post infrastructure support (n=86)

- The combined effect of safer transport and improved campus infrastructure is reflected in students' overall perception of the school. About **93% said that because of the bus and solar lights, their school feels much better than before, while the rest said it feels better than before** (n=86). Notably, all students said these facilities help them attend school regularly, and **95% said they would like to continue studying in the school** (n=86) because of them.

IRECS Analysis

Parameter	Assessment from study
Inclusiveness	• The project demonstrates strong inclusiveness as it supports students from **underserved and economically vulnerable households** enrolled at Lotus Petal Senior Secondary School. The student survey indicates that **55% of respondents reported having a BPL card**, while qualitative consultations highlighted that many students come from families engaged in **low-income**

[20] Source: As per the Annual Project Report (FY24-25) shared by the Lotus Petal Foundation.

Parameter	Assessment from study
	occupations such as security work, housekeeping, carpentry, construction work, domestic work, driving, gardening, and delivery services. • The bus service has wide reach among surveyed students. All **86 students** reported using the bus service, and **99% reported using it daily**. This suggests that the intervention is not limited to asset creation but is actively used by the intended student group as part of their routine access to school.
Relevance	• The project is highly relevant to the needs of the students and the school. The Dhunela campus serves students from multiple locations, and distance from school was identified as a key access barrier. Before the bus service, students relied on walking or cycling, parent drop-offs, public transport, or shared private vehicles. These arrangements were less predictable and could create safety, cost, and time-related challenges for students and families. • The survey findings show that the bus service addressed this gap effectively. **91% of students stated that commuting to school is now "very easy"**, and the remaining students described it as "easy". Further, **98% of students found the bus schedule convenient**, indicating that the service is aligned with student needs and school timings. • The solar streetlights were also relevant to the school's infrastructure needs. Installed across the boundary wall and playground areas, **they improved visibility and strengthened safety during low-light conditions, power cuts, and activities extending beyond regular school hours, such as sports practice and event preparation extended to late evenings**. All students stated that school areas are well lit due to the solar lights, while **70% reported that they make movement during evening much safer or more comfortable**. • The project therefore addressed practical enablers of education (access, safety, affordability, and campus readiness) rather than only providing physical assets.
Effectiveness	• At the outcome level, the bus service contributed to improved access and regularity. **94% of students reported that they always arrive at school on time**, and **60% stated that their attendance improved significantly** after the introduction of the bus service. In addition, **67% reported that the bus service helped them focus better on studies** by reducing travel fatigue. These student perceptions are further reinforced by project records, which show that the **average attendance of bus-commuting students reached 88%, exceeding the target of more than 80%**. • The intervention also **reduced the financial burden on families**. Survey findings suggest that, **without the bus facility, families would have faced additional monthly transportation expenses**, potentially increasing their financial strain.

Parameter	Assessment from study
	• Safety outcomes were also positive. All students reported noticing cameras installed in the buses, and **92% stated that they feel much safer** due to safety features such as cameras. The buses were also rated positively on upkeep, with **86% describing them as always clean and well-maintained**. • The solar lighting component also demonstrated effectiveness. All students reported that school areas are well-lit due to the solar lights, and **77% stated that the lights help a lot during power cuts**. • Overall, the project has delivered against its planned infrastructure outputs and contributed to measurable improvements in student experience, safety, and regular school access.
Convergence	• The intervention is broadly aligned with wider policy priorities on strengthening school infrastructure and improving access to education. In Haryana, initiatives such as **PM SHRI promote investments in enabling school infrastructure**, including solar systems. While this project was implemented independently at Lotus Petal Senior Secondary School, its focus on solar lighting and safe transport reflects a similar emphasis on improving school environments through infrastructure that supports student well-being and sustainability.
Sustainability	• The project has a positive sustainability outlook, as the assets are integrated into daily school operations. The buses operate through defined routes and are supported by staff supervision, including drivers, conductors, attendants, and teacher in-charges. The inclusion of maintenance arrangements also strengthens the long-term usability of the buses. • The solar lights provide recurring operational benefits through improved visibility, reduced dependence on grid electricity, and **estimated monthly savings of 690 electricity units, equivalent to INR 5,000 and 641 kg CO_2e**[21] in avoided emissions. These benefits are likely to continue if maintenance of panels, batteries, and fixtures is carried out regularly.

Alignment to UN SDGs & SBI Card's ESG Goals

The project contributes to multiple **UN Sustainable Development Goal (SDGs):** SDG 4: Quality Education, SDG 7: Affordable and Clean Energy, SDG 10: Reduced Inequalities.

The project is also **aligned with SBI Card's internal ESG goal** of "Transform the education of 1 lakh individuals by FY 2027 and 5 lakh individuals by FY 2030 through Corporate Social Responsibility

[21] Source: As per the Annual Project Report (FY24-25) shared by the Lotus Petal Foundation.

(CSR) programmes and Reduce Scope 2 emissions by 50% by FY 2027 (Baseline FY 2019) and achieve carbon neutrality by 2030".

Project Recommendations

Based on the assessment findings, the project has achieved strong results in improving access, safety, affordability, and the overall school environment. The following recommendations focus on sustaining these outcomes and addressing improvement areas identified through student responses and stakeholder consultations:

Scale the renewable energy model across similar education settings

The solar streetlights have demonstrated value in improving campus visibility, supporting operations during power cuts, and contributing to reduced electricity use and costs. Given the positive experience under this project and the school's ability to operationalize the assets effectively, SBI Card may consider supporting replication of similar renewable energy interventions across other school campuses or education facilities serving underserved communities. Over time, this approach may also be expanded beyond streetlighting to cover a larger share of school energy requirements through solar-based solutions. Such an approach would help extend the project's sustainability benefits while strengthening climate-conscious school infrastructure in other settings.

Case Story

Case Story: When Safe Transport Made Education Possible

Ananya (Name changed to protect identity) is a 12-year-old student in Class 7 at Lotus Petal Senior Secondary School. She lives with her parents and younger brother in a rented room in Gurugram. Her father works as a carpenter's helper, while her mother works part-time in housekeeping. With limited and irregular income, the family carefully manages every education-related expense.

When the school shifted to the Dhunela campus, distance became a serious concern. The campus was too far for Ananya to walk or cycle, public transport was not considered safe for a young girl to travel daily, and private transport was beyond the family's budget.

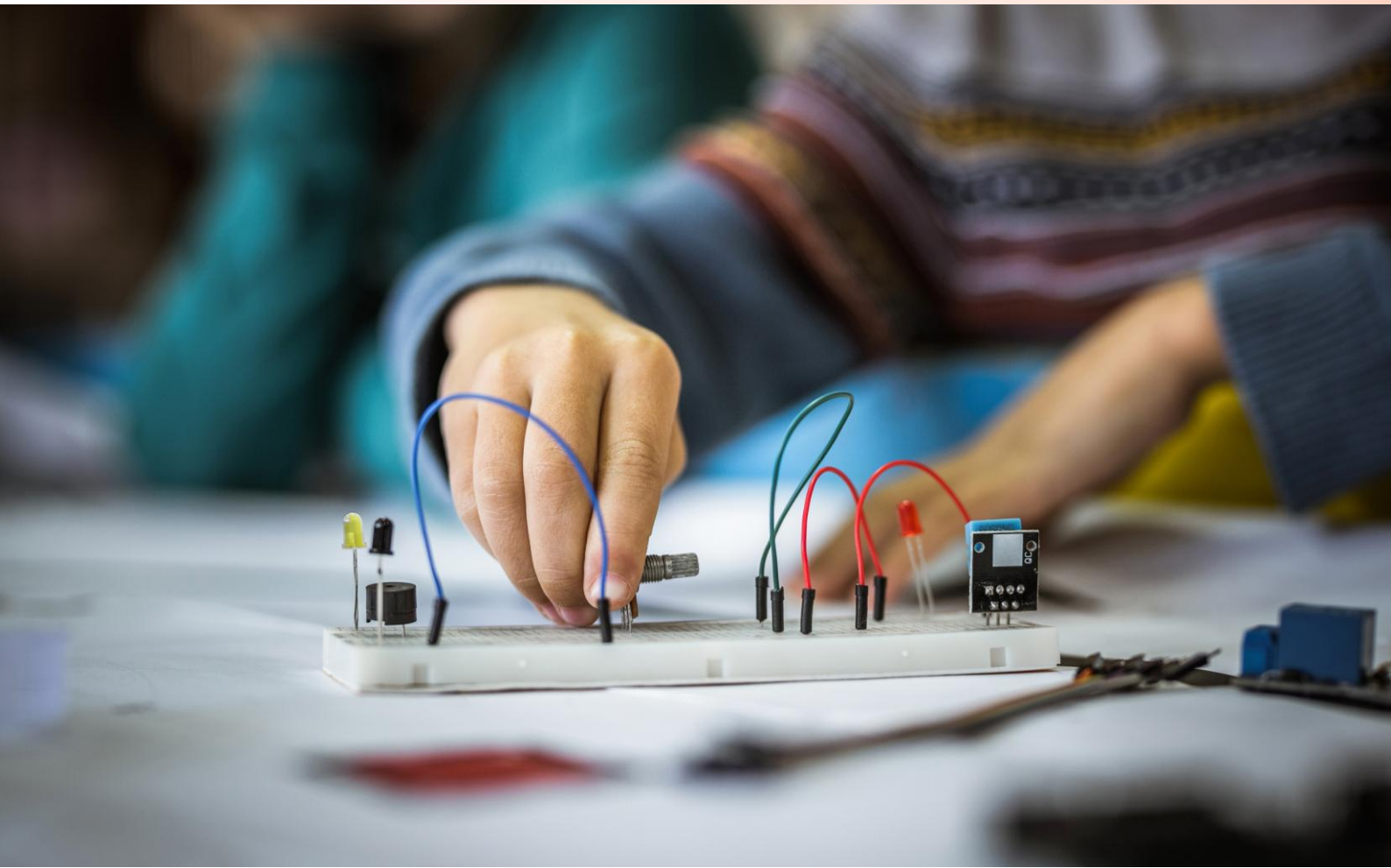
The school bus changed this situation. Ananya now boards the bus from a fixed point near her home every morning. She travels with other students, and the presence of the driver, conductor, didi, and teacher in-charge reassures her parents. The camera inside the bus gives them additional confidence that the journey is monitored and safe. The bus has brought routine and reliability into Ananya's day. She reaches school on time, feels less tired when classes begin, and has become more regular in attendance. For her, the journey has also become a space to interact with friends and revise lessons before school.

The support has helped her family financially as well. Since no separate transport fee is charged, her parents are able to continue her schooling without taking on additional monthly travel costs.

For Ananya, the project has meant something simple but significant: she can come to school every day, on time, without fear or uncertainty. Her story shows how safe and reliable transport can help children from underserved families stay connected to education, friendships, confidence, and future opportunities.

08

Project 5: To establish 25 Tinkering Labs across different locations in Assam, Punjab & Uttar Pradesh



About the Project

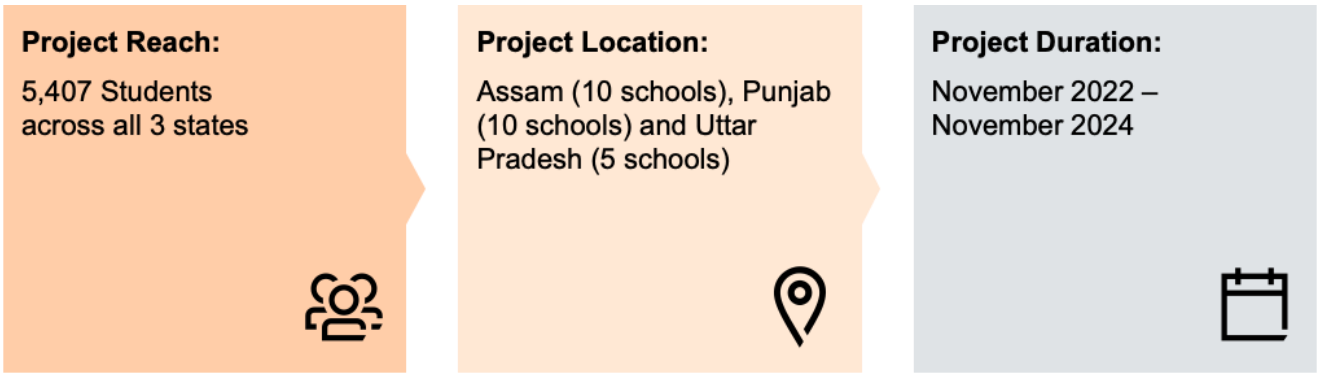
SBI Card, in collaboration with Sumangal Foundation, launched its initiative to establish 25 Atal Tinkering Labs across Assam, Punjab, and Uttar Pradesh over a 24-month period. These labs were equipped with robotics kits, sensors, 3D printers, and laptops, introducing advanced science, technology, and engineering learning tools into government schools for students of 6th to 10th class. The project was initially launched across 25 schools in Delhi and Haryana. Building on that experience and the learnings gained, this phase ensured systematic fund disbursement tied to milestones, supporting proper installation, resource use, and sustainability. Over a 24-month period, the initiative expanded to establish 25 Atal Tinkering Labs in government schools across Assam, Punjab, and Uttar Pradesh.

The project sought to ensure that students emphasised creative learning through practical exposure to the equipment kits provided. In addition, it imparted training in computational thinking, problem-solving, and programming concepts using the AI and Coding platform. By nurturing creativity, critical thinking, and problem-solving skills, the initiative empowered thousands of young learners to emerge as future-ready innovators.

Aligned with NITI Aayog's Atal Innovation Mission, the initiative strengthened the culture of innovation and scientific temperament among India's youth, ensuring that government school students had equitable access to opportunities that sparked curiosity and inspired entrepreneurship.[22]

Below figure provides an overview of the project specifics[23]:

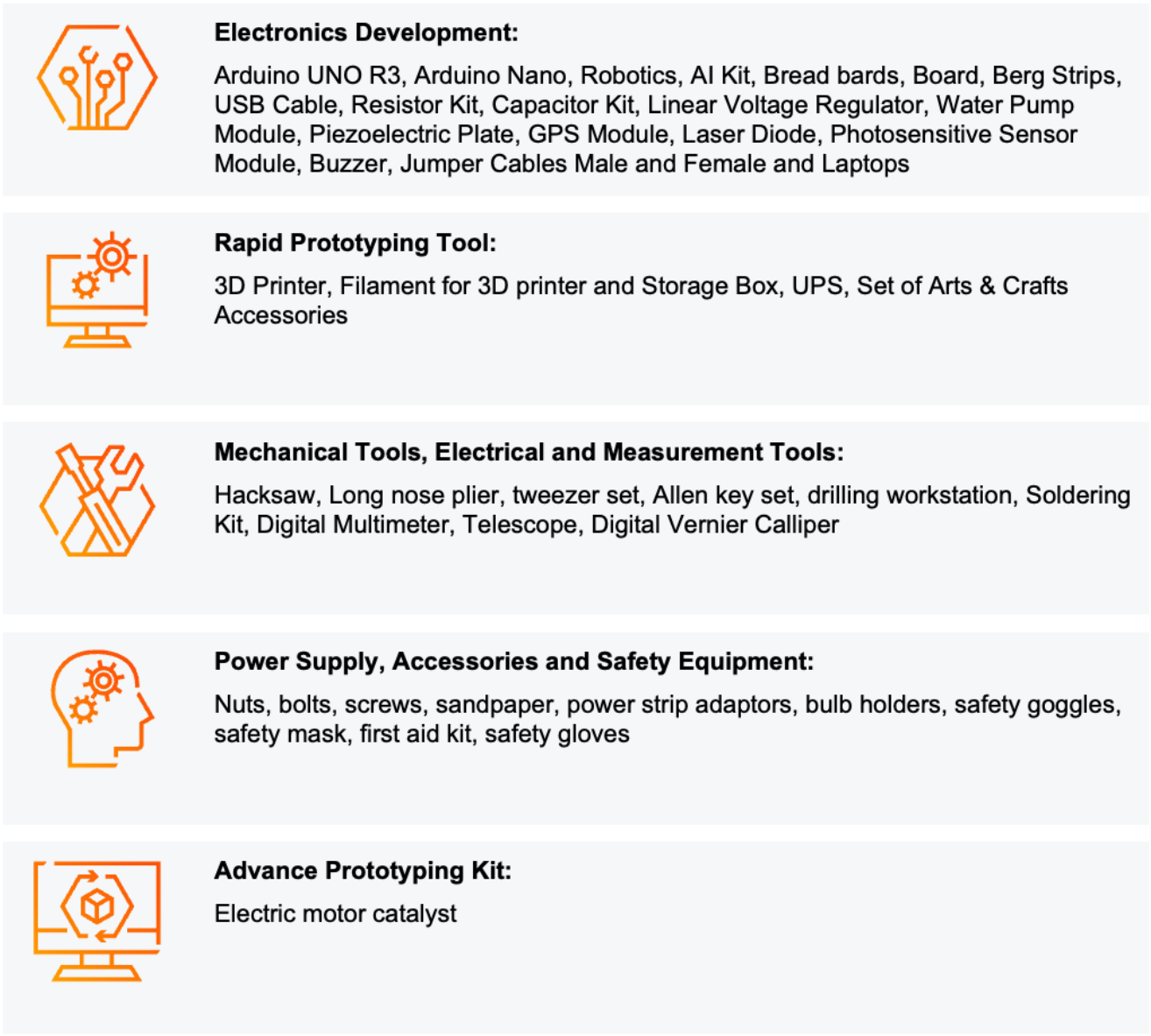
Figure 55: Project overview



[22] Source: https://aim.gov.in/atl.php
[23] Source: MoU signed between SBICPSL and Sumangal Foundation

The following equipment was provided through the project in the laboratory for students of Classes 6 to 10:

Figure 56: Equipment provided in the tinkering lab



Method of Impact Assessment

The impact assessment study leveraged an integrated and cohesive approach to assess the social impact transpired since project's implementation. A kick-off meeting was held with SBI Card and Sumangal Foundation to understand the nature of support for this project and align the requirements for starting the assessment exercise.

Following the meeting, PWCALLP received following **project documents**:

- Memorandum of Understanding (MoU) containing project details agreed with Sumangal Foundation and SBI Cards
- Closure report of the project
- Beneficiary details of the project

PWCALLP team then began the project's **desk review** based on the information collected during the kick-off meeting and from the project documents. This helped our team in designing the assessment framework and **finalising the key stakeholders** for the interactions.

In consultation with SBI Card, **a mixed-methodology approach combining quantitative and qualitative research** was deployed for the assessment. The quantitative study generated evidence-based insights, while qualitative methods captured stakeholder perspectives and experiences to validate findings and understand actual impact. Research techniques included Focus Group Discussions (FGDs), and In-depth Interviews (IDIs) to ensure comprehensive evaluation.

Based on the data from the closure report, the project impacted a total of **5,407 students across three states** - Assam, Punjab, and Uttar Pradesh. A sample size of 135 students was determined at a 95% confidence level with a 5% margin of error. For the purpose of the field study, Assam (Guwahati) and Punjab (Amritsar) were selected as the two assessment locations, facilitating a comprehensive evaluation of project outcomes across diverse geographic and socio-cultural contexts.

The qualitative sampling plan is as follows:

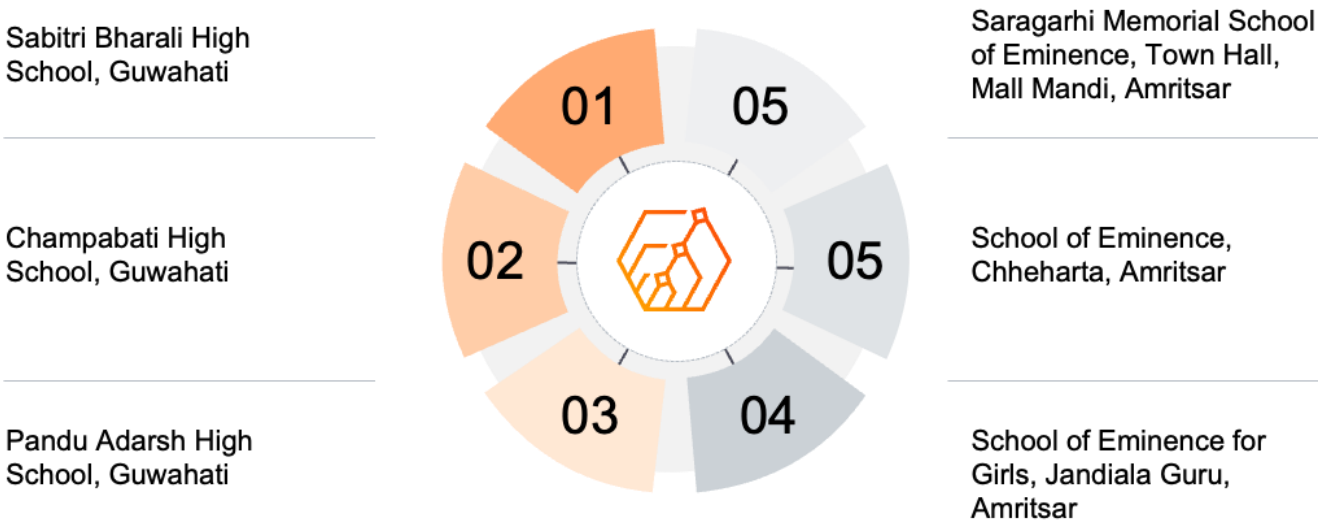
Table 9: Qualitative Sampling Distribution

Stakeholders	Quantitative	Focus Group Discussion	In-Depth Interview
School teachers			✓
Students	✓	✓	
Principal			✓
Trainers			✓
Education Department Representative			✓
Sumangal Foundation Team member			✓
SBI Card Team member			✓

The responses collected from the stakeholders' interactions were analysed to arrive at detailed findings as depicted in the next section.

The aforementioned quantitative and qualitative interactions were covered from the following schools:

Figure 57: Sample schools covered in Assam and Punjab



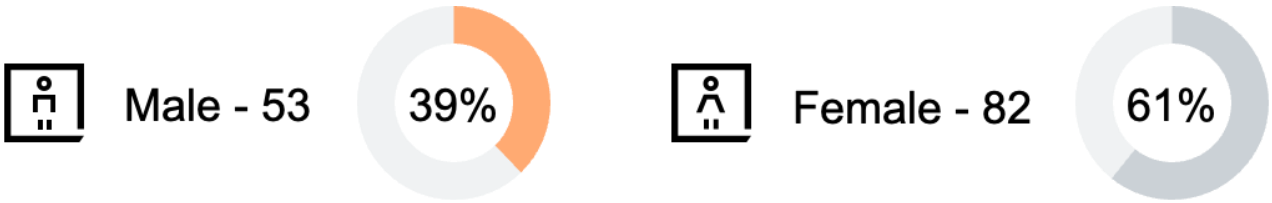
Analysis and Findings

This section summarises the findings from the desk review and interactions:

1. Profile of the respondents

This section presents the socio-demographic profile of the respondents, emerging from quantitative interactions carried out with beneficiaries (students) (n=135) of the project activities to understand the impact of project.

Figure 58 : Gender distribution of the respondents (n=135)



Majority of students were in 8th grade, making up 39 (29%) of the total participants. This was followed by 30 (22%) in 9th grade and 27 (20%) each in 7th and 10th grades. Students in 6th grade made up the smallest group at 12 (9%) (n=135). The distribution highlights balanced participation across grade levels.

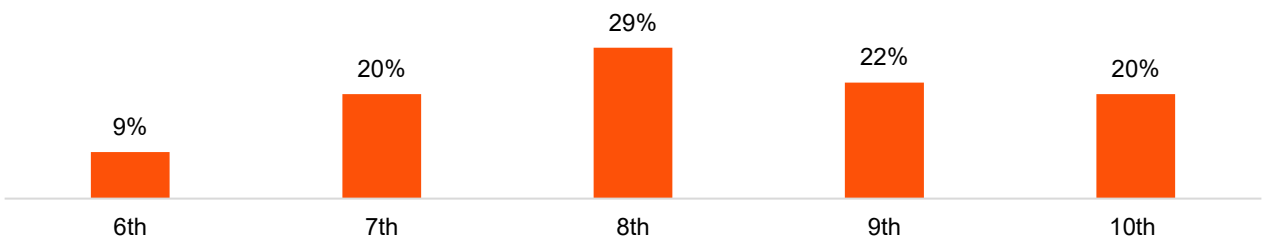
The government schools were located in the urban areas of Amritsar (Punjab) and Guwahati (Assam).

The students belong to economically disadvantaged families, with household income primarily sustained through occupations like marginal farming, wage-based labor, and construction work.

Summary Of Impact Created by the Project

This section presents key findings from the impact assessment study, providing an evidence-based foundation for strategic recommendations and future project improvements.

Figure 59: Class wise representation of the sample covered (n=135)



1. **Transforming Learning Infrastructure and Enabling Hands-On Exploration:**

- As corroborated by teachers during field interactions, government schools had long struggled to provide practical, hands-on learning opportunities. Prior to the establishment of the labs, teaching was largely confined to textbook-based instruction and blackboard demonstrations, with most schools lacking even basic infrastructure such as science and computer laboratories. This heavy reliance on theory-based instruction left minimal scope for experiential learning, limiting students' ability to develop critical 21st-century skills such as creative thinking, problem-solving, and teamwork. There was, therefore, a pressing need to **transform pedagogical approaches** and invest in **technology-enabled learning environments** that could **bridge the gap between theoretical knowledge and practical application.**

- Teachers reported that the project's phased implementation apporach, beginning with infrastructure preparation, followed by equipment installation, and concluding with capacity-building training was **instrumental in ensuring that the labs were set up efficiently and were operationally sustainable.**

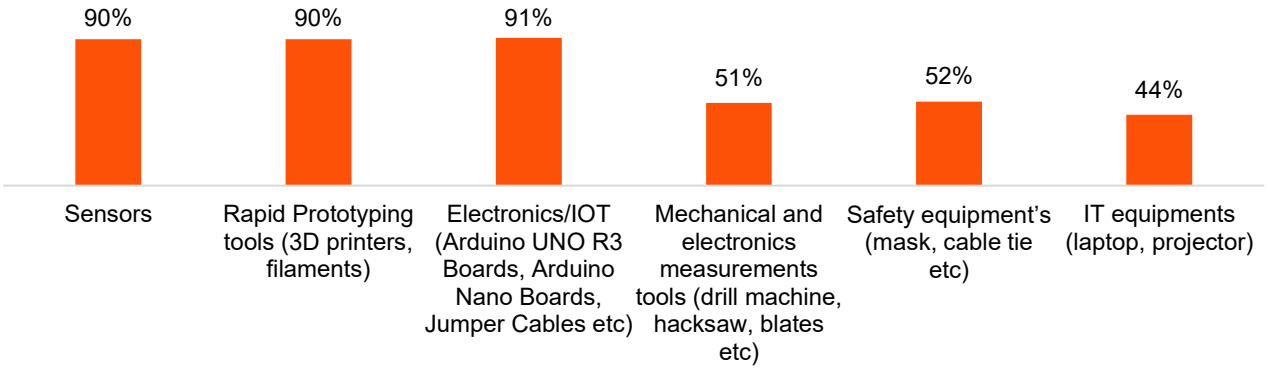
- Beyond setting up modern labs, the initiative **complemented national education reforms under the National Education Policy (NEP), fostering innovation and equipping students with future-ready skills in robotics, coding, 3D printing, artificial intelligence etc.** Teachers across both states reported that the labs enabled students to **move beyond rote memorisation and engage meaningfully with concepts** in science, technology, engineering, and mathematics, thereby **developing competencies in robotics, coding, artificial intelligence etc** that are essential for future readiness.

- To ensure that this existing familiarity was effectively channeled into meaningful learning outcomes, the project adopted a structured and grade-appropriate curriculum framework. It was highlighted by the teachers that the project's curriculum **followed NITI Aayog's broad framework, refined into age-appropriate modules for different grades (6th to 10th).** It emphasised experiential learning, such as building circuits and robotics projects, which significantly **improved student retention and understanding.**

- It was observed that while **all students used the lab equipment and kits at least once a week** ranging from electronics and sensors to robotics sets, 3D printers, and computers, **only those with strong interest continued to return, explore further, and work on additional projects as this was not a mandatory class for them in their timetables.**

- Around 91% of students (n=135) used Electronics/IOT kits like Arduino boards, while 90% (n=135) made use of sensors and rapid prototyping tools such as 3D printers. This demonstrates a **strong preference for electronics and prototyping among the students.**

Figure 60: Equipment's most used in the lab by the students (n=135)



Multiple responses allowed; percentages may exceed 100%

- It was highlighted that 30% of students (n=135) had access to **one instrument for every two students**, **while 70% shared equipment** within their groups (n=135). The students indicated that the **lab promoted transversal skills** such as teamwork, communication, and problem-solving.

- Although 96% of students (n=135) reported weekly access to the labs, **participation was optional rather than mandatory.** This meant that while every student had the opportunity to engage with equipment and kits, actual involvement **depended on individual interest and motivation**. The **absence of compulsory attendance, project deadlines, or homework created a low-pressure environment that encouraged exploration but also allowed some students to disengage.** As a result, the labs functioned more as open learning spaces stimulating curiosity and creativity for those who chose to participate rather than structured classrooms with enforced outcomes.

- **Students expressed overall satisfaction with the quality of the kits and equipment**, with **84%** of students (n=135) experiencing **no technical issues in the lab.** Only a small portion (16%) (n=135) reported occasional difficulties which were resolved within a week by the trainer or technician provided through the Foundation.

Figure 61:Frequency of Student Access to Labs (n=135)

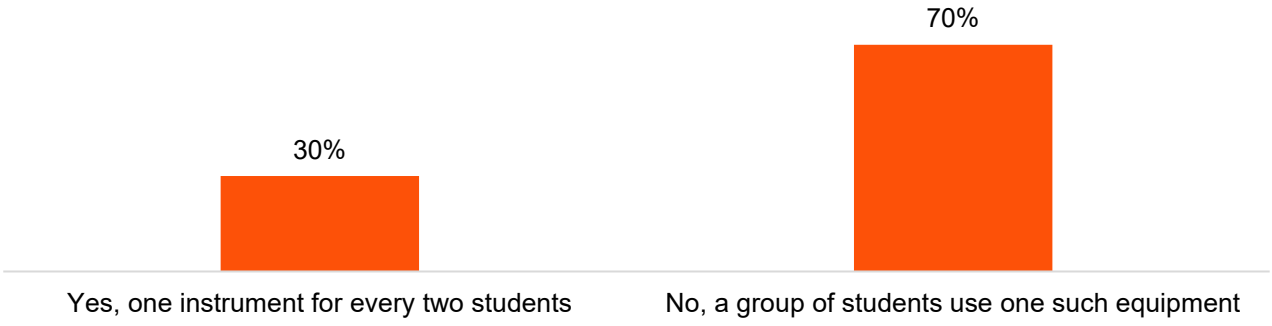


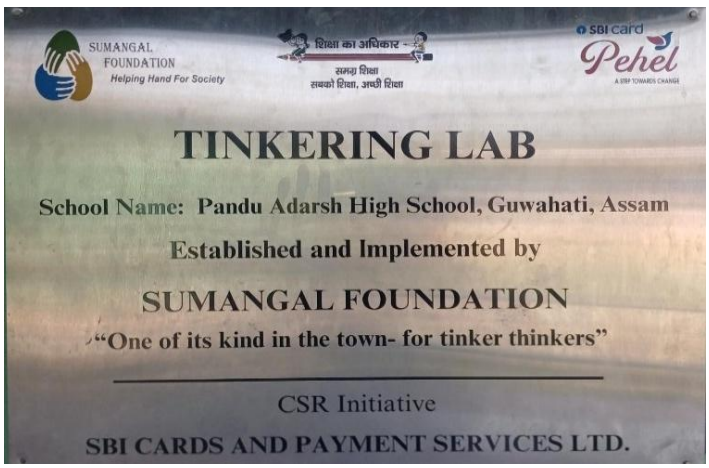
Figure 62: Student Access to Lab Equipment and Instruments (n=135)

- An Annual Maintenance Contract (AMC) valid until 2025 ensured that any malfunctioning equipment was promptly repaired or replaced, providing uninterrupted access to lab resources. Teachers expressed confidence in the sustainability of the labs, noting minimal downtime and timely resolution of technical issues.
- Overall, the establishment of the labs **represented a meaningful shift in the learning landscape** of government schools, effectively bridging a longstanding infrastructure and pedagogical gap by transforming previously under-resourced classrooms into vibrant spaces of exploration and innovation. By equipping students with access to modern tools, a structured yet flexible curriculum, and responsive technical support, the initiative enabled students to transition from passive, theory-based learning to active, hands-on engagement, nurturing curiosity, creativity, and foundational STEM competencies essential for future readiness.

2. Building Teacher Capacity and Confidence in Lab Practices

- The Sumangal Foundation representative reported that trainers responsible for training school teachers were carefully chosen for their expertise in robotics, electronics, and engineering. These trainers underwent a rigorous screening process, followed by 10-15 days of intensive training, with continuous mentoring and monitoring to ensure effective delivery in schools.

Image 38: Branding display at Pandu Adarsh High School's Tinkering Lab, Guwahati



- The impact of this structured trainer-to-teacher model was evident during field interactions with the trained teachers themselves. One teacher shared that she attended **face-to-face training sessions conducted by these trainers engaged by the Sumangal Foundation, which introduced her to the fundamentals of electronics and coding.**

- Despite having no prior experience in these areas, the training gave her the confidence and skills to **begin incorporating hands-on activities into her teaching including basic robotics projects where students could assemble simple circuits, programme sensors, and build small functional models.** These practical exercises helped make abstract concepts tangible and engaging for learners.

- Importantly, capacity building extended beyond initial training sessions. Teachers highlighted the value of ongoing support mechanisms, including WhatsApp groups and periodic online interactions, which enabled them to seek troubleshooting assistance, exchange challenges, and receive refresher inputs. Additionally, select **teachers were trained in basic equipment maintenance, such as minor repairs and recalibration of lab instruments**, further strengthening their sense of ownership and responsibility for the labs. Foundation-facilitated technical support groups supplemented this effort when more complex issues arose.

- In contrast to this, some teachers acknowledged **feeling only moderately confident when using lab equipment** like Arduino Uno and LEDs, highlighting the challenges of mastering new technologies and the **desire to have trainers available onsite for support.**

Image 39: Introductory robotic kit

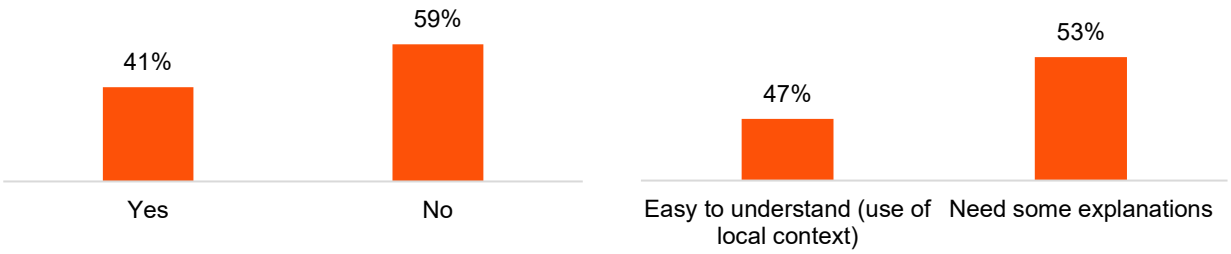
- To this, a principal at one of the schools suggested that while the training provided by the Sumangal Foundation was comprehensive in its content and delivery, it was valuable in equipping teachers to engage effectively with the labs from the outset. The principal also noted that ongoing support mechanisms such as WhatsApp groups and periodic interactions were also helpful.

- According to the teachers, time and workload constraints occasionally influenced the scheduling of tinkering sessions. They found the curriculum highly relevant for introducing STEM concepts through practical exercises, though integrating it alongside existing responsibilities required careful planning. As a result, sessions were often conducted once a week in the lab.

- According to the students, **41% of school (n=135) teachers were able to comprehend the new technology**, while 59% (n=135) were not. This suggests that **while some teachers grasped the new concepts, more support may be needed to help the majority fully understand the technology.**

- Moreover, 47% of students reported that the concepts taught by their teachers during lab sessions were easy to understand, particularly due to the use of local context and practical demonstrations, while 53% felt that certain topics required some additional explanations to fully grasp the technical aspects being covered.

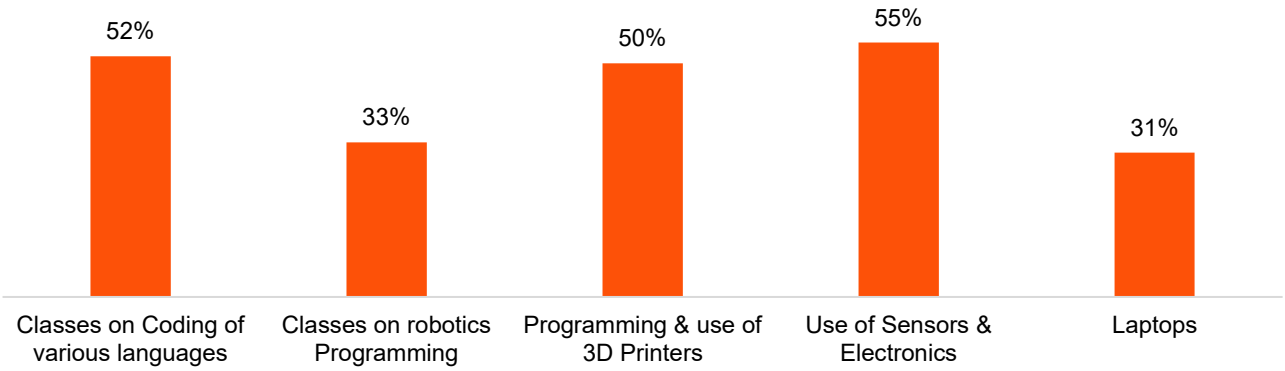
Figure 63: Student Perception on Ease of Understanding Concepts Taught During Sessions (n=135)



- According to the survey, 57% of students agreed that school teachers had provided ample hands-on experience and practical exercises during lab sessions, while 43% felt otherwise.
- Students were taught a wide range of skills throughout the sessions, with 55% learning to use sensors and electronics, 52% attending coding classes in various languages, and 50% being taught programming and how to use 3D printers.

This indicated that most teachers facilitated practical learning, although there remained some room for improvement.

Figure 64: Learning Components in Lab Sessions (n=135)



Multiple responses allowed; percentages may exceed 100%

- According to the teachers, they observed a marked increase in student interest in STEM subjects following the lab setup, citing projects such as automatic houses, toll gates and smart dustbins that engaged students creatively.
- An educational department representative similarly reported heightened student interest across various cluster schools, reflecting broader positive reception of the lab and its activities.
- According to the students, 56% (n=135) reported that school teachers did not update them about their progress in the lab (improved focus, enhanced creativity) in coding, robotics, and other activities. This highlighted a communication gap, as only 44% (n=135) received progress updates, indicating a need for more consistent and structured feedback from teachers.

- In addition, 99% of students highlighted that trainers made learning more enjoyable and engaging compared to school teachers, due to the available lab equipment. Students' interest noticeably increased when trainers were present, as teachers often faced scheduling challenges. Similarly, school teachers through discussions also conveyed the same sentiment, acknowledging that students were more engaged and enthusiastic when trainers conducted the sessions.

Image 40: Automatic Toll Gate - a student-built prototype using sensors and electronics

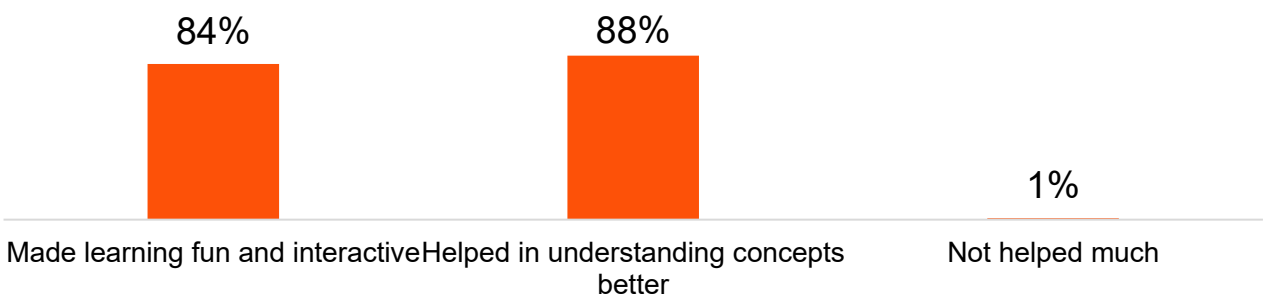
3. Deepening Conceptual Understanding and Strengthening Student Engagement

- According to the feedback received from the teachers, the **participation of girls saw a notable increase following the introduction of the labs**. The hands-on and interactive nature of the sessions appeared to create a more **inclusive and encouraging environment**, motivating girls to engage more actively and attend more consistently.
- In addition, **81% of students participated in workshops or training sessions** related to the lab and its equipment, indicating strong student involvement and enthusiasm for hands-on learning.

Image 41: Student-made smart dustbin with sensor-based lid

- One of the main challenges as reported by the school principal was that most students at the school spoke Assamese as their first language and had limited comfort with English or Hindi. The resulting language gap held back many students from participating confidently in the activities.

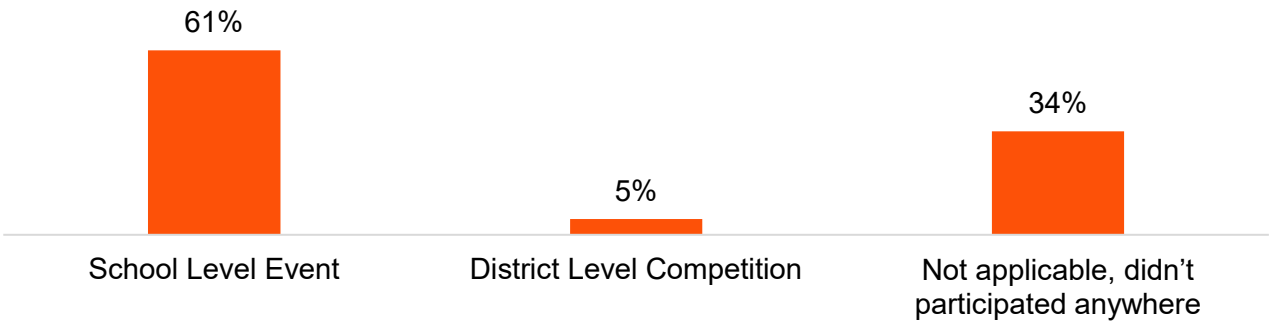
Figure 65: Impact of Lab on Student Learning Experience (n=135)



Multiple responses allowed; percentages may exceed 100%

- According to the students, **88% felt that the lab helped them understand concepts better, while 84% acknowledged that it made learning fun and interactive,** reflecting a highly positive impact on the overall learning experience and reinforcing the effectiveness of the lab in enhancing both engagement and conceptual clarity among students.
- Further, they added that **creativity was the most significant skill developed** through hands-on activities. Working on projects together, **students became more collaborative and began applying critical thinking and problem-solving skills with greater confidence, learning by doing rather than simply listening.**

Figure 66: Student participation in competitions (n=135)

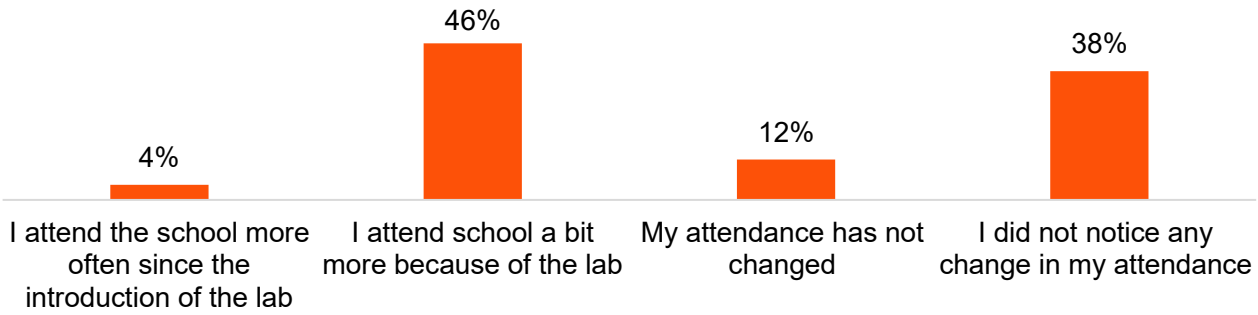


- According to the students, **66% participated in competitions following the training,** with 61% competing at the school level and 5% at the district level, demonstrating that the lab sessions encouraged students to actively apply their learning in competitive settings. Students whose projects were recognised were awarded certificates and trophies, further reinforcing their motivation and sense of achievement.
- According to the students, **88% developed 1 to 5 projects** while 12% developed 5 to 10 projects during the training, indicating that the majority of students were actively involved in hands-on project development. Notably, many of these projects **were pursued voluntarily by students beyond their assigned tasks, reflecting a genuine curiosity and self-driven interest** in exploring and applying the concepts learned during the lab sessions.
- According to the students, 95% reported that the lab sessions did not follow a conventional homework or assignment-based structure, unlike their other regular classes at school. **While this experiential approach allowed students the freedom to explore and learn at their own pace without the pressure of formal assessments, it also presents an opportunity to introduce light-touch reinforcement activities such as guided practice exercises or take-home project ideas that could further strengthen knowledge retention without undermining the creative and exploratory nature of the lab sessions.**

Image 42: Educational kits available in the lab - Pluto 1.2 for coding and drone programming, and Mechanix for engineering and mechanical design

- Despite this, **89% of students indicated that the lab activities helped in enhancing their understanding of science and technology.** Even some classroom concepts could be better understood through practical learnings of the lab, which helped when teachers taught them in the class.
- According to the students, **96% felt that the availability of educational kits like sensors, robotics kits, and AI kits strongly enhanced their learning experience**, reinforcing the importance of well-equipped labs in making STEM education more practical, engaging, and impactful for students.
- According to the students, 50% reported attending school more often since the introduction of the lab, indicating that the lab had a positive influence on student attendance. Meanwhile, 38% did not notice any change and 12% stated their attendance remained the same, showing that while the lab serves as a motivating factor for many, its impact on attendance varies across students. This was further corroborated by teachers and school principals during interactions, who observed a **noticeable improvement in the overall average attendance on days when lab sessions were scheduled.**
- Principals noted that students who were previously irregular or disengaged showed a marked increase in attendance, particularly on lab days, as the prospect of hands-on activities and working with technology served as a strong motivator.
- Teachers also highlighted that the **enthusiasm generated by the lab sessions had a spillover effect**, with students arriving earlier and staying more attentive throughout the school day in anticipation of their scheduled lab time.
- In addition, 98% of the students (n=135) were of the opinion that they **would like to continue learning about robotics, coding and science related aspects in the lab in the future**, demonstrating a strong desire for sustained engagement.

Figure 67: Impact of the lab on student attendance (n=135)



- 93% of students (n=135) expressed that they would suggest other peers to also attend the lab sessions, reflecting a strong endorsement and high level of satisfaction with the overall learning experience provided by the lab.

Figure 68: Student Suggestions for Lab Improvement (n=135)

Multiple responses allowed; percentages may exceed 100%

- When asked for suggestions, a large majority of students expressed a desire for more **87% recommended increasing the number of lab sessions**, indicating a **strong appetite for additional hands-on learning time.** Additionally, 63% suggested that more events, seminars, and competitions be organised, reflecting students' enthusiasm to engage with the subject beyond regular classroom activities and test their skills in broader settings.

IRECS Analysis

Parameters	Assessment from study
Inclusiveness	• The project was implemented in government schools that primarily served students from economically disadvantaged families, ensuring that advanced learning tools reached those who would have otherwise had limited or no access to such resources • The labs accommodated students across Classes 6 to 10, enabling broad and balanced participation across multiple age groups and grade levels.

Parameters	Assessment from study
	• The initiative was spread across 25 schools in Assam, Punjab, and Uttar Pradesh, ensuring geographical diversity and extending its reach to students across varied socio-cultural contexts. • The labs functioned effectively with 96% of students reporting weekly access, welcoming learners regardless of their prior knowledge or confidence levels. • The project surpassed its original target of 3,750 students, reaching 5,407 beneficiaries, reflecting a strong commitment to maximising inclusivity and widening access.
Relevance	• The project was aligned with NITI Aayog's Atal Innovation Mission and complemented national education reforms under the NEP, making it directly relevant to India's broader innovation agenda. • It further addressed a longstanding gap in government schools where theory-heavy instruction had limited the development of 21st-century skills among students. • Labs were equipped with contemporary tools such as Arduino boards, sensors, 3D printers, and AI platforms, with 96% of students affirming that these kits strongly enhanced their learning experience. • The project responded to a genuine infrastructure deficit, as many schools lacked basic science and computer laboratories prior to the intervention.
Effectiveness	• 88% of students observed improved conceptual understanding among students, while 84% noted that the lab made learning more enjoyable and interactive. • 84% of students experienced no technical issues in the lab, and the remaining reported difficulties were resolved within a week, reflecting responsive technical support and effective equipment management. • Creativity, teamwork, and problem-solving emerged as the most significant transversal skills developed, with teachers observing students growing more collaborative and confident through hands-on activities. • 93% of students indicated they would recommend the lab sessions to their peers, serving as a strong endorsement of the quality and impact of the learning experience delivered. • 98% of students expressed a desire to continue learning in the labs and 87% recommended increasing the number of sessions, indicating that the project's offerings were well-aligned with learner interest and demand.

Parameters	Assessment from study
	• 91% of students used Electronics and IoT kits such as Arduino boards, while 90% made use of sensors and rapid prototyping tools like 3D printers, demonstrating high levels of active engagement with the lab equipment provided. • The phased approach to implementation - infrastructure preparation, equipment installation, and capacity-building training was confirmed by teachers as instrumental in ensuring that the labs were set up efficiently and remained operationally sustainable. • 88% of students developed between 1 to 5 projects and 12% developed 5 to 10 projects during the training, with many projects pursued voluntarily, reflecting genuine curiosity and self-driven engagement. • 61% of students participated in school-level events and 5% competed at the district level after receiving training, demonstrating that the lab sessions encouraged students to actively apply their learning in competitive settings. • 89% of students indicated that the lab activities helped enhance their understanding of science and technology, with some noting that classroom concepts could be better understood through the practical learnings of the lab. • 96% of students felt that the availability of educational kits such as sensors, robotics kits, and AI kits strongly enhanced their learning experience, reinforcing the importance of well-equipped labs in making STEM education more practical and impactful. • The project contributed to **improved student attendance**, with 50% of students reporting increased attendance and principals corroborating higher average attendance on lab days.
Convergence	• The project drew its foundational approach from NITI Aayog's Atal Innovation Mission, thereby anchoring itself within a well-established national framework aimed at nurturing innovation, scientific curiosity, and entrepreneurial aptitude among school students. • The curriculum complemented the New Education Policy's emphasis on experiential and competency-based learning, reinforcing its alignment with ongoing national education reforms. • The project leveraged existing government school infrastructure to set up labs, optimising resources rather than creating parallel systems, and ensuring integration within the established educational ecosystem.
Sustainability	• Engagement with education department representatives at the local level indicated institutional awareness and receptiveness, with officials reporting heightened student interest across cluster schools.

Parameters	Assessment from study
	• An Annual Maintenance Contract (AMC) was in place until 2025, ensuring that any faulty or non-functional equipment was promptly repaired or replaced. This provision played a key role in maintaining the operational readiness of the labs and safeguarding the continuity of learning beyond the initial project setup phase. • Teachers were trained in **basic equipment maintenance and recalibration**, building in-house capacity for minor troubleshooting. • Ongoing support mechanisms like WhatsApp-based groups provided teachers with a continuous channel for refresher inputs, troubleshooting, and peer learning.

Alignment to UN SDGs & SBI Card's ESG Goals

The project is aligned with the following UN Sustainable Development Goals (SDGs): 4 - Quality Education, 10 - Reduced Inequalities, and 17 - Partnerships for the Goals.

The project is also **aligned with SBI Card's internal ESG goals** of "Transforming the education of 1 lakh individuals by FY 2027 and 5 lakh individuals by FY 2030 through Corporate Social Responsibility (CSR) programmes."

Project Recommendations

The study identified the following project level recommendation which has been summarised below:

Digitisation of Training Content for Scalable and Continuous Learning

It is recommended to develop a structured repository of digital training content in the form of short, modular video tutorials covering key lab components such as electronics, robotics, coding, and 3D printing. These videos should be designed for both teachers and students, with simple, step-by-step demonstrations in multiple languages where required.

This will:

- Provide on-demand learning support, reducing reliance on external trainers
- Enable continuity in learning despite teacher transfers or trainer unavailability
- Serve as a refresher tool for previously trained teachers
- Support self-paced learning among students, especially those with higher interest
- Address challenges related to concept clarity and retention

- A centralised digital library (accessible via mobile, school devices, or offline storage) can ensure sustainability and easy access across locations.

Case Story

Case Story: Wired for the Future: How Priya Found Her Calling in the Lab

Priya (name changed for anonymity), an 8th-grade student at a government school in Amritsar, Punjab, comes from a modest household where her father works as a daily wage labourer. Before the Tinkering Lab was set up in her school, her learning was largely limited to textbooks. She had heard of things like sensors and coding but had never had the chance to work with them firsthand.

When the lab was introduced under the SBI Card Pehel initiative, Priya began attending sessions regularly. She started with basic electronics using Arduino boards and gradually moved on to building small projects with her classmates. Having grown up seeing overflowing bins and litter scattered across her neighbourhood and school surroundings, Priya wanted to address something she encountered every day. This led her and her group to build a Smart Dustbin, a simple sensor-based model that opened its lid automatically, making waste disposal more hygienic and convenient. Working on it helped her pick up practical skills in coding and electronics, while also learning to collaborate and problem-solve with her peers.

Since then, Priya has grown noticeably more interested in science and technology. She participated in a school-level innovation event where her project was recognised, and she now looks forward to her weekly lab sessions. Inspired by her experience in the lab, Priya now aims to crack one of the best engineering colleges in the country and become an engineer, a goal that once felt distant but now feels within reach

09

Project 6: Smart Green Power Schools- Installation of off-grid solar system in 20 Government Schools of Delhi & Haryana

About the Project

National school infrastructure improvement has become a critical priority to ensure quality education delivery across the country. A key challenge facing government educational institutions, particularly in rural and semi-urban areas, is the lack of continuous electricity supply. Frequent power outages and unreliable grid connectivity significantly hamper teaching effectiveness, limit access to digital learning resources, and restrict operational hours for schools. This energy deficit directly impacts educational outcomes and prevents schools from utilizing modern teaching methodologies. Recognizing this pressing need, sustainable solar energy solutions have emerged as a viable approach to provide reliable, cost-effective electricity to government schools, thereby supporting the national objective of strengthening educational infrastructure while promoting environmental sustainability.

SBI Card partnered with **Yuva Unstoppable** with the aim of supporting the **Future Classroom Initiative** and making the schools self-dependent for **electricity needs**. The schools were unable to utilize the full potential of the Digital Classroom due to frequent power cuts. The **inverters provided** were aiding for limited time, after which the productivity was compromised. The vision of the project is to make the schools **"Smart and Green Power Schools"**[24].

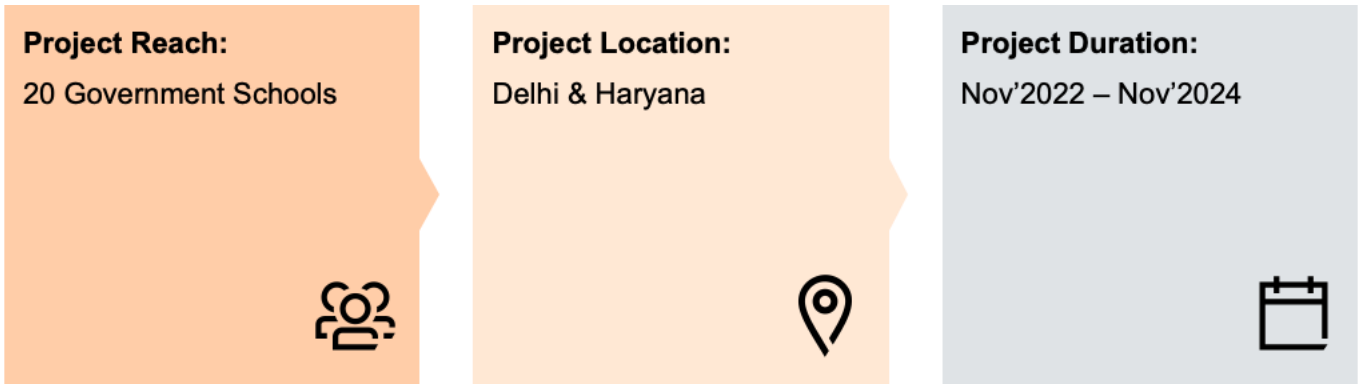
Smart Green Power Schools project started in November 2022 with the focus on supporting Future Classroom Initiative. Under the project, off-grid solar system at 20 government schools of Delhi & Haryana was installed which were among the 51 schools supported by SBI Card under Future Classroom Initiative. Installation of solar panels made the school environment friendly and self-reliant for energy needs. The key objectives of the project are mentioned below[25]:

To substitute existing consumption of electricity with clean and green electricity.

To enhance the learning outcomes and improve attendance.

Below figure provides an overview of the project specifics[26]:

Figure 69: Project overview



Key Activities of the project are mentioned below:

[24] Project Closure Report
[25] Source: MoU signed between SBICPSL and Yuva Unstoppable-2022
[26] Source: MoU signed between SBICPSL and Yuva Unstoppable-2022

- Site survey to establish suitability of site to install solar panels and its feasible capacity.
- Design of solar plant based on School roof area and equipment.
- Supply of various components of solar plant.
- Erection and commissioning of the plant.
- Grid connection of the plant with necessary approvals of utility.
- Operation and maintenance of plants for 2 years.

Method of Impact Assessment

The impact assessment study leveraged an integrated and cohesive approach to assess the social impact transpired since project's implementation. A kick-off meeting was held with SBICPSL and the Yuva Unstoppable to understand the nature of support for this project and align the requirements for starting the assessment exercise.

Following the meeting, PWCALLP received following **project documents**:

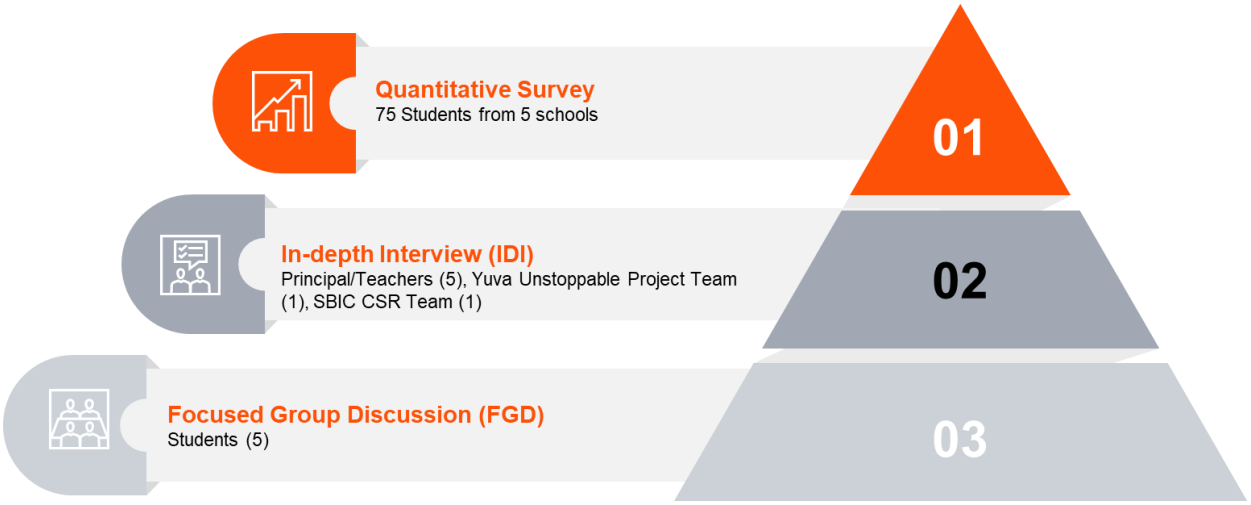
- Memorandum of Understanding (MoU) and its addendum containing project details agreed with Yuva Unstoppable and SBICPSL
- Project Closure report
- Quarterly reports of Project Smart Green Power Schools

PWCALLP team then began the project's **desk review** based on the information collected during the kick-off meeting and from the project documents. This helped our team in designing the assessment framework and **finalising the key stakeholders** for the interactions.

In consultation with SBICPSL, a mixed-methodology approach combining quantitative and qualitative research was deployed for the assessment. The quantitative study generated evidence-based insights, while qualitative methods captured stakeholder perspectives and experiences to validate findings and understand actual impact. Research techniques included surveys, Focus Group Discussions (FGDs), and In-depth Interviews (IDIs) to ensure comprehensive evaluation.

A sample of **67 beneficiaries** (students) was estimated at a **90% confidence level and 10% margin of error** with whom quantitative survey was carried out. A booster of 8 sample was added to the original sample making the total sample size to 75. Selection of students was done by simple random sampling technique from the 5 sampled schools of the intervention area. 15 students from each school were selected for quantitative survey. Stakeholders for each thematic area were also identified for qualitative interactions.

The quantitative and qualitative sampling plans are detailed in the figure below:



Total 10 Qualitative interactions were conducted to understand the perspective of various stakeholders involved in the project. Additionally, two interactions were conducted with SBIC Team and Yuva Unstoppable team to understand the project's impact, bringing the **total qualitative interactions to 12.**

The responses collected from the stakeholders' interactions were analysed to arrive at detailed findings as depicted in next section.

Analysis and Findings

This chapter presents the insights derived from comprehensive impact assessment study conducted with 75 students across 5 Government Schools in Delhi and Gurugram, Haryana, along with input from various stakeholders during extensive field visits. The findings are organized in terms of impact created to highlight the most significant patterns, trends, and discoveries that emerged from the data analysis.

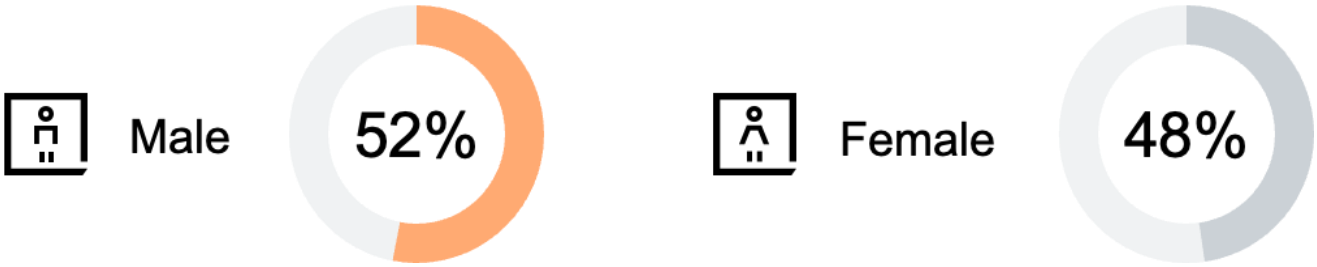
Summary of Impact Created

This section presents key findings from the impact assessment study, providing an evidence-based foundation for strategic recommendations and future project improvements.

1. Profile of the respondents

This section presents the socio-demographic profile of the respondents, emerging from quantitative interactions carried out with beneficiaries (students) (n=75) of the project to understand the impact.

Figure 70 : Gender distribution of the respondents (n=75)



The gender distribution is near-balanced, ensuring both perspectives are represented. This balance supports opinions across genders for comfort, focus, and acceptance outcomes. **52%** of the respondents are **male** whereas **48%** of the respondents are **female**. Gender distribution of the respondents is represented above.

Figure 71: Age of the respondents (n=75)

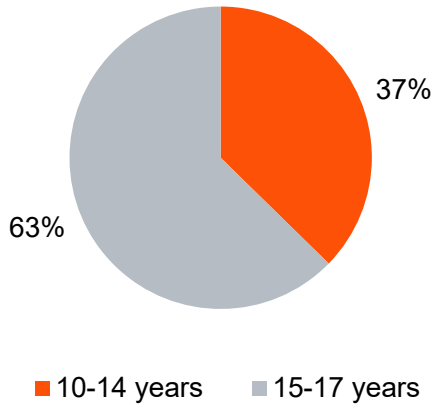
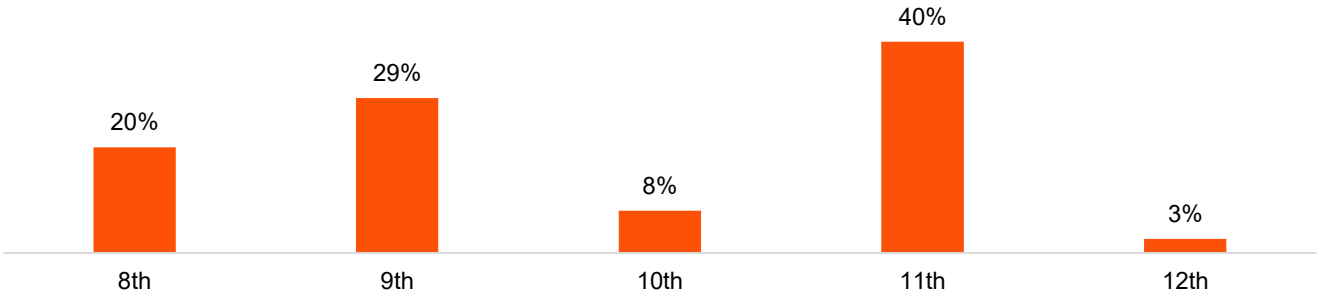


Figure 72: Education level of the respondents (n=75)



A majority of students (63%) are in the 15-17 years of age group, while 37% between 10-14 years, suggesting that the sample largely represents higher classes (9th to 12th grades).

Most respondents are from senior grades, with 40% from Grade 11 and 29% from Grade 9, followed by 20% from Grade 8. This concentration in upper grades is particularly relevant, as these students are typically heavier users of digital learning resources and exam-oriented infrastructure that require consistent electricity supply. The lower representation of Grade 12 students in the sample is attributed to their limited availability due to ongoing board examinations during the survey period.

2. Infrastructure Barriers to Learning Conditions- Pre Intervention:

Before the intervention, **frequent power cuts posed a major challenge in schools**, severely affecting the learning environment. Fans and lights often stopped working, especially during peak summer months of Haryana where temperature goes nearly to 40-45 degrees making classrooms uncomfortable and difficult to study in. Due to frequent power outages, computer classes were often cancelled, leading to limited utilization of smart classrooms.

Figure 73: Students experiencing power cuts in school

At times, students from second shifts were even required to sit in dark classrooms, creating an environment that was neither conducive nor safe for learning.

- Prior to the installation of the solar system, power instability was a **pervasive and daily challenge for students**, severely hampering classroom learning. As shown in the graph on the frequency of power interruptions, 80% of students experienced power cuts during class hours, with a significant **77% facing disruptions every single day**. These outages were not brief, according to the accompanying graph on duration of interruptions, 55% of students reported that power failures typically lasted between 2–3 hours, while additional groups faced interruptions lasting 1–2 hours and even up to 4–5 hours.

Figure 74: Frequency of power cuts before intervention

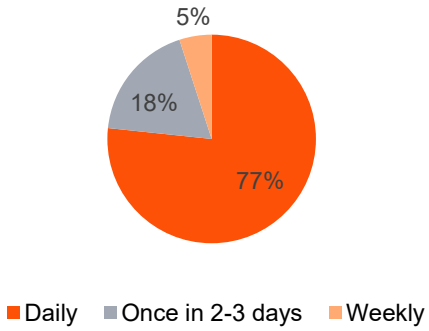
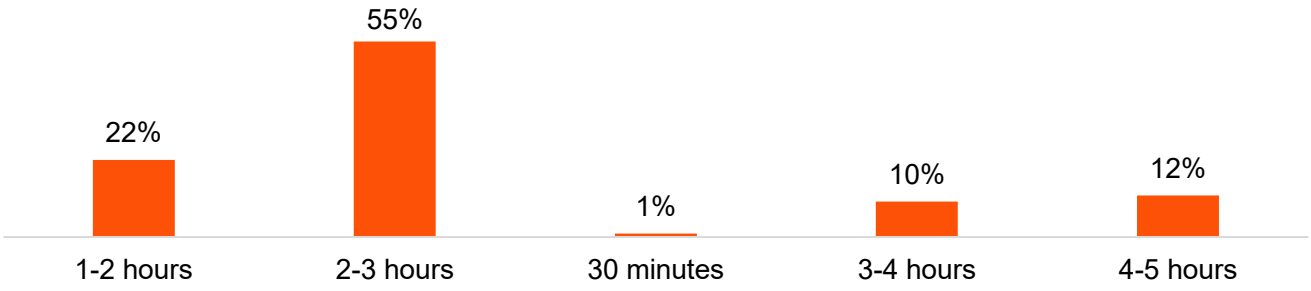


Figure 75: Duration of power cuts per day before intervention



- Collectively, the data illustrates that prolonged and frequent power outages were a critical challenge in government schools. These recurring disruptions significantly **hindered teaching continuity**, restricted the use of digital classrooms, and compromised the overall comfort and learning environment for students.

3. From Disruption to Reliability: The Solar Impact

- **Reduced Power Disruptions:** The solar intervention has delivered remarkable results in power stability, with 93% of students reporting significant reductions in electrical interruptions compared to pre-installation conditions. Although occasional disruptions still occur, indicating potential opportunities for enhanced capacity or supplementary backup systems the vast majority of students recognize substantially improved electrical reliability that has strengthened educational continuity and created a more stable learning environment.

Image 43: Solar plates installed in GGSSS, Jacubpura

- The project demonstrates comprehensive success in stakeholder engagement, with complete awareness among all students (100%, n=75) about the solar installation, evidencing strong institutional backing.
- 93% of students were aware of proper reporting channels for electricity or device problems.

- **Transformative Digital Engagement:** Based on feedback from 97% of students who were enrolled before the project began, the comparison shows a strong increase in usage. Daily use of digital classrooms jumped from just 3% before installation to 93% after installation- about a 30-times increase.

Image 44: Branding of Project in Islampura school

- **Student Awareness and Support Systems:** Solar-powered infrastructure is well-understood by students, with strong awareness levels and a majority knowing exactly whom to approach when electricity or device issues arise. This robust awareness and clear communication framework ensured quick problem resolution, minimizes learning disruptions, and demonstrated effective institutional support systems that enhanced overall project sustainability and user confidence.
- **Infrastructure Reliability and Learning Enhancement:** Solar plant implementation has fundamentally transformed electrical infrastructure reliability, ensuring consistent operation of essential classroom equipment including lighting, fans and digital learning tools. These improvements have created optimal learning environments and facilitated uninterrupted educational activities, particularly during high-demand summer periods.
- **Economic Impact and Comprehensive Value:** The initiative extends beyond educational benefits to deliver measurable economic impact, generating monthly cost savings of INR 10,000–12,000

during peak consumption periods, as stated by one of the School Principals. This dual benefit of enhanced learning conditions and financial efficiency demonstrates the comprehensive value of sustainable energy solutions in educational infrastructure development.

- **Reducing Carbon Footprint Through Solar-Powered Education Institutions:** The installation of solar power plants across 20 schools has generated a significant positive environmental impact. According to project estimates, the initiative has resulted in a reduction of approximately 36.5 tonnes[27] of CO_2 emissions per quarter, amounting to an estimated total reduction of nearly 292 tonnes of CO_2 emissions over the entire project period. This transition to clean energy reduces dependence on fossil-fuel-based electricity and contributes meaningfully to climate change mitigation. In addition to delivering measurable carbon savings, the project also fosters **environmental awareness among students**, positioning schools as active contributors to a more sustainable future.
- **Maintenance and Technical Support:** The solar installation includes a comprehensive 5-year Annual Maintenance Contract (AMC). For any technical issues, the school contacts the implementing partners who coordinate prompt resolution through established complaint mechanisms. Additionally, school staff have been trained in daily cleaning and routine maintenance of the solar panels, ensuring optimal performance and longevity of the system.

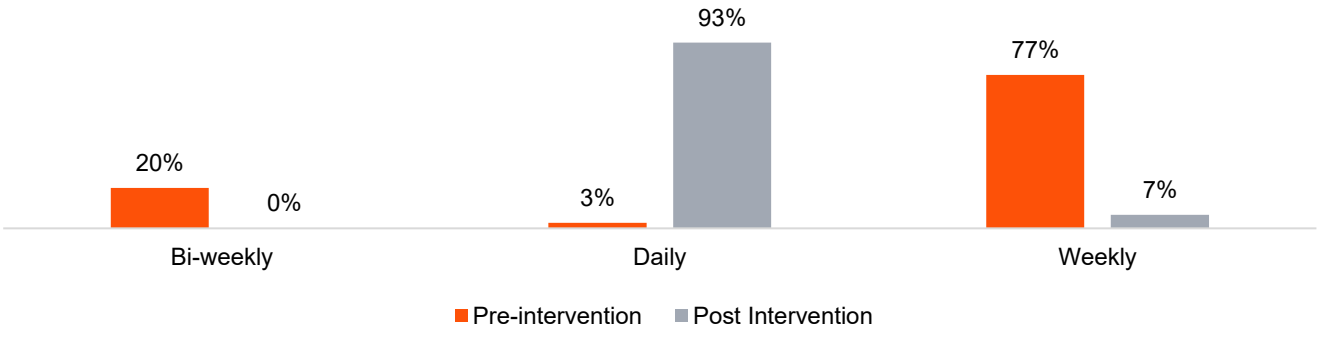
"I believe this initiative is sustainable in the long run. It provides reliable electricity and supports better learning environment. To improve, continued support and maintenance will help keep the system running well."

– Teacher from GGSSS, Jacubpura, Gurgaon

4. Infrastructure Access and Digital Learning Transformation

- Students mentioned during the discussion that they felt safer moving around stairs, toilets and corridors due to better lighting, especially schools who runs in second shifts. Lighting, therefore, contributes not only to learning but also to physical safety, particularly in shared and circulation spaces.

Figure 76: Frequency of digital classroom usage (n=75)



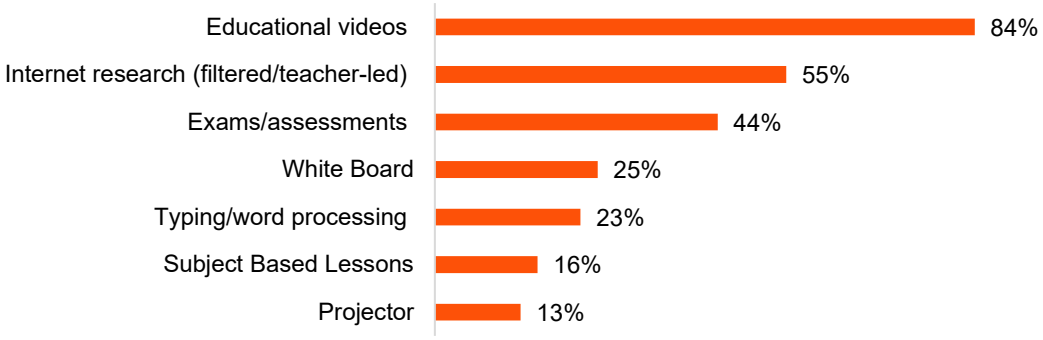
- According to the survey, 99% (n=75) of students use computers or digital devices at school, with 100% having access to electricity-supported classes.
- According to the teacher of PGDAV, Patel Nagar, smart classes have been successfully integrated into the regular teaching framework and now constitute a fundamental component of the

[27] Source: As mentioned in the project closure report

pedagogical approach. This seamless integration has been made possible through the reliable power supply provided by the solar installation, which ensures uninterrupted operation of digital equipment and enables consistent delivery of technology-enhanced education.

- Teachers reported that student participation in technology-enabled sessions remains strong, with attendance consistently around 80% in smart classrooms. Compared to conventional classrooms, students show noticeably higher engagement and active participation during smart class sessions. This sustained engagement is closely linked to the solar installation, which ensures an uninterrupted power supply. Reliable electricity enables consistent use of smart classroom infrastructure, allowing teachers to deliver multimedia-based instruction without concerns over power disruptions, an issue that had earlier limited both the use and effectiveness of technology-supported teaching.

Figure 77: Classroom activities students are engaged in* (n=75)



*Multiple choice question, hence total will not add up to 100%

- The infrastructure has enabled universal access to basic amenities, with all students using fans and lights in classrooms, while 71% utilize smart boards and projectors. Digital learning activities have diversified significantly, with 84% of students engaging with educational videos, 55% conducting internet research, and 44% taking digital assessments.

- Digital classrooms make educational content more engaging and easier to understand. With the installation of solar plant, students across all schools reported improved access to interactive learning materials such as animations and digital displays. The consistent power supply has enhanced comprehension through uninterrupted digital board usage, demonstrating the effectiveness of technology-enabled instruction. Additionally, the reduction in power disruptions has created a stable learning environment, supporting continuous learning and improved academic outcomes.

5. Student Experience and Learning Environment Enhancement

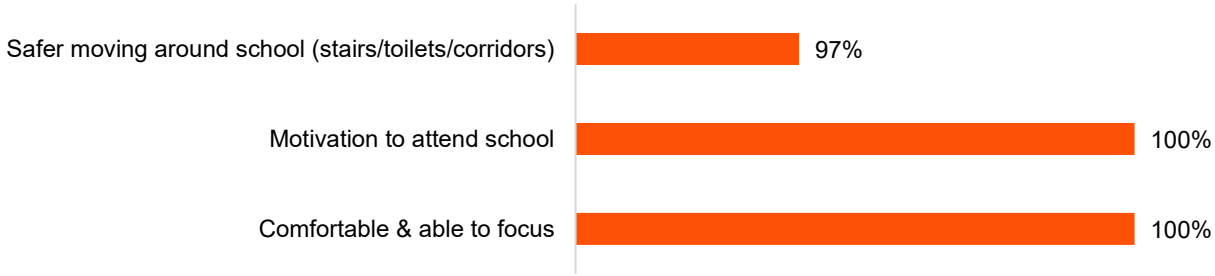
- The solar installation has universally transformed the learning experience and school environment, with 100% of students reporting increased comfort and improved ability to focus due to working fans and lights. Improved lighting in corridors, stairs, and toilets has made 97% of students feel safer moving around school premises.

- **Environmental Awareness and Renewable Energy Education:** The on-campus solar plant serves as a living laboratory for our students, with science teachers conducting regular educational sessions on renewable energy systems. This hands-on exposure has significantly enhanced student understanding of sustainability principles and fostered awareness of how clean energy solutions can be integrated into everyday life.

"Now we have regular computer classes and smart classes that we enjoy. Our teachers can keep us for extra hours with digital tools, and the best part. We're motivated to come to school because we know classes won't be cancelled due to power cuts anymore. Learning has become something we look forward to."

. – Student of 10th grade from GSSS, Pahadi, Pataudi

Figure 78: Students' perception about impact of solar panel* (n=75)



*Multiple choice question, hence total will not add up to 100%

- **Enhanced Learning Through Digital Integration:** Students participating in smart classroom environments have shown marked improvements across multiple learning dimensions, with documented measurable increases in creative problem-solving abilities, sustained attention and focus during lessons, autonomous utilization of digital learning tools, and overall academic engagement and participation.

IRECS Analysis

Parameters	Assessment from study
Inclusiveness	• **Gender-balanced participation:** Near-equal representation with 52% male and 48% female students demonstrating benefit for all students regardless of gender, ensuring equitable access to improved learning conditions. This balanced participation underscores the intervention's commitment to gender-inclusive development, ensuring that solar-powered educational enhancements benefit all students equally without creating gender disparities. • **Universal access achieved:** 100% of students now have access to electricity-supported classes and basic amenities (fans, lights) depicting comprehensive solution rather than selective benefits and ensuring all students experience improved learning environments. This universal coverage exemplifies true educational inclusiveness, where no student is left behind due to infrastructural limitations. • **Collective Impact on Inclusiveness:** By targeting government schools—which primarily serve students from economically disadvantaged backgrounds—this solar intervention addresses multiple dimensions of inclusiveness simultaneously: gender equity, universal access, and socio-economic inclusion. The project ensures that quality, technology-enhanced education reaches those

Parameters	Assessment from study
	who need it most, democratizing access to modern learning infrastructure and breaking down barriers that traditionally exclude marginalized communities from educational advancement.
Relevance	• **Problem-responsive design:** The programme directly addressed the core challenge identified, where 80% of students faced daily power cuts lasting 2-5 hours. This demonstrates that the intervention was designed based on actual ground realities rather than assumed needs. • **Contemporary educational alignment:** The programme was designed to enable modern teaching methodologies, aligning with current educational priorities and digital learning requirements. • **Comprehensive educational support:** Enabling 84% students to access educational videos, 55% for research, and 44% for digital assessments shows the programme was designed to support diverse learning activities rather than just basic electricity supply.
Effectiveness	• **Outcome-focused implementation**: Achieving 93% reduction in power interruptions demonstrates the programme was designed with clear performance targets and technical specifications adequate to meet operational demands. • **Holistic learning Environment Approach**: 100% of students reporting improved comfort and focus indicates the programme addressed not just power supply but overall learning conditions, showing comprehensive planning for educational effectiveness. • **Quality-assured delivery**: The increased attendance in smart classes with enhanced engagement shows the programme included adequate training, equipment quality, and pedagogical integration to ensure effective utilization of infrastructure. • **Multi-objective optimization**: Simultaneously achieving educational improvements and INR 10,000-12,000 monthly cost savings on electricity demonstrates the programme was designed to converge sustainability, economic efficiency, and educational outcomes in a unified approach. • **Contribution to Environment:** The initiative has resulted in a reduction of approximately 36.5 tonnes[28] of CO_2 emissions per quarter, amounting to an estimated total reduction of nearly 292 tonnes of CO_2 emissions over the entire project period. This transition to clean energy reduces dependence on fossil-fuel-based electricity and contributes meaningfully to climate change mitigation.
Convergence	• The program converged with national school infrastructure improvement priorities by addressing the fundamental barrier of unreliable electricity supply. This alignment enabled schools to fully utilize their existing digital infrastructure

[28] Source: As mentioned in the project closure report

Parameters	Assessment from study
	investments (smart boards, computers) that were previously underutilized due to power constraints.
Sustainability	• **Environment education integration**: 100% student awareness combined with teacher-led renewable energy education shows the programme included knowledge transfer components to build local understanding and environmental consciousness for long-term sustainability. • **Self-reliant maintenance systems**: 93% of student awareness of reporting channels indicates the programme established local support systems and trained institutional capacity rather than creating external dependency for operations and maintenance. • **Economic sustainability model**: Monthly savings of INR 10,000-12,000 demonstrate the programme was designed as a financially sustainable solution that reduces operational costs while improving services, creating a replicable model that supports long-term viability without continuous external funding.

Alignment to UN SDGs & SBI Card's ESG Goals

The project is **aligned with the following UN Sustainable Development Goal (SDGs)**: 4 - Quality Education, 7 - Affordable and Clean Energy, 11 - Sustainable Cities and Communities.

The project is also **aligned with SBI Card's internal ESG goals** of "Transforming the education of 1 lakh individuals by FY 2027 and 5 lakh individuals by FY 2030 through Corporate Social Responsibility (CSR) programmes, Reduce Scope 2 emissions by 50% by FY 2027 (Baseline FY 2019) and achieve carbon neutrality by 2030 & Give Rs. 50 Crores contribution to environment initiatives by FY 2029."

Project Recommendations

The study identified the following project level recommendation which has been summarised below:

Scale Solar-Powered Digital Learning Solutions Across Government Schools:

Building on the demonstrated impact of reliable power in enhancing digital classroom usage and learning outcomes, the project can scale the solar plant intervention to other government schools facing frequent power disruptions. By prioritizing schools with existing digital infrastructure, this approach can maximize utilization, improve teaching effectiveness, and create a sustainable, replication-ready model that strengthens technology-enabled education through consistent electricity access.

10

Project 7: Digital Shaala- Enabling digital learning opportunity in 100 Govt Schools

About the Project

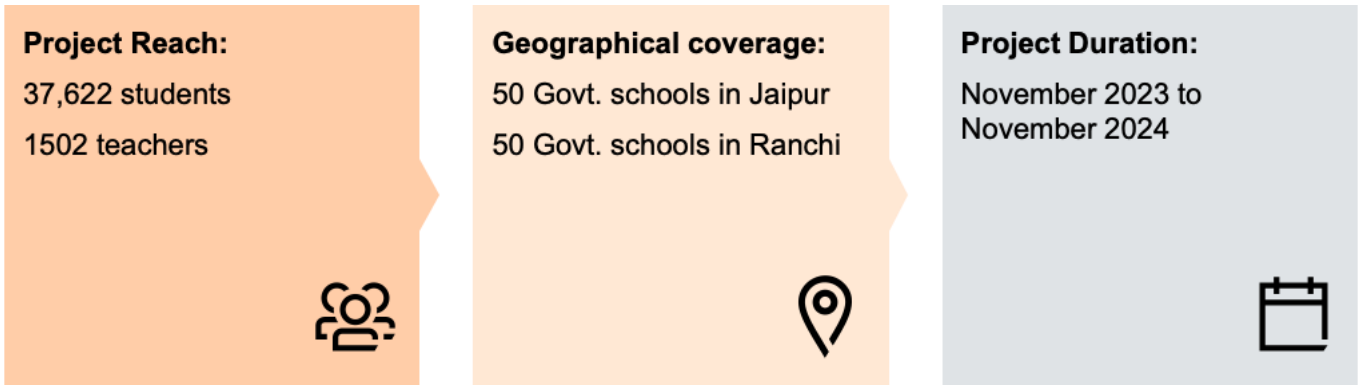
Education is a cornerstone of socio-economic progress, laying the groundwork for a knowledge driven society and improving overall quality of life. While access to schools has expanded significantly, many children still struggle to learn at grade level due to limited resources. To address this, education must become more inclusive, equitable, and responsive to modern demands. A crucial step is integrating technology into the teaching and learning process. Educational technology can extend its reach to every school, bridging the digital divide in underserved regions, ensuring continuity of learning, and strengthening teacher development. When used strategically, technology not only enhances academic outcomes but also fosters a more accountable and adaptive education system29.

Technology driven approaches can significantly enhance how skills and knowledge are applied in classrooms, particularly in low-resource environments, while also preparing students with advanced competencies. This underscores the growing need to expand the use of information and communication technologies (ICT) in education. SBI Card partnered with Muskaan Dreams with the aim of providing digital classrooms among schools under the SBI Card Digital Shaala Programme[30].

Digital Shaala is a project aimed at promoting digital education in government run schools. The project has provided ICT devices to classrooms and equipped teachers with the technical knowledge required for effective implementation. The target population for this project is students from Standard 6th to 8th, and the curriculum is aligned with National Education Policy (NEP) 2020 and National Council of Educational Research and Training (NCERT) standards.

Below figure provides an overview of the project specifics[31]:

Figure 79: Project overview



The project had the following objectives[32]:

- To integrate the use of technology for improving the overall reach and quality of education in government schools.
- To enable access to quality education through provision of teaching and learning tools.
- To enhance the student's learning outcomes, digital literacy, and classroom engagement through innovative teaching and learning.

Following activities were carried out under the project[33]:

- Ensuring school readiness with digital infrastructure in the selected schools (50 government schools of Ranchi, Jharkhand and 50 government schools of Jaipur, Rajasthan).

29 Source: Derived basis secondary desk review
30 Source: Word Bank Report on Education and Technology Overview (worldbank.org)
31 Source: MoU signed between SBI Card and Muskaan Dreams and Annual project report provided by SBI Card team
32 Source: MoU signed between SBI Card and Muskaan Dreams and Annual project report provided by SBI Card team
33 Source: MoU signed between SBI Card and Muskaan Dreams and Annual project report provided by SBI Card team

- Installation of Android TV with an encrypted pen drive with preloaded curriculum.
- Providing benches & desks in the two classrooms of each school.
- Enabling internet connectivity.
- Classroom refurbishment with paint work.
- Capacity building of teachers, government's academic support cadre and support teachers to integrate digital aid into their teaching practices. Training will be provided for the teachers to improve their proficiency.
- Providing support-based materials to schools and teachers and ensuring maintenance & support to the teachers through WhatsApp chatbot after exit.

Method of Impact Assessment

The impact assessment study leveraged an integrated and cohesive approach to assess the social impact transpired since project's implementation. A kick-off meeting was held with SBI Card and the Muskaan Dreams to understand the nature of support for this project and align the requirements for starting the assessment exercise.

Following the meeting, PWCALLP received following **project documents**:

- Memorandum of Understanding (MoU) and its addendum containing project details agreed with Muskaan Dreams and SBI Card
- Annual project report of Project Digital Shaala
- Quarterly reports of Project Digital Shaala
- School details of the Project Digital Shaala

PWCALLP team then began the project's **desk review** based on the information collected during the kick-off meeting and from the project documents. This helped our team in designing the assessment framework and **finalising the key stakeholders** for the interactions.

In consultation with SBI Card, a mixed-methodology approach combining quantitative and qualitative research was deployed for the assessment. The quantitative study generated evidence-based insights, while qualitative methods captured stakeholder perspectives and experiences to validate findings and understand actual impact. Research techniques included surveys, Focus Group Discussions (FGDs), and In-depth Interviews (IDIs) to ensure comprehensive evaluation.

A sample of 138 students was selected for the quantitative survey, calculated at a 95% confidence level with a 5% margin of error. Students from Standard 7th to 9th were randomly chosen, as they had been the primary beneficiaries during the intervention period (when they were in Standard 6th to 8th). Of the 50 schools in Jaipur, five were selected for field visits, and 10 teachers (two per school) were included in the quantitative study. Although the intervention was implemented in both Jaipur and Ranchi. However, in-person interactions were conducted only in Jaipur. Both quantitative and qualitative engagements took place there, while qualitative interactions for Ranchi were carried out virtually. Table 1 presents the stakeholder wise quantitative and qualitative interactions undertaken as part of the assessment.

Table 10: Mixed-method approach for interaction with key stakeholders

Stakeholders	Quantitative	Focus Group Discussion (FGD)	In-Depth Interview (IDI)	Key Informative Interview (KII)
Students	✓	✓		
Principals			✓	
Teachers	✓		✓	
Block Education Officer				✓
Muskaan Dreams Programme Team			✓	
SBI Card Team member			✓	

Analysis and Findings

This section summaries findings of the interactions:

Profile of the students

The students (n=138) currently within the grades of Standard 7th to 9th were selected for the quantitative interactions as they were the beneficiaries of the programme when they were in Standard 6th to 8th and are still being impacted by the programme.

Figure 80: Percentage distribution of students (n=138)

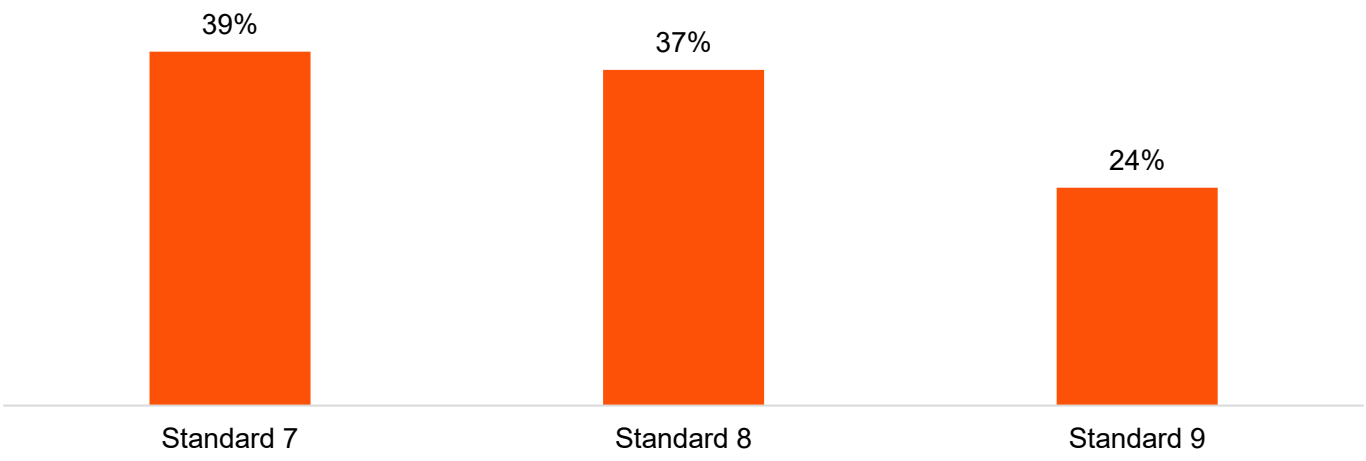
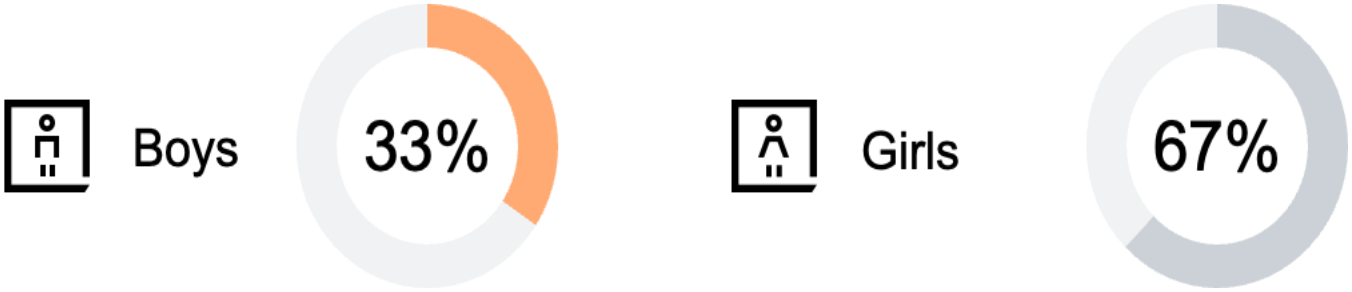


Figure 81: Gender wise % distribution (n=138)

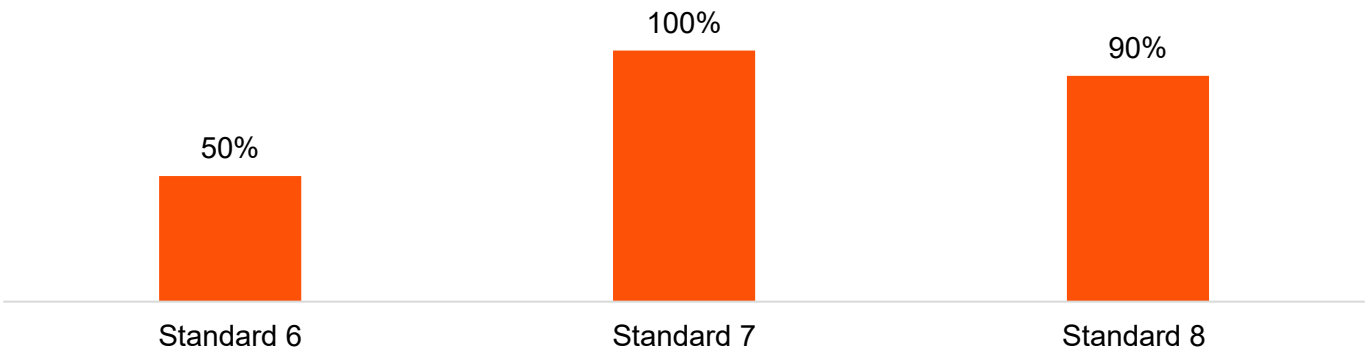


One among the 5 schools visited in Jaipur was a government girls' school, resulting in a relatively higher proportion of female student respondents.

Profile of the Teachers

During the visit to schools, quantitative interactions were held with 10 teachers along with qualitative interactions with the teachers who access the Digital Classroom. These interactions aimed towards understanding their opinion and feedback on the use of the Digital Classroom and how it has been beneficial for the students. The interactions were done with such teachers who were **teaching mathematics and science in Standard 6th to 8th.**

Figure 82: Classes taught by the teachers (n=10)



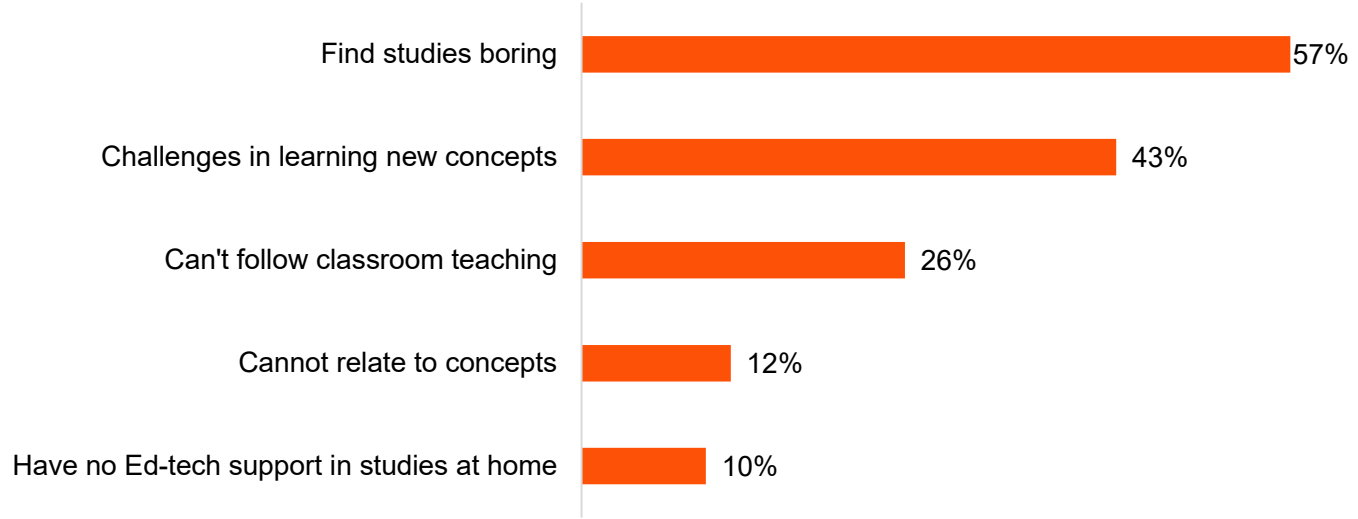
Multiple choice question, total may exceed 100%

Challenges prior to the Project

Prior to the implementation of the programme, both teachers and students faced a few key challenges in achieving the desired learning outcomes as listed below:

- The teachers mentioned facing challenges, such as limited access to modern technology, lack of resources for interactive teaching, difficulty in maintaining student engagement within the classroom, and issues with internet connectivity. These constraints made it difficult to deliver lessons effectively and to encourage meaningful participation by using traditional methods of teaching.

Figure 83: Challenges faced by the students in the traditional classroom (n=138)



Multiple choice question, total may exceed 100%

- Prior to the SBI Card intervention, digital tools were not available in the schools, which limited teachers' ability to use technology-aided methods in classrooms and restricted the quality of teaching to conventional approaches.
- The primary challenge faced by students in traditional classrooms is a lack of interest, with 57% reporting that they find their studies boring. Furthermore, 43% of students encounter difficulties in understanding new concepts.
- These findings suggest that low engagement and challenges in comprehending new concepts are the most prevalent issues among students in traditional learning environments.

Following the intervention, these challenges were addressed during the programme's implementation to improve its effectiveness. Digital tools were introduced to overcome limited access, and capacity building of teachers and substitute teachers was carried out to enable them to integrate digital aid into their teaching practices.

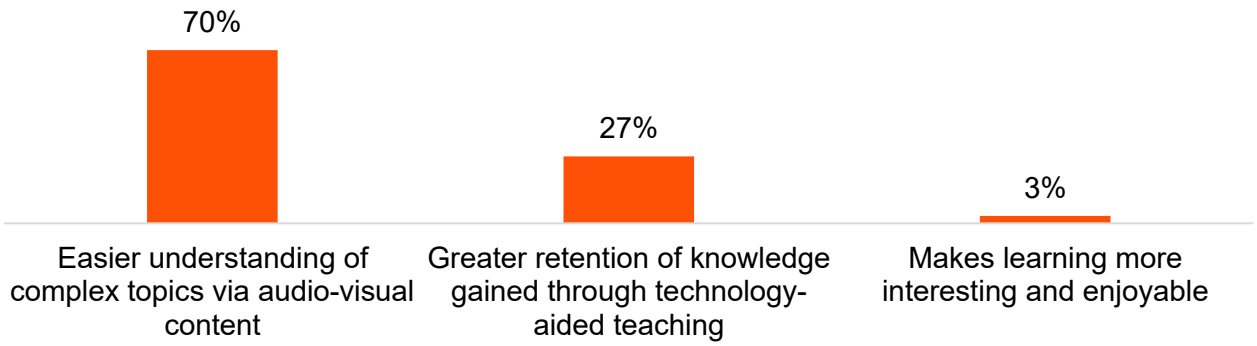
Summary of Impact Created

This section presents key findings from the impact assessment study, providing an evidence-based foundation for strategic recommendations and future project improvements.

1. Improvement in Academic Outcomes and Attendance of the students

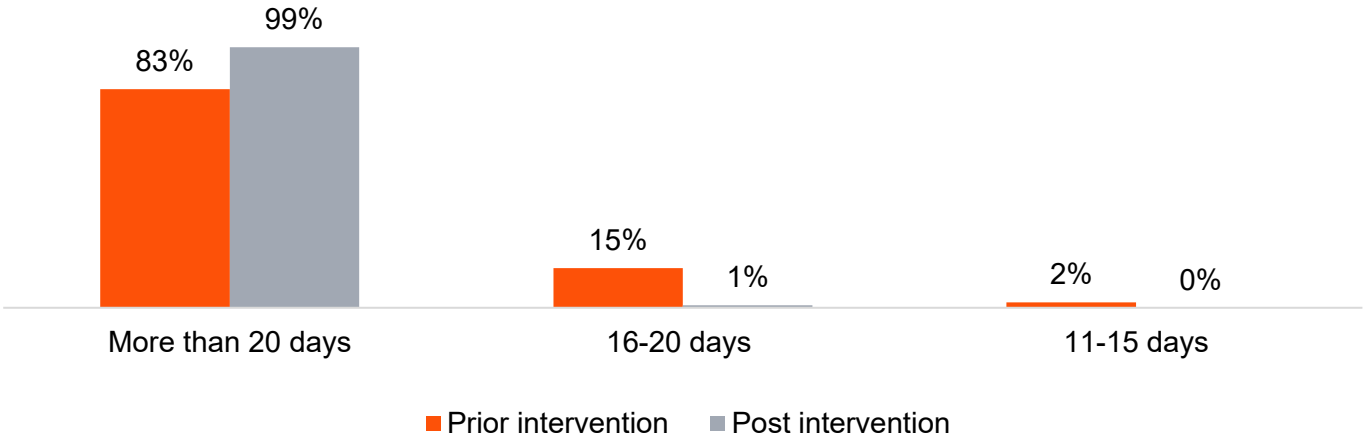
- **Increased interest in studies:** The intervention has contributed meaningfully to enhancing students' academic performance, particularly in Science and Mathematics, as noted in both teacher observations and student responses. This was due to the Digital Classrooms being equipped with digital content for major subjects viz. Science and Mathematics. **100% of the students (n=138) agreed that their academic performance in STEM based subjects has increased after learning through the Digital Classrooms**. Among those who experienced academic improvement, 70% (n=138) stated that digital tools such as audio-visual content helped them better understand complex topics.

Figure 84: Reasons for improvement in academic performance (n=138)



- **Improvement in attendance pattern:** All the teachers (n=10) interacted mentioned that the introduction of Digital Classrooms in the school has helped in improving the student's attendance. This is primarily because of increased interest in learning through Digital Classrooms and curiosity of learning via audio-visual content.

Figure 85: Average monthly attendance pattern of the students prior and post intervention (n=138)



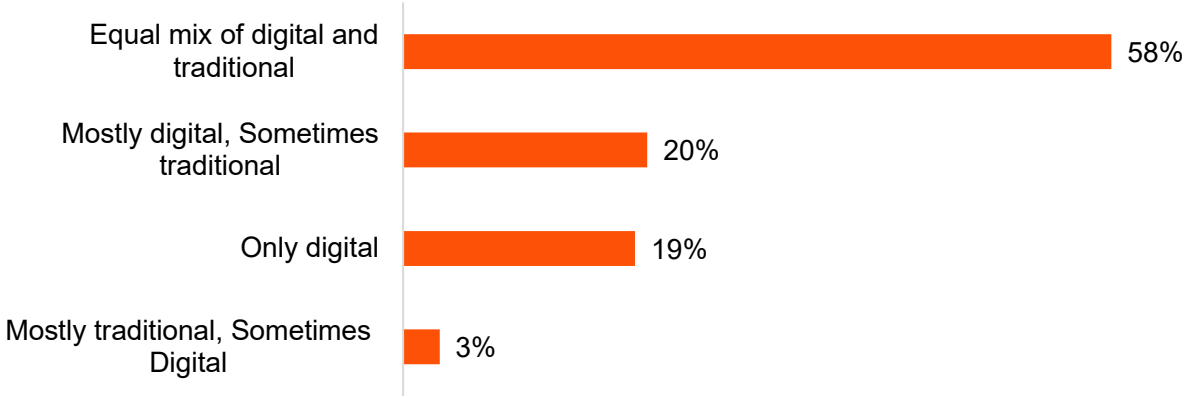
Many of the students stated that they now look forward to attending school because of the engaging learning environment enabled by the Digital Classrooms. Among the students surveyed (n=138), 99% stated that they are attending the schools for more than 20 days in a month after the Digital Classroom set up.

- **Shift in learning preference of the students:** The feedback gathered through interviews and focus group discussions with students indicated a positive shift in their classroom experience after the introduction of Digital Classrooms. Students expressed that **learning through Digital Classrooms** was not only **easier** but also **more enjoyable.** A majority (99%) of the students (n=138) found studying through Digital Classrooms to be both **easy and interesting**, **performing better in exams, Studies are more fun,** after the installation of Digital Classrooms. Post learning through the Digital Classrooms the learning preferences of the students have also shifted from the traditional method of learning to digital mode of learning. Figure below shows the learning preferences of the students.

2. **Improved Capacity of the Teachers in Education Technology:**

- Professional development training under this programme equipped teachers to effectively use Digital Classrooms and integrate digital tools into their teaching practice, addressing challenges in achieving desired learning outcomes.

Figure 86: Post-intervention learning preference of the students (n=138)

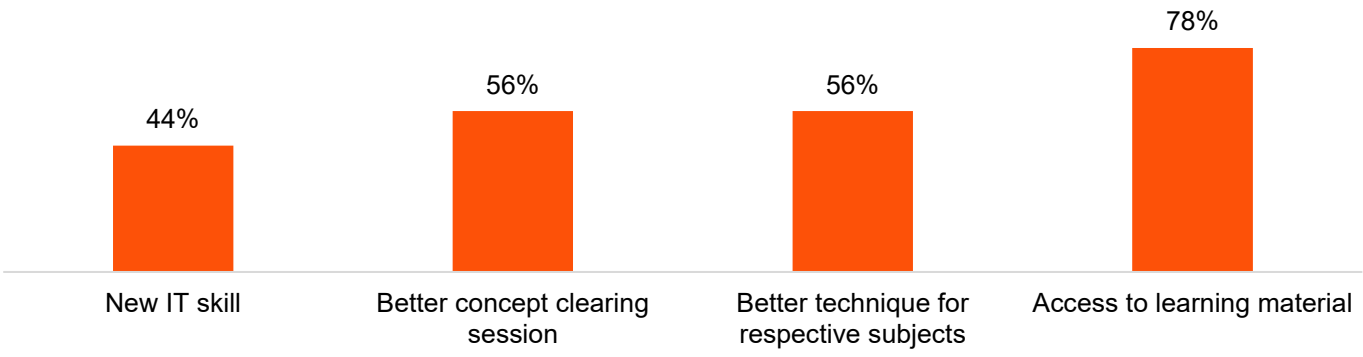


- Out of the ten teachers interacted, nine confirmed they had received formal training, while one had recently joined or transferred and therefore missed the training session. Nevertheless, all ten reported actively using the Digital Classroom setup in their daily teaching. Teachers recognized the benefits of interactive digital pedagogy and were fully engaged with the training. Further, all ten teachers has confirmed that they use digital classroom on weekly basis.

3. **Transformed teaching methods:**

- The training sessions have helped teachers transform their teaching methods, particularly in subjects like Mathematics and Science. They shared that these new approaches such as access to learning material, better interactive sessions, new IT skills etc. made lessons more interactive and enabled them to explain complex concepts such as mathematical problem-solving and scientific theories with greater clarity. This demonstrates that the training has upskilled teachers and equipped them with the necessary tools to integrate digital methods into their everyday classroom practice. All teachers are currently conducting digital classes actively, successfully integrating digital tools to improve their teaching methods.

Figure 87: Aspects covered in the training (n=10)



Multiple choice question, total may exceed 100%

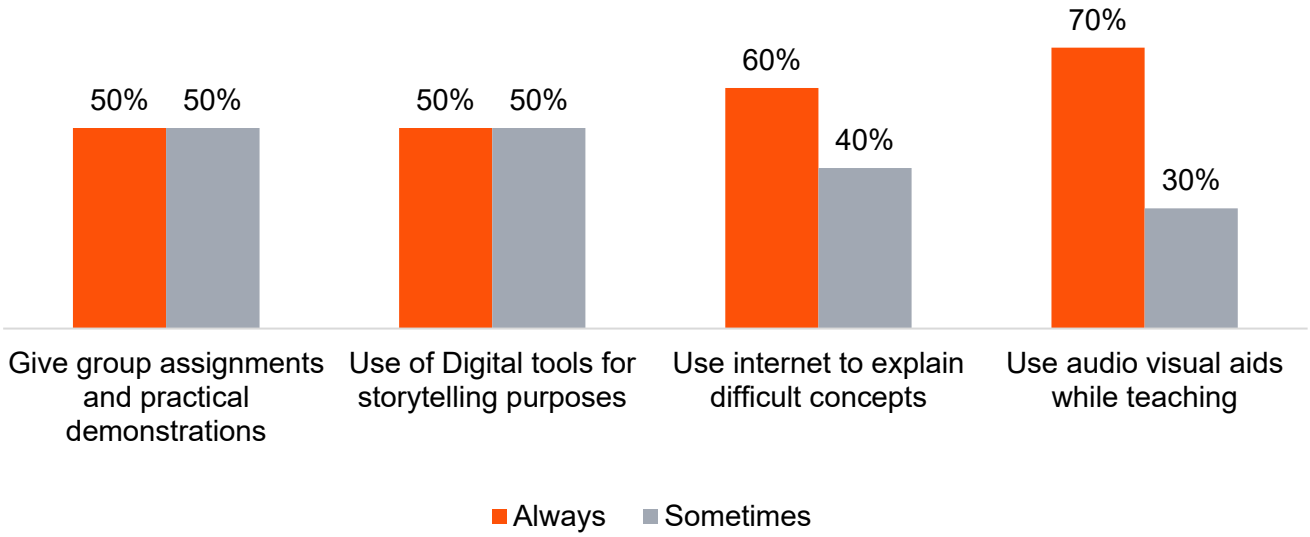
- Additionally, **96% of students (n=138) affirmed that their teachers now excel** in leveraging digital tools within the classroom ranging from audio visual content and images to practical demonstrations, storyboards, and YouTube videos making lessons more engaging, dynamic, and easier to comprehend.

4. **Shift from Traditional to Modern Methods of Teaching:**

Image 45: SBI Card Digital Classroom setup

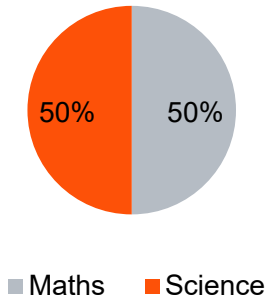
- Following the intervention, a significant transformation in teaching practices was evident. Teachers mentioned in the qualitative interactions that Digital Classrooms are more convenient than traditional methods and expressed a desire for more such classrooms in their schools.
- Before the intervention, teachers occasionally used the internet in classrooms, but its application was limited. Following the intervention, 60% of teachers reported regularly using the internet as part of their teaching practice. Similarly, 70% of teachers consistently employ audio-visual tools, and remaining 30% use them one to many times particularly for explaining complex topics, conducting storytelling sessions through Smart TVs, and enhancing lessons with group assignments and practical demonstrations. These changes led to **increased attentiveness and participation among students** within the classroom.

Figure 88: Post-intervention changes in teaching methods (n=10)



- The Implementation partner from their experience shared that the teachers initially faced challenges in capturing students' attention, particularly when relying on traditional methods that struggled to engage learners across varying IQ levels. During qualitative interactions, teachers emphasised that the introduction of digital content has not only improved classroom discipline but also **increased student interest in learning**. Teachers further added that the training they received was effective, but they feel that additional sessions, refresher trainings would be valuable to further strengthen their skills and confidence in using these tools.

Figure 89: Subjects with best learning experience through digital classrooms (n=10)

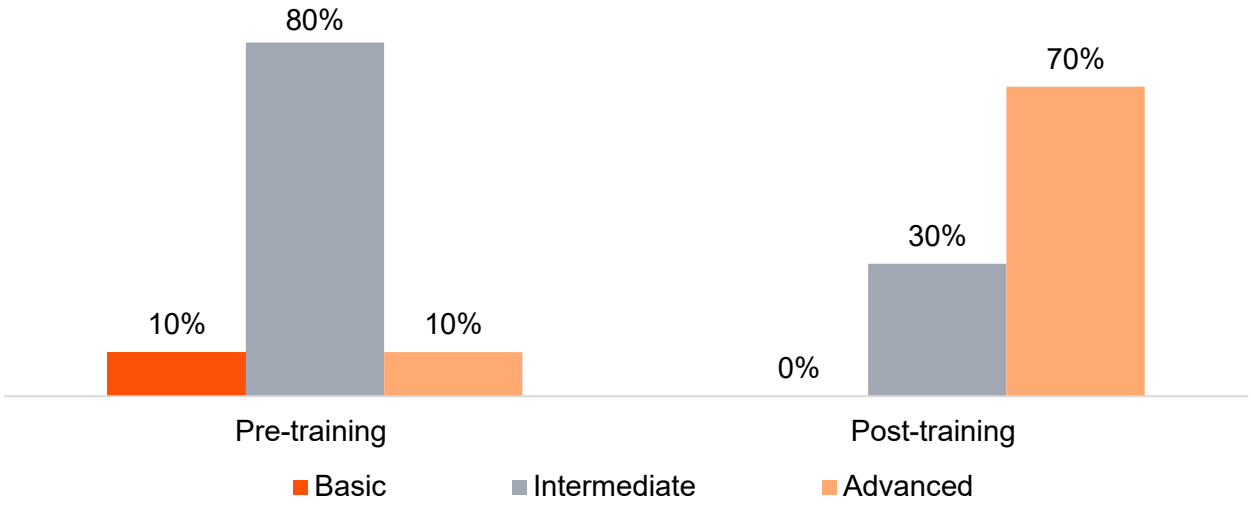


- The intervention has driven a clear shift from traditional to modern teaching practices, especially in Mathematics and Science. Teachers now actively use SBI Card - supported digital tools in classrooms, which has helped students better understand complex topics and increased engagement. Students confirmed these improvements, noting greater clarity in Digital Classroom lessons. **Beyond the programme's scope, teachers have also adopted innovative practices on their own, such as using YouTube for English instruction, reflecting the broader influence of the intervention in encouraging the adoption of diverse digital resources to enrich teaching and learning across subjects.**
- School principal during interactions has shared that before the introduction of Digital Classrooms, the traditional teaching methods were time-consuming and **often required them to draw complex diagrams on the blackboard, which did not effectively represent the concepts**.
- As reported by the Implementing Partner, the digital classroom sessions for Standards 6th to 8th are being conducted across both project locations, with usage patterns differing between the two. In **Ranchi, the average day-wise content usage is recorded at 3.47 hours per day for Science and 2.21 hours per day for Maths. In comparison, Jaipur reflects a lower day-wise average, with 0.42 hours per day for Science and 0.35 hours per day for Maths.**
- The Implementing Partner has also shared the MIS database capturing content usage data for both Ranchi and Jaipur, with records maintained from November 2024 to February 2026. As noted by the IP, November 2024 was a start-up month during which activities were primarily focused on content installation, device setup, and initial activation. Consequently, actual classroom usage during this period remained limited, and the observed figures for November 2024 should be interpreted in the context of the rollout phase rather than as an indicator of steady-state adoption.

5. Improved IT proficiency:

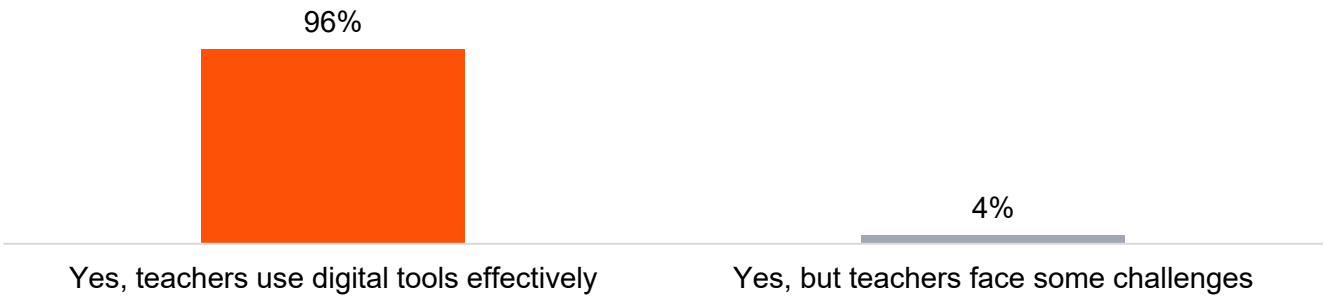
- The intervention significantly enhanced teachers' digital skills. All teachers (n=10) reported improvements in their IT proficiency, with many progressing from **basic to intermediate** levels or from **intermediate to advanced**. This advancement strengthened their digital competencies and enabled them to integrate technology more effectively into classroom teaching.

Figure 90: IT proficiency of teachers - Prior & Post-intervention (n=10)



- The teachers emphasised that the skill enhancement from the various aspects of the training has been helpful for them in **improving their teaching** and **communication with the students.**
- Following the SBI Card intervention, 100% teachers (n=10) agreed that Digital Classroom learning is **highly effective in capturing students' attention**, as the training enabled them to make lessons more interactive. **96% of students reported that teachers are using digital tools effectively,** making classrooms more engaging, enjoyable, and stimulating since the intervention.

Figure 91: Effective use of digital class by teachers as mentioned by students (n=138)

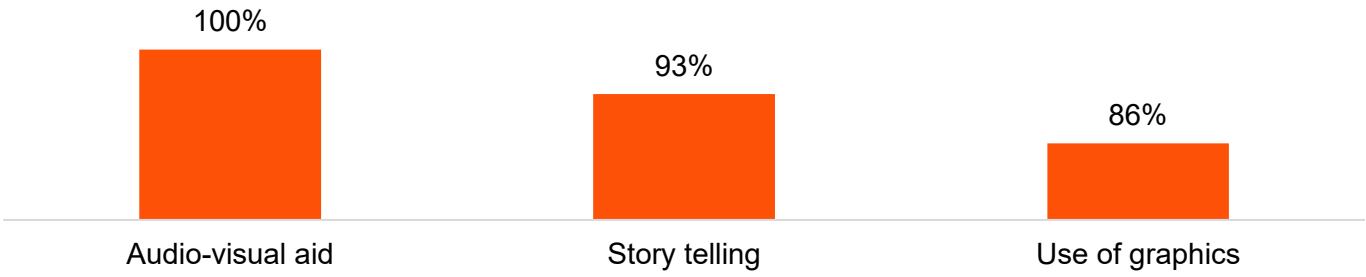


- In reference to effective usage, the Block Education Officer of Ranchi also shared that regular monitoring is carried out by them in government schools, and teachers are observed utilising digital tools effectively, with students actively engaging in the learning process. Principals also noted observable outcomes, including improvement in academic performance of students, an increase in attendance records and a rise in new admissions following the introduction of digital classrooms.

6. Improvement in School Infrastructure and Teaching Quality

- **Ensuring Continuity of Learning through Digital Content:** One of the Principal shared that the availability of digital content has empowered substitute teachers in their school to manage lessons more effectively, which is particularly valuable in government schools that often face teacher shortages during local elections. Principals further emphasized that students' learning remains uninterrupted even when regular teachers are assigned administrative duties. Substitute teachers can easily access digital content, ensuring that classes continue with proper discipline, while students remain attentive and enthusiastic in their learning.

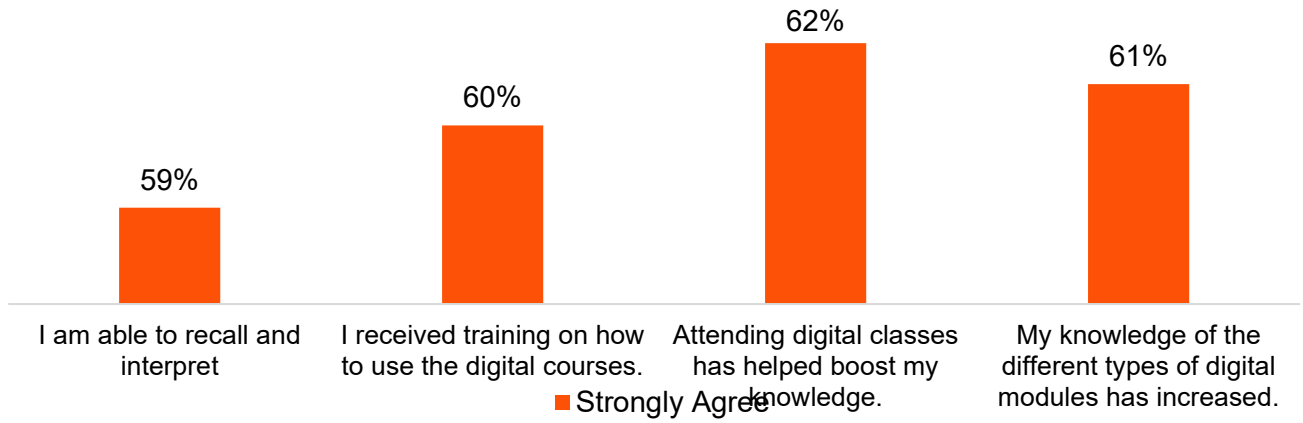
Figure 92: Use of method for teaching students in digital class (n=138)



Multiple choice question, total may exceed 100%

Moreover, with the support of digital interventions, many students reported that their performance in examinations has improved. They also expressed that learning has become more enjoyable, accessible, and engaging, which has motivated them to attend school regularly.

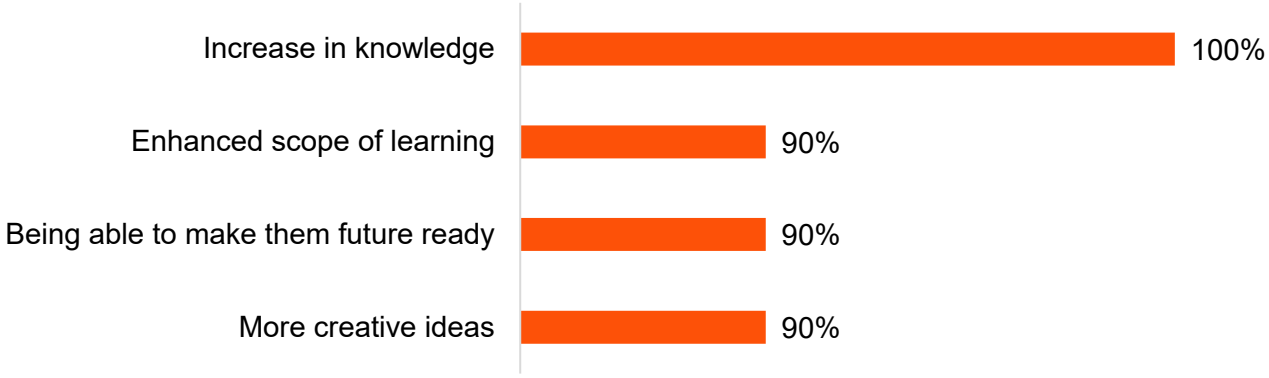
Figure 93: Post intervention student outcomes on digital classrooms experience (n=138)



Multiple choice question, total may exceed 100%

- **Creating Functional Learning Spaces Through Furniture Support:** Across all schools, principals and teachers shared that the new desks, benches and classroom upgrades supported by SBI Card have created a clear shift in how students show up and engage in class. The refreshed classrooms, now painted, organised and properly furnished, have made students more willing to attend school and participate actively.
- Teachers observed that students can now sit comfortably, focus for longer periods and engage more confidently during lessons. The sturdy and age-appropriate furniture has helped create an environment that feels structured, safe and supportive of learning.
- Along with digital tools such as Android Smart TVs, curriculum aligned content and internet connectivity, the furniture became the base that made the technology truly usable. Without proper seating, it would have been difficult for students to follow digital lessons from the floor, leading to discomfort and distraction.
- With functional desks and benches in place, students can take notes, use their textbooks alongside digital content and remain attentive throughout the session. In practice, the furniture has turned digitally equipped rooms into fully functional learning spaces where students do not just watch lessons but actively learn.

Figure 94: Impact on students after learning from the Digital Classes (n=10)



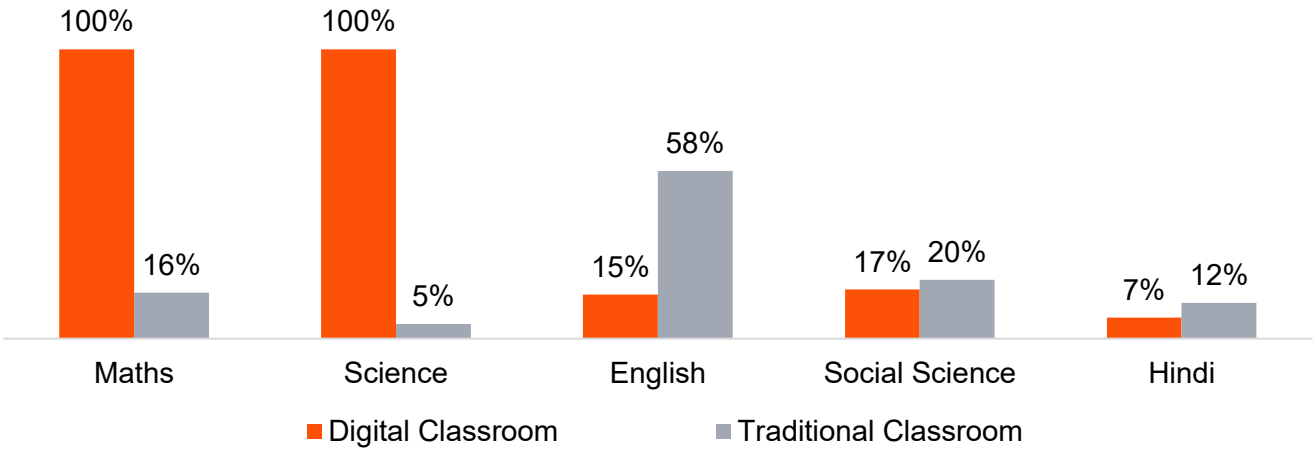
Multiple choice question, total may exceed 100%

The implementing partner reported that both teachers and parents provided positive feedback on the integration of digital tools, affirming the relevance and usefulness of the intervention. However, it was noted that the availability of only two Digital Classrooms per school leads to limited access for all classes.

Consequently, teachers recommended in the qualitative interactions that expanding the initiative to include multiple Digital Classrooms in each school and extending digital content to higher grades (9 - 12) as well as to additional subjects beyond Mathematics and Science, to ensure continuity of learning.

- **Increased trust and the strengthening quality of education:** Teachers shared encouraging feedback, noting that the enhanced infrastructure has contributed to a significant rise in student enrolment and retention. Teachers further shared that during parent–teacher meetings, it was observed that parents now express greater confidence in the quality of education being delivered. The upgraded facilities have made government schools more competitive, narrowing the gap in learning experiences compared to their peers. This intervention has not only reinforced students' foundational skills but also equipped them with essential digital competencies, preparing them for future opportunities.

Figure 95: Subject -wise students' learning preference - Digital Classroom vs Traditional Classroom (n=138)



Multiple choice question, total may exceed 100%

IRECS Analysis

Parameters	Assessment from study
Inclusiveness	• The programme targeted all the students in Standard 6th to 8th in 100 government schools within the state of Rajasthan and Jharkhand and support provided under the project reached out to all intended beneficiaries, irrespective of their social class. • The intervention emphasized inclusivity by focusing on children from underserved communities, ensuring they have equal access to modern learning methods alongside their peers.
Relevance	• The relevance of the intervention is evident in its alignment with the specific needs of government schools. By providing essential digital infrastructure, it directly addressed the challenges these schools faced and ensured students gained access to quality education. • The initiative helped bridge learning gaps by introducing context-appropriate digital tools and content, making the intervention both responsive and effective in tackling on-ground challenges.
Effectiveness	• The intervention greatly expanded students' access to educational technology, resulting in improved academic performance and more consistent attendance. • For most students, digital classes and content made learning simpler and more engaging. They reported better exam results, greater enjoyment in studies, and a more interactive classroom experience. • 99% of students now attend school for more than 20 days each month following the project intervention. • All students (100%) expressed a preference for audio-visual techniques as their preferred method of learning in digital classrooms. • The hands-on training provided by the IP team has effectively boosted teachers' confidence and enabled them to integrate technology seamlessly into their teaching practices. • Following the intervention, classrooms have seen greater student participation and attentiveness, driven by the shift from traditional methods to modern, technology-enhanced pedagogy. • Principal and teachers in consensus shared that the addition of new desks, benches, and fresh paintwork in classrooms has created a more welcoming and functional learning environment. Students have shown greater interest in attending school, with improved participation and attentiveness. The modern furniture, designed for comfort and durability, supports diverse learning needs and

Parameters	Assessment from study
	helps transform classrooms into spaces that encourage engagement and regular attendance.
Convergence	• The initiative undertaken by SBI Card has helped in promotion of quality education using Digital Classrooms in the schools which very well aligns with SDG 4 (Quality Education). • The initiative has effectively supported the efforts of the education department and government schools in the region. By aligning with the government's vision of promoting digital learning, it has helped enhance student learning outcomes while strengthening teachers' ability to adopt modern teaching practices.
Sustainability	• Training teachers and upgrading their IT skills from basic to intermediate or advanced levels has ensured that the use of digital infrastructure will continue beyond the project period. • Following the intervention, most teachers reported using the internet to explain complex topics, leveraging digital classrooms for storytelling, incorporating audio-visual aids, and assigning group projects and practical demonstrations. This marks a clear shift in pedagogy made possible through sustained use of digital tools. • Investments in digital classrooms have created long-term assets that schools can continue to utilize. • The sustainability of the initiative depends on regular equipment maintenance and periodic teacher training to support effective use of digital tools over time. However, there is currently limited clarity on how schools will manage ongoing maintenance, which may affect the long-term continuity of the intervention.

Alignment to the UN SDGs & SBI Card's ESG Goals

The project is **aligned with the following UN Sustainable Development Goal** (SDG) 4: Quality Education. The project directly addresses this goal by improving access to quality education in government schools. It enhances digital literacy and classroom engagement through digital classrooms and STEM-focused digital content.

The project is **also aligned with SBI Card's internal ESG** goals of "Transforming the education of 1 lakh individuals by FY 2027 and 5 lakh individuals by FY 2030 through Corporate Social Responsibility (CSR) programmes."

Project Recommendations

The study identified the following project level recommendation which has been summarised below:

- **Expand Digital Classroom Infrastructure:** Currently, each school has only two digital classrooms, which restricts usage across grades. Feedback from teachers and students indicates strong interest in using these tools more frequently across subjects. Establishing additional digital classrooms would make digital learning accessible to all students. Moreover, the digital content that has been well received in Standard 6th to 8th could be extended to higher grades (9–12) and to subjects beyond Mathematics and Science, ensuring continuity and broader coverage of learning.
- **Strengthen Trainer Support through Recorded Training Sessions:** While teachers have adapted well to digital classrooms and tools, continuous access to training resources will help them stay updated with evolving technologies and teaching practices. Although informal knowledge sharing occurs among teachers, providing recorded training sessions would offer consistent and accessible support, particularly for newly appointed or transferred teachers who may lack prior experience. These recorded sessions can be accessed by teachers at their convenience, ensuring that all teachers remain confident and capable of fully utilizing the digital infrastructure, thereby sustaining the quality and continuity of technology-enabled learning

11

Project 8 and 9: Mainstreaming Deaf Youth through Pre-Vocational Skill Development and Suitable Livelihood

About the Project

In today's pursuit of equality and inclusion, it is both an ethical and social imperative to ensure that Persons with Disabilities (PwD's) have fair and equitable access to education and employment opportunities. According to the 2011 Census, India is home to 2.68 crore individuals with disabilities, among whom 21.9% experience hearing impairments (Census of India, 2011)[34]. Further underscoring the scale of this issue, the World Health Organisation (WHO) estimated in 2023 that approximately **63 million people in India suffer from significant auditory impairments**.[35]

Despite the large numbers, **mainstream skill development programs remain largely inaccessible** to PwD's due to several critical barriers, including **insufficient integration of Indian Sign Language (ISL)**, **limited specialised training modules designed for their needs**, and **pervasive social stigma**. Research has shown that PwDs, including those with hearing impairments, constitute **an underutilised workforce**, facing persistent challenges in accessing meaningful skill-building and employment opportunities (Government of India, Ministry of Labour & Employment 2024).[36] This sustained exclusion **perpetuates unemployment and dependency, preventing youth with hearing impairments from contributing fully to India's economic growth and social development.** Addressing these barriers is therefore not only a matter of social justice but also a crucial step towards harnessing the untapped potential of those with hearing impairments.

SBI Cards and Payment Services Limited, through its CSR initiatives and in partnership with Noida Deaf Society (NDS), implemented the project Mainstreaming Deaf Youth through Pre-Vocational, Skill Development, and Suitable Livelihood[37]. **In Phase I**, the training covered Indian Sign Language, computer literacy, English communication, retail, hospitality skills, and pre-employment preparation. Whereas in **Phase II,** the focus shifted to digital literacy, banking and finance, data entry, English communication, sign language, and vocational skills such as bakery and beauty services.

Through its CSR partnership with Noida Deaf Society (NDS), the project **endeavored** to create employment opportunities for trained hearing-impaired youth while also building awareness among corporates and families.

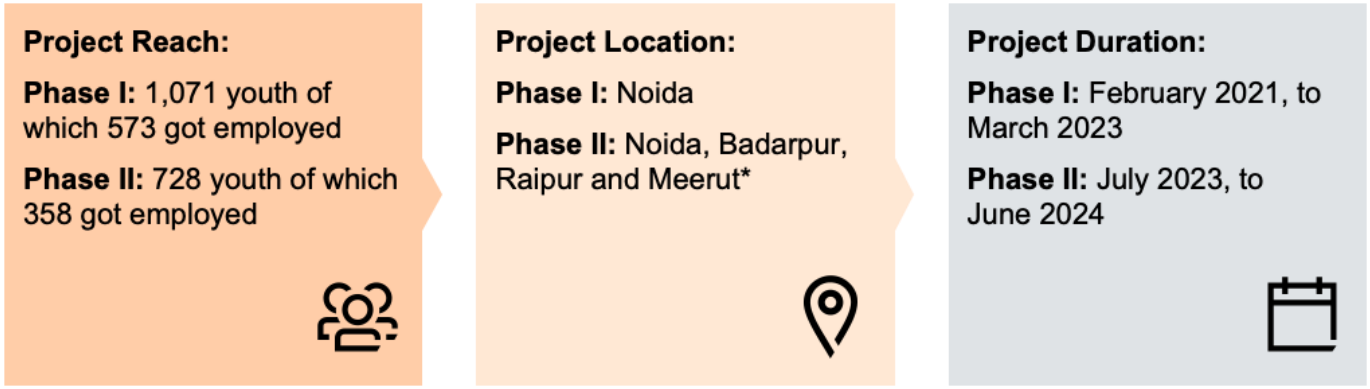
In Phase I, 100 corporates were engaged to promote inclusive workplaces and disability hiring. The programme also involved families through around **200 parental counselling and awareness sessions,** contributing to wider societal sensitisation.

In Phase II, following the approach adopted in Phase I, **110 corporates** were sensitised to promote inclusive workplaces and support disability-inclusive hiring practices.

Across both phases, the project combined professional skill development with corporate sensitisation efforts and initiatives aimed at fostering an enabling ecosystem for employment. Exposure visits, conducted four times a year, were also included to strengthen practical learning and workplace readiness. Below figure provides an overview of the project specifics[38]:

34 https://censusindia.gov.in/nada/index.php/catalog/43469?utm_source
35 https://www.who.int/india/campaigns/world-hearing-day-2023?utm_source
36 https://dge.gov.in/dge/sites/default/files/2024-08/Opportunitie_for_PwD.pdf?utm_source
37 Source: Agreement, Addendum & Closure Report provided by the SBI Cards team
*The Meerut and Raipur center got closed. Hence, we could only visit Noida and Badarpur center as part of the impact assessment study
38 Source: MoU signed between SBI Cards and NDS

Figure 96: Project overview



The SBI Cards supported project implemented by NDS was a **skill development initiative** aimed at empowering youth with hearing impairments from diverse and underserved regions. Designed as a structured **three-month training programme**, it was primarily intended for participants **aged 18 to 30 years**, as the core objective of the programme was to prepare beneficiaries for employment opportunities following the NDS training, for which the minimum eligibility age is 18 years.

In addition to the targeted beneficiaries, the programme also accommodated individuals **below 18 years of age as supplementary participants**, over and above the defined target group. Since these younger trainees were not eligible to apply for jobs, they were offered foundational courses such as General Knowledge, English Communication, Mathematics, Basic IT, Indian Sign Language (ISL), and Digital Literacy to support their overall learning and development until they reached the eligible age for employment.

Furthermore, the residential model was initially launched in April 2021 as part of Phase I, which included hostel accommodation, meals, and transportation facilities for the trainees. However, due to the outbreak of the COVID-19 pandemic, the hostel facility was discontinued by September 2021, with meal provision remaining operational in both the phases.

During both the phases, SBI Card supported a digital learning model, which enabled NDS to facilitate a hybrid mode of training. This ensured continuity of learning for trainees who were unable to travel to the centres, allowing them to participate in the programme remotely.

For Phase I and II corporate sensitisation workshops drove inclusive hiring, leading to placements across IT, Hospitality, Retail, E-Commerce and Education. Parent counselling and ISL learning strengthened family support, enhancing student outcomes. By combining inclusive training, employer engagement, and family involvement, the project created a clear pathway to sustainable employment and social inclusion for hearing impaired youth. Figure below presents an overview of key activities implemented across both phases of the project, reflecting the integrated approach to skill development, employment facilitation, and ecosystem strengthening.

Figure 97: Project activities implemented across both phases (as per MoU between SBI Cards and NDS for both the phases)

Mobilisation & Enrolment

- Outreach and mobilisation of youth with hearing impairments
- Assessment and counselling to understand aptitude, interests, and readiness
- Enrolment and batch formation across project locations

Skill Development & Training Delivery

- Delivery of market-aligned vocational training, including digital literacy, data entry, retail, hospitality, bakery, beauty services, and workplace readiness
- English communication and life skills training Indian Sign Language (ISL) foundation to strengthen communication and learning outcomes
- Development and use of customised, visual training curriculum designed for deaf youth Periodic assessments and evaluations of trainees

- **Employment Facilitation**
- Organisation of placement drives for trained youth
- Corporate outreach and sensitisation workshops to promote inclusive hiring
- Corporate integration training to support smooth workplace inclusion of employed youth

Exposure & Experiential Learning

- Regular exposure visits to industries and workplaces to strengthen practical understanding and job readiness
- Science and health workshops to support holistic development

Infrastructure and transportation support

- Establishment and operationalisation of skill development centres across locations
- Provision of transportation facilities (where applicable) to support participation for commuting to the centers.

Trainer Capacity Building

- Training of Trainers to strengthen pedagogical approaches, content delivery, and experiential learning practices
- Continuous academic support and sharing of best practices

Family & Community Engagement

- Parental counselling and sensitisation sessions to strengthen family support
- Encouragement of ISL learning among parents to improve communication and bonding

Method of Impact Assessment

The impact assessment study leveraged an integrated and cohesive approach to assess the social impact transpired since project's implementation. A kick-off meeting was held with SBI Cards and the Noida Deaf Society to understand the nature of support for this project and align the requirements for starting the assessment exercise.

Following the meeting, PWCALLP received following **project documents**:

- Memorandum of Understanding (MoU) and its addendum containing project details agreed with Noida Deaf Society and SBI Cards
- Center Wise Annual Reports of the project
- Course details of the project

PWCALLP team then began the project's **desk review** based on the information collected during the kick-off meeting and from the project documents. This helped our team in designing the assessment framework and **finalising the key stakeholders** for the interactions.

A qualitative approach was deployed for the assessment. Qualitative methods captured stakeholder perspectives and experiences to validate findings and understand actual impact. Research techniques included Focus Group Discussions (FGDs), and In-depth Interviews (IDIs) to ensure comprehensive evaluation.

The qualitative sampling plan is detailed in the table below:

Table 11: Qualitative Sampling Distribution for Phase 1 and Phase 2

Stakeholders	No. of interactions (in both the phases) *	In-Depth Interview	Focus-group discussion
Student Beneficiaries (10 students in each group)	1 per centre		✓
Trainers	1 per centre	✓	
Center Head	1 per centre	✓	
On-Ground Team for Sensitization of Corporates	1 per centre	✓	
Employers	2 per centre	✓	

Stakeholders	No. of interactions (in both the phases) *	In-Depth Interview	Focus-group discussion
Parents	4 per centre	✓	
NDS Programme Team	1 per centre	✓	
SBI Card Team member	1 per centre	✓	

*For Phase I, interactions were conducted at the Noida centre, as it was the only operational centre at the time. In Phase II, the programme expanded to four centres (Noida, Badarpur, Raipur, and Meerut); however, during the Impact Assessment study, the Raipur and Meerut centres were non-operational.

Accordingly, the impact assessment for Phase I is based on interactions conducted at the Noida centre, while the Phase II assessment draws on data from the Noida and Badarpur centres.

The responses collected from the stakeholders' interactions were analysed to arrive at detailed findings as depicted in next section.

Summary of Impact Created

This section presents key findings from the impact assessment study, providing an evidence-based foundation for strategic recommendations and future project improvements.

Image 46: Student outreach poster for skilling & career growth

1. **Building a safe and inclusive learning hub for youth with hearing impairments**

   Expanding Access Through Community Engagement and Peer Networks

   Children and youth with hearing impairments benefit from dedicated outreach, awareness, and peer support to access inclusive education. Strengthening these areas helps eligible trainees gain the confidence to enroll and continue their learning.

- Phase I served as an important groundwork phase, during which outreach and mobilisation efforts were initiated within the target communities. Lessons learned during this period shaped Phase II, in which expanded outreach and mobilization efforts supported wider awareness and increased enrolment. This, in turn, supported more consistent participation in training and learning activities across centres.
- Parents reported that they **first learned about the center through friends and word of mouth**, as many trainees with hearing impairment in their neighborhoods had begun securing **meaningful employment** in sectors such as **retail, hospitality, and manufacturing**. The availability of **free**

training and support services enabled families to access educational and livelihood opportunities that were previously unattainable.

- Although many trainees had previously attended mainstream schools, parents observed that they continued to face comprehension difficulties due to communication barriers. In contrast, the specialised training centre, supported by SBI Card, provided an accessible and inclusive learning environment where trainees could interact freely with peers experiencing similar challenges, thereby fostering both confidence and understanding.
- The center head across centres during interaction highlighted that from the moment of enrollment, **the transformation was evident.** Trainees entered a safe and supportive space where Indian Sign Language (ISL) served as the **primary medium** of communication. For many, this was the first time they experienced education delivered in a language they could fully understand and use naturally. The consistent use of ISL enabled clearer understanding of concepts, active participation in class, and confident self-expression.
- Parents highlighted how their children's enthusiasm grew over time as they looked forward to attending classes daily. Trainees began managing themselves independently, including commuting to the centre on their own, handling their daily routines, and taking responsibility for their personal needs without relying on their families. They also actively engaged with trainers and classmates, reflecting a growing sense of self-reliance and confidence.
- The center thus became a catalyst for empowerment, demonstrating **how** accessible communication unlocks potential.

Enhanced Career Readiness and Strengthened Stakeholder Engagement in Phase II

- During Phase II of the project, outreach efforts were further strengthened through peer networks, contributing to improved enrolment and career readiness among trainees. Notably, several trainees were influenced by interactions with individuals trained and placed during earlier phases of the project, reflecting the role of alumni networks in outreach. Digital platforms such as Facebook and WhatsApp further supported awareness and mobilisation efforts.

Image 47: General Knowledge Class at NDS Centre, Noida

- Families engaged actively in counseling and awareness sessions that enhanced their understanding of workplace demands, fostering a trusting and supportive environment essential for the trainee’s career development. The programme contributed to changing community perceptions by showcasing the professionalism and capabilities of trainees through training in formal behavior and communication skills.
- The on-ground corporate sensitisation team emphasised the value of exposure visits, where trainees visited actual workplaces such as retail stores and hospitality venues. These visits provided

practical insights into workplace operations and regulations, helping to build trainees' confidence and communication abilities.

"Many students came to us unsure of their abilities, hesitant to engage. Over the months, I've seen them transform into confident young adults who actively participate, ask questions, and are ready to take on jobs with pride."

- Trainer at the Noida Centre

Enhancement of Infrastructure and Facilitation:

- The trainees from Phase I highlighted how their time at NDS opened new possibilities. With support services such as free meals, hostel facilities, and assistive technologies, they were able to participate in training regularly without the usual financial or logistical barriers.
- According to the Implementation Partner, the residential model, launched in April 2021, provided meals and accommodation for the initial three months but was discontinued by September 2021 due to COVID-19. Despite the limited duration, the programme reached youth from remote and underserved regions, including Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, and Rajasthan, thereby expanding opportunities and empowering marginalised communities.
- Beyond addressing infrastructure and residential support, the programme also focused on facilitating informed learning pathways for trainees. Across both phases, trainees highlighted that after enrolling, they received guidance from trainers in choosing vocational as well as supplementary education courses. The counseling process helped learners align their training with their age and personal aspirations.
- Vocational courses such as "**Path to Livelihood, Personality Development, Hospitality, Retail, Pre-employment Training, and Basic IT, etc."** were available to those aged 18 and above, preparing them directly for workplace integration. Meanwhile, some younger learners below 18 could choose any **two supplementary courses from General Knowledge, English Communication, Mathematics, Basic IT, Indian Sign Language (ISL), and Digital Literacy, etc**.
- In addition to vocational and academic pathways, the programme sought to strengthen trainees' functional skills relevant to an increasingly digital work environment. The **inclusion of digital literacy classes** added another important skill set, with trainees gaining **access to computers** at the center and **learning basic IT skills** applicable **to their daily lives and employment context.**

Image 48: Building digital confidence at the NDS Centre in Noida

- These skill-building experiences were also positively received by families and trainers. Parents and trainers shared that the trainees showed enthusiasm during digital literacy sessions, often **expressing pride in being able to navigate digital platforms independently.**

- Beyond technical skill development, equal importance was placed on preparing trainees for the realities of the workplace, guiding them on how to **present themselves in interviews, communicating effectively with employers through sign language, and adapting to organisational culture.**
- To support structured and recognised learning outcomes, Trainers reported using courses and handouts developed by the National Institute of Open Schooling (NIOS). Through these resources, the center provided trainees with structured and flexible education that was accessible and nationally recognised.
- Building on this foundation, Phase II introduced additional training opportunities in areas such as **banking and finance, data entry, and vocational skills such as bakery and beauty courses**. These expanded offerings widened employment pathways and responded to evolving market requirements for trainees.
- Learning facilitation was further strengthened through sustained pedagogical support. The continued use of visual learning aids and peer support mechanisms enhanced comprehension and communication, supporting both academic learning and personal growth among trainees. Trainers highlighted that they focused on nurturing confidence through interactive activities such as **role plays and group projects.**
- Complementing classroom-based instruction, exposure to real workplace environments was further strengthened during Phase II. As indicated by the center head, trainees visited retail stores and hospitality venues, enabling them to connect classroom learning with practical job environments and understanding workplace ethics.
- **These training and exposure efforts were reinforced through formal recognition of learning outcomes.** The awarding of nationally recognised certificates by the National Institute of Open Schooling (NIOS) upon course completion was a key factor in supporting employment prospects for trainees.
- Sustained engagement with families remained an integral component of the facilitation process. Parent-Teacher Meetings (PTMs) served as forums to sensitise parents to trainee needs, monitor progress, and reinforce the importance of family support throughout the trainees' career journeys.

Addressing Psychological and Social Challenges through the Center:

- As indicated by a NDS team member, during both phases, the center emerged as a safe and supportive environment where trainees overcame social isolation, stigma, and low self-esteem. Parents observed noticeable emotional and behavioral shifts in their children, which reflected improved confidence and social comfort.
- These changes were gradual and closely linked to parallel efforts to sensitise families. Trainers emphasised that **parental engagement played a pivotal role.** Parents who initially doubted their child's prospects **shifted from hesitancy to advocacy** as they **witnessed tangible progress.** This change not only reduced stigma but also **fostered more inclusive mindsets within families and communities.**
- Trainers further emphasised that when parents were motivated and well-informed, they became a source of emotional strength for the trainees. They observed that as parental confidence in the programme's effectiveness grew, trainees felt more encouraged to persevere through challenges. This consistent family support played a significant role in reducing dropout rates, while also

nurturing a sense of self-assurance and determination among the trainees to pursue their career goals.

- Parents observed that the training supported their children in improving communication both at home and in social settings. These changes contributed to greater independence and helped strengthen relationships.
- Individual experiences illustrated the emotional impact of the supportive environment. One parent shared the decision to enroll her 18-year-old daughter despite initial resistance from other family members. The daughter reported feeling safe and comfortable at the centre, often preparing for classes in advance and expressing eagerness to engage with peers—reflecting growing confidence and motivation.
- Sensitisation efforts also contributed to broader inclusion outcomes. Trainers reported increased acceptance of **female youth joining training programs**, **breaking gender-related barriers**. This was further reinstated **when the center head reported that a transgender trainee successfully enrolled**, affirming its role as a truly inclusive space where diversity is not only respected but actively supported.

Strengthening Psychological Support and Family Engagement in Phase II:

- During Phase II, the programme further strengthened its focus on structured psychological support for trainees and their families. The center head reported that regular counseling sessions were offered to trainees and their families to **address psychological challenges**, such as isolation, low self-esteem, and anxiety about the future. This support helped trainees build coping skills and feel supported during their learning journey.
- In addition to counseling support, trainees highlighted the role of extracurricular activities and centre-based events like sports day, which created a structured **"school-like" atmosphere** that increased engagement and nurtured a sense of belonging.

Image 49: Hands-on Baking Skills for Students

- Formalised mechanisms for family engagement were strengthened during Phase II to ensure sustained parental involvement. Quarterly Parent-Teacher Meetings (PTMs) enabled regular communication with trainers, allowing parents to better understand their children's progress and address concerns, if any.
- The programme also incorporated targeted workshops focusing on health, well-being, and professional presentation supported trainees' holistic development. Families were encouraged to participate or remain informed about these sessions, recognising their direct impact on social inclusion and workplace readiness.
- The NDS programme team members emphasised that this comprehensive approach **strengthened the social support network** around hearing-impaired youth, enabling them to experience **greater emotional stability, motivation, and skill development.**

"Before joining the centre, my daughter was so quiet at home, shy and hesitant to express herself. Today, she walks into class with excitement, communicates confidently in Indian Sign Language, and even helps others find their words. Watching her discover herself and her confidence has been one of the greatest joys of my life"

- Jyotica's mother about the Noida centre

(name changed to maintain anonymity)

2. Development of Market-Relevant Professional Skills and job readiness

Comprehensive Skill Development for Job Readiness:

- Trainers shared that during the initial phase of implementation, the programme offered a structured **three-month program** that prepared trainees by **combining vocational skills with supplementary education** in areas such as computer literacy, English communication, and industry-specific knowledge. This integration supported their transition into workplace settings.
- As part of this structured training approach, the centre head highlighted that **training batches were customised based on disability certification and academic background**, enabling relevant skill development aligned to market-oriented roles.

Image 50: Personality Development Class at the Badarpur Centre

- **According to the trainers, monthly assessments revealed significant improvements in English reading, vocabulary, digital literacy, and essential soft skills** such as communication, teamwork, and workplace etiquette.
- As trainees demonstrated readiness through these assessments, structured placement support was provided, **including role matching based on individual interests and capabilities**. **Interpreters supported trainees during interviews,** while trainers provided guidance on professional grooming and workplace behavior, strengthening preparedness for formal employment.
- **Employer perspectives illustrated how inclusive employment translated into career progression.** An employer at one of the most prestigious hotels in the country shared that their firm belief in providing an 'equal seat at the table' reflects the company's inclusive employment policy, which led them to employ **over 250 hearing-impaired individuals**. These **employees began at entry-level roles and progressively advanced into managerial positions** such as restaurant manager, assistant manager, and shift manager.
- The employer further noted that hearing-impaired employees **often demonstrate better concentration and productivity when given the opportunity**, though challenges like miscommunication sometimes arise; in such cases, NDS provides interpreters to help navigate these situations.

- Building on the foundational training, **more than half of the hearing-impaired trainees in both phases** secured employment across a range of sectors, including e-commerce, hospitality, retail, and information technology.
- Trainees were placed in diverse operational and service-oriented roles such as housekeeping, laundry, food and beverage (F&B) service, customer care executives, packers, associates, operators, and trainers. Some were also placed with e-commerce platforms such as Big Basket, reflecting the breadth of industry engagement achieved through the programme.
- Employment in these roles contributed directly to the financial independence of trainees and their families. During Phase I, the trainees placed earned an average monthly salary of **INR 11,783**, which increased to **INR 14,619** in Phase II, indicating both improved earning potential over time and the programme's effectiveness in facilitating access to better-paying opportunities. For many trainees, this represented their first experience of earning a stable income, which enhanced their sense of self-worth and enabled them to contribute meaningfully to household expenses.[39]
- Trainers reported that trainees developed practical customer-service skills, particularly relevant in hospitality roles. They helped them interact professionally at work which leads to improved job performances which in turn results into continued job assurance and increased household income.
- According to a corporate sensitisation team member, **regular workshops with corporate partners** helped improve employer understanding of the abilities and needs of hearing-impaired employees. As a result, **more organisations adopted inclusive hiring practices** and adjusted to support such employees effectively.
- The programme also introduced **buddy systems, where newly placed trainees were paired with experienced colleagues or alumni within their workplaces**. This support helped them manage day-to-day communication, adjust to workplace culture, and settle more smoothly into their roles during their initial months on the job.
- Beyond initial placement, the programme extended structured post-placement support to ensure sustained employment. Trainers and coordinators conducted regular follow-ups with both trainees and employers to address emerging challenges. Common difficulties reported during this phase included workplace miscommunication due to the absence of sign language awareness among co-workers, initial hesitance from supervisors in assigning complex tasks, and occasional feelings of isolation among trainees in hearing-dominated environments. To address these, NDS deployed interpreters for critical interactions, conducted periodic workplace visits, and facilitated refresher sessions on communication strategies for both employees and their teams. This continued engagement helped reduce early attrition and supported longer-term job retention.
- In addition to technical and professional skills, **foundational health awareness and family support emerged as important enablers of sustained participation** and job readiness among trainees.

Enhancing Health Awareness and Parental Engagement for Holistic Development

- During phase I, trainers observed challenges related to personal hygiene and health awareness among trainees due to communication barriers. To address this, the center provided health kits and conducted Covid-19 awareness sessions, during the pandemic.

[39] Source: MIS Database provided by the SBIC Team consisting of monthly salaries.

- The health kits, which included masks, sanitizers, and thermometers, were important during the Covid-19 pandemic. They enabled trainees to follow basic safety practices independently, particularly in situations where public health messages were not easily accessible.

Overall, parents in both phases appeared more informed and engaged, expressing appreciation for improved communication and support, which strengthened family involvement in trainees' learning and career journeys.

3. Driving attitudinal change towards greater inclusivity and social inclusion

Changes in corporate attitudes

- Trainers emphasised that corporate sensitisation efforts contributed to gradual shifts in employer attitudes towards hiring youth with hearing impairments**. In Phase I, sensitisation programmes were conducted with the participation of 100 corporates.** This engagement gradually enhanced awareness, encouraging organisations like Zudio, Amazon, and various retail and hospitality firms to actively contribute to inclusive hiring practices.

- Employers noted that hearing-impaired employees often displayed strong commitment, honesty, and productivity. Challenges such as communication barriers were addressed with interpreter support and mentoring schemes or **"buddy systems," which helped new employees integrate smoothly and gain confidence.**

- **Corporate partners also shared that exposure visits to workplaces played a role in preparing trainees for employment, helping them understand job expectations and workplace norms.** Employers expressed appreciation for the preparedness of trainees and the ongoing support provided by NDS, which contributed to more inclusive workplace environments.

Expanding Corporate Engagement and Sustaining Employment in Phase II:

- Building on these initial changes in employer attitudes, corporate involvement continued to grow through ongoing sensitisation workshops. These interactions played a key role in dispelling misconceptions and fostering a more inclusive mindset. Meanwhile, buddy systems remained instrumental in supporting workplace integration. According to the Implementation Partner, in **Phase II, 110 corporates participated in sensitisation programmes.**

- As corporate engagement strengthened, collaboration among stakeholders, including trainers, employers, and families, etc. supported more stable employment outcomes. Trainees benefited from training tailored to their needs, practical exposure in industries such as hospitality and retail, and ongoing mentoring. Trainers also incorporated employer feedback to refine the programs and engaged families regularly, ensuring continued encouragement and realistic career support for the trainees.

- Similarly, according to the corporate sensitization team**, trainees secured jobs in diverse sectors**, with **some employers even expressing interest in learning Indian Sign Language to facilitate better communication.** Exposure visits to organisations like Taj Vivanta and Big Basket further boosted trainees' confidence and understanding of workplace dynamics.

- **Employers also emphasised the ongoing need for comprehensive and practical training for corporate teams, along with thorough candidate preparation**, to ensure smooth workplace integration**.** They further added that training curriculum could be strengthened through greater emphasis on practical knowledge, workplace conduct, ethics, and financial literacy.

4. Social and Personal Empowerment Outcomes

> “Our hearing-impaired employees consistently surprise us with their dedication and focus. They not only perform their tasks efficiently but also inspire their colleagues, proving that given the right support, their potential is limitless.”
>
> - Employer at a premier hotel in the hospitality industry

Parental engagement as a catalyst for empowerment

- Trainers emphasised that motivated and informed parents played a pivotal role in providing emotional support to hearing-impaired youth. Parental confidence in the program helped trainees to persist despite challenges, **resulting in lower dropout rates and greater self-assurance among trainees.**
- As engagement improved over time, parents reported greater involvement in their children’s learning journeys and expressed increased confidence in supporting continuity of training. This strengthened family encouragement and reinforced trainees’ motivation.
- Parents also observed improvements in their children’s communication skills, particularly through increased use of video calls and basic WhatsApp messaging. **These developments enabled parents to stay informed about their children’s routines and whereabouts,** an area that had previously been a significant concern.
- While parents noted that broader community perceptions had not shifted substantially, **many expressed personal satisfaction with their children’s progress, independence, and confidence, reflecting meaningful social and personal empowerment at the household level.**

IRECS Analysis

Parameters	Phase I - Assessment from the study	Phase II - Assessment from the study
Inclusiveness	• Open to all regardless of education or disability certification, with customized batches for individual needs. • ISL-based training ensured a fully inclusive, accessible environment for hearing-impaired learners. • Free meals, transport, and assistive tech (3 months) removed barriers for low-income families. • Parent counselling and PTMs built family support and challenged disability-related stigma. • Around 100 corporates sensitized, promoting inclusive workplaces for hearing-impaired youth.	• The programme expanded from a single centre in Noida to four centres (Noida, Badarpur, Raipur, and Meerut), widening geographical access. • The centre enrolled a transgender trainee, reflecting its commitment to gender and identity inclusivity. • Training remained open to participants aged 14 to 30, with vocational courses for those aged 18 and above and supplementary courses for younger trainees. • All services continued to be provided free of charge.
Relevance	• NDS delivered market-aligned training in retail, hospitality, IT, and manufacturing for hearing-impaired youth. • NIOS courses and certifications provided official accreditation, boosting employer credibility and higher education access. • Job matching, interview coaching, and professional grooming enhanced trainees' employability. • Health kits supported personal well-being, complementing technical training for daily life and work readiness.	• Additional courses such as banking and finance, data entry, bakery, and beauty services were introduced to align with evolving market needs. • Exposure visits to workplaces such as retail stores and hospitality venues provided practical insights into workplace operations. • Regular counselling sessions addressed psychological challenges such as isolation, low self-esteem, and anxiety among trainees. • The use of buddy systems at workplaces addressed the need for smooth integration of newly placed trainees.

Parameters	Phase I - Assessment from the study	Phase II - Assessment from the study
Effectiveness	• The project trained 1071 hearing-impaired youth, exceeding the target of 1000. • Approximately 53% of trainees, i.e. 573 trainees, secured employment, demonstrating tangible success in job creation. • Monthly assessments showed measurable progress in English, communication, and digital literacy. • Trainers and parents noted significant growth in trainees' confidence, engagement, and communication skills. • Corporate sensitization workshops dispelled misconceptions and fostered inclusive workplace attitudes. • Employers reported strong commitment, concentration, and productivity among hearing-impaired employees. • Interpreters, personalized follow-ups, and interview coaching enabled smooth transition into employment.	• Out of 728 youth trained, employment opportunities were facilitated for 358 trainees across sectors including e-commerce, hospitality, manufacturing, retail, and IT. • Over 110 corporates were sensitised to disability inclusion through ongoing workshops. • Quarterly PTMs and WhatsApp-based communication improved parental awareness and engagement compared to Phase I. • Nationally recognised certificates from NIOS upon course completion supported employment prospects for trainees.
Convergence	• SBI Cards-NDS collaboration leveraged CSR and NGO expertise to expand employment and inclusion for hearing-impaired youth. • Adoption of NIOS curriculum and compliance with the PwD Act ensured regulatory legitimacy and credibility. • Cross-sector collaboration across retail, hospitality, IT, and manufacturing created diverse employment pathways for these youth.	• The project continued to align with SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 10 (Reduced Inequalities). • NIOS-developed courses and handouts continued to be used, ensuring nationally recognised and structured learning. • Corporate sensitisation efforts complemented broader government initiatives towards inclusive employment for PwDs.

Parameters	Phase I - Assessment from the study	Phase II - Assessment from the study
		• Employers such as Taj Vivanta, Big Basket, Zudio, and Amazon actively participated in inclusive hiring, reflecting convergence with private sector inclusion goals.
Sustainability	• NIOS certification enabled further education and employment opportunities. • Corporate inclusive hiring embedded youth meaningfully into the workforce. • Family and community involvement sustained motivation and long-term inclusion.	• The transportation model along with meal provision ensured continued support for trainees. • Stronger parental engagement through regular PTMs and WhatsApp groups built a more informed and supportive family ecosystem. • The buddy system at workplaces supported long-term workplace integration and retention of trainees.

Alignment to UN SDGs & SBI Card's ESG Goals

The project is aligned with **UN Sustainable Development Goals (SDGs)**, particularly SDG 4 – Quality Education, SDG 8 - Decent Work and Economic Growth and SDG 10 - Reduced Inequalities.

The project is **also aligned with SBI Card's internal ESG goals** of "Transforming the education of 1 lakh individuals by FY 2027 and 5 lakh individuals by FY 2030 through Corporate Social Responsibility (CSR) programmes".

Project Recommendations

Scaling the Program through Hybrid Delivery and Institutional Collaborations

Building on the hybrid training model already supported by SBI Card during Phase I and Phase II, NDS can consider scaling the program by complementing physical batches with structured virtual classes delivered in Indian Sign Language (ISL). The current reach of 1,071 trainees in Phase I and 728 in Phase II has been limited by the physical capacity of centres in Noida, Badarpur, Raipur, and Meerut, restricting access for hearing-impaired youth in other remote regions.

The scale-up can be supported through the following measures:

- **Hybrid Delivery:** Run virtual classes alongside physical batches, enabling trainees unable to travel to centres to participate remotely and increasing overall trainee count without proportional infrastructure cost.
- **Open Digital Media Platforms:** Host ISL-based modules on platforms such as YouTube, supplementing existing Facebook and WhatsApp outreach. Structured content can cover hospitality (F&B, housekeeping), retail (customer service, store operations), e-commerce (warehousing, packing, data entry), BFSI (back-office operations), and beauty and wellness.
- **College Collaborations:** Partner with colleges across different locations to host satellite batches, share infrastructure, and co-deliver vocational modules, extending reach beyond NDS-operated centres and aligning with the Skill India Mission, NSDC, and PMKVY provisions.

Study Limitations

Limited Interactions with Trainees due to Communication through Sign Language

Interactions with trainees during the study were conducted through Indian Sign Language (ISL) with interpreter support. Given the nature of sign language–based communication, the number and depth of interactions with trainees were limited compared to verbal conversations. This may have restricted the extent to which certain nuances of trainees' experiences and feedback could be captured during the assessment.

Case Stories

Case Story 1: Transforming Barriers into Pathways: Rahman's Journey to success (Phase I)

Rahman (name changed to maintain anonymity), a 20-year-old youth from Noida, joined the NDS training program in 2022 with limited proficiency in Indian Sign Language and very low confidence. His early experiences were marked by fear, anxiety, and communication barriers, reflecting the limited exposure he had to accessible education and supportive environments. These challenges initially made both learning and social interaction difficult.

Through the program, Rahman first received intensive training in Indian Sign Language, which became a critical foundation for communication and learning. Building on this, he enrolled in courses such as English, General Knowledge, Microsoft Office, and Banking, Financial Services, and Insurance (BFSI). These tailored modules expanded his skillset beyond basic communication and introduced him to academic and vocational knowledge relevant to workplace readiness.

The structured training and supportive environment at NDS gradually boosted Rahman's self-confidence and reduced his anxiety, enabling him to participate more actively in both classroom learning and peer interactions. Exposure visits and workplace experiences further broadened his perspective, giving him practical insights into professional environments and helping him envision opportunities beyond his immediate circumstances.

Although Rahman eventually moved away from retail employment, a common pathway for many trainees, the program's impact on his personal development remained profound. Empowered by the confidence and skills he gained, Rahman pursued his passion for badminton professionally and now represents Uttar Pradesh at the state level. His journey demonstrates how inclusive, skill-based training can unlock potential, foster independence, and enable hearing impaired youth to explore diverse career pathways beyond conventional employment options. Rahman's story highlights both the challenges faced by hearing impaired youth and the transformative role of accessible education and tailored training in building self-assurance, resilience, and success across varied fields.

Case Story 2: Embracing Identity and Ability: Ayesha's story of breaking ceilings (Phase II)

Ayesha's (name changed to maintain anonymity) from Badarpur, Delhi experience at NDS illustrates how inclusive training environments can dismantle multiple, overlapping barriers. As a transgender youth with hearing impairment, she had long faced compounded stigma that restricted her access to education, employment, and community acceptance.

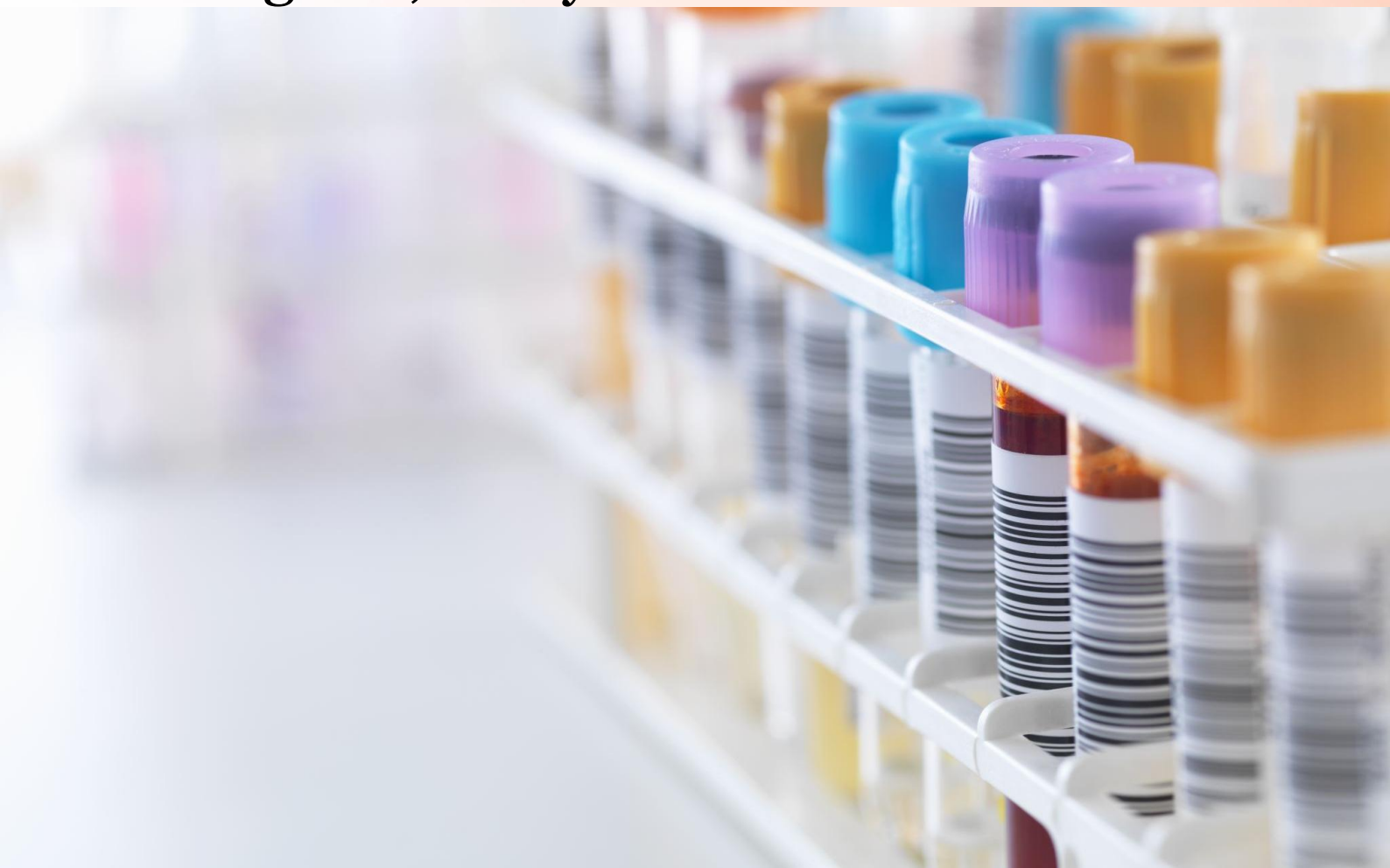
Prior to joining NDS, Ayesha's experiences were marked by discrimination and marginalization. Transgender persons often face rejection from families, reduced access to mainstream education, and limited livelihood opportunities. For Ayesha, these challenges were intensified by communication barriers and the absence of accessible learning environments. The lack of supportive networks left her vulnerable to exclusion and reinforced feelings of invisibility. The NDS program provided a turning point. At NDS, the use of Indian Sign Language (ISL) created an accessible foundation, while the center's openness to gender diversity affirmed her identity. The residential model and peer support reduced isolation, and vocational courses in computer literacy, English, and hospitality equipped her with practical skills. Importantly, counseling and sensitization sessions extended beyond the classroom, engaging families and communities to foster acceptance.

The program also worked with employers, using exposure visits and corporate workshops to highlight the value of diversity. This dual focus empowering trainees while preparing workplaces enabled Ayesha to secure employment in the hospitality sector.

Her story demonstrates the impact of intersectional inclusion, when disability and gender identity are addressed together, opportunities expand, stigma recedes, and sustainable livelihoods become possible. Ayesha’s success reflects not only her resilience but also the broader potential of inclusive ecosystems to transform lives and workplaces alike

12

Project 10: To skill 558 youths in HealthCare job roles of Phlebotomist, General Duty Assistant- Advanced and Dresser (Medical) in residential mode in Gurugram, Sadiya and Silchar



About the Project

India continues to face a major shortage of trained support staff in the healthcare sector. While the lack of doctors and nurses is often discussed, the gap in support roles such as technicians, assistants, and frontline support workers is equally serious. Many health centres, especially in smaller towns and rural areas, struggle because they do not have enough trained people to handle day-to-day services. This shortage affects the overall quality of care and puts extra pressure on the limited staff already working in the system. The pandemic in India further showed how important these support roles are, as hospitals needed far more trained hands than what was available.

To strengthen healthcare delivery, it is important to prepare a steady pipeline of skilled support workers who can assist hospitals, clinics, and community health facilities. Building such a workforce not only improves access to healthcare but also opens livelihood opportunities for young people. **The project undertaken by SBI Card and implemented by the Healthcare Sector Skill Council (HSSC) aims to address this need by providing skill training, certification, and placement support to underprivileged youth, helping create a reliable and capable healthcare support workforce**.

Below figure provides an overview of the project specifics[40]:

Figure 98: Project overview

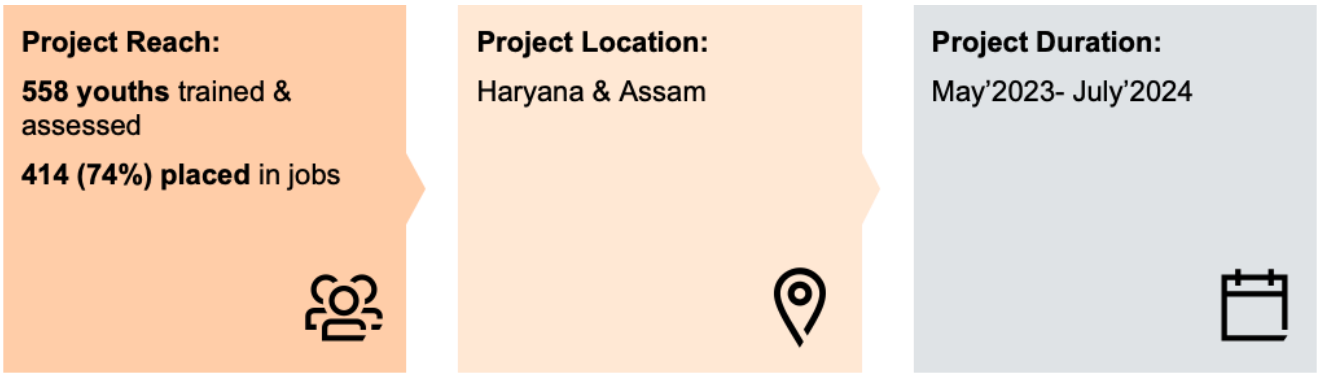
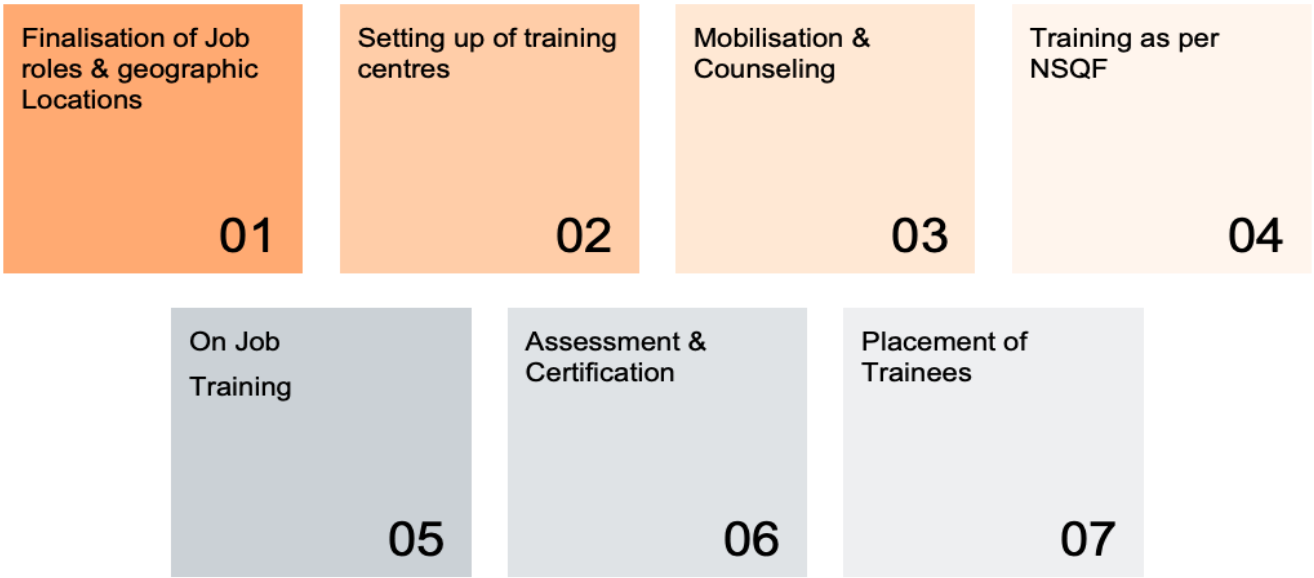


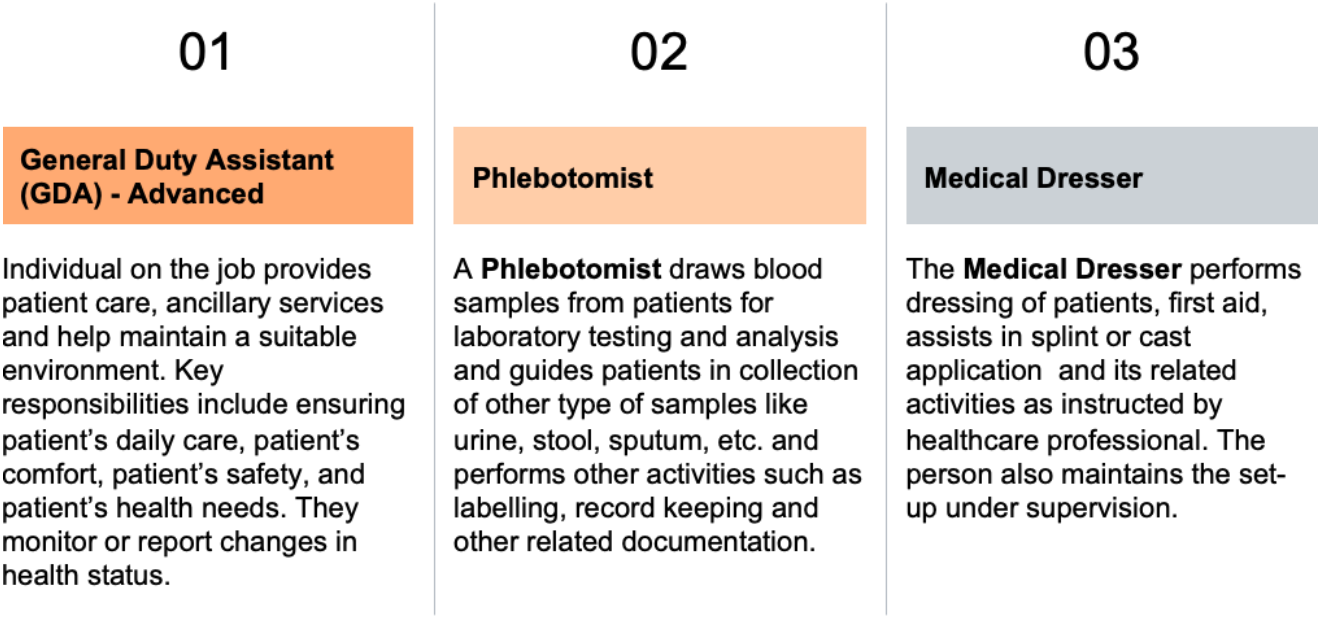
Figure 99: Lifecycle of the training programme



[40] Source: MoU signed between SBICPSL and HSSC

The youths were trained as per the National Skills Qualification Framework (NSQF), with a mix of classroom lessons, lab practice, and On the Job Training (OJT) organised in healthcare facilities such as Primary Healthcare Centres (PHC's), hospitals, diagnostic facilities, sample collection centres, etc. The programme involved setting up of training centres at three locations, namely Gurugram (Haryana), Sadiya and Silchar (Assam) where candidates had the option to opt for either residential or non-residential training. The steps followed during the project and courses offered are shown in the figures below[41]:

Figure 100: Type of courses offered



Method of Impact Assessment

The impact assessment study leveraged an integrated and cohesive approach to assess the social impact transpired since project's implementation. A kick-off meeting was held with SBICPSL and the HSSC team to understand the nature of support for this project and align the requirements for starting the assessment exercise.

Following the meeting, PWCALLP received following **project documents**:

- Memorandum of Understanding (MoU) and its addendum containing project details agreed with HSSC and SBICPSL
- Project Completion Report
- Course wise curriculum details
- Beneficiary details of the project

PWCALLP team then began the project's **desk review** based on the information collected during the kick-off meeting and from the project documents. This helped our team in designing the assessment framework and **finalising the key stakeholders** for the interactions.

[41] Source: MoU signed between SBICPSL & HSSC

In consultation with SBICPSL, a mixed-methodology approach combining quantitative and qualitative research was deployed for the assessment. The quantitative study generated evidence-based insights, while qualitative methods captured stakeholder perspectives and experiences to validate findings and understand actual impact. Research techniques included surveys, Focus Group Discussions (FGDs), and In-depth Interviews (IDIs) to ensure comprehensive evaluation.

Based on data from HSSC, the project impacted **558 direct beneficiaries**. A **sample size of 111 was calculated** at 95% confidence level and 5% margin of error. Basis mutual agreement, the sample of 111 was further divided into placed and non-placed groups, with 10% drawn from non-placed trainees and 90% from placed. The sample then was **allocated across the three courses in proportion to their respective share** of placed & non placed trainees, ensuring representative course wise coverage.

The quantitative and qualitative interactions are detailed in the table below:

Table 12: Quantitative & Qualitative Distribution

Stakeholders	Quantitative	In-Depth Interviews
Youth trained	✓	✓
Trainees at institute		✓
On-job trainers / Centre In Charge		✓
Employers		✓
HSSC		✓
SBI Card		✓

The responses collected from the stakeholders' interactions were analysed to arrive at detailed findings as depicted in next section.

Analysis and Findings

This section presents key findings from the impact assessment study, providing an evidence-based foundation for strategic recommendations and future project improvements.

1. Beneficiary Profile

- Considering the intervention was carried out in two states, Haryana and Assam, hence almost an equal representation was ensured from them. Out of the total trainees interviewed, **86% of them were women** (n=111).
- **94% of the respondents** (n=111) completed their **Higher Secondary Education** (12th Class) and more than half of them (53%) were graduates.
- Conversations with HSSC and others involved in the programme made it clear that most trainees come from households with very limited financial means. **A large share (91%) of those surveyed said they had a BPL card**, which reflects the economic pressure their families face. Trainers also mentioned that many of the youth who joined had struggled to find steady work earlier and were looking for a chance to learn something that could help them support their families.
- Among the 111 trainees interviewed, **53% were graduates** and **41% had completed Class 12th**. This profile indicates that the programme largely reached youth with basic to higher levels of formal education. Despite this educational attainment, discussions with programme stakeholders indicated that many trainees lacked job-oriented, sector-specific skills required for employment in the healthcare ecosystem. The training programme was therefore particularly relevant in translating existing educational qualifications into practical competencies aligned with healthcare support roles. By focusing on skill-based certification rather than academic credentials alone, the programme provided an appropriate pathway for educated youth to access structured employment opportunities in a sector facing an acute shortage of trained support staff.
- Both the implementing partners and the SBI Card team pointed out that this is exactly why such training matters, it gives these young people practical skills and a clearer pathway to better paying jobs, something they would otherwise find difficult to access.

Figure 101: Trainees reporting having a BPL Card (n=111)

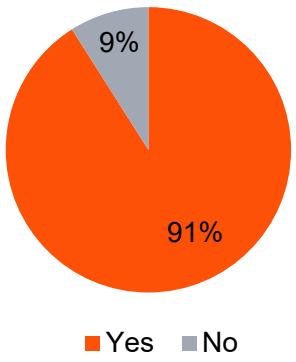
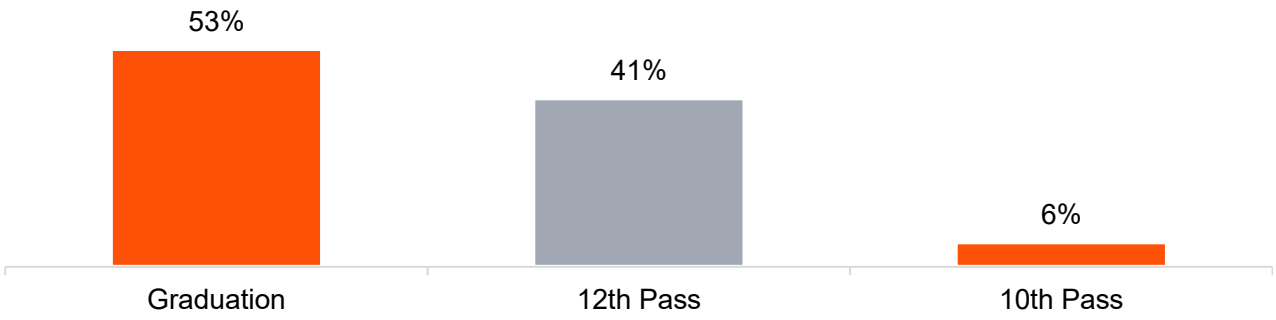


Figure 102: Education level of the trainees (n=111)



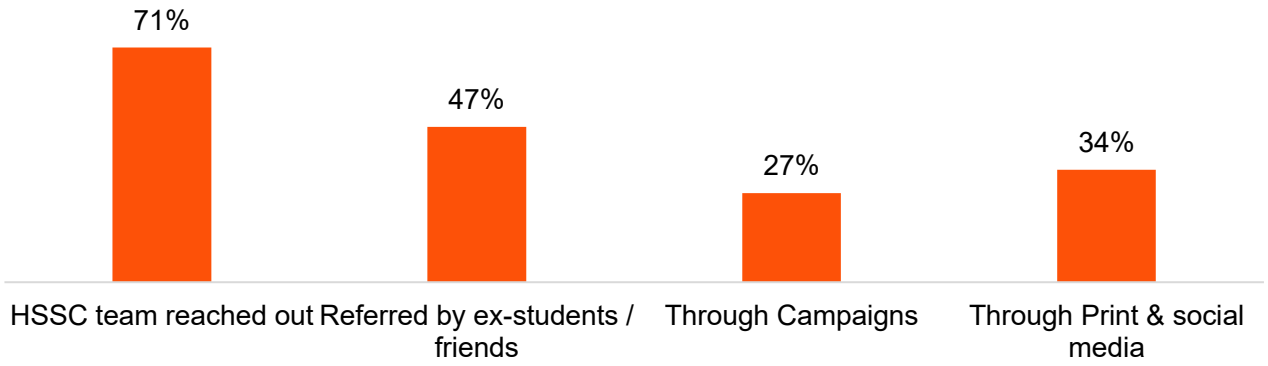
Summary of Impact Created

1. Strengthening Healthcare workforce readiness through Skill Development

The programme primarily reached young individuals with secondary or higher secondary education, many of whom had limited or informal work experience prior to enrolment. For a significant proportion, this was their first structured skill building opportunity in the healthcare sector, positioning the training as a critical entry point into formal employment.

- Across interactions, it was clear that most respondents aspired to build a career in the healthcare sector. However, pursuing formal medical or nursing education was often out of reach. Financial constraints at the household level, the high cost of professional courses, pressure to take up work closer to home, and in some cases, the need to support family members with health concerns limited to their options. Within this context, the programme has helped the youths to develop relevant skills to enter the healthcare ecosystem.

Figure 103: Source of information about the training programme (n=111)

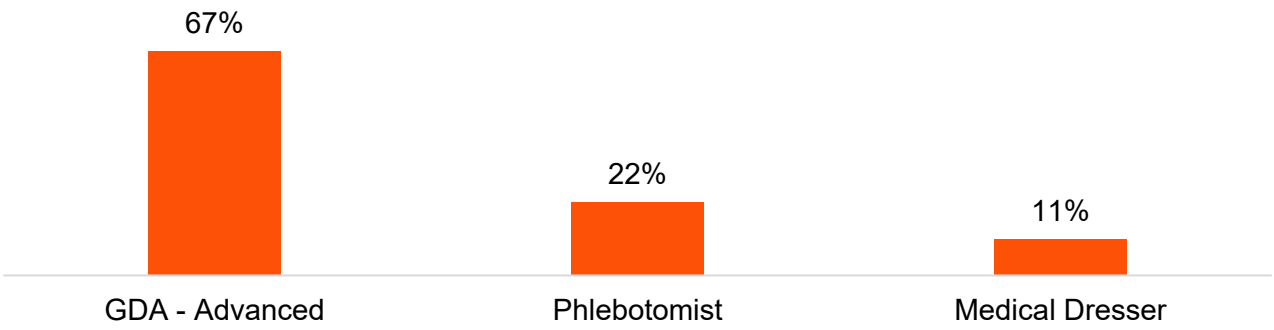


Multiple Choice question, % may exceed 100%

- As noted during interactions, **71% of respondents (n=111)** came to know about the training programme because of the mobilisation effort undertaken by the training institute teams followed by referral from ex-students / friends or relatives **(47%)** who had previously participated in similar programs at the institutes. Campaigns were the least reported source of information, as indicated by the respondents.

- Under this training programme, discussions with the HSSC confirmed that training was delivered across three healthcare job roles, i.e. **General Duty Assistant Advanced** (GDA), **Phlebotomist**, and **Medical Dresser** which were delivered in line with National Skills Qualification Framework (NSQF) and followed a structured sequence of classroom teaching, practical sessions and a mandatory On the Job Training programme in healthcare facilities.
- Employer feedback further validated programme's role as an effective entry point into the healthcare workforce. Partner healthcare facilities observed that trainees joined with basic patient care knowledge and a strong willingness to learn. Employers described trainees as sincere and receptive, noting that while some required a short adjustment period, they showed initiative in understanding their roles and adhering to workplace expectations.

Figure 104: Respondent distribution across courses (n=111)

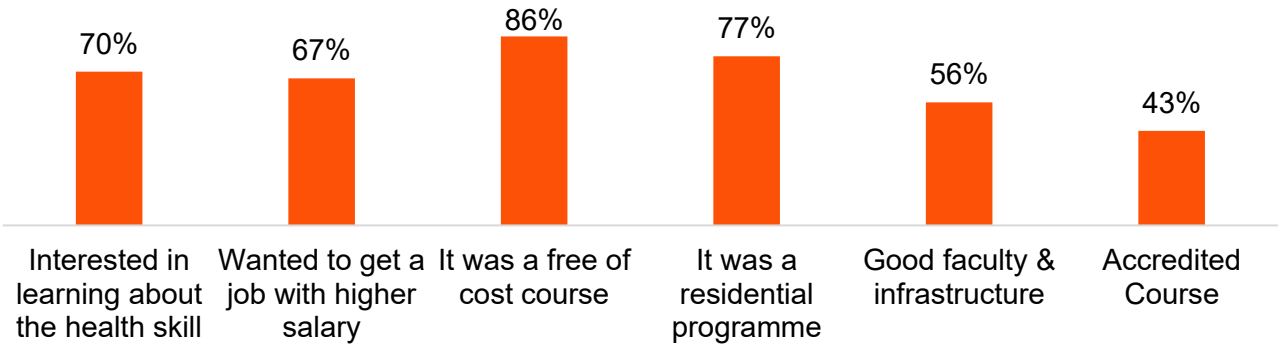


- Among the 111 respondents interviewed, **majority (67%)** had enrolled in the GDA - Advanced course, while others opted for roles such as phlebotomist and medical dresser. These courses, by design, are shorter in duration and more accessible, making them particularly suitable for individuals from lower socio-economic backgrounds who may not have the means and finances to pursue long term medical education.
- As noted during the interaction with HSSC, roles such as a Phlebotomist, GDA – Advanced and Medical Dresser create meaningful entry points into the healthcare sector for youth from lower socio economic backgrounds who may not have access to formal medical or nursing education.
- Compared to advanced nursing roles, these positions require **shorter training periods**, allowing young individuals to enter the workforce quickly, **gain practical skills, and begin earning a stable income**. Moreover, these roles provide **foundational knowledge in healthcare, opening doors to a wide range of career pathways** as individuals gain experience and perhaps pursue further courses over time.
- By working in the healthcare sector, youth not only achieve financial stability but also contribute positively to their communities by addressing essential health needs. Additionally, the demand for healthcare support staff is consistently high, ensuring job security in a rapidly growing industry. For young individuals facing socio economic constraints, training in such healthcare occupations represents a pathway towards improved career prospects, financial independence, and long term empowerment.
- **A large majority of trainees (86%, n=111)** shared that as the course was free of cost hence it motivated them to enroll for this course, highlighting the importance of financial support in reducing entry barriers. In addition, **77% of respondents opted for the residential training**

option, underscoring the value of accommodation support in enabling sustained participation, particularly for candidates with limited mobility or resources.

- Employment outcomes were also a strong driver, with **67% of respondents stating that securing a job and earning a better salary motivated their enrolment**, indicating that the programme was viewed as a pathway to livelihood improvement.
- Beyond financial considerations, interest in learning healthcare skills also emerged as a motivation among youth to join the programme. About **70% of respondents reported that their interest in learning health skills** influenced their decision to join the programme, indicating that participation was not driven solely by monetary benefits.

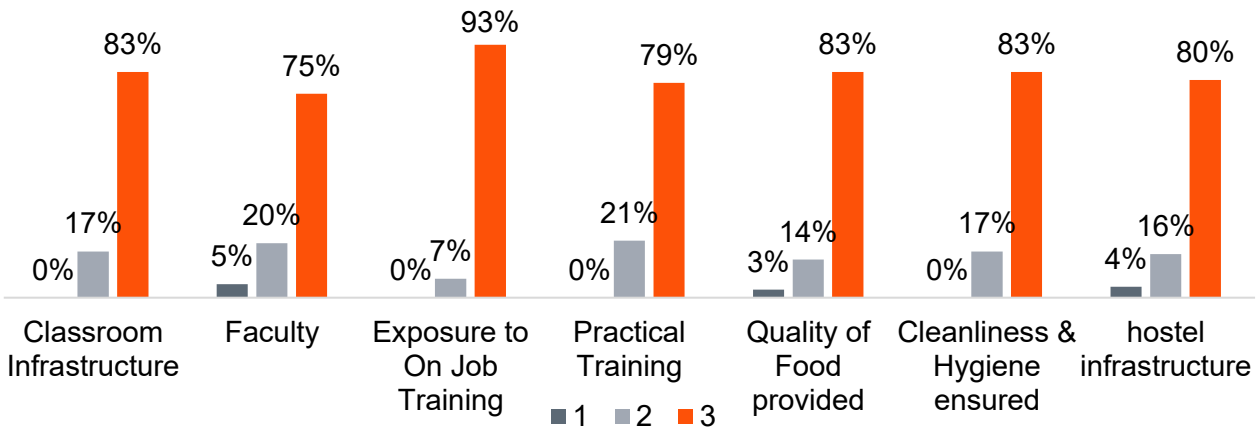
Figure 105: Factors that motivated youth to enroll for this programme (n=111)



Multiple response question, percentage may exceed 100%

- Interactions with the trainees suggested that the residential format appears to have played an important enabling role. By reducing travel related barriers and providing a more immersive learning environment, it allowed trainees those coming from distant or rural areas to participate more consistently without worrying about the stay or expenses associated with.
- Respondents were asked to rate (on a scale of 1 to 3, with 1 being lowest rating) the facilities offered during the training period. These facilities included, Classroom Infrastructure, Quality of food provided, cleanliness & hygiene, Faculty, Training Facilities, Practical Trainings, etc.

Figure 106: Trainees rating the facilities provided to them during the course (where 1 = Not Satisfied & 3 = Satisfied)



Hostel infrastructure was rated by those who availed the hostel facility (n=94), rest indicators were applicable to all

- The findings clearly shows that the programme created a strong foundation for employability and job readiness. On average, **82% (n=111) of trainees reported a high level of satisfaction with the facilities**. The highest rating was for on-the-job training (93%), indicating that hands on exposure played a key role in building practical skills required in healthcare settings. Essential support systems such as classroom infrastructure, food quality, and cleanliness (83% each), among those who availed hostel facility (n=94) rated high satisfaction with hostel facilities (80%), ensured a stable and distraction free learning environment. It can be inferred that the availability of quality facilities and **structured training support enabled trainees to focus on skill development, gain confidence, and transition more effectively** into the healthcare workforce.

On an overall basis, the training for roles such as GDA-Advanced, phlebotomist, and medical dresser emerged as a practical and effective pathway to strengthening healthcare workforce readiness. By offering short term, industry relevant courses aligned with NSQF standards and supported through free, residential training, the programme enabled youth from weaker economic backgrounds to access formal skill development and enter the healthcare sector. **Employers also reinforced this value, by expressing willingness to engage more trainees from similar programmes, citing their basic preparedness and positive attitude towards healthcare work**.

2. Enhancing Practical Competence through Structured Training and On-the-Job Exposure

The programme placed strong emphasis on hands-on learning and structured skill development aligned with healthcare sector requirements. Based on interactions, it was noted that on an average the three courses spans around 4-5 months of training period including a 3-month deployment under On-the-Job Training programme which ensured that classroom instruction were effectively complemented by real time workplace exposure.

- **100% of the respondents participated in the OJT sessions** conducted. Trainees consistently reported that the OJT experience was valuable to them, as it enabled them to apply theoretical knowledge in real clinical settings, develop practical competencies, and gain clarity on routine job responsibilities, thereby strengthening skill retention and workplace preparedness.

- Trainees during the interactions shared that the OJT helped them to get **hand on experience of activities like patient care including bed making, feeding, hand hygiene, basic vital monitoring, and moreover how to communicate with patients effectively.** Hospital based OJT played a crucial role in building confidence through real world exposure and supervisor guidance.

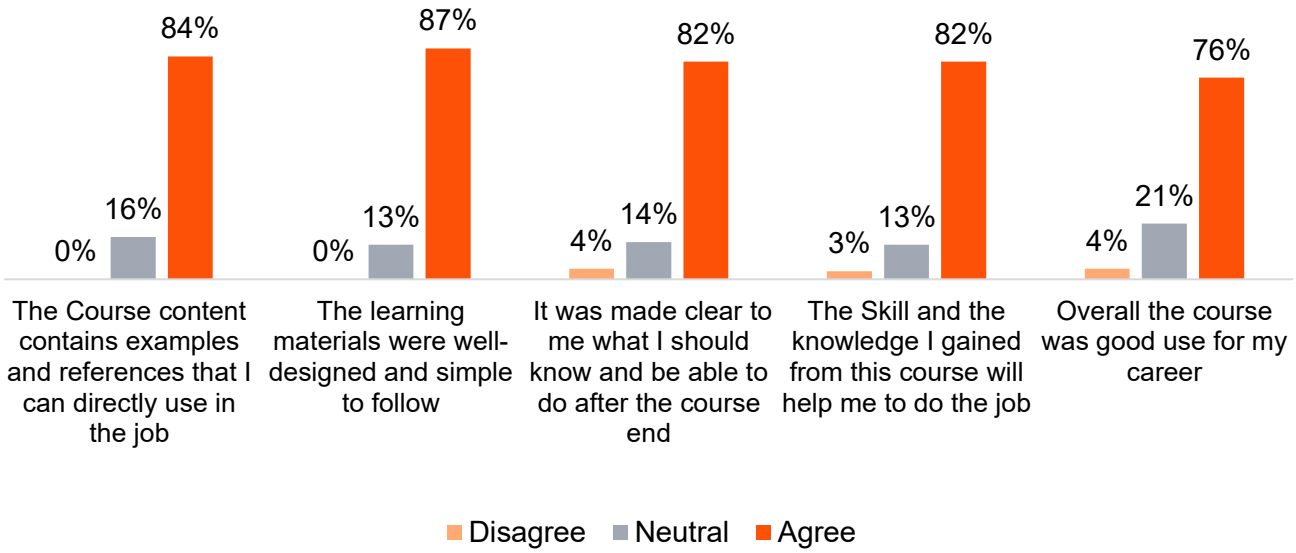
- Almost all trainees, rated their OJT experience as good. All respondents reported receiving a stipend during OJT, with an **average amount of approximately INR 2,900**. Further, **69% (n=111) of respondents reported satisfaction with the stipend received during OJT**, indicating its adequacy in supporting trainees during the training period. Successful completion of assessments and certification further reinforced job readiness. Overall, the experience highlights the programme's impact in equipping trainees with practical skills, confidence, and financial support to transition into the healthcare workforce.

- Employers' observations also aligned with trainee feedback on the usefulness of OJT. Facility supervisors shared that trainees were initially assigned basic patient care tasks under supervision and were gradually given additional responsibilities as they gained confidence. Following orientation, **trainees were found to adhere to safety protocols, hygiene practices,**

and assigned duties, reflecting effective application of classroom learning in real hospital settings.

- Trainees largely perceived the course content to be relevant and well structured. They shared that learning materials were easy to comprehend and included practical examples that could be directly applied in their future roles. **Clear guidance during the initial counselling sessions helped trainees understand course expectations and outcomes, allowing them to better align their learning with job requirements.** Most respondents expressed agreement that the training significantly enhanced their skills and knowledge, reinforcing the programme's role in building practical competence and preparing them for future opportunities.

Figure 107: Trainees agreement level towards the course (n=111)



3. Creating Sustainable Employment and Income Opportunities through Effective Placements

Post the assessment and awarding of certificates, candidates were offered placement opportunities at partner facilities / hospitals / health care centres / nursing homes. 100% of the respondents reported that they were offered placement opportunities after course completion. Of the total respondents interviewed, 10% of the sample comprised non-placed students who confirmed that placement opportunities had been offered. However, these candidates chose not to accept the offers due to personal circumstances, primarily related to their decision to pursue further education.

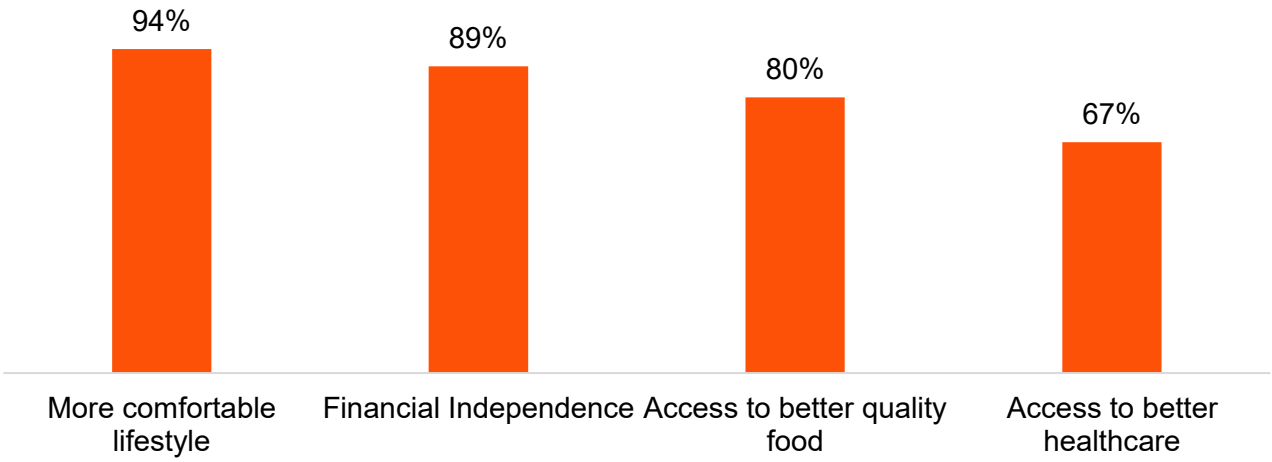
- Among trainees who accepted placements (n = 100), a comparison of expected salary and actual earnings indicates a positive outcome. At the time of joining the course, **trainees reported an average expected monthly income of approximately INR 15,000, reflecting their pre-training salary perception**. However, **the actual average salary received upon placement was approximately INR 20,000**, representing **an increase of approximately 30% over these initial expectations.** This differential suggests that the training enhanced employability outcomes and enabled trainees to secure entry-level earning opportunities that were higher than initially anticipated, thereby reinforcing the economic value of the course.

- Among trainees who accepted placement, **91% (n = 100) were employed at the time of interaction**. Of those currently employed, 67% (n = 91) continued to work in the same field as their training, indicating strong alignment between the course content and the job roles available in the market. Among the remaining trainees, **29% reported entrepreneurial engagement**

within the healthcare ecosystem, undertaking activities such as home-based blood sample collection linked to nearby hospitals or working as agents supplying medical equipment and consumables. In addition, **4% transitioned out of the healthcare sector and took up salaried roles** such as teaching positions in private schools. Overall, the findings indicate that even where trainees did not continue in salaried healthcare roles, the training supported relevant self-employment pathways for most, with only a small proportion exiting the sector entirely.

- Further, among trainees continuing in the same field, **96% reported advancement from their initial positions,** either through increased responsibilities or role progression, suggesting effective workplace preparedness and skill applicability. These outcomes point to the relevance of the training content in enabling trainees not only to secure employment but also to progress within their roles over time.
- During interactions**, trainers reiterated that the course curriculum is regularly reviewed and updated** to incorporate evolving training methodologies, helping ensure that skills imparted remain aligned with current healthcare workforce requirements.
- **Beyond employment, trainees reported clear signs of financial stability and improved household well-being**, as reflected in changes to their standard of living. A large majority (**94%**) reported a more comfortable lifestyle, supported by **89% achieving financial independence**, indicating reduced economic vulnerability at the household level.

Figure 108: Changes in standard of living post-employment (n=100)



Multiple response question, percentage may exceed 100%

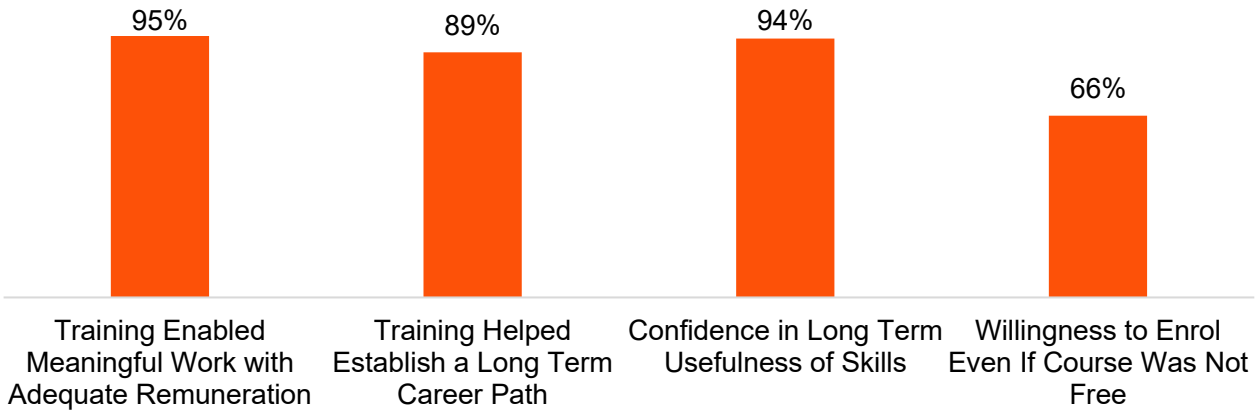
- Access to essential needs improved notably following employment, with **80% reporting better quality food** and **67% reporting improved access to healthcare services**, highlighting how regular income enabled households to prioritise health and nutrition.
- Of the 100 trainees who were employed at the time of the survey, a subset were married, and among them, some had children. **These trainees shared that they had been able to start setting aside savings for their children's education**, indicating early signs of greater financial planning supported by stable employment.
- Importantly, among those who are currently working, **77% of them (n=100) also reported that post placement and due to better income they are able to initiate savings or investment practices to secure their future as well.** Taken together, these findings indicate that

placements not only led to employment but also supported gradual improvements in earnings stability and financial resilience.

4. **Impact of the Course on Trainee and Trainer Perceptions of Job Skill Importance**

- Interactions with trainers, including OJT supervisors and institute faculty, highlighted that **skill based upskilling in healthcare roles creates employment opportunities for youth from disadvantaged backgrounds**, particularly by enabling access to stable income and structured work environments.
- Trainers further noted that courses such as **GDA - Advanced, Phlebotomist, and Medical Dresser** are intentionally designed to be **short in duration and job oriented**, allowing young individuals to enter the workforce quickly while balancing economic and family responsibilities.
- The training equips participants with **practical and role specific skills**, enabling them to perform effectively in real healthcare settings and respond confidently to workplace expectations.
- As reflected in the respondent perceptions, these outcomes translate into tangible livelihood benefits. A large majority reported (n=111) that the **training enabled them to secure meaningful work with adequate remuneration (95%)**, while **89% felt it helped establish a long term career path in healthcare**. Confidence in the continued usefulness of skills remained high, with **94% expressing confidence that the skills gained would support future career progression**.
- Notably, **66% of respondents indicated that, knowing the earning potential associated with the course, they would have enrolled even if it had not been offered free of cost**. This reinforces both the perceived value and market relevance of the training. Together, these findings demonstrate that the programme supported trainees not only in accessing employment, but also in improving income stability and overall standard of living (Figure below).

Figure 109: Trainees perception towards the programme (n=111)



Multiple response question, percentage may exceed 100%

- On an overall basis, employer feedback also reflected the views shared by trainers and trainees on the relevance of skills and readiness for work. Employers noted that short term healthcare courses are well suited for young people balancing economic and family responsibilities. While they suggested a short orientation period to help trainees settle into hospital environments, they

observed that trainees were able to perform their roles effectively once this initial phase was complete. Taken together, these insights underline the programme's strength in combining structured training with practical exposure to support a smooth transition into employment.

IRECS Analysis

Parameters	Assessment from study
Inclusiveness	• The programme showcased inclusiveness by reaching youth from economically vulnerable households, with **91% of respondents holding BPL cards**, indicating sustained targeting of those facing financial constraints. • **A high proportion of respondents were women (86%)**, highlighting the programme's contribution toward improving access to healthcare skill development for women. • **Trainees were largely educated but not employed,** with 94% having completed higher secondary education and over half being graduates yet earning minimal or no income prior to enrolment. • The free-of-cost and residential training model played a crucial role in removing financial, mobility, and accommodation barriers for youth from both rural and distant locations.
Relevance	• By training youth in roles such as General Duty Assistant, Phlebotomist, and Medical Dresser, the project aligns with the **need to reduce the burden on existing healthcare** professionals and ensure timely healthcare services. • The consistent demand for healthcare support staff ensures job security for trained individuals, making the project pertinent to current industry's needs. • The programme remains highly relevant to current healthcare workforce needs by training youth in **entry level and support healthcare roles** such as GDA-Advanced, Phlebotomist, and Medical Dresser. • Training design aligned well with labour market realities, offering **short term, NSQF aligned courses** that enabled faster entry into employment for individuals unable to pursue long-term medical education.
Effectiveness	• The project's effectiveness is clear, **all respondents reported being offered placement opportunities, and average salaries at placement exceeded trainee expectations** by approximately 30%. • Employment retention remained high, with a large majority of trainees currently working, and most continuing in the same field as their training. • Career progression was evident, **as 96% of those working in the same field reported advancement from their initial roles.**

Parameters	Assessment from study
	• Effectiveness extended beyond employment, with **trainees reporting improvements in standard of living, financial independence, access to food and healthcare, and initiation of savings or investments.**
Convergence	• The training followed the **National Skills Qualification Framework (NSQF)** and underwent assessment through the **Healthcare Sector Skill Council (HSSC)** based on National Occupational Standards. • Structured classroom learning, practical sessions, and **mandatory On-the-Job Training** ensured alignment between institutional training and real healthcare settings.
Sustainability	• Sustainability of outcomes is supported by **continued engagement in the healthcare sector**, with many trainees remaining employed in relevant roles over time. • The relevance of skills beyond initial placement was reinforced by reported job progression and ongoing usefulness of training in current roles. • Evidence of **financial resilience**, including savings behaviour, and improved household wellbeing, suggests long term livelihood impact. • The programme also shows potential for **intergenerational benefits**. Among trainees who were currently employed and had children at the time of the survey, **a proportion demonstrated** the **ability to save for their children's education,** indicating emerging signs of sustained socio-economic improvement enabled by stable employment.

Alignment to UN SDGs & SBI Card's ESG Goals

The project is **aligned with the following UN Sustainable Development Goal (SDGs)**: 1 – No Poverty, 3 - Good Health and Wellbeing, 5 - Gender Equality and 10: Reduced Inequalities.

The project is also **aligned with SBI Card's internal ESG goal** of "Providing quality health care services to at least 50,000 individuals by strengthening health infrastructure by FY 2027."

Project Recommendations

The study identified the following project level recommendation which has been summarised below:

Scaling up the Intervention to Expand Impact:

- In view of the outcomes achieved in terms of training completion, placement rates, and income improvement, there is clear potential to scale up the intervention to reach a larger cohort of youth.
- The programme should be expanded to additional geographies with high demand for healthcare support staff by replicating the existing residential training model and NSQF-aligned course structure.
- Scaling up through increased intake at existing centres, as well as phased replication in new locations, would help address regional healthcare workforce gaps while creating livelihood opportunities for more underprivileged youth.
- Such expansion would further strengthen the availability of trained healthcare support staff and enhance the programme’s contribution to healthcare delivery and livelihood generation.

13

Project 11: BHAVNAM 2.0 – Tree Plantation Project in Aravalli Hills, Delhi NCR

About the Project

SBI Card, in partnership with Sankalptaru Foundation, launched Project Bhavnam 2.0 to plant a total of 30,000 tree saplings of native species in the Aravalli Hills, Gurugram with the aim to enhance the green cover. The project was implemented in Gairatpur Bas village, Sohna block, Gurugram district, Haryana, located within the ecologically sensitive Aravalli region[42].

The Aravalli Mountains, one of the world's oldest ranges, are a prominent geological feature shaping western and northwestern India. It plays a crucial ecological role in northwestern India. It serves as a natural barrier against desertification and also supports water recharge systems. The Aravalli Range faces increasing threats due to deforestation, mining, grazing, and human encroachment. Desertification is exacerbating as desert sands move eastward, compromising regions like Gurugram and Alwar. Mining activities have damaged aquifers, dried up lakes, and reduced the range's ability to support wildlife[43].

To address these challenges, SBI Card in collaboration with Sankalptaru Foundation undertook the plantation of 30,000 (30175 exact) saplings spread across 30 Hectares, consisting of native trees with dense foliage, as well as fruit and flowering trees. The plantation site also aimed to minimize its use of natural resources by implementing a solar-powered irrigation system and installing drip lines across the area. The intervention was designed to contribute to the revitalizing and rejuvenating of the region's ecosystem while providing shelter and fodder for the diverse flora and fauna inhabiting the area.

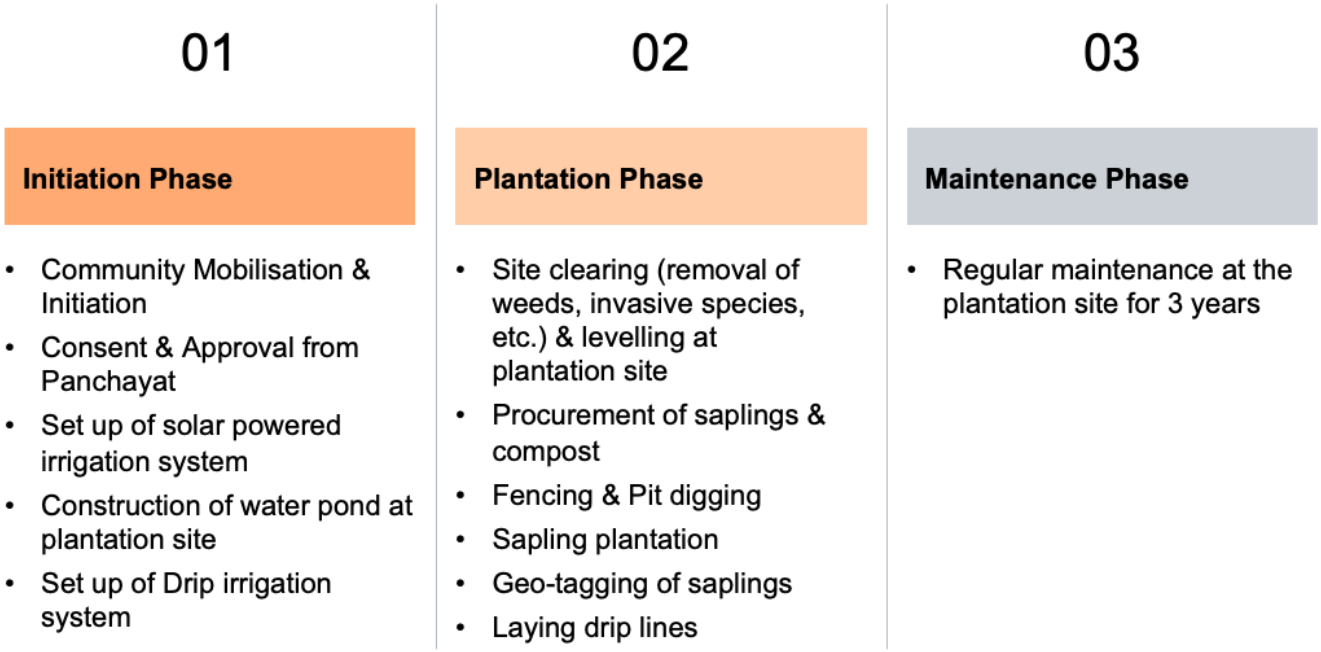
Below figure provides an overview of the project specifics[44]:

Figure 110: Project overview

The project was implemented over a period of approximately 36 months, after which the plantation site was formally handed over to the Gram Panchayat for continued maintenance and long-term sustainability.

42 Source: MoU signed between SBICPSL and Sankalptaru Foundation
43 Source: Aravalli Landscape Restoration – Ministry of Environment, Forest and Climate Change
44 Source: MoU and Project Closure Report

Figure 111: Key Activities under the project



Method of Impact Assessment

SBI Card and Payments Services Limited (SBICPSL) engaged PWCALLP to carry out the impact assessment of the Project with a purpose to evaluate the impact created during the period of November 2021 – November 2024. The scope of work included reviewing the Key Performance Indicators (KPIs) as defined by the Management of SBICPSL under the framework for implementing the project for the outputs, outcomes and impact created through the project. PWCALLP adopted the IRECS Framework - Inclusiveness, Relevance, Efficiency, Convergence, and Sustainability for the purpose of this assessment and recommendations were provided on the Project's performance for further evaluation and consideration.

The assessment was undertaken using qualitative methods to understand the interventions undertaken under the CSR project in mutual discussion with SBICPSL. The scope of work involved conducting desk reviews of the project documents, mapping of key project stakeholders, developing research methodology, undertaking qualitative interactions, analysis and report writing. The impact assessment study leveraged an integrated and cohesive approach to assess the social impact transpired since project's implementation. A kick-off meeting was held with SBICPSL and the Sankalptaru Foundation to understand the nature of support for this project and align the requirements for starting the assessment exercise.

Following the meeting, PWCALLP received following **project documents**:

- Memorandum of Understanding (MoU) and its addendum containing project details agreed with Sankalptaru Foundation and SBICPSL
- Project Closure Report

PWCALLP team then began the project's **desk review** based on the information collected during the kick-off meeting and from the project documents. This helped our team in designing the assessment framework and **finalising the key stakeholders** for the interactions.

In consultation with SBICPSL, a qualitative approach was adopted for the study. The study relied on qualitative interactions with multiple stakeholders involved in the project, including community members, on-ground maintenance staff, Panchayati Raj Institution member and Implementation team. These qualitative methods captured stakeholder perspectives and experiences to understand actual impact. Research techniques included Focus Group Discussions (FGDs), In-depth Interviews (IDIs) and Key Informant Interviews (KIIs) to ensure comprehensive evaluation.

The qualitative sampling plan is as detailed in the table below:

Table 13: Quantitative Sampling Distribution

Sl. No.	Stakeholder Name	Type of Interaction	No. of interactions
	Community Members	Focused Group Discussion (FGD)	1 (8-10 members)
	On -ground Field / Maintenance Staff	In-Depth Interview (IDI)	4
	PRI Member	Key Informant Interview (KII)	1
	Implementing Partner	In-Depth Interview (IDI)	1
	SBICPSL Team Member	In-Depth Interview (IDI)	1
	Total		**8**

The responses collected from the stakeholders' interactions were analysed to arrive at detailed findings as depicted in next section.

Analysis and Findings

Need of intervention

The **Aravalli Mountains**, one of the **world's oldest ranges**, are a prominent geological feature shaping western and northwestern India. Extending from Gujarat to Delhi, the Aravalli Range plays a crucial ecological role in northwestern India. It serves as a **natural barrier against desertification**, preventing the expansion of the Thar Desert and protecting cities like Delhi, Jaipur, and Gurgaon. The range also **supports water recharge systems** and is the source of important rivers such as Chambal, Sabarmati, and Luni. Its forests, grasslands, and wetlands harbour endangered flora and fauna, **contributing to biodiversity and regulating precipitation through evapotranspiration**, which helps mitigate droughts.[45]

[45] Source: Aravalli Landscape Restoration Plan – Ministry of Environment, Forest and Climate Change

Similarly, the project area, located in the Aravalli region, is characterised by **degraded and rocky terrain with minimal vegetation cover, limiting its ecological productivity** and usability. The Aravalli range has undergone significant **degradation over the years** due to increasing urbanization and industrialisation. As mentioned by community members during interactions, it was further noted that the region faces challenges such as **scanty rainfall and declining groundwater levels, which have contributed to soil degradation and reduced natural regeneration**. These factors have also **adversely impacted local biodiversity**, with limited presence of flora and fauna observed in the area highlighting the need for intervention.

Activities Implemented

To address the adverse impact of urbanization and industrialization in the Gurgaon region, **SBI Cards in collaboration with Sankalptaru Foundation undertook the Bhavnam 2.0** (Tree plantation) project in Gairatpur Bas, Gurugram. The project **aimed at enhancing biodiversity, improving air quality, and promoting green cover**.

As part of the intervention, a total of **30,000 saplings** (30175 exact) over 30 Hectares, were planted, reflecting a strong commitment to **combating land degradation, supporting wildlife habitats**, and contributing to climate change mitigation. The initiative has also contributed to **revitalizing and rejuvenating the region's ecosystem** while **providing shelter and fodder for the diverse flora and fauna** inhabiting the area. The land for the sapling plantation under the project was provided by Panchayat. To ensure the project's sustainability, **native sapling varieties** were selected and planted at the site, based on community recommendations, ensuring they were well-**suited to the local geography** and appropriate for the Aravali range. This approach ensures that the native saplings have the optimal environment to thrive and grow, thereby enhancing the long-term success of the initiative. The types of saplings planted are as below[46]:

Figure 112: Types of saplings planted

01	Jamun	07	Amla	13	Indian jujube	19	Lemon
02	Rosewood	08	Peepal	14	Gulmohar	20	Arjun
03	Neem	09	Pakad	15	Teak	21	Tamarind
04	Karanj	10	Guava	16	Kinnu	22	Karamda
05	Kadam	11	Mango	17	Apple Ber		
06	Banyan	12	Cluster Fig	18	Kachnar		

Additionally, to make the plantation site sustainable, a **solar-powered irrigation system with drip irrigation system** was installed across the plantation site. This system helped in timely irrigation and maintenance of saplings leading to **high survival rate of the plants**. The availability of solar powered irrigation has not only **reduced the dependency of irrigation on electricity** but also helped in ensuring **long-term sustainability** of the intervention.

[46] Source: Project Closure Report

Summary of Impact Created

This section of the report highlights the key findings of the impact assessment study of Project Bhavnam 2.0 (Tree Plantation Project) in Aravalli Hills, Delhi NCR as per each of the activities with stakeholders of the project. It provides a basis for IRECS analysis and recommendations for the project.

1. Improvement in Local Ecological Conditions and Biodiversity

- During Focused Group Discussion, community members reported that prior to the intervention, the land was largely **barren**, **rocky**, and devoid of vegetation, limiting its ecological value; **post-implementation**, they observed a **visible transformation** through **increase in green cover**, **restoration of degraded land, improved biodiversity** and **improvement in ecological conditions**.

Image 51: Plantation site at Gairatpur Bas, Haryana

- PRI Members highlighted that there has been an **increase** in the presence and **variety of bird species**, including species that were not commonly seen earlier and increased influx of **migratory birds especially during winters coming from different regions of the country & world**, suggesting that the plantation has begun to create a **conducive habitat for fauna** and support biodiversity recovery. The implementing partner reported that initially the project site was abundant with invasive species “prosopis juliflora” which hindered the nesting of birds whereas now after plantation of native species the Project Bhavnam 2.0 site supports a variety of bird species, both resident and migratory, as well as those associated with wetlands. This reflects the restored habitat's functional diversity, which includes a mix of features like closed canopy areas and shrub undergrowth, These different microhabitats provide support for diverse groups of birds at the same time.

> “Earlier, this land was mostly barren with very few trees, and we did not see many birds around. After the plantation, the area has become greener, and now we can see different types of birds returning. The overall environment feels better than before.”
>
> – Community member, Gairatpur Bas

- Community members reported a noticeable **reduction in dust** levels across the area, particularly during dry and windy conditions when dust pollution is typically high. This decline has made the surroundings cleaner and more comfortable for nearby residents, especially during peak summer months when dust-laden air is a common concern. They also consistently perceived an improvement in overall air quality, which they attributed to the increase in green cover created through the plantation efforts. According to them, the expanding vegetation is beginning to act as a natural barrier trapping dust, reducing soil exposure, and contributing to fresher air indicating early but encouraging environmental benefits.

Image 52: Trees at the Plantation site

- Community members and maintenance staff shared that the plantation area now experiences noticeably lower

temperatures and an improved water table, which has increased by approximately 20-30 meters, compared to earlier years. This indicates early signs of **micro-climate regulation,** especially during the peak summer months. They also reported that water is now available throughout the year, which has positively influenced household usage, supported livestock needs, and enhanced irrigation for agriculture.

- During discussions, the implementation team confirmed that planting **native species** suited to local soil and climate conditions has significantly **improved plant survival** and **ecological compatibility.** This strategic approach has **enhanced restoration efforts** and markedly **reduced soil erosion** in the area compared to previous conditions. As reported by the Implementing Partner team, the soil outside the plantation site has a loose, poorly structured matrix with coarse gravel, quartzite rock fragments, and fine dust, lacking biological binding that results in minimal cohesion and crumbles easily, while the soil in the project plantation site features finer, better aggregated particles and a granular, crumbly texture with visible soft, rounded aggregates, indicating active biological processes that enhance soil structure, aeration, and water infiltration.

- Additionally, the choice of saplings, including varieties such as Jamun, Neem, Rosewood, Banyan, Amla, and Peepal, was guided by community suggestions. In addition, regular **awareness activities** were conducted to engage and educate community members, further supporting the project's success. This has not only led to the ecosystem being more resilient but since native species plants were planted they are better equipped to handle climatic changes and sequester carbon.

2. Creation of Enabling Infrastructure Supporting Long-Term Sustainability

- During discussions, community members highlighted that the project design incorporated a **solar-powered drip irrigation system** to overcome the logistical challenges of **maintaining the plantation site**, a critical aspect of ensuring the plants' survival. Additionally, a borewell was established to store water in an **on-site artificial pond**, with solar power supporting both the borewell and irrigation processes. This approach significantly reduced dependence on the village's inconsistent electricity supply. The project officer from the implementation team mentioned that the solar power plant has a capacity of 10KW for borewell operation and 18KW for irrigation needs, including the drip system and motor, reinforcing the project's focus on sustainability.

Image 53: Trees at plantation site with drip irrigation system

"After learning about the plantation initiative through an acquaintance, I took the initiative to bring a similar intervention to our village. I connected with the implementation team and actively supported the planning and execution of the project.

Today, the impact of the project is clearly visible on the ground, and we see strong potential to scale it further. The Panchayat remains committed to supporting such initiatives and is prepared to allocate additional land to expand plantation efforts and enhance green cover in the region."

- Sarpanch, Gairatpur Bas

- Community members and the PRI members further confirmed that the availability of irrigation infrastructure enabled regular and need-based watering of plants, which is essential for ensuring survival, particularly during early growth stages and dry periods. Additionally, the presence of protective infrastructure, such as fencing, has further strengthened plantation outcomes by safeguarding saplings from external risks.

Image 54: Solar Power Plant at Plantation Site

- Stakeholders consistently emphasized that fencing the entire 30-hectare plantation area played a crucial role in protecting the saplings during their most vulnerable growth stages. In rural settings where open grazing is common, young plants are at high risk of being damaged or completely lost due to free-roaming cattle and goats. The protective fencing created a secure boundary around the site, preventing grazing, trampling, and other forms of physical disturbance that typically threaten newly planted saplings. By minimizing these risks, fencing helped maintain the integrity of the plantation, reduced the need for repeated replantation, and supported the strong survival rate observed in the project. It also enabled the maintenance teams to carry out watering, mulching, and other care activities more effectively, as the controlled environment ensured that growth was not repeatedly set back by external pressures.

Image 55: Fencing at plantation site

- The installation of the solar-powered irrigation system significantly **strengthened the project's ability to maintain** the plantation of 30,000 saplings across the site. By enabling regular and energy-efficient water supply, the system ensured **systematic and timely irrigation cycles**, which directly **contributed to improved plant health**, **reduced moisture stress, and higher survival rates**. Over the three-year post-plantation maintenance period, this reliable water access allowed field teams to follow consistent care protocols such as watering, mulching, and gap filling substantially increasing the long-term viability of the plantation area.

Image 56: Man made pond at plantation site for water storage

- Continuous and uninterrupted irrigation throughout the year also helped **mitigate the impacts of extreme weather variability**, which is increasingly common in the region. The solar-powered system enabled **real-time monitoring and responsive maintenance**, allowing teams to quickly address plant stress during heatwaves, dry spells, or irregular rainfall. This climate-resilient irrigation approach not only supported the healthy growth of the saplings but also **created a more stable micro-environment, promoting faster establishment** of green cover and strengthening the ecological regeneration potential of the entire plantation landscape.

- Following the handover of the plantation site, Panchayat took responsibility for ongoing **upkeep by assigning maintenance staff** to manage routine care activities. According to the appointed staff, the availability of drip irrigation and supporting site infrastructure made need-based watering easier and more efficient. This consistent access to water contributed to the strong health of the plantation, with stakeholders reporting that all planted saplings survived despite exposure to extreme weather conditions. Community members also shared that during the implementation period, saplings were replaced whenever required, which further helped maintain a 100% survival rate across the plantation of 30,000 plants**.**

"The solar-powered irrigation system has made a significant difference, as it ensures regular and adequate watering of the plants, even in periods of limited water availability. This has helped in improving the survival and growth of the plantation."

– Maintenance staff

- At the same time, both community members and the PRI representative highlighted concerns regarding the sustainability of maintenance after the project handover. While the village sarpanch has appointed a dedicated maintenance resource, limited financial and human resources at the Panchayat level have affected the ability to carry out upkeep consistently. These constraints suggest that although the project established a solid infrastructure foundation and demonstrated strong early outcomes, continued and reliable maintenance may require additional support mechanisms to ensure long-term sustainability.
- SBI Card team emphasised that the integration of such infrastructure ensures that the project moves beyond a one-time plantation activity to a system-based intervention designed for **sustained environmental impact** over the long term.

"With the infrastructure developed at the site, including fencing and water arrangements, the plantation is better protected and easier to maintain. These systems will help sustain the plantation over time and ensure long-term benefits for the village."

– Community member, Gairatpur Bas

IRECS Analysis

Parameters	Assessment from study
Inclusiveness	• Stakeholder interactions indicate that the project adopted an **inclusive approach** by actively **engaging community members** and **village level local governance** during planning and implementation stages of the project viz. **selection of plant species** incorporating **local preference** and **knowledge**. • Overall, the project demonstrates strong inclusiveness through **participatory decision making** and involvement of local governance structures, building a sense of ownership among stakeholders.
Relevance	• The project is **well-aligned** with the local **environmental needs** and challenges identified by stakeholders in the region. Community members and Panchayat representatives mentioned depleting green cover, increasing temperatures and less flora & fauna, as key challenges to which the project is directly aligned. • Community members also expressed observing difference in **improved air quality** and environmental conditions, which align with the project's intended outcomes. Thus, the intervention demonstrates strong **contextual relevance** by addressing local environmental concerns.
Effectiveness	• Assessment findings indicated that the project has been implemented effectively with activities resulting in visible on-ground outcomes. Community members and PRI Members reported observing **visible improvements** in **environmental conditions**, including **increased greenery** and **biodiversity**. • Maintenance staff highlighted that key project activities, including site preparation, plantation, installation of solar-powered irrigation, and regular maintenance, were executed as per the planned approach. The **survival and growth of plants**, along with **sustained upkeep of the site**, reflect **effective implementation** and translation of planned inputs into on-ground results. Overall, the project demonstrates effectiveness in achieving its intended outputs through systematic implementation and maintenance.
Convergence	• The project demonstrates convergence with **local governance structures**; however, the extent of multi-stakeholder collaboration appeared to be limited and can be further strengthened. • The project reflects convergence with the **Gram Panchayat** and the **community**, particularly in facilitating **land allocation** and **supporting implementation**.

Parameters	Assessment from study
Sustainability	• The project incorporated **long-term sustainability** measures, including **solar-powered irrigation**, **water storage systems**, and **native species plantation** for sustainability of the intervention. • A formal **handover of the plantation site** to the Panchayat was done post project completion to establish **local ownership** at the institutional level. • While the project has established a strong foundation for sustainability through infrastructure and institutional ownership. However, **continued engagement with local governance institutions and periodic technical support** will be critical for sustaining **long-term outcomes**.

Alignment to UN SDGs & SBI Card's ESG Goals

The project is **aligned with the following UN Sustainable Development Goal (SDGs):** 11 – Sustainable Cities & communities, 13 – Climate Action & 15 – Life on Land.

The project is also **aligned with SBI Card's internal ESG goal** of "Give Rs. 50 Crores contribution to environment initiatives by FY 2029".

Project Recommendations

The study identified the following project level recommendation which has been summarised below:

Replicate the model in similar ecological contexts with contextual adaptations: The project demonstrates an effective afforestation model with visible environmental benefits and a replicable approach through plantation of native species, integration of solar-powered irrigation, and site-specific design considerations. SBICPSL can consider scaling up the project in other geographies while adapting the model based on local contexts such as soil conditions, water availability, and community readiness and retaining core elements of sustainability. Scaling such interventions can amplify environmental impact across geographies.

14

Project 12, 13, and 14: Mantra for Advanced Sustainable Solution (MASS) - Phase III, IV and MASS Uttarakhand

About the Projects

SBI Card in collaboration with Indian Pollution Control Association (IPCA) initiated a project which aimed at establishing sustainable waste management system. This partnership was designed to address the critical issues of plastic pollution by promoting the segregation at source, collection and recycling of plastic waste while strengthening the waste management infrastructure. The Mantra for Advanced Sustainable Solutions (MASS) project commenced with Phase-I in February 2021 focusing on development of structured framework for effective plastic waste management. During Phase I of the project one Material Recovery facility of 2 Tonnes Per Day (TPD) capacity in East Delhi and one Plastic Recycling Facility of 30 TPD capacity in Greater Noida was established in Delhi for recycling of low value plastic waste. Similarly in Phase II of the MASS Project, two Material Recovery Facilities (MRF) of 5 TPD capacity each in East Delhi and one MRF of 10 TPD capacity in Greater Noida were set up.[47]

The primary objective of the project was to create a replicable and scalable model for responsible waste handling ensuring proper segregation at the source, efficient collection and environmentally sound recycling practices. The initiative also aimed to foster community participation and raise awareness about the importance of plastic waste while facilitating the recovery of recyclable materials.

Furthermore, as the MASS Project progressed, the subsequent phases Phase III & IV along with MASS Uttarakhand were evaluated, with an overview as mentioned below:

Phase III – MASS Ghaziabad

MASS Phase III, implemented in Ghaziabad from January 2023, aimed to establish a sustainable and comprehensive waste management strategy through a decentralized and efficient recovery approach. The project sought active participation from local communities, including residential societies and educational institutes, to enhance waste segregation efforts and strengthen waste management infrastructure. It focused on transitioning from manual to mechanical waste segregation, utilizing innovative waste treatment solutions, and fostering community involvement and awareness. The activities undertaken within phase III are as mentioned below:

- Engaged 23 Residential Societies in Raj Nagar Extension, Ghaziabad and 2 Educational Institutes for the project.
- Conducted extensive training and awareness programs for residents, maids, waste workers, and housekeeping staff to encourage active participation in waste segregation.
- Established a 50 TPD Material Recovery Facility at Ret Mandi, Ghaziabad in close collaboration with the Ghaziabad Nagar Nigam for mechanical segregation of municipal waste. The Ghaziabad Nagar Nigam provided critical support in terms of facilitating necessary permissions, logistical coordination, and integration with the city's overall waste management system.
- Employed 4 Organic Waste Composters to manage wet waste effectively.
- Developed a sustainable supply chain for low-value commercial plastic waste and other waste by connecting them with authorized recyclers.

[47] Source: Project Documents shared by SBICPSL and IPCA

- Demonstrated and disseminated technical solutions for waste management through various communication tools.
- Utilized FM campaigns, wall paintings, cleanup drives, social media campaigns, and knowledge exchange programs to showcase project efforts and raise awareness.

Phase IV – MASS Patiala

Project MASS Patiala marks the fourth phase of the flagship MASS initiative, launched in August 2023. In this project, 10 TPD MRF and 10 TPD Plastic Recycling Facility along with decentralized solid waste management system in 10 residential colonies of Patiala, Punjab has been set up and operated. The project aimed to add value to low-value commercial plastic waste efficiently and encouraged people participation in source segregation followed by composting of their organic waste through aerobin community composter. With the help of this project, IPCA developed a model that ensures a circular supply chain of plastic waste, promoting efficiency and optimum use of waste. The activities undertaken within the phase are as mentioned below:

- Set up 10 TPD Material Recovery Facility in Patiala, Punjab to streamline municipal solid waste management.
- Set up a 10 TPD Plastic Recycling Facility in Patiala, Punjab to establish Sustainable supply chain for plastic waste.
- Executed decentralized organic waste management system at 10 identified locations in Patiala to recover potential wet waste by establishing decentralized wet waste management.
- Executed IEC and Branding Campaign to spread awareness on sustainable waste management among the citizens.

MASS Uttarakhand

Project MASS in Uttarakhand was initiated with a strong focus on tackling the growing issue of plastic waste in the region. The project aimed to successfully recycle plastic waste and repurpose it into 10,000 desks, benefiting 452 government school in 12 districts (divided into 4 zones) of Uttarakhand. The initiative not only addressed the pressing challenge of plastic waste but also supported the educational infrastructure in these remote areas, contributing to both environmental sustainability and social development. Through this approach, Project MASS demonstrated the power of recycling, stemming into the educational infrastructure and the potential for creating long-term solutions that benefit both communities and the environment. The activities undertaken within the MASS Uttarakhand Project are as below:

- Production of School desks from Recycled Plastic waste
- Assembly and dispatch of recycled school desks in all selected four zones (12 districts) of Uttarakhand.
- Conduct workshop to spread awareness on usage of recycled plastic waste products for sustainable future.

MASS Project across its various phases has aimed to establish sustainable waste management systems and address the critical issue of plastic pollution. From reducing plastic waste in urban areas like Delhi and Ghaziabad to promoting recycling initiatives in Patiala and adopting innovative solutions for the vulnerable ecosystems of Uttarakhand, the project's phases have collectively aimed to create a replicable and scalable model for responsible waste handling.

Method of Impact Assessment

The impact assessment study leveraged an integrated and cohesive approach to assess the social impact transpired since projects' implementation. A kick-off meeting was held with SBICPSL and the IPCA to understand the nature of support for the projects and align the requirements for starting the assessment exercise.

Following the meeting, PWCALLP received following **project documents**:

- Memorandums of Understanding (MoUs) and its addendum containing details agreed with IPCA and SBICPSL
- Closure reports of MASS Ghaziabad, MASS Patiala and MASS Uttarakhand
- Quarterly reports of MASS Ghaziabad, MASS Patiala and MASS Uttarakhand

PWCALLP team then began the projects' **desk review** based on the information collected during the kick-off meeting and from the project documents. This helped our team in designing the assessment framework and **finalising the key stakeholders** for the interactions.

In consultation with SBICPSL, **a mixed-method approach combining quantitative and qualitative research** was deployed for the assessment. The quantitative study generated evidence-based insights, while qualitative methods captured stakeholder perspectives and experiences to validate findings and understand actual impact. Research techniques included surveys, Focus Group Discussions (FGDs), and In-depth Interviews (IDIs) to ensure comprehensive evaluation.

Based on data from IPCA, the sample was calculated based on direct beneficiary counts. Stakeholders for each phase were also identified for qualitative interactions.

The quantitative and qualitative sampling plans of the MASS Projects under assessment are as detailed in the table below:

Table 14: Sampling Distribution

Project Name	Type of Stakeholder	Type of Interaction	No. of interactions
MASS Phase III - Ghaziabad	Residents	Quantitative Survey	50
	Waste Workers	Focused Group Discussion (FGD)	1
	Housekeeping Staff / Maids	In-Depth Interview (IDI)	10

Project Name	Type of Stakeholder	Type of Interaction	No. of interactions
	MRF - In charge	Key Informant Interview (KII)	1
	Government Official	Key Informant Interview (KII)	1
MASS Phase IV - Patiala	Residents	Quantitative Survey	50
	Waste Workers	Focused Group Discussion (FGD)	1
	Housekeeping Staff / Maids	In-Depth Interview (IDI)	10
	MRF - In charge	Key Informant Interview (KII)	1
	PRF - In charge	Key Informant Interview (KII)	1
	Government Official	Key Informant Interview (KII)	1
MASS Uttarakhand	Students	Quantitative Survey	139
	Principal / Teachers	In-depth Interview (IDI)	4
	Students	Focused Group Discussion (FGD)	4
	Government Official	Key Informant Interview (KII)	1
IPCA Team Member		In-depth Interview (IDI)	1
SBICPSL Team Member		In-depth Interview (IDI)	1

The responses collected from the stakeholders' interactions of the projects under assessment were analysed to arrive at detailed findings as depicted in next section.

Analysis and Findings

This section summarises the phase-wise findings from the desk review and interactions of the projects under assessment:

Summary of Impact Created

1. MASS Ghaziabad – Phase III

This section provides an overview of the key insights based on the quantitative and qualitative interactions carried out within Phase III of the MASS Project in Ghaziabad.

Beneficiary Profile:

- Majority of the respondents (54%, n=50) in the quantitative survey were women and the remaining were men. This represents are nearly balanced gender- distribution which facilitated in gathering diverse perspectives.
- As reported by the respondents, 70% of the head of the households are engaged in salaried jobs, while 8% run shops, businesses or trades. Additionally, 22% of them reported being retired.

Figure 113: Gender distribution of the respondents (n=50)

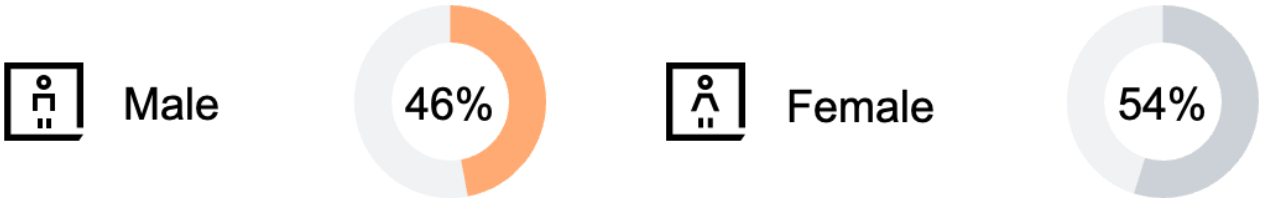
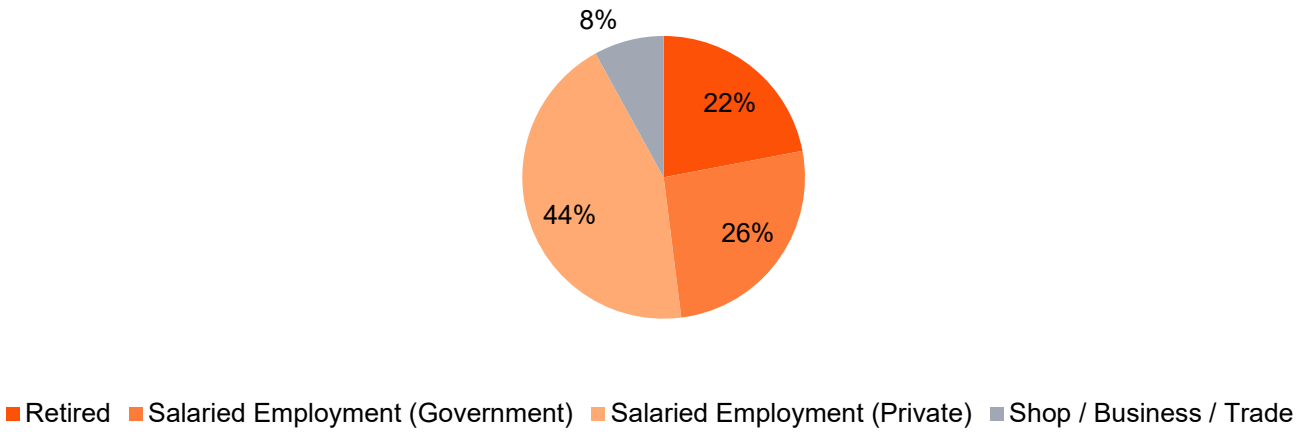


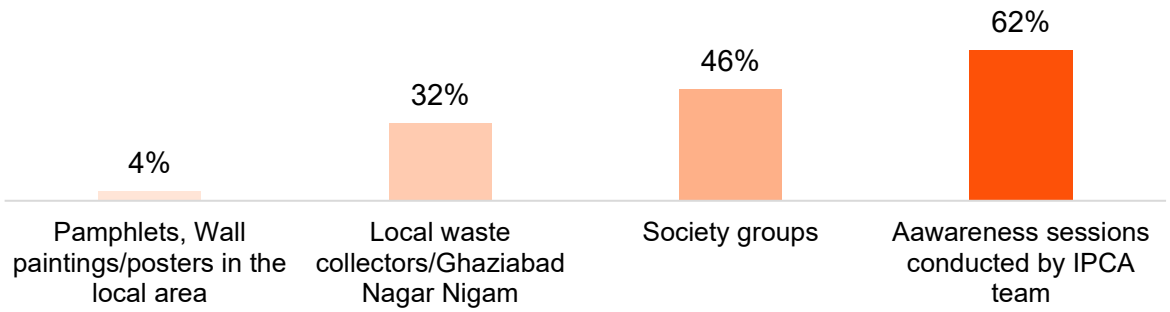
Figure 114: Primary occupation of the respondents (n=50)



Awareness about the project

- 100% of the respondents reported being aware of the Mantra for Advanced Sustainable Solution (MASS) project supported by SBICPSL and implemented by IPCA team.

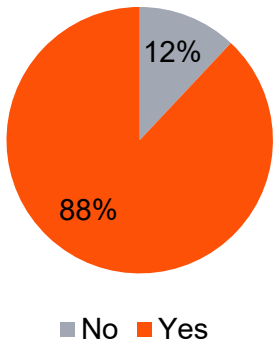
Figure 115: Sources of awareness among respondents (n=50)



*Multiple choice question, hence, might not add up to 100%

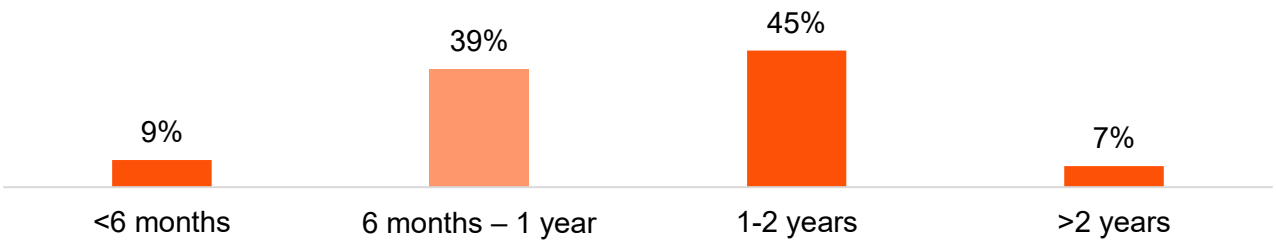
- Additionally, 100% of the respondents also reported being aware of waste segregation of which **88% reported practicing waste segregation at their household level**. It was further confirmed by the housekeeping staff during qualitative interactions that **majority of the households** provide **segregated waste** everyday. This demonstrates the effectiveness of project's trainings and awareness campaigns in empowering the residents about the importance of source segregation and its benefits.

Figure 116: Respondents practicing waste segregation (n=50)



- During quantitative interactions, **45%** of respondents indicated that they have been **practicing waste segregation** at the household level for **1-2 years**, while **39%** mentioned they have been doing so for **6 months to 1 year**.

Figure 117: Duration of respondents practicing waste segregation (n=44)



- It was further confirmed by **70%** of the respondents that **awareness sessions** on **importance of waste segregation** and **waste management** was conducted by the IPCA team. Further

50% of the respondents reported **attending at least 1 awareness session** conducted in their societies.

- SBIC Team member and IPCA Team member reported that **awareness sessions** in the form of **nukkad naataks in societies**, **FM campaigns**, **wall paintings**, and other outreach activities were conducted throughout the project duration to maximize awareness about waste management. The **FM campaign** ran for **at least one hour daily**, spread across different times of the day, and **continued for 30 days**, reaching a **listenership of approximately 1 crore**.

Increased awareness and ownership towards responsible waste management practices among stakeholders

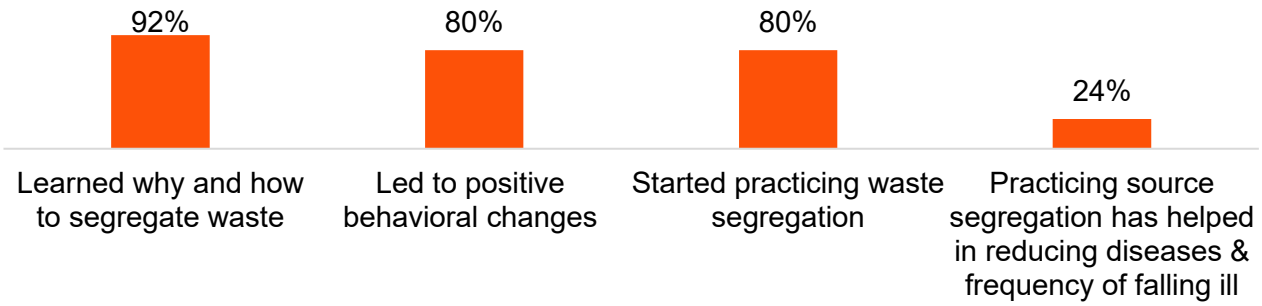
- During qualitative interactions with maids / housekeeping staff of the residential societies it was mentioned that all segregated wet waste received from the households is composted through the Aerobin Composters set up in the society upon minimal further segregation.

- Each residential society was provided with 4 Aerobin composters, each having a capacity of 400 liters. These composters are typically filled within a month, based on the daily deposit of approximately 12 kg of wet waste. This indicates that the Aerobin composters are able to process around 36,000 kg of wet waste every month. The composting cycle spans 45 days, after which the compost generated is utilized by the societies.

Image 57: Aerobin Composter at Fortune Residency, Ghaziabad

- The awareness sessions conducted within the societies have helped in creating a sense of ownership among residents to practice waste segregation at source. The residents reported that the awareness sessions has helped them learn why and how to segregate waste (92%), started practicing waste segregation (80%) and has led to positive behavioural change (80%). It was further mentioned by the residents that there is a need for more innovative ways of awareness sessions to engage more residents and to improve awareness among new residents and housekeeping staff.

Figure 118: Benefits of attending the awareness sessions (n=25)



*Multiple choice question, hence, might not add up to 100%

- During discussions, housekeeping staff and maids expressed that the training sessions have helped them understand the importance of waste segregation and have made their jobs easier, as most households now provide segregated waste. However, not all households adhere to this practice, indicating a need for further awareness and involvement to ensure comprehensive participation in waste segregation.
- Additionally, society representatives mentioned that the availability of Aerobin composters has helped in treatment of wet waste by composting within the society itself. The compost gets ready within a cycle of 45 days and is used for landscaping within the society. For most of the societies the compost generated from the Aerobin composters has completely eliminated the need to buy chemical fertilizers or any kind of compost.

Enhanced infrastructure for waste segregation and recycling

- As reported by the MRF-Incharge and IPCA Team member, there are 6 zones in Ghaziabad for garbage collection and all the waste for the city zone is brought at the MRF. Initially when the MRF was not present, the area was a **dhalao** and all the unsegregated waste was dumped together which was further manually segregated by the waste workers. The waste workers used to segregate the saleable waste from the dump and then sell that further for income.

Further, Ghaziabad Nagar Nigam (GNN) allotted land for the project to set up a Material Recovery Facility for waste segregation. The infrastructure at the Material Recovery Facility is as mentioned below:

Table 15: Machinery Present at the Material Recovery Facility in Ghaziabad

Sl. No.	Type of machine	Purpose of the machine
1.	Weighing Bridge	For weighing the garbage collection vehicle and its contents
2.	Conveyor with Hopper	For collecting waste from loaders and separating it followed by transferring of the waste to the master conveyor belt for the mechanical separation
3.	Segregation Platform	For sorting and separate storage of various components of solid waste namely biodegradable waste and non-biodegradable waste
4.	Master Conveyor Belt	For selective picking of recyclables and help minimize the fatigue of monotonous work of the waste handlers which eases the segregation process
5.	Trommel	For separating out the waste and categorizing them allowing particular sizes of waste to be separated out
6.	Organic Waste Convertor	For converting biodegradable waste to organic manure

7.	Vertical Hydraulic Baler	For compressing waste materials such as paper, plastic, cartons, and cloth into compact and easily transportable bales.
8.	Fatka Machine	For eliminating dust from plastic and other dry waste leading to improved efficiency of waste management operations by minimizing airborne particles.

- The MRF-In charge mentioned that the MRF in Ghaziabad is equipped with suitable machinery that aids in segregating 3-4 types of waste, including recyclable materials, hazardous waste, and wet waste that can be transformed into compost using Organic Waste Converters. This has been implemented following the establishment of infrastructure at the MRF and the capacity-building of waste workers.

Image 58: Material Recovery Facility at Ret Mandi, Ghaziabad

- The Material Recovery Facility (MRF) is equipped with a capacity of 50 TPD. According to an IPCA Team member, the facility has consistently operated at full capacity since its inception, indicating both a need for the initiative and its effective implementation. The MRF successfully recovers approximately 85% of recyclable materials from the total waste collected, minimizing landfill contributions.
- Additionally, within the MRF, Organic Waste Converter (OWC) machines with a combined capacity of 20 TPD play a crucial role in processing wet waste into compost. These machines typically complete the composting process within 15 days, and collectively, the four OWCs produce around 5-6 tonnes of compost monthly. This compost, managed by the GNN, is utilized for maintaining green spaces or distributed to relevant government departments such as the Horticulture Department.
- According to the IPCA team, the 50 TPD MRF processes approximately 20 TPD of wet waste through the OWC machines, while the remaining 30 TPD primarily consists of dry waste and rejects. Out of the 30 TPD dry waste, about 9 TPD of plastic waste is segregated and sent to

authorized recyclers. Of this, approximately 2 TPD of multilayer plastic (MLP) waste is directed to IPCA's recycling unit in Greater Noida. The rest of the plastic waste including PET, PP, HDPE, and LDPE amounting to around 2,000 metric tonnes, is sent to authorized recyclers at an average rate of INR 15 per kg.

Skill Development and Enhanced working conditions of the waste workers

- During the Focused Group Discussion (FGD) with waste workers, they highlighted that their understanding of the importance and necessity of waste segregation has greatly improved. In addition, their working conditions have enhanced, as previously all the collected waste was unsegregated. Now, a substantial portion of the waste arriving at the MRF is already segregated, allowing them to spend less time on the segregation process.
- Waste workers highlighted that the establishment of the MRF has automated the waste segregation process, significantly reducing the time required by approximately two hours per day. This time savings allows workers to better manage household responsibilities. Additionally, the increased efficiency enables them to sell recyclable materials to recyclers more effectively, boosting their earnings.
- Workers also reported that since the opening of the Material Recovery Facility (MRF), overall cleanliness in the area has improved, and waste-handling practices have been enhanced. As a result, there has been a noticeable decrease in disease incidence. Workers have also received safety equipment, such as masks and gloves, which helps them perform their tasks more effectively while protecting their health.
- During discussions, waste workers shared that without the MRF, they would have to work longer hours for lower wages, approximately INR 5,000 per month. Now, with the MRF, they can finish their work by 2-3 PM and earn between INR 6,000-7,000 per month, allowing them to save money as well. This increase in income is attributed to improved daily wages at the MRF.

Solidifying the commitment for environmental well-being

- The establishment of MRF has strengthened eco-friendly waste processing by diverting the recyclable materials from ending up in landfills and promoting proper resource recovery. As reported by the IPCA team, the MRF in Ghaziabad is handing 50 MT of waste per day contributing to large scale waste diversion from open dumping sites.
- The MRF In-charge and IPCA team member reported that the waste received at the MRF comprises approximately 60% dry waste and 40% wet waste. The wet waste is processed through the Organic Waste Converters at the facility. Of the 60% dry waste (equating to 30 TPD), about 30% (9 TPD) consists of plastic waste, which is recycled at the Plastic Recycling Facility. The remaining dry waste is sold to authorized recyclers by the Ghaziabad Nagar Nigam, with only about 10-15% of the residual waste ultimately being sent to landfills.
- The respondents shared that they practice composting at the RWA level. Out of the total waste generated i.e. per household, 80% is wet waste.

The project operates under a public-private partnership model. Through discussions with the MRF In-charge, SBIC Team member, and IPCA Team member, it was revealed that the project has significantly enhanced waste segregation, collection, and efficient recycling processes at the MRF. This collaboration effectively merges corporate resources, municipal governance, and technical expertise to develop a robust waste management system. Revenue generated from the sale of

compost and processed dry waste covers the MRF's operational costs from the second year onwards.

2. MASS Patiala – Phase IV

This section provides an overview of the key insights based on the quantitative and qualitative interactions carried out within Phase IV of the MASS Project in Patiala.

Beneficiary Profile:

- Majority of the respondents (60%, n=50) in the quantitative survey were men and the remaining 40% were women. This represents a nearly balanced gender- distribution which facilitated in gathering diverse perspectives.
- As reported by the respondents, 26% of the head of the households are engaged in salaried jobs, while 24% run shops, businesses or trades. Additionally, 36% of them reported being retired and 14% of the respondents were college students.

Figure 119: Gender distribution of respondents (n=50)

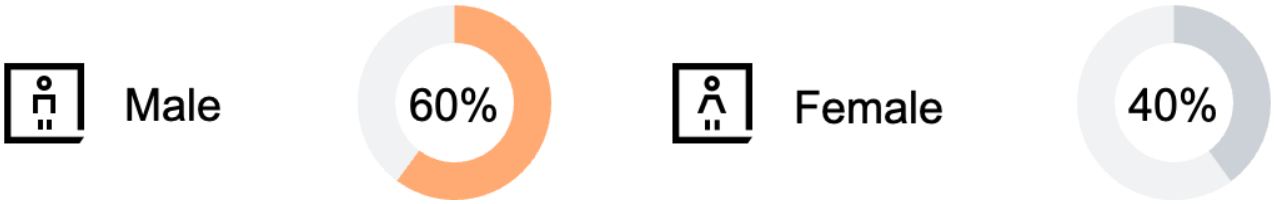
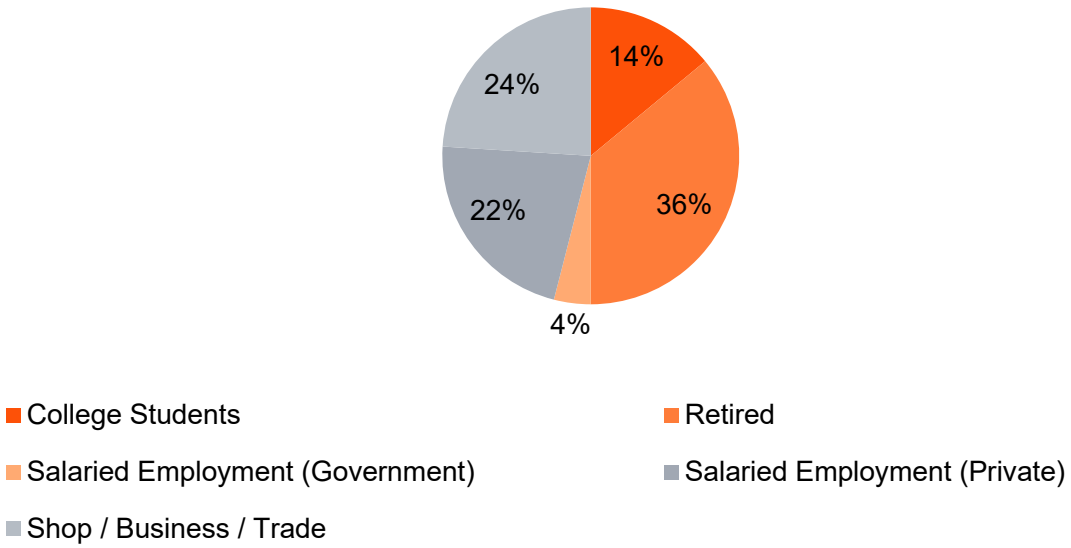


Figure 120: Primary occupation of the respondents (n=50)



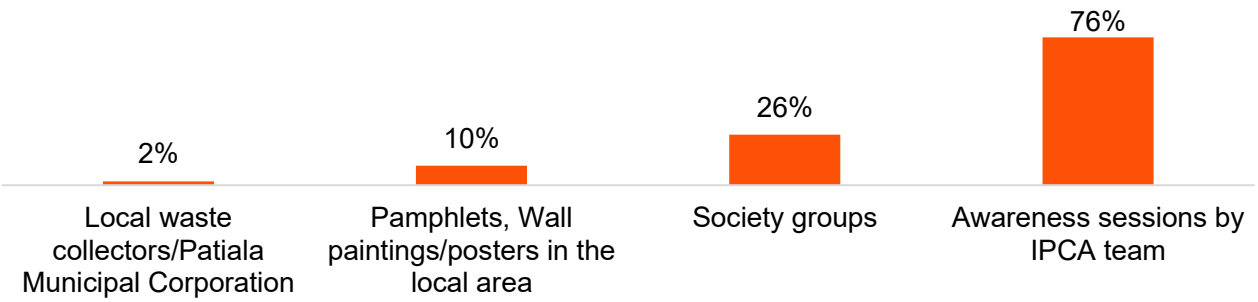
Increased awareness about the project and waste management practices

- 100% of the respondents reported being aware of the Mantra for Advanced Sustainable Solution (MASS) project supported by SBICPSL and implemented by IPCA team in Patiala.
- Additionally, all respondents reported being aware of waste segregation, with **96%** actively practicing it at the household level. This was confirmed by the housekeeping staff during qualitative interactions, as they confirmed that nearly all households provide segregated waste on a daily basis. This highlights the effectiveness of the project's training sessions and

awareness campaigns in educating and empowering residents about the importance and benefits of source segregation.

- The majority of respondents (76%) indicated that they learned about the MASS project through awareness sessions conducted by IPCA. Additionally, 26% became aware through society groups, while 10% found out via pamphlets and wall paintings in the area.

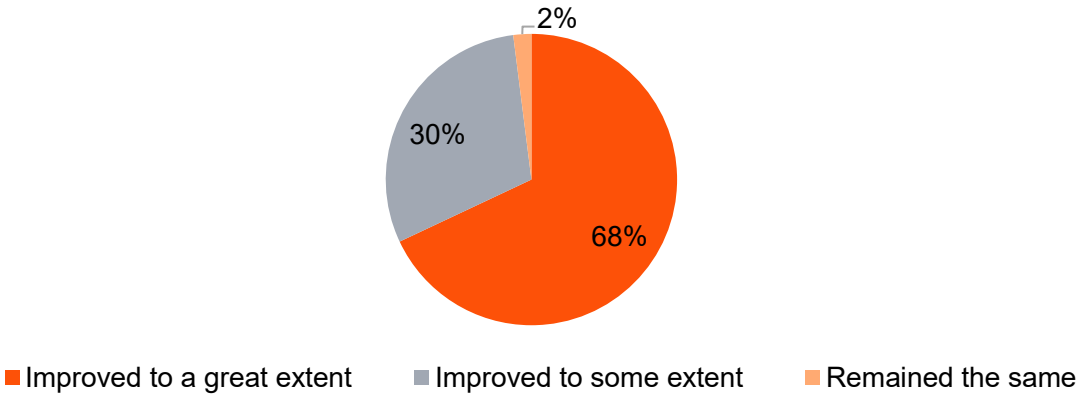
Figure 121: Sources of awareness among respondents (n=50)



*Multiple choice question, hence, might not add up to 100%

- During quantitative interactions, 54% of respondents indicated that they have been practicing waste segregation at the household level for 1-2 years, while 44% mentioned they have been doing so for more than 2 years. Additionally, 2% reported that they have recently started segregating waste in the last 6 months to 1 year. This has led to increased cleanliness and general hygiene in the residential societies as well.

Figure 122: Residents response on improvement in general hygiene in the area since last 2 years

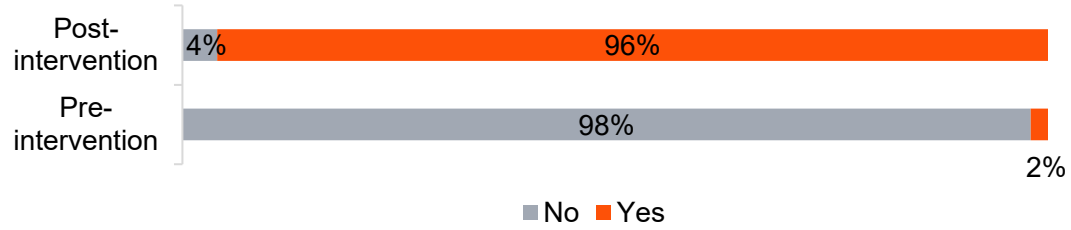


- Furthermore, 72% of respondents confirmed that the IPCA team conducted awareness sessions on the importance of waste segregation and waste management. Additionally, 48% of respondents reported having attended at least one such awareness session in their communities.
- The SBIC and IPCA Team members reported that various awareness activities were conducted throughout the project to maximize understanding of waste management. These included nukkad nataks (street plays) in communities, cleaning drives, and the creation of wall paintings.

Positive behavioural change among residents for waste management at source

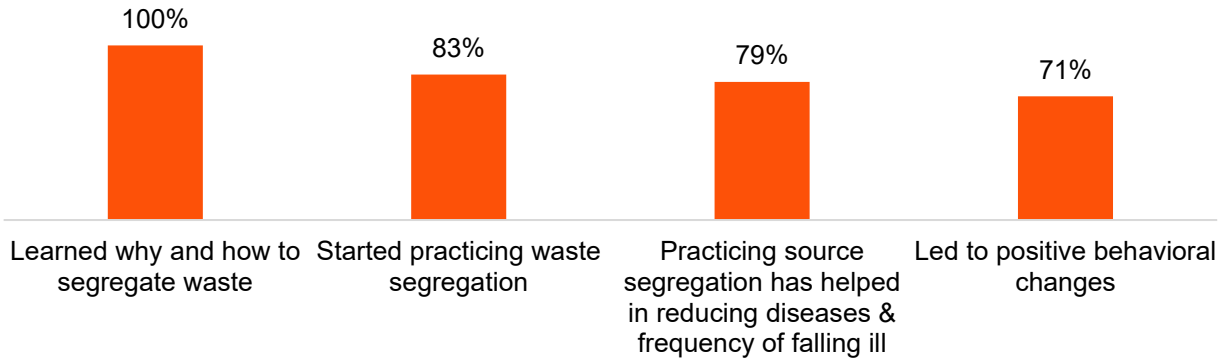
- A majority (96%) of respondents reported engaging in waste segregation at their household level, reflecting both increased awareness and a significant behavioral change among residents regarding source segregation. This widespread adoption demonstrates the effectiveness of the initiatives aimed at educating the community about waste management.
- Initially, before the intervention, only 2% of respondents practiced waste segregation at home. In contrast, post-intervention quantitative data reflected that 96% are now actively separating their waste into dry and wet categories, highlighting the project's impact in promoting sustainable practices at the household level.

Figure 123: Residents response of practicing waste segregation pre and post intervention (n=50)



- Out of the 50 respondents surveyed, 24 reported attending at least one awareness session, 71% reported observing positive behavioral changes among residents, while all participants (100%) learned the importance and methods of waste segregation. Furthermore, 83% have actively started practicing waste segregation.

Figure 124: Benefits of attending the awareness sessions conducted by IPCA (n=24)



*Multiple choice question, hence, might not add up to 100%

- Additionally, 40% of respondents stated that they have taken initiatives to raise awareness about source segregation among other residents in their vicinity, highlighting the project's sustainable impact and its ability to foster community-driven efforts for long-term environmental benefits.
- Discussions with housekeeping staff revealed that residents are now more aware about waste segregation practices and have taken responsibility for separating waste at the household level before handing it over. This shift has significantly eased the workload of housekeeping staff, as they no longer need to spend hours sorting waste themselves.

- Additionally, the introduction of Aerobin composters has further heightened residents' awareness of the benefits of waste segregation. Once segregated waste is collected by the housekeeping staff, the wet waste is added to the Aerobin composters. Within a cycle of 30-45 days, these composters produce organic compost, which is then used for landscaping activities within the societies. Residents mentioned that in some residential societies, they have stopped purchasing chemical fertilizers for their common areas, opting instead to use the organic compost generated from the Aerobin composters.

Image 59: Aerobin Composters at Ambey Apartments, Patiala

- Each residential society was provided with 4 Aerobin composters, each having a capacity of 400 liters. These composters are typically filled within a month, based on the daily deposit of approximately 12 kg of wet waste. This indicates that the 40 Aerobin composters in the 10 societies are able to process around 14,400 kg of wet waste every month.

Enhanced waste management infrastructure leading to sustainable management of waste

- During visits, it was verified that a Material Recovery Facility (MRF) with a capacity of 10 TPD and a Plastic Recycling Facility (PRF) with an installed capacity of 30 TPD (two operational shifts) and have been established. The MRF In-charge shared that there has been significant improvement in waste handling at these sites following the intervention. Additionally, the establishment of the PRF has facilitated the recycling of plastic waste, which was previously not recycled at all.

Image 60: Landscape Maintenance done through compost from Aerobins in Patiala Heights, Patiala

Image 61: Plastic Recycling Facility set up in Patiala

- Additionally, the MRF In-charge reported that the facility handles 8-9 TPD of wet waste and 3 TPD of dry waste. The MRF's capacity is divided equally, with 5 TPD allocated for wet waste processing and 5 TPD for dry waste processing. Approximately 2-3 TPD of plastic waste is sent from the MRF to the PRF for further processing and recycling into end products every month at the rate of INR 2-3 per kg. The types of machinery present at the MRF is as mentioned in the table below:

Table 16: Machinery present at the Material Recovery Facility

Sl. No.	Type of machine	Purpose of the machine
1.	Conveyor Belt with Platform (10 MT per day)	To segregate different grade of categories of waste (Plastic, paper, cardboard, e-waste, metal, glass etc.) efficiently through semi-automatic segregation platform.
2.	Hydraulic Baler (4 MT per day)	To compact waste items like paper, plastic cartons, cloths into compact and portable bales using hydraulic pressure
3.	Organic Waste Convertor (6 MT per day)	To automate, accelerate and ease the process of composting. These machines utilize aerobic technology to convert biodegradable waste into valuable organic manure.

- Furthermore, the IPCA Team and MRF In-charge observed a notable improvement in the cleanliness of the area and in how waste is received at the MRF. However, they emphasized the critical need for all citizens to take ownership in order to sustain these positive changes over the long term.

Image 62: Waste Workers segregating waste at MRF Patiala

- During discussions with the PRF In-charge, it was noted that upon receiving plastic waste, the Plastic Recycling Facility (PRF) further segregates it into multilayered plastic and other types of plastic waste. The PRF has an operational capacity of 30 TPD (two shifts operational level) and typically processes at least 10 TPD of plastic waste daily. The recycled plastic waste is initially transformed into sheets of varying thicknesses. These sheets serve as raw material that can be further converted into a variety of end products such as pots, desks, benches, and more, depending on the order volume and specific product requirements. The monthly board production from plastic waste is approximately 5,000 units, translating to an annual production of around 60,000 boards across day and night shifts.

- This intervention has developed much required infrastructure to address the pressing need for comprehensive waste management from source to processing. At source, residents are educated on waste segregation, and organic waste composters are provided within societies to manage wet waste on-site, turning it into compost. Plastic waste is segregated, baled, and sent to the PRF, where it is further processed and converted into end products. This approach underscores the sustainability of the project, as the intervention spans the entire waste management process from beginning to end.

Image 63: Organic Waste Composters and its output at MRF Patiala

Skill development and better working conditions of the waste workers

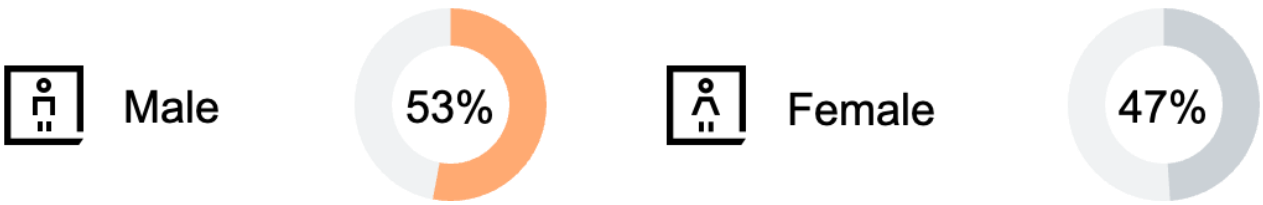
- Waste workers shared that previously they spent hours manually sorting waste and searching for items that could be sold for additional income. Since the establishment of the MRF, the time spent on segregation has significantly decreased, as most of the waste received is already sorted. Additionally, the availability of machines has transformed the process into a semi-automatic one, further streamlining their work.
- Before the MRF was established, the waste collection site had 58 composting pits, which were insufficient for segregating and processing the daily volume of waste collected. Although the number of composting pits has increased to 98, the establishment of the MRF has brought about a significant improvement in waste handling practices through automated machines.
- Further the MRF In-charge noted improvements in the working conditions of waste workers. They have received training on operating machinery and have been provided with safety gear, including masks and gloves, enabling them to perform their duties more effectively and safely.

3. MASS Uttarakhand

This section provides an overview of key insights based on the quantitative and qualitative interactions carried out with 139 students (n=139) from 4 Government Schools of Dehradun and Rudraprayag Districts of Uttarakhand and other stakeholders during the field visits.

Beneficiary Profile:

- The gender distribution is near-balanced, ensuring both perspectives are represented. This balance supports opinions across genders for comfort, focus, and acceptance outcomes.



- A majority (68%) are 10–14 years old as in majority of the schools, benches provided under the program are used by middle class students.
- Responses are concentrated in Class 7 (43%), with solid representation in Classes 8 and 11 (24% each) because benches are majorly being used by the students of middle class.

Figure 125: Age group of respondents

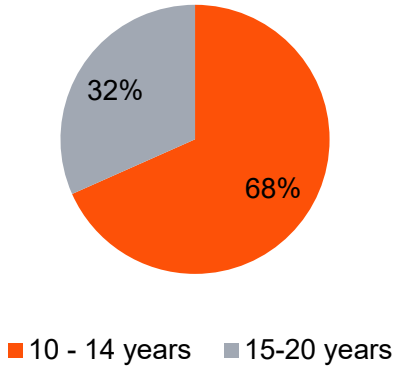
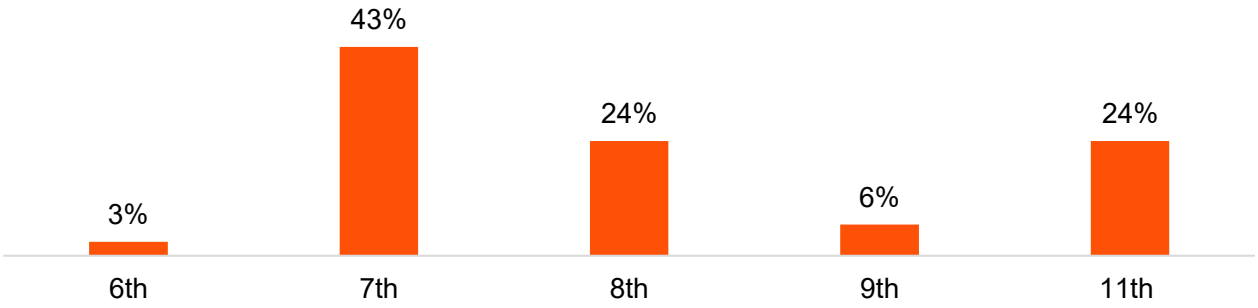


Figure 126: Grade of respondents



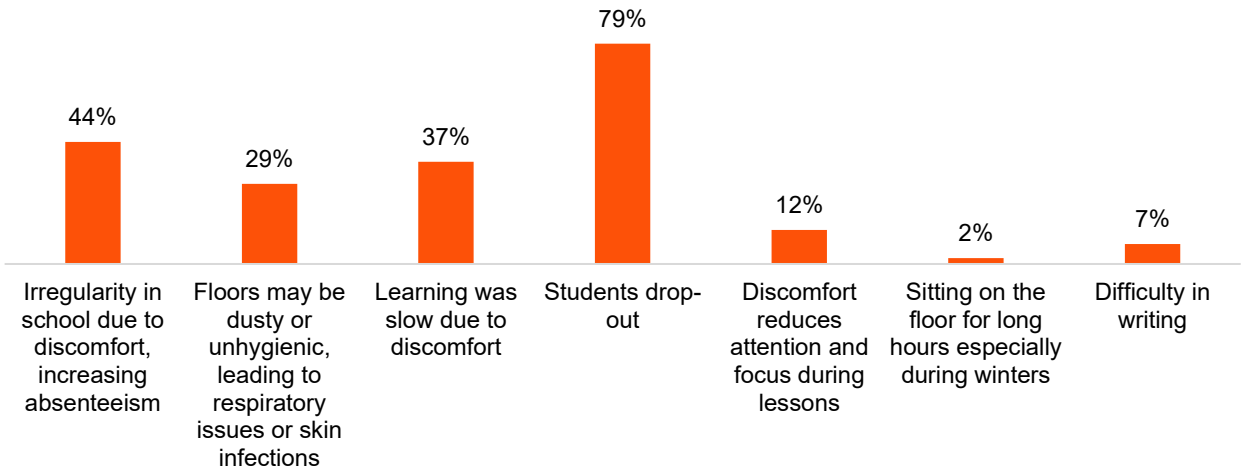
Improved Learning Comfort and Classroom Experience

- Prior to the intervention, 100% of the students have expressed concerns about the inadequate number of benches, highlighting a tangible deficiency in infrastructure. The program effectively addressed this critical need, enhancing the overall functionality and efficiency of the classroom setting.

100% respondents were **aware about the project** indicating visibility & communication.

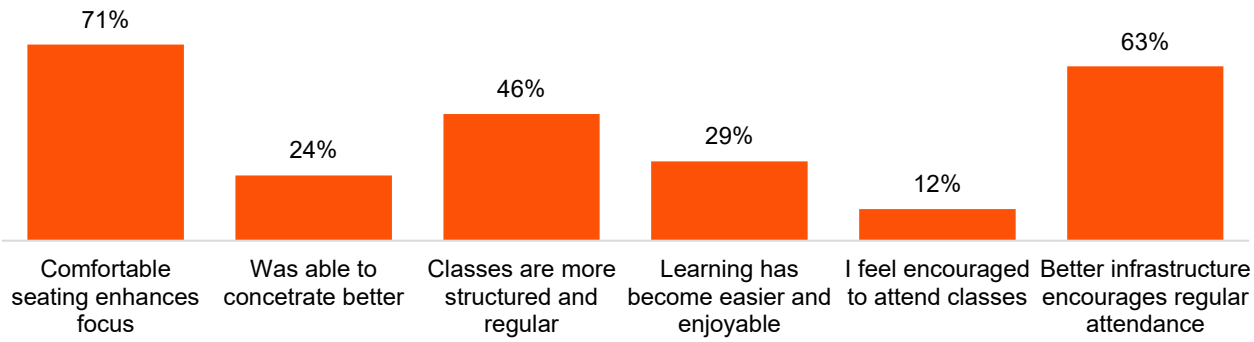
- The awareness of the program among 100% students suggests effective visibility and communication efforts within the school environment. This heightened level of awareness likely contributed to the favourable acceptance and utilization of the program.
- During the interaction at GIC, Jawari, Rudraprayag, the Principal shared that prior to the implementation of the program, students faced significant challenges, particularly during the winter months. They were compelled to sit outside on the ground, which often resulted in younger children falling ill. To address these issues, benches were majorly provided to the middle school students, significantly improving their learning environment and overall well-being.

Figure 127: Challenges faced due to nonavailability or lack of benches



- The data reveals a range of challenges faced by students, with writing difficulties reported by 79%, highlighting issues related to posture and inadequate writing surfaces. Additionally, 44% of students experienced discomfort from floor seating, a problem exacerbated during the winter months and was also shared by students during interaction. This physical discomfort correlates with reduced attention spans, as reported by 37% of students, and hygiene concerns, noted by 29%, both of which further illustrate how suboptimal physical conditions can severely impact the quality of learning.
- In terms of specific challenges, writing difficulties stand out as the predominant issue, closely associated with constraints related to posture and the lack of appropriate surfaces. These figures suggest that, while less prevalent, the consequences of inadequate infrastructure may lead to broader educational disengagement for some students, underscoring the need for targeted interventions to support at-risk communities.

Figure 128: Benefits of benches provided



- The provision of benches in classrooms has enhanced the students' learning experience. A substantial 71% of students reported increased focus due to comfortable seating, directly impacting their engagement and concentration. This improvement also contributed to a more structured and regular classroom environment as stated by teachers, with 46% of students noticing more regular and structured classes.
- Furthermore, 29% of students found that learning became more enjoyable and easier, highlighting the positive impact of physical comfort on educational experience. Additionally, improved infrastructure encouraged regular class attendance, with 63% of students feeling

motivated by the better environment. Overall, the addition of benches not only addressed immediate physical needs but also fostered a more effective and engaging learning atmosphere.

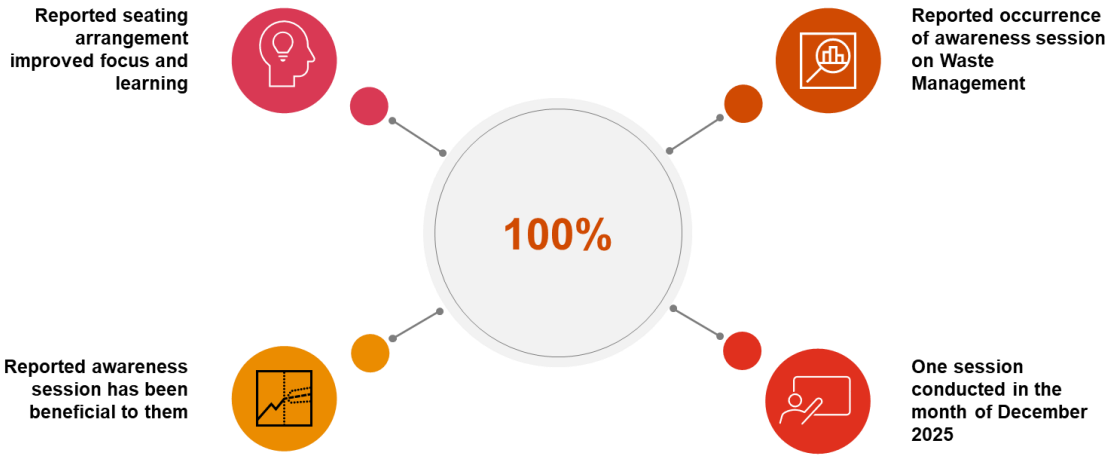
- **Daily Comfort with Benches:** 96% of students reported feeling very comfortable with the new benches, demonstrating a strong fit between the product and daily user needs. Only a small portion noted partial comfort, suggesting minor areas for ergonomic improvement.
- **Awareness of Recycled Materials:** All the students (100%) have a clear understanding that the benches are made from recycled plastic materials, reflecting clear communication about sustainability. This awareness lays a foundation for integrating broader lessons on the circular economy into the curriculum.
- **Positive Influence of Recycling:** Knowing that the benches are recycled has positively impacted 98% of students, enhancing their perception and pride in using these resources. This support for sustainability can be a key factor in expanding the program and gaining broader community support.

Prior to the intervention, students faced discomfort due to lack of benches, with major challenges including difficulty in writing, reduced focus, and prolonged floor seating, especially during winters. Post-intervention, 96% of students reported the new benches to be highly comfortable for daily use. Improved seating directly enhanced physical comfort, reduced strain, and created a more conducive classroom environment. As a result, students perceived learning to be easier and more enjoyable.

Awareness generation and capacity building around waste management

Awareness sessions were conducted for students who received benches made from recycled plastic waste. These sessions were designed to educate students about the materials used in the benches and to promote understanding of waste management practices. **100% of students** responded that awareness activities were conducted, anchoring the intervention in behaviour change rather than infrastructure alone. This integrated approach strengthens durability of outcomes.

Figure 129: Overview of awareness session conducted on waste management



During the sessions, the topic of **waste segregation and behavior change** had the strongest recall, with **79% of students** remembering the key messages. This shows that students understand the importance of sorting their waste properly and changing their habits for better environmental practices. During the discussion, students from GIC Bannu shared that they have started **keeping dustbins in their classrooms** and started **separating waste depicting behaviour change** among students. Classroom-level adoption can reduce health risks and help **build lasting habits**, but sustaining these gains will require ongoing reinforcement and reliable collection and disposal systems. The second most recalled topic was the **health risks of littering and burning**, remembered by **46% of students**. This highlighted the dangers that improper waste disposal poses to both health and the environment. Lastly, the topic of **composting** had a recall of 34%. This suggests that while students learned about composting, they might need more hands-on practice to fully grasp the concept and apply it effectively in their lives.

Figure 130: Aspects covered as part of awareness sessions

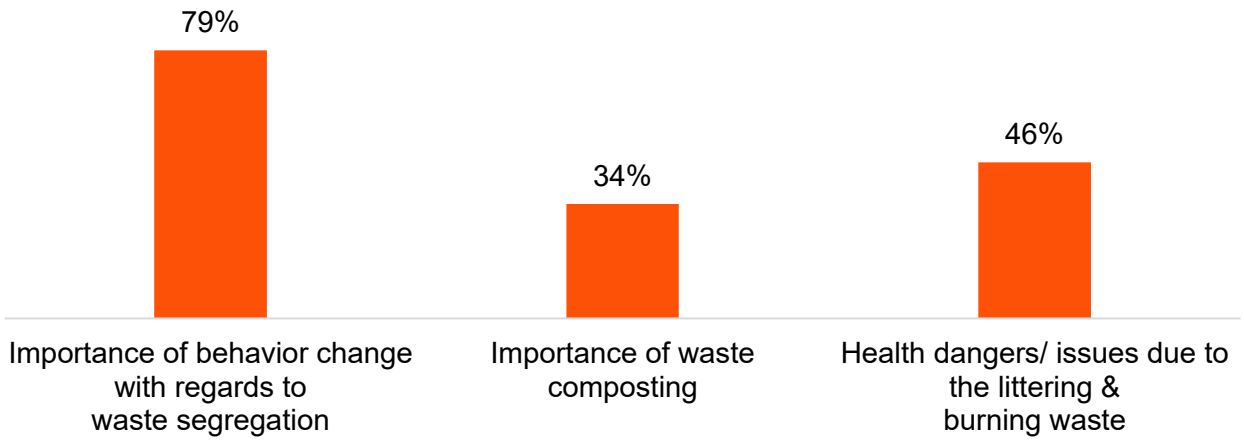
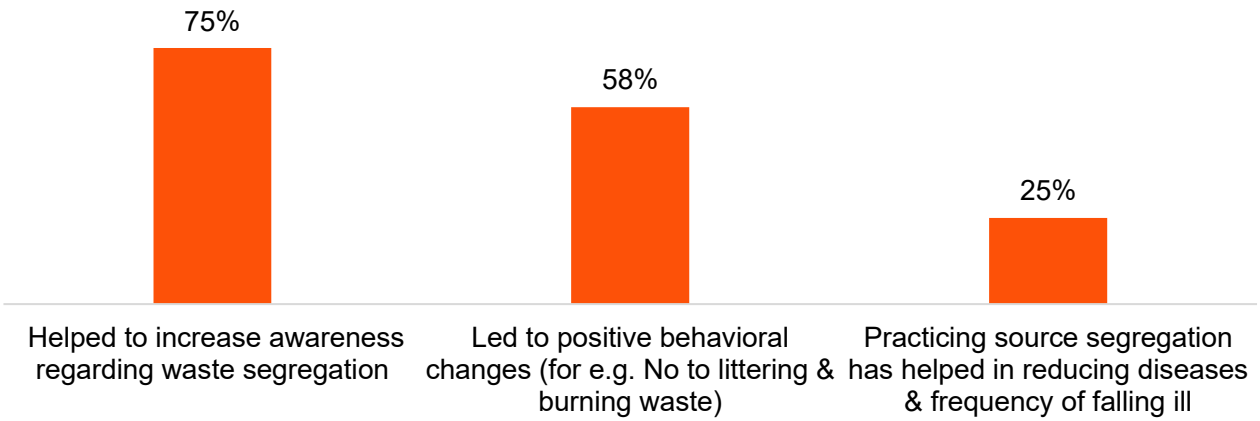


Figure 131: Benefits of awareness sessions



75% of students retained the core message on **waste segregation**, showing the sessions were effective at raising awareness; more than half (58%) reported adopting better practices, which is encouraging but indicates a gap between knowing and doing. Only 25% of students reported practicing source segregation, a meaningful early sign that improved practices may be benefiting health, though this likely reflects initial or perceived improvements. The gap between awareness and practice can be explained by practical and social barriers: limited facilities or collection systems, entrenched habits and social norms that need time and reinforcement to change, insufficient

hands-on practice (for example, composting demonstrations) to build confidence, and the natural time lag before health impacts become clear.

Awareness that benches were made from recycled plastic waste was very high, and 98% of students stated this positively influenced their opinion of the benches. Waste-management awareness sessions reinforced behaviour change, particularly around waste segregation and reduced littering. Students reported increased environmental awareness and adoption of sustainable practices. Strong support (99%) for using recycled materials in other school infrastructure highlights the intervention's broader attitudinal impact.

Usage of benches and experience

The survey showed a clear preference for the new benches: 86% of students found them comfortable or very comfortable (28% comfortable, 58% very comfortable) whereas 14% of students were neutral about the comfort level of benches. The slightly higher comfort rating compared with the reported reduction in discomfort suggests most students appreciate the improved seating, while a smaller group remained neutral.

Figure 132: Comfort level of new benches compared to previous one

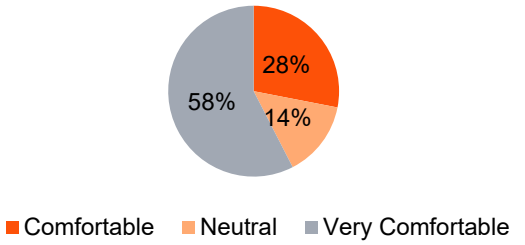
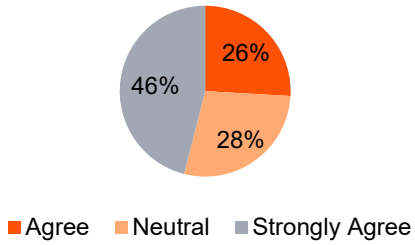


Figure 133: Experiencing less physical discomfort with new benches



A majority (72%) report experiencing less physical discomfort (26% agree, 46% strongly agree). on pain reduction possibly reflecting an adjustment period, individual needs, or age/size differences. Overall, the results indicate the benches are delivering meaningful ergonomic benefits that can support better posture, reduced fatigue and improved classroom engagement.

Following the intervention, students reported reduced physical discomfort, including back pain, with 72% agreeing that discomfort had decreased. Improved comfort and classroom conditions were perceived to have a positive influence on regular attendance and continuation in school. While most rated this impact as "somewhat," it signals an important enabling factor for retention.

Comfortable seating led to noticeable improvements in students' ability to concentrate, with 71% reporting better focus during lessons. Students also observed that classrooms became more structured and regular, contributing to a more disciplined learning environment. Better infrastructure was perceived to encourage regular attendance by 63% of respondents. Overall, 99% of students felt the benches had a positive impact on the learning environment.

Usage of benches and experience

Overall Impact

Support for the use of recycled materials is overwhelmingly positive, with 77% of students strongly supporting and 22% somewhat supporting their application in other school supplies and infrastructure. This strong endorsement indicates broad social acceptance and provides a clear mandate for scaling up similar sustainable interventions.

77% respondents were **strongly supporting** the use of recycled material.

Table 17: Overall Impact

Parameters	Highly Impactful	Not Impactful	Somewhat Impactful
Quality of benches	47%		53%
Better learning environment	46%	1%	53%
Decrease in drop-out rate of students	25%		75%
Regular Attendance of students	18%	2%	80%

Quality of Benches: All students found the quality to be impactful (47% highly; 53% somewhat), confirming product reliability and acceptance. The “somewhat” share suggested incremental improvements can elevate perceived quality further.

Better Learning Environment: 99% perceived an improved learning environment (46% highly, 53% somewhat), showing climate and classroom organization gains. This complements focus and attendance drivers.

Decrease in drop-out rate of students: Students perceived a positive effect on retention (25% highly; 75% somewhat), but most rated it “somewhat.” This was directionally strong and merits validation with school records.

Regular Attendance of students: Perceived attendance benefits were substantial (18% highly; 80% somewhat), aligning with improved comfort and structure.

SROI Analysis

1. Phase III- MASS Ghaziabad

The Social Return on Investment (SROI) Framework design helps us measure and account for value in a broad sense. The overall impact and the subsequent calculation of the return was done after preparing an impact map for the programme. Thereafter, the cumulative benefit was derived after adjusting the deadweight, displacement, attribution (by others) and drop-off factors from the year wise benefits. These factors are defined in detail as follows:

Deadweight	Dead-weight is the estimation of the benefits which would have occurred even in the absence of the programme. For the 3 individual benefits attributable to this project, **dead-weight has been considered to be 28% (as 28% respondents reported already practicing waste segregation)** based on the interaction with the stakeholders on-ground. For rest of the benefits, dead-weight has been considered as 15% because Without the intervention, some limited informal recovery of recyclable material may still have occurred, but the scale, efficiency, and environmental outcomes would likely have been much lower. Therefore, a 15% deadweight reasonably captures the small portion that might have happened anyway.
Displacement	Displacement is the component which informs the assessor on how much one outcome of the project may influence any other outcome. During the assessment for this project, there was no evidence of any displacement noted or reported. Hence, the displacement factor is taken to be 0% for the calculations.
Attribution (by others)	Attribution (by others) is an estimate of what proportion of the impact may be attributed to the efforts of other stakeholders involved. During the assessment and the survey, it was found that for benefits from this project, attribution (by others) may be set between 0% to 90%. For benefit through radio & mass awareness, 90% of attribution has been considered because awareness at this level is typically shaped by many overlapping influences government messaging, school education, news & social media, local civic activity, and other nonprofit or municipal campaigns. 85% attribution used for outcomes from the MRF, sale of plastic waste, plastic board generation from MLP, and GHG emissions avoided appears to reflect the fact that these outcomes are highly dependent on external system actors, even if the project catalyzed them. Waste/MRF workers benefit through training, PPE, reduced time burden, and improved incomes, but outcomes are only partly driven by the project. Given dependencies on municipal support, system operations, market demand, and worker adoption, a 50% attribution to external factors is reasonable.
Drop Off	Drop-off is factored in as in the subsequent years, the benefit or the impact would be slightly less than the previous year. During the qualitative interactions it was found that there has been negligible migration and flats in the RWA societies were not left unoccupied hence the drop-off value is considered to be 0% for calculations.

The impact of the project has been arrived at based on the following calculations:

- **Impact Value for the first year:** Quantity of change or Number of beneficiaries or Number of benefit units x Financial Proxy (FP) value x (1- deadweight) x (1- displacement) x (1- attribution)
- **Impact value for subsequent years:** Quantity of change or Number of beneficiaries or Number of benefit units x Financial Proxy (FP) value x (1- deadweight) x (1- displacement) x (1- attribution) + [impact of previous year] x (1-drop off)]

Based on the above calculations, the cumulative benefit or impact generated by the project from the year 2022-23 till the end of the financial year 2025-26 comes out to be ₹ 52,81,50,121/-. The detailed calculations and year-wise values can be referenced in text and table below:

The SRoI value is expressed as a ratio of the return and is calculated by dividing the net present value of total Impact value (or cumulative benefit) divided by the net present value of the total investment or funds utilized for the project.

Net Present value of total impact value (or cumulative benefit) is ₹ 44,78,83,025/- whereas the net present value of **Total Utilization or Investment (till the time of survey) is ₹ 3,44,03,000/-.**

Now, to calculate the SRoI following formula has been used:

SRoI = Net Present value of benefits/ Net Present Value of Investment

Net Present Value has been calculated using the formula below:

Net Present Value of benefits = Cumulative benefits*POWER ((1+r) time) where 'r' has been taken as per national inflation rate during the programme period

SRoI	$\frac{\text{Net Present value of Benefits}}{\text{Net Present Value of Investment}}$
NPV of Benefits	₹ 44,78,83,025/-
NPV of Investment	₹ 3,44,03,000/-
SRoI Value*	13.02

*SRoI value of 13.02 indicates that an investment for every ₹ 1 invested in the project, a social value of ₹ 13.02 is generated.

SRoI Estimation – Impact Values

Stakeholders	Project Activity	Benefits	Dead weight	Displacement	Attribution (by others)	Drop-off	Total value to be created between years (Value in ₹)				Total
							2022-23	2023-24	2024-25	2025-26	
Residents / Households	Awareness sessions on waste segregation & composting through community engagement activities	Improved household waste segregation	28%	0%	50%	0%	-	₹1,102,500	-	-	₹1,102,500
	Set up of Aerobins for wet waste composting	Amount saved in ustilising compost generated within the society	15%	0%	50%	0%		₹ 144,500	₹ 144,500	₹ 144,500	₹ 433,500
General Community	Awareness sessions on waste management through radio	Improved awareness	28%	0%	90%	0%	-	-	₹ 25,557,840	-	₹ 25,557,840
Waste Workers / MRF Workers	Training on waste segregation and MRF operations	No. of waste workers trained	15%	0%	50%	0%	-	₹ 260,313	-	-	₹260,313
	Provide precautionary items such as gloves, masks, etc.	Reduced health expenses of the waste workers	15%	0%	50%	0%	₹ 59,500	₹ 238,000	₹ 238,000	₹ 238,000	₹773,500
	Time saved due streamlining of activities	Improved income of Waste Workers	15%	0%	50%	0%	₹ 1,338,750	₹ 5,355,000	₹ 5,355,000	₹ 5,355,000	₹17,403,750

Stakeholders	Project Activity	Benefits	Dead weight	Displacement	Attribution (by others)	Drop-off	Total value to be created between years (Value in ₹)				Total
							2022-23	2023-24	2024-25	2025-26	
	Set of 50 TPD MRF	Savings by selling plastic waste to authorized recyclers	15%	0%	85%	0%	-	₹4,886,438	₹4,886,438	₹4,886,438	₹ 14,659,313
		Amount saved by selling plastic boards made out of MLP	15%	0%	85%	0%	-	₹ 544,489	₹ 544,489	₹ 544,489	₹1,633,466
		GHG emission saved due to 27 TPD dry waste diverted from landfill	15%	0%	85%	0%	-	₹ 44,915	₹ 44,915	₹ 44,915	₹ 134,745
		GHG emission saved due to wet waste diverted from landfill and processed at MRF and use of aerobins	15%	0%	85%	0%	-	₹ 155,304,096	₹ 155,304,096	₹155,304,096	₹ 465,912,289
Maids and Housekeeping Staff	Training on systematic disposal of waste	No. of maids and housekeeping staff trained and who follow waste segregation practices	15%	0%	50%	0%	-	₹ 278,906	-	-	₹ 278,906
Total Benefits							**₹ 1,398,250**	**₹168,159,156**	**₹192,075,278**	**₹166,517,438**	**₹528,150,121**

2. Phase IV MASS Patiala

The Social Return on Investment (SROI) Framework design helps us measure and account for value in a broad sense. The overall impact and the subsequent calculation of the return was done after preparing an impact map for the programme. Thereafter, the cumulative benefit was derived after adjusting the deadweight, displacement, attribution (by others) and drop-off factors from the year wise benefits. These factors are defined in detail as follows:

Deadweight	Dead-weight is the estimation of the benefits which would have occurred even in the absence of the programme. For the 3 individual benefits attributable to this project, dead-weight has been considered to be 2% (as 2% respondents reported already practicing waste segregation) based on the interaction with the stakeholders on-ground. For rest of the benefits, dead-weight has been considered as 15% because Without the intervention, some limited informal recovery of recyclable material may still have occurred, but the scale, efficiency, and environmental outcomes would likely have been much lower. Therefore, a 15% deadweight reasonably captures the small portion that might have happened anyway.
Displacement	Displacement is the component which informs the assessor on how much one outcome of the project may influence any other outcome. During the assessment for this project, there was no evidence of any displacement noted or reported. Hence, the displacement factor is taken to be 0% for the calculations.
Attribution (by others)	Attribution (by others) is an estimate of what proportion of the impact may be attributed to the efforts of other stakeholders involved. During the assessment and the survey, it was found that for benefits from this project, attribution (by others) may be set between 0% to 90%. For benefit through radio & mass awareness, 90% of attribution has been considered because awareness at this level is typically shaped by many overlapping influences government messaging, school education, news & social media, local civic activity, and other nonprofit or municipal campaigns. 75% attribution used for outcomes from the MRF, sale of plastic waste, plastic board generation from MLP, and GHG emissions avoided appears to reflect the fact that these outcomes are highly dependent on external system actors, even if the project catalyzed them. Waste/MRF workers benefit through training, PPE, reduced time burden, and improved incomes, but outcomes are only partly driven by the project. Given dependencies on municipal support, system operations, market demand, and worker adoption, a 50% attribution to external factors is reasonable.
Drop Off	Drop-off is factored in as in the subsequent years, the benefit or the impact would be slightly less than the previous year. During the qualitative interactions it was found that there has been negligible migration and flats in the RWA societies were not left unoccupied hence the drop-off value is considered to be 0% for calculations.

The impact of the project has been arrived at based on the following calculations:

- **Impact Value for the first year:** Quantity of change or Number of beneficiaries or Number of benefit units x Financial Proxy (FP) value x (1- deadweight) x (1- displacement) x (1- attribution)
- **Impact value for subsequent years:** Quantity of change or Number of beneficiaries or Number of benefit units x Financial Proxy (FP) value x (1- deadweight) x (1- displacement) x (1- attribution) + [impact of previous year] x (1-drop off)]

Based on the above calculations, the cumulative benefit or impact generated by the project from the year 2022-23 till the end of the financial year 2025-26 comes out to be ₹ 37,54,71,191/-. The detailed calculations and year-wise values can be referenced in text and table below:

The SRoI value is expressed as a ratio of the return and is calculated by dividing the net present value of total Impact value (or cumulative benefit) divided by the net present value of the total investment or funds utilized for the project.

Net Present value of total impact value (or cumulative benefit) is ₹ 31,93,85,732/- whereas the net present value of **Total Utilization or Investment (till the time of survey) is ₹ 4,02,18,653/-.**

Now, to calculate the SRoI following formula has been used:

SRoI = Net Present value of benefits/ Net Present Value of Investment

Net Present Value has been calculated using the formula below:

Net Present Value of benefits = Cumulative benefits*POWER ((1+r) time) where 'r' has been taken as per national inflation rate during the programme period

SRoI	$\frac{\text{Net Present value of Benefits}}{\text{Net Present Value of Investment}}$
NPV of Benefits	₹ 31,93,85,732/-
NPV of Investment	₹ 4,02,18,653/-
SRoI Value*	7.94

*SRoI value of 7.94 indicates that an investment for every ₹ 1 invested in the project, a social value of ₹ 7.94 is generated.

SRoI Estimation – Impact Values

Stakeholder	Project Activity	Benefits	Dead weight	Displacement	Attribution (by others)	Drop-off	Total value to be created between years (Value in ₹)				Total
							2022-23	2023-24	2024-25	2025-26	
Residents / Households	Awareness sessions on waste segregation & composting through community engagement activities	Improved household waste segregation	2%	0%	50%	0%	-	₹274,400	-	-	₹274,400
		Amount saved in ustilising compost generated within the society	15%	0%	50%	0%	-	₹42,500	42,500	42,500	127,500
General Community	Awareness sessions on waste management through radio	Improved awareness	2%	0%	90%	0%	-	₹ 24,010,000	-	-	24,010,000
Waste Workers / MRF Workers	Training on waste segregation and MRF operations	No. of waste workers trained	15%	0%	50%	0%	-	₹ 37,188	-	-	37,188
	Provide precautionary items such as gloves, masks, etc.	Reduced health expenses of the waste workers (Annual)	15%	0%	50%	0%	₹33,203	₹132,813	132,813	132,813	431,641
	Time saved due streamlining of activities	Improved income of Waste Workers (Monthly)	15%	0%	50%	0%	₹478,125	₹1,912,500	₹1,912,500	₹3,825,000	₹8,128,125
	Set of 10 TPD MRF	GHG emission saved due to wet waste diverted from landfill and processed at MRF and use of aerobins	15%	0%	75%	0%	-	₹102,283,612	₹102,283,612	₹102,283,612	₹306,850,836

Stakeholder	Project Activity	Benefits	Dead weight	Displacement	Attribution (by others)	Drop-off	Total value to be created between years (Value in ₹)				Total
							2022-23	2023-24	2024-25	2025-26	
		GHG emission saved due to dry waste diverted from landfill	15%	0%	75%	0%	-	₹13,863	₹13,863	₹13,863	₹41,588
		Revenue from selling dry waste to authorised recyclers	15%	0%	75%	0%	-	₹4,653,750	₹4,653,750	₹4,653,750	₹13,961,250
	Establishment of Plastic Recycle Facility	Revenue from selling boards made out of recycled MLP waste	15%	0%	75%	0%	-	₹7,140,000	₹7,140,000	₹7,140,000	₹21,420,000
		GHG emission saved due to plastic waste diverted from landfill	15%	0%	75%	0%	-	₹ 55,450	₹55,450	₹ 55,450	₹ 166,351
Maids and Housekeeping Staff	Training on systematic disposal of waste	No. of maids and housekeeping staff trained and who follow waste segregation practices	15%	0%	50%	0%	-	₹22,313	-	-	₹22,313
Total							**₹ 511,328**	**₹ 140,578,388**	**₹ 116,234,488**	**₹ 118,146,988**	**₹ 375,471,191**

3. MASS Uttarakhand

The Social Return on Investment (SROI) Framework design helps us measure and account for value in a broad sense. The overall impact and the subsequent calculation of the return was done after preparing an impact map for the programme. Thereafter, the cumulative benefit was derived after adjusting the deadweight, displacement, attribution (by others) and drop-off factors from the year wise benefits. These factors are defined in detail as follows:

Deadweight	Dead-weight is the estimation of the benefits which would have occurred even in the absence of the programme. For the 2 benefits attributable to this project, **dead-weight has been considered to be 5%** based on the interaction with the stakeholders on-ground. For rest of the benefits, dead-weight has been considered as 0%.
Displacement	Displacement is the component which informs the assessor on how much one outcome of the project may influence any other outcome. During the assessment for this project, there was no evidence of any displacement noted or reported. Hence, the displacement factor is taken to be 0% for the calculations.
Attribution (by others)	Attribution (by others) is an estimate of what proportion of the impact may be attributed to the efforts of other stakeholders involved. During the assessment and the survey, it was found that for benefits from this project, attribution (by others) may be set between 25%.
Drop Off	Drop-off is factored in as in the subsequent years, the benefit or the impact would be slightly less than the previous year. The drop-off value is considered to be 0% for calculations.

The impact of the project has been arrived at based on the following calculations:

- **Impact Value for the first year:** Quantity of change or Number of beneficiaries or Number of benefit units x Financial Proxy (FP) value x (1- deadweight) x (1- displacement) x (1- attribution)
- **Impact value for subsequent years:** Quantity of change or Number of beneficiaries or Number of benefit units x Financial Proxy (FP) value x (1- deadweight) x (1- displacement) x (1- attribution) + [impact of previous year] x (1-drop off)]

Based on the above calculations, the cumulative benefit or impact generated by the project for the financial year 2024-25 comes out to be ₹ 5,00,15,070/-. The detailed calculations and year-wise values can be referenced in text and table below:

The SRoI value is expressed as a ratio of the return and is calculated by dividing the net present value of total Impact value (or cumulative benefit) divided by the net present value of the total investment or funds utilized for the project.

Net Present value of total impact value (or cumulative benefit) is ₹ 4,73,17,947/- whereas the net present value of **Total Utilization or Investment (till the time of survey) is ₹ 3,39,66,219/-.**

Now, to calculate the SRoI following formula has been used:

SRoI = Net Present value of benefits/ Net Present Value of Investment

Net Present Value has been calculated using the formula below:

Net Present Value of benefits = Cumulative benefits*POWER ((1+r) time) where 'r' has been taken as per national inflation rate during the programme period

SRoI	$\frac{\text{Net Present value of Benefits}}{\text{Net Present Value of Investment}}$
NPV of Benefits	₹ 4,73,17,947/-
NPV of Investment	₹ 3,39,66,219/-
SRoI Value*	1.39

*SRoI value of 1.39 indicates that an investment for every ₹ 1 invested in the project, a social value of ₹ 1.39 is generated.

SRoI Estimation – Impact Values

Stakeholder	Project Activity	Benefits	Dead weight	Displacement	Attribution (by others)	Drop-off	Total value created in the year of 2023-24	Total
School	Installation and use of durable benches	Reduced maintenance/ replacement costs	5%	0%	50%	0%	₹ 4,50,00,000	₹ 4,50,00,000
Students	Awareness sessions on waste segregation & waste management	Improved awareness	5%	0%	50%	0%	₹ 11,865	₹ 11,865
Environment	Recycling plastic into usable products	Amount of waste diverted from landfill	0%	0%	50%	0%	₹ 45,66,510	₹ 45,66,510
	Ghg emission due to not cutting of trees	Cost of carbon saved due to non-cutting of trees	0%	0%	25%	0%	₹4,36,695	₹ 4,36,695
Total							**₹ 5,00,15,070**	**₹ 5,00,15,070**

IRECS Analysis

Parameters	Assessment from study
Inclusiveness	**MASS Ghaziabad (Phase III) & MASS Patiala (Phase IV)** • The projects ensured inclusion of diverse stakeholder groups including residents, waste workers and housekeeping staff enabling broad-based participation across the waste value chain. • Awareness sessions and training programs facilitated participation across socio-economic segments, though deeper engagement with marginalized communities could be further strengthened. **MASS Uttarakhand** • The intervention benefited a **diverse and balanced student population**, with near-equal participation of girls (47%) and boys (53%), indicating gender inclusivity. • A majority of respondents were from middle school grades (Classes 7 and 8), where seating gaps are often most acute, ensuring support reached students to support on learning.
Relevance	**MASS Ghaziabad – Phase III** • The project addressed critical urban challenges related to inefficient waste management, including lack of source segregation and over-reliance on landfills. • Establishment of Material Recovery Facility (MRF) aligned with city-level sanitation priorities and emerging circular economy practices. The intervention was also well-suited to the local context, responding to both environmental and municipal infrastructure gaps. **MASS Patiala – Phase IV** • The intervention was highly relevant in addressing growing concerns around sustainable waste management practices from source at households to processing at the recycling facility. • The introduction of both the Material Recovery Facility (MRF) and the Plastic Recycling Facility (PRF) strengthened the end-to-end waste value chain, from segregation to processing and recycling. • The PRF, in particular, addressed the critical gap in handling low-value plastic waste, making the intervention contextually robust and aligned with emerging circular economy priorities. **MASS Uttarakhand**

Parameters	Assessment from study
	• The provision of benches directly addressed a **clearly articulated need** identified by the Directorate of Education, Dehradun and validated by students, who reported inadequate seating prior to the intervention. • Pre-intervention challenges such as **difficulty in writing, poor focus, and discomfort** demonstrate that the intervention was **highly aligned with ground realities**. • The solution responded to both **educational and health-related concerns**, making it contextually **appropriate for government schools** in the region.
Effectiveness	**MASS Ghaziabad – Phase III** • The intervention led to significant improvements in waste segregation practices, with a majority (88%) of households adopting source segregation. • The MRF also demonstrated high operational efficiency, processing a substantial proportion of waste through recycling and composting. As shared by the MRF-In charge, the MRF is operational at full capacity (50 TPD) at all times and aids in recovering approximately 80% of recyclable materials from the total waste collected. • Increased awareness and behavioural change among residents also highlight the effectiveness of combined infrastructure and awareness-driven approaches. This was confirmed by 70% of the respondents reporting that awareness sessions on importance of waste segregation and waste management were conducted within the project. **MASS Patiala – Phase IV** • The project achieved high effectiveness, with all **(100%)** reported being **aware of waste segregation** and approximately **96% of households practicing waste segregation** and demonstrating sustained behavioural change. Additionally, **72%** of the respondents also reported that **awareness campaigns** significantly **improved knowledge** and **participation in sustainable waste management practices**. • Efficient integration between MRF and PRF enabled systematic processing of dry waste, ensuring that plastic waste was not only collected but also recycled into usable products. Approximately **2-3 TPD** of plastic waste from the MRF is processed at the PRF for further processing and recycling into end products every month. • Functional composting cycles and recycling operations indicate strong operational outcomes across both organic and plastic waste streams. Approximately 10 TPD of plastic waste is recycled everyday at the Plastic Recycling Facility. **MASS Uttarakhand**

Parameters	Assessment from study
	• The intervention led to improvements in comfort and focus, with 96% of students finding the benches highly comfortable and 71% reporting enhanced concentration. • Students perceived improvements in classroom structure, learning experience, and attendance, indicating that the benches effectively improved the learning environment. • Reduction in physical discomfort and positive perceptions around attendance and retention highlight the intervention's success in meeting its immediate objectives.
Convergence	**MASS Ghaziabad – Phase III** • The project demonstrated strong convergence with Ghaziabad Nagar Nigam, particularly in land allocation and integration with existing waste management systems. Further, collaboration with RWAs and local communities enabled effective implementation and adoption of segregation practices. **MASS Patiala – Phase IV** • The intervention showed strong convergence with Punjab Pollution Control Board for setting up a Material Recovery Facility and Plastic Recycling facility. Additionally, convergence with residential communities was also done to introduce the practice of segregation of waste at source and support decentralized waste management practices. **MASS Uttarakhand** • The project demonstrates effective convergence between the **Education Department and government schools** through the establishment of localized bench assembly centres within school premises across multiple zones of Uttarakhand. This decentralized approach **strengthened institutional collaboration**, enabled efficient implementation, and contributed to local capacity building.
Sustainability	**MASS Ghaziabad – Phase III** • The project demonstrates strong sustainability through revenue generation from recyclable materials, supporting operational viability of the MRF. • Established infrastructure ensures long-term waste processing capacity; however, sustained behavioural change requires continuous engagement**.** **MASS Patiala – Phase IV**

Parameters	Assessment from study
	• The intervention reflects strong sustainability, supported by decentralized composting systems and an integrated recycling value chain connecting the MRF and PRF. • The PRF enhances long-term sustainability by enabling value recovery from plastic waste, reducing landfill dependency and supporting circular economy outcomes. • Community ownership and participation further contribute to continuity of the practices. **MASS Uttarakhand** • Awareness that benches were made from recycled plastic positively influenced 98% of students, fostering acceptance of sustainable materials. • Waste-management sessions led to increased awareness and positive behavioural changes, supporting long-term environmental outcomes beyond the project duration. • Overwhelming student support for using recycled materials in other school infrastructure indicates strong potential for **scaling and replication** of the model.

Alignment to the UN SDGs & SBI Card's ESG Goals

MASS Ghaziabad – Phase III: The MASS Ghaziabad Project (Phase III) is **aligned with Sustainable Development Goals:** 8- Decent Work and Economic Growth, 11 – Sustainable Cities and Communities, 12 – Responsible Consumption and Production and 13 – Climate Action. The project is also aligned with ESG focus area of "Climate Change" identified by SBI Card.

MASS Patiala - Phase IV: The MASS Patiala Project (Phase IV) is **aligned with Sustainable Development Goals**: 8- Decent Work and Economic Growth, 11 – Sustainable Cities and Communities, 12 – Responsible Consumption and Production and 13 – Climate Action. The project is also aligned with ESG focus area of "Climate Change" identified by SBI Card.

MASS Uttarakhand: The project is **aligned with Sustainable Development Goals:** 3 – Good Health and Well Being, 4 – Quality Education, 10 – Reduced inequalities, 12 – Responsible Consumption and Production, 13 - Take urgent action to combat climate change and its impacts. The project is also aligned with ESG focus areas identified by SBI Card: "Climate Change" and "Inclusion and Diversity".

The project is also **aligned with SBI Card's internal ESG goals** of "Reduce Scope 2 emissions by 50% by FY 2027 (Baseline FY 2019) and achieve carbon neutrality by 2030, Give Rs. 50 Crores contribution to environment initiatives by FY 2029, Adopt recycle plastic cards and increase its volume to 25% by FY 2030".

Project Recommendations

The study identified the following phase wise project level recommendations which has been summarised below:

- Based on the outcomes observed in Ghaziabad and Patiala, it is recommended that the MASS project be scaled through an integrated MRF-PRF model, combining Ghaziabad's high-capacity MRF approach with Patiala's end-to-end plastic waste recycling value chain. This model can **enable systematic collection, segregation, processing and recycling of plastic waste, particularly low-value plastic** that otherwise has limited market demand and often ends up in landfills. High-capacity MRFs may be established or strengthened in larger urban centres, with **direct linkages to PRFs and authorised recyclers** to ensure downstream recycling and value creation. The scale-up should be supported by partnerships with Urban Local Bodies and Pollution Control Boards, adequate segregation and composting infrastructure, waste worker training and safety measures, and monitoring systems to track waste processed, plastic recycled and landfill diversion. This approach can **help create a closed-loop, sustainable and replicable circular waste management model across cities**.
- Additionally, it was observed that the **gap between the seating surface and the front bench/desk is relatively large, making the benches less suitable for primary-level students**. Due to this design limitation, the benches are currently more appropriate for middle and higher-grade students, thereby restricting their universal usability. To address this, it is recommended that **future bench designs adopt age-appropriate dimensions based on the level of students**. Introducing such differentiated sizing would ensure that the benches can be effectively used across primary, middle and higher classes, thereby enhancing inclusiveness, comfort, posture support and optimal utilization of the infrastructure provided.

Limitations

The planned sample size for the quantitative survey with residents in MASS Ghaziabad (Phase III) and Patiala (Phase IV) was 139. However, due to the unavailability of residents, only 50 residents were covered in both locations.

Efforts to interact with the Ghaziabad Nagar Nigam Official were unsuccessful due to the official's unavailability, despite repeated attempts.

15

Project 15: Ensuring Sustainable Water Security for Rural Communities through Rainwater Harvesting

About the Project

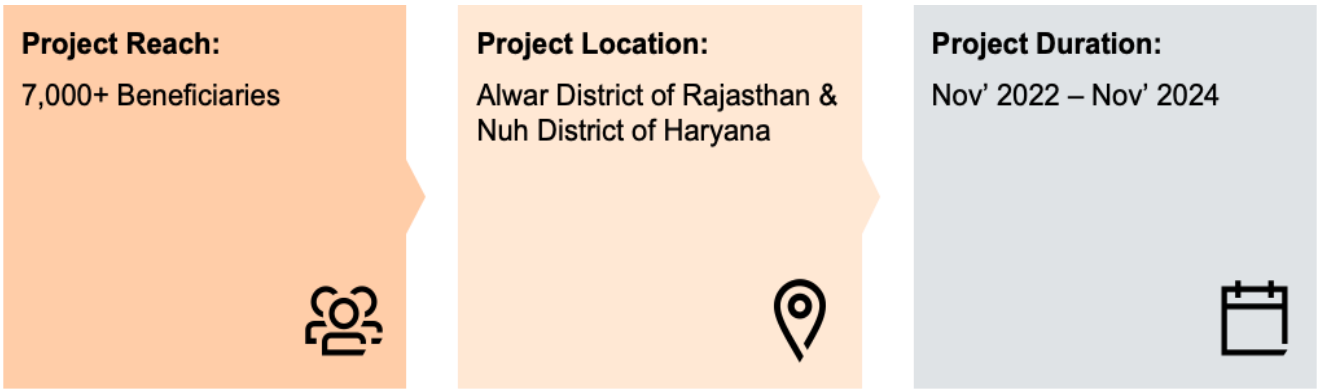
Water stress has emerged as a critical national challenge in India. The Government of India has stated that per capita water availability in the country was assessed as 1,486 cubic metres for 2021, a level below the 1,700 cubic metres threshold that defines a water-stressed condition[48]. According to the National Compilation on Dynamic Ground Water Resources of India (2025), both Haryana and Rajasthan are among the states where a significant share of groundwater assessment units have been classified as Over-exploited, Critical, or Semi-Critical, based on the ratio of annual groundwater extraction to natural replenishment in the phreatic aquifer[49].

Recognizing the critical need to conserve, restore, recharge, and reuse water resources, the Ministry of Jal Shakti launched the Jal Shakti Abhiyan in 2019 which was implemented in 1,592 water stressed blocks across 256 districts of the country to engage citizens in a nationwide effort to address water scarcity through a series of targeted interventions[50].

In this context, improving rainwater harvesting and groundwater recharge is essential for strengthening water security and protecting rural livelihoods. SBI Card, under its CSR initiative, has partnered with Tarun Bharat Sangh (TBS) to implement the project "**Ensuring Sustainable Water Security for Rural Communities through Rainwater Harvesting**" across Nuh District of Haryana and Alwar District of Rajasthan to address these challenges.

Below figure provides an overview of the project specifics[51]:

Figure 134: Project overview



The primary objectives of the project were[52]:

- To enhance the capacity of the indigenous communities in water conservation and management
- To ensure water security for drinking and irrigation with indigenous communities in the project area for sustainable development and livelihood generation.
- To implement an efficient model of water consumption in agriculture with farmers.

48 Source: https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2002726&reg=3&lang=2
49 Source: https://www.jalshakti-dowr.gov.in/static/uploads/2025/11/711d8d476bbf498cd90f8038e7371227.pdf
50 Source: https://www.pib.gov.in/PressNoteDetails.aspx?NoteId=151914&ModuleId=3&reg=3&lang=2
51 Source: MoU signed between SBICPSL and Tarun Bharat Sangh
52 Source: MoU signed between SBICPSL and Tarun Bharat Sangh

And to achieve the objectives of the project following project activities were carried out:

1. **Rainwater Harvesting Structures (RWHS)** - 27 rainwater harvesting structures were constructed under this project. These structures are simple, cost-effective traditional and are erected at places where they can assist in maximum aquifer recharge. They are built with locally available materials, manual labour and are thus easy to repair and maintain. The structures will provide additional water storage of approximately 270 million litres providing water security to communities, their livestock and wildlife in the region.

2. **Tanks for Drinking Water** - The project villages face water scarcity. So, the families have to be dependent on the water tankers from nearby places. But there are vulnerable families who can't afford to build the water tanks for storage. In this case they have to travel long distances to collect water for daily chores. 40 water tanks for poor and vulnerable families were built to increase the storage capacity of 10000 litre single filling per tank, increasing water storage capacity by 4,00,000 litres in water stressed areas.

3. **Water-use Efficiency Models through Sprinklers** - Flood irrigation techniques consume a large quantity of water, a significant part of which is either lost through evaporation and drainage. Project equipped 200 farmers with 100 sprinkler systems to reduce water consumption in agriculture and also provided technical training to them.

4. **Farmers Seminar** - Awareness camps were organized for farmers highlighting the need of rainwater harvesting and water conservation and the positive impacts it brought to their lives.

5. **Yuva Jagruti Shivir** - Youth awareness workshops to drive the village youth towards water conservation were conducted. The workshops followed a pre-designed curriculum and had activities like games, lectures, competitions, role-plays etc. Sanitation and water safety were also included in the workshop content.

6. **Training and Knowledge Enhancement** - Exposure visits were conducted for local farmers to exhibit the best practices of water conservation and efficient irrigation systems and connected them with the water and agriculture experts and researchers.

7. **Theme-based Awareness Material** - Wall Writings, Printed IEC Material & Display Material. Literature was developed in the local languages for distribution in the villages.

The project achieved comprehensive impact, reaching 7,000+ beneficiaries across all activities in the project locations, including 3,525 direct beneficiaries.

District wise activities implemented under the project[53]:

Table 18: Project Overview

S. No.	Project Activities	Alwar District, Rajasthan	Nuh District, Haryana	Total Direct Beneficiaries
1	Rainwater Harvesting Structures	18	9	1,080
2	Tanks for Drinking Water	1	39	1,101

[53] Source: As per the Annual Progress Report (2022-2024) shared by SBICPSL and Tarun Bharat Sangh

S. No.	Project Activities	Alwar District, Rajasthan	Nuh District, Haryana	Total Direct Beneficiaries
3	Water-use Efficiency Models	24	76	622
4	Farmers Seminars	2 Seminars		306
5	Yuva Jagruti Shivir	4 Shivir		302
6	Training & Knowledge Enhancement	2 Exposure Visits		114
7	Theme-based Awareness Material	200 walls paintings 2,000 calendars IEC printed material		-

Method of Impact Assessment

The impact assessment study leveraged an integrated and cohesive approach to assess the social impact transpired since project's implementation. A kick-off meeting was held with SBICPSL and the Tarun Bharat Sangh (TBS) team to understand the nature of support for this project and align the requirements for starting the assessment exercise.

Following the meeting, PWCALLP received following **project documents**:

- Memorandum of Understanding (MoU) and its addendum containing project details agreed with Tarun Bharat Sangh (TBS) and SBICPSL
- Project Annual Progress reports
- Project Quarterly reports
- Project Beneficiary details

PWCALLP team then began the project's **desk review** based on the information collected during the kick-off meeting and from the project documents. This helped our team in designing the assessment framework and **finalising the key stakeholders** for the interactions.

In consultation with SBICPSL, **a mixed-methodology approach combining quantitative and qualitative research** was deployed for the assessment. The quantitative study generated evidence-based insights, while qualitative methods captured stakeholder perspectives and experiences to validate findings and understand actual impact. Research techniques included surveys, Focus Group Discussions (FGDs), and In-depth Interviews (IDIs) to ensure comprehensive evaluation.

Based on data from TBS team, the project impacted **3,525 direct beneficiaries**[54]. Of these, 2,803 formed the universe for sample calculation, while the remainder were covered through qualitative interactions. A **sample size of 132 was calculated** at 95% confidence level, 5% margin of error, and 90% population proportion. This sample was proportionately distributed across three project activities suitable for quantitative surveys based on direct beneficiary counts. Between the two locations, Nuh and Alwar, Nuh was selected for the quantitative survey as the coverage and concentration of activities suitable for quantitative assessment were higher there compared to Alwar. Relevant stakeholders from each project component were selected for detailed qualitative engagement.

The quantitative and qualitative sampling plans are detailed in the table below:

Table 19: Quantitative Sampling Distribution

Project Activity	Direct Beneficiary Universe for Quantitative Sampling[55]	Sample Distribution
Rainwater Harvesting Structures (RWHS)	1,080	51
Tanks for Drinking Water	1,101	52
Water-use Efficiency Models	622	29
Total	**2,803**	**132**

Table 20: Qualitative Sampling Distribution

Qualitative Stakeholder	Type of Interaction	No of Interactions
Farmers	Focused Group Discussion (FGD)	1
Drinking Water Tank Beneficiaries	Focused Group Discussion (FGD)	1
Yuva Jagruti Shivir Beneficiaries	Focused Group Discussion (FGD)	1
Panchayati Raj Institution Member	In-Depth Interview (IDI)	1
TBS Project Team	In-Depth Interview (IDI)	1
SBIC Team	In-Depth Interview (IDI)	1

[54] Source: As per the Annual Progress Report (2022-2024) shared by SBICPSL and Tarun Bharat Sangh
[55] Source: As per documents shared by Tarun Bharat Sangh

Total	**6**

The responses collected from the stakeholders' interactions were analysed to arrive at detailed findings as depicted in next section.

Analysis and Findings

This section summarises the findings from the desk review and interactions:

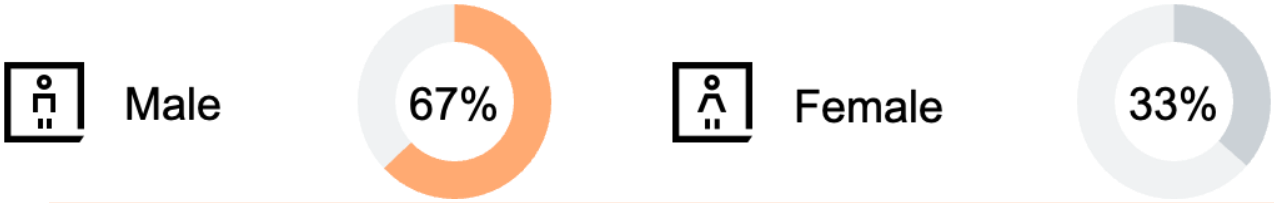
Summary of Impact Created

This section presents key findings from the impact assessment study, providing an evidence-based foundation for strategic recommendations and future project improvements.

1. **Profile of the respondents**

   This section presents the socio-demographic profile of the respondents, emerging from quantitative interactions carried out with beneficiaries (farmers) (n=132) of RWHS, Drinking Water Tank and Water Use Efficiency activities to understand the impact of project.

   Figure 135 : Gender distribution of the respondents (n=132)



The age profile reveals that respondents aged 40-44 years constitute the largest segment (38%), followed by those aged 45-49 years (21%) and 30-34 years (11%). Other age groups show: 50-54 years (10%), with equal distribution of 6% each for 25-29 years, 35-39 years, and 55-59 years, while the 18-24 years group had minimal representation (2%).

Educational attainment among respondents remains low: half (50%) have never received any formal education, while another 32% studied only up to the primary level (5th grade). Just 18% progressed to secondary education or beyond: 14% completed 10th grade, 2% completed 12th grade, and 2% are graduates. This educational profile highlights educational accessibility challenges within the target communities.

Figure 136: Age of the respondents (n=132)

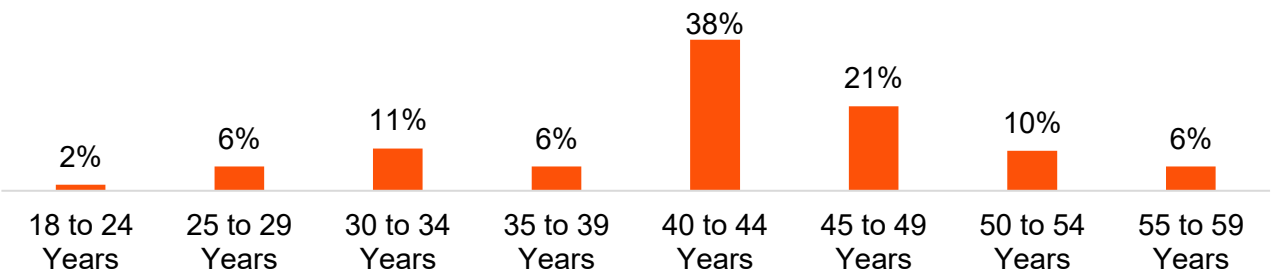
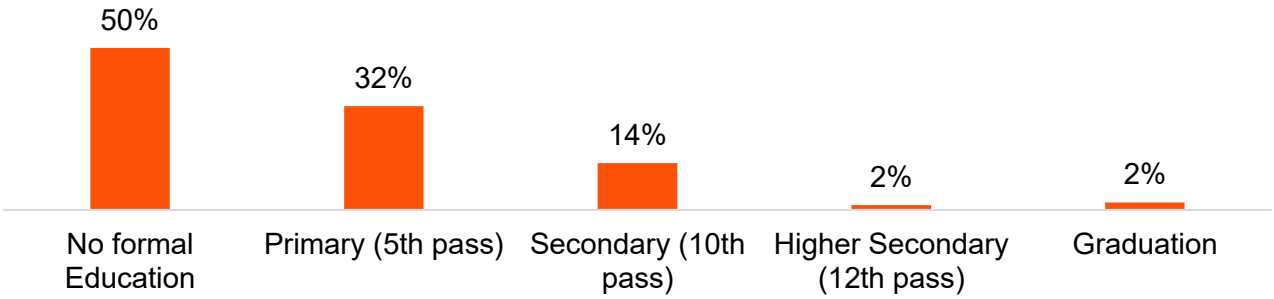
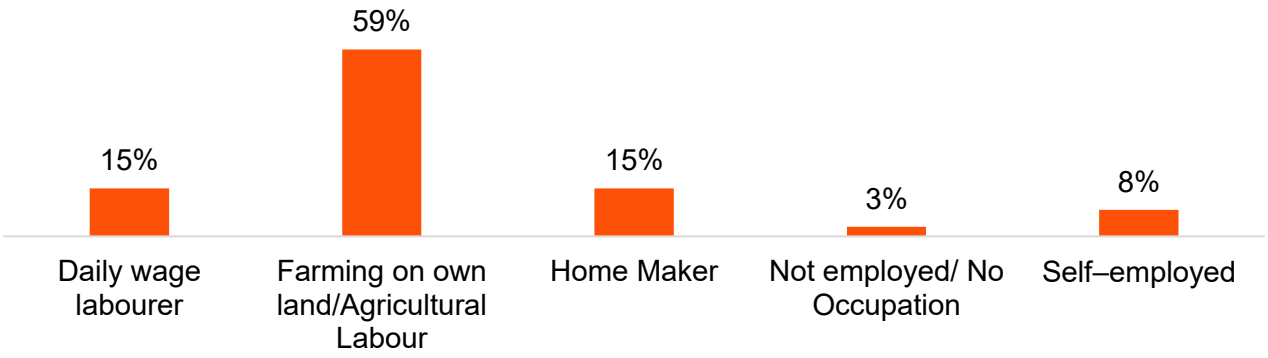


Figure 137: Education level of the respondents (n=132)



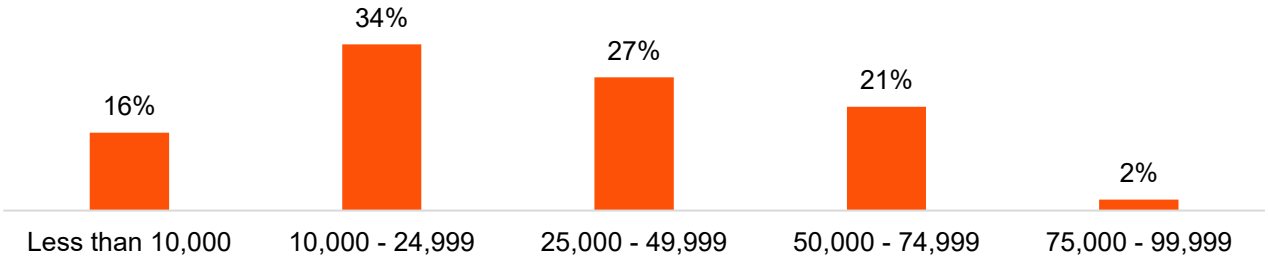
- The occupational profile reveals 59% of respondents are **engaged in farming on own land or agricultural labour**, representing the **primary occupation within the target communities**. Daily wage labourers and homemakers each constitute 15% of respondents, while 8% are self-employed. Only 3% reported as unemployed. This profile reflects a **predominantly agriculture-based rural economy with informal labour participation.**

Figure 138: Occupation of the respondents (n=132)



- The annual income analysis reveals that 50% of families subsist on less than ₹25,000 yearly and 77% earn below ₹50,000, with a further 42% reporting BPL card ownership, collectively demonstrating the economic vulnerability across the majority of respondent households.

Figure 139: Annual income of the respondents (n=132)

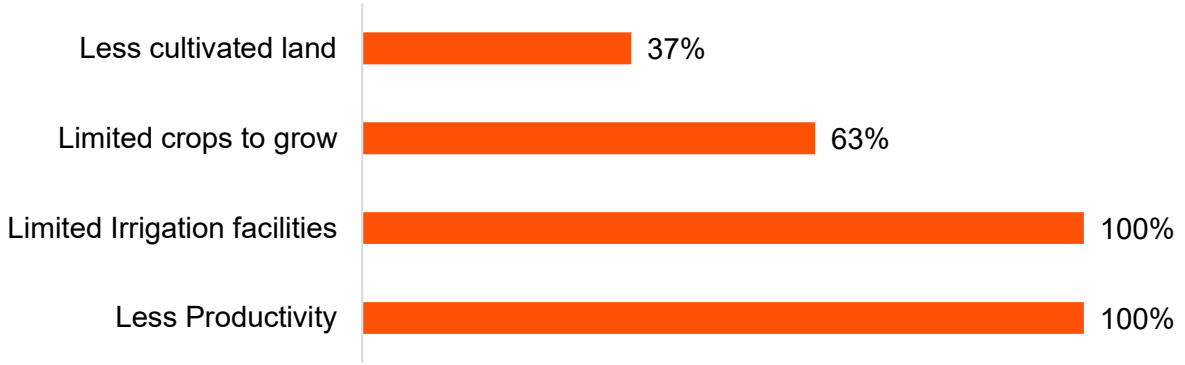


- 42% of respondents have **families of 5 members, representing the most common household size**. Additionally, **45% have larger families with 6 or more members** (22% with exactly 6 members and 23% with more than 6). This distribution indicates predominantly **larger family structures within the target communities.**

2. Groundwater Recharge and Agricultural Water Security Through Rainwater Harvesting Systems (RWHS)

- The project established 27 rainwater harvesting systems across 15 target villages of Nuh and Alwar to enhance agricultural water security and restore local ecosystems through groundwater recharge and surface water availability. These structures were created with dual purposes of supporting rural livelihoods and providing water resources for both communities and farm animals in the region. For this activity, data was collected from 51 respondents.
- Prior to RWHS implementation, 100% of beneficiaries reported **experiencing inadequate irrigation facilities and reduced agricultural productivity as primary challenges**, with additional constraints detailed in the below figure.

Figure 140: Challenges before RWHS Implementation (n=51)



Multiple choice question, and total may not add up to 100%

- Farmer interactions in Nuh indicated that most respondents are small landowners and, despite owning cultivable land, many households are unable to bring small land parcels under cultivation due to constraints in irrigation infrastructure and low groundwater availability. These challenges are compounded by the area's erratic rainfall and terrain conditions, which together restrict optimal land use and agricultural productivity.
- All respondents (n=51) demonstrated complete awareness of rainwater harvesting structures constructed by SBIC and TBS in their villages
- The implementation of RWHS has supported farmers by enabling the systematic collection of rainwater over successive seasons and contributing to groundwater recharge. Farmers reported that improvements in groundwater availability were observed across their landholdings, with those located closer to the structures experiencing noticeable changes as early as the first monsoon following implementation. These observations are corroborated by survey findings, which indicate an improvement in average groundwater depth from 560.7 feet to 528.3 feet across farmers' fields.
- Improved groundwater availability has empowered farmers to bring previously uncultivated parcels into production through enhanced irrigation capabilities

Figure 141: Change in average groundwater level in farmers field (n=51)

Pre intervention		Post intervention		% Change
560.7	Average groundwater level in farmers field (in ft) →	528.3	Average groundwater level in farmers field (in ft)	5.8%

- During interactions, farmers mentioned that they expect **the benefits of RWHS to continue increasing over time with ongoing rainfall and groundwater recharge**. They shared that sustained improvements in water availability would enable them to bring **additional marginal and previously fallow land parcels under cultivation, helping them gradually optimize the full extent of their land for farming**.
- This trend is reflected in the survey findings, which show **an increase in average land area under both cultivation and irrigation from 1.93 acres to 2.05 acres**.
- Analysis of irrigation access data indicates a **substantial improvement in the number of irrigations** farmers were able to provide to their fields after the installation of RWHS. In the Kharif season, the average number of irrigations increased from 2.09 to 3.80. This indicates that enhanced groundwater recharge **allowed farmers to provide more timely irrigations during monsoon dry spells**. In the Rabi season, where groundwater availability is more critical, the average number of irrigations increased from 3.00 to 4.76. This demonstrates that the intervention strengthened **irrigation reliability throughout the dry season**, enabling farmers to better meet the water requirements of wheat, mustard, and vegetable crops.

Image 64: Johad RWHS created at Ghatashamshabad village

Figure 142: Change in number of irrigations possible for Kharif and Rabi seasons (n=51)

Pre intervention		Post intervention		% Change
2.09	Avg no of irrigations possible during Kharif season →	3.80	Avg no of irrigations possible during Kharif season	81.8%
3.00	Avg no of irrigations possible during Rabi season →	4.76	Avg no of irrigations possible during Rabi season	58.7%

- Farmers reported that prior to the intervention, many depended on water tankers for irrigation needs. Following project implementation, farmers mentioned there has been **reduction in tanker dependency across the farming community**. Farmers shared that, before the intervention, private tankers travelled from distant locations charging ₹3,000 per load. Improved

groundwater recharge has enabled private tankers to refill from farmland borewells near the Bandhs and Johads, lowering the price to ₹1,000 per load, which represents a 67% cost reduction for buyers. Overall, 76% of respondents (n=51) **reported reduced irrigation costs**.

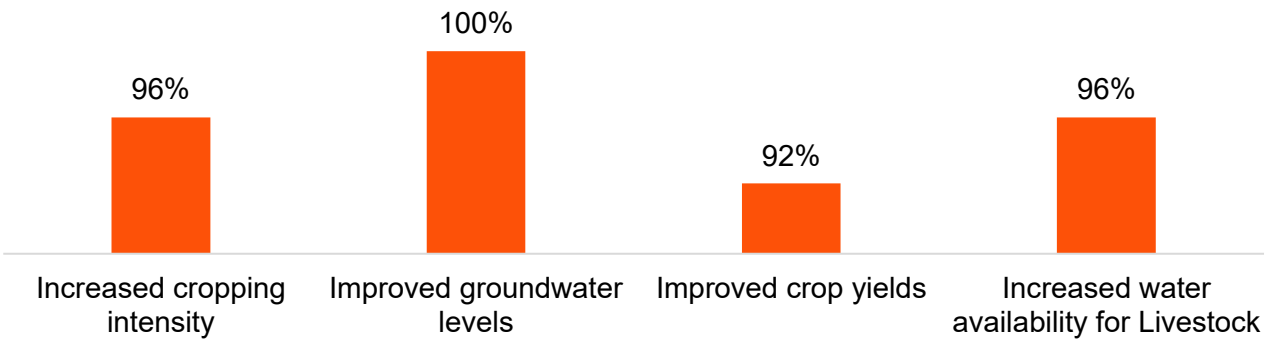
- The project **led to economic gains** as well for farming households in terms of reduced cost of irrigation and annual agriculture income. At the same time, timely irrigation improved crop performance and reduced production risks, contributing to a **~26% increase in average agricultural income, which rose from ₹32,607 to ₹41,019**.
- With improved water security, the cropping pattern data shows that the RWHS intervention **enabled farmers to diversify cultivation in both seasons.** In the Kharif season, the number of crops grown increased from 1 to 2 crops for 16% (n=51) of respondents, indicating that improved water availability during monsoon dry spells allowed some farmers to introduce an additional crop where only one was feasible earlier. In the Rabi season, 33% (n=51) of respondents expanded from 1 to 2 crops, reflecting a **stronger response due to the season's high dependence on groundwater and increased winter-season cultivation.**

Tomato cultivation had nearly disappeared in our area because of limited water availability. Earlier, only farmers with reliable water sources or the means to purchase water could grow it. Now, some farmers with land near the bandh and johad constructed under the project have started cultivating tomato again, supported by improved groundwater recharge and better water availability. With continued recharge, we believe that more farmers will be able to grow tomatoes in the coming seasons.

As narrated by Farmer during our interaction at Pathkori village, Nuh

- Overall, the RWHS intervention has delivered multi-dimensional benefits for farmers and are presented in the below graph. Together, these improvements demonstrate progress in strengthening water security, enhancing land use, and improving the resilience of farming households in the intervention areas. Furthermore, all respondents (100%, n=51) expressed satisfaction with the impact of RWHS on their lives and community.

Figure 143: Overall impact of RWHS intervention observed by the respondents (n=51)

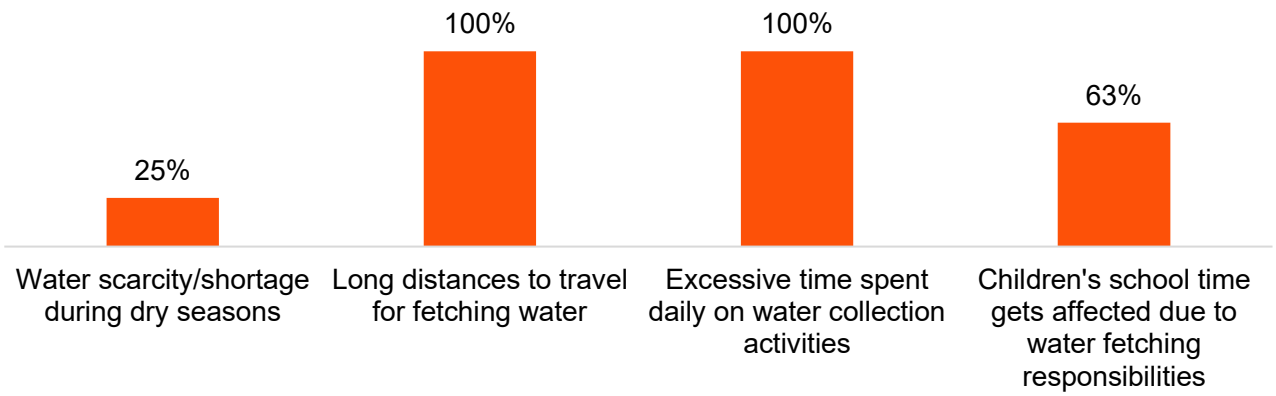


Multiple choice question, and total may not add up to 100%.

3. Drinking Water Security Through Tank Infrastructure

- The project constructed 40 water storage tanks to address drinking water scarcity in communities where families, particularly women and girls, were compelled to walk long distances or depend on expensive private water tankers. This intervention prioritised vulnerable households including widows and low-income families, requiring a beneficiary contribution to ensure community ownership and sustainability. For this activity, data was collected from 51 respondents.
- Prior to the water tank installation, all respondents (100%, n=52) **experienced two primary challenges: traveling long distances to collect water and dedicating significant portions of their day to water collection activities**. Additional challenges faced by the community are illustrated in the adjacent graph.

Figure 144: Challenges before construction of drinking water tanks (n=52)



Multiple choice question, and total may not add up to 100%

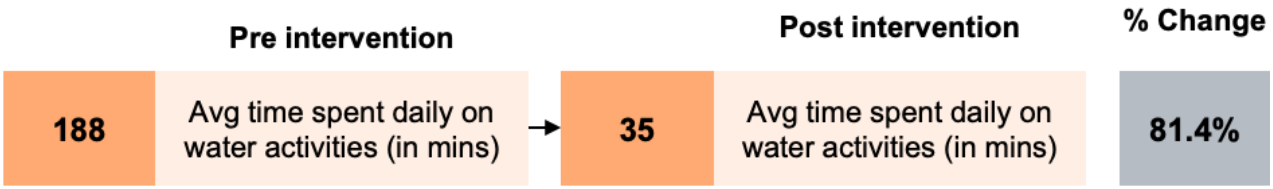
- 100% (n=52) of respondents reported receiving support from SBIC and TBS for the construction of the water storage tank and contributing to the structure in various forms, including cash, in-kind materials, labor, machinery, or equipment. Each water tank serves an average of 4–5 families, who have jointly contributed to its installation.

Image 65: Water tank with borewell connection at Basimeo village during field visit

- Respondents reported relying on multiple drinking water sources, with borewells being the most prevalent (85%, n=52), followed by private water tankers (29%), wells (6%), and rivers/ponds (4%).Field discussions revealed that household water collection responsibilities disproportionately burdened women and children, who endured extensive travel, repeated journeys, and considerable time investment for daily water procurement. Tank construction has fundamentally transformed this reality.

- Before the intervention, respondents (n=52) reported walking an average of 2.3 km and making around 6 trips per day to collect water from different sources and then store water in limited storage capacity. These trips have **now been completely eliminated**, as many households either fill the tank through their farm's borewell using pipes or purchase private tankers water to store in the tank.
- Additionally, the time spent on water collection and transport has **reduced significantly from 188 minutes daily to just 35 minutes after the intervention**. This has especially benefited girl children, who were earlier spending long hours fetching water instead of attending school or engaging in education and skill-building activities. The time saved has enabled better school attendance and learning opportunities for girls.

Figure 145: Change in average time spent daily on water activities (n=52)



- This substantial time saving has generated widespread positive impacts across household members. All respondents (100%, n=52) reported that **women household members experienced substantially increased free time and reduced drudgery.** Additionally, 100% of respondents (n=52) reported **reduced disruption to children's school time due to water collection activities**, with 63% indicating significant positive impact and 37% reporting moderate positive impact.

> Earlier, daily our time used to go in taking multiple trips for fetching water, even in hot weather, carrying multiple vessels to borewells and wells. We had dependency on electricity in summers for borewells to work, and electricity sometimes came at midnight, forcing us to fetch water at odd hours. All of these issues have been resolved now with these water tanks linked to our borewell - it has really reduced our drudgery significantly.
>
> **As narrated by a woman during our interaction at Bhond village, Nuh**

- The installation of household water storage tanks has enhanced water security and reduced wastage. Prior to the intervention, families relied on multiple small drums and vessels, which were cumbersome and limited average storage capacity to about 158 litres, often resulting in inefficiencies and shortages. Post-intervention, households now collectively have access to 17,000 litres of storage capacity, ensuring more reliable water availability, especially during dry periods. This improved storage system has reduced daily stress around water management and enabled households to share surplus water with neighbours, particularly smaller families with limited storage, strengthening community cooperation and equitable access.
- Tank maintenance practices demonstrate high community engagement and sustainable management. All respondents (100%) actively maintain their water tanks, with 71% cleaning monthly and 29% every three months.
- The maintenance burden remains manageable, as 87% (n=52) find tank cleaning very easy and only 13% require moderate effort. Financial sustainability is evident with 63% of households

managing maintenance without additional costs, while those who spend money (37%, n=19) invest less than ₹500, indicating that tank upkeep is both affordable and accessible for the community.

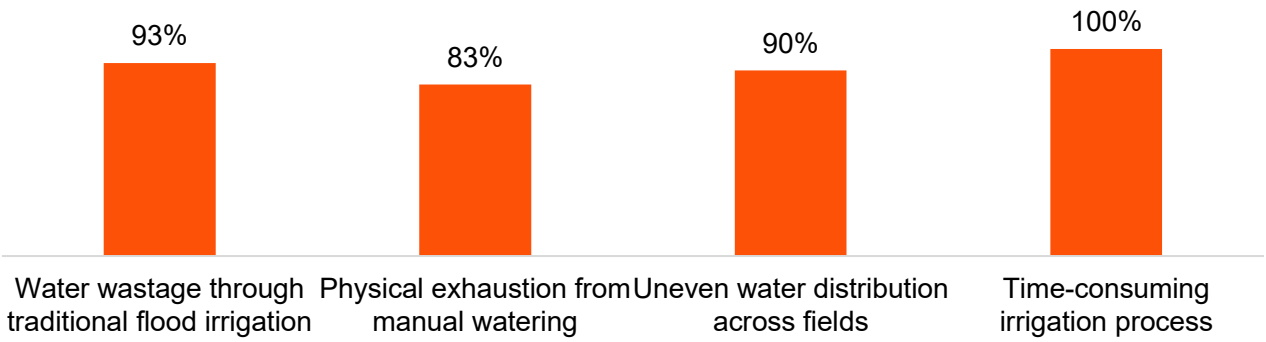
- The project's transformative impact is validated by 100% of households (n=52) reporting high positive impact on their quality of life, demonstrating the initiative's success in addressing water security challenges and enhancing community well-being.

4. Improved Agricultural Water Efficiency Through Sprinkler Systems

- To enhance water-use efficiency, the project provided sprinkler irrigation systems to 100 farmers, with each system intended to benefit an additional farmer, reaching 200 farmers and their families. Farmers contributed 25% of the cost, ensuring ownership. Community meetings and baseline assessments were conducted prior to distribution, and the sprinklers are designed to reduce water use and labour hours in irrigation. For this activity, data was collected from 29 respondents.

- Before the provision of sprinkler systems, farmers revealed in discussions that they faced irrigation-related difficulties due to the **inefficient and labour intensive nature of conventional flood irrigation**. All respondents (100%, n=29) reported that **irrigation was highly time-consuming, while 93% experienced water wastage**. Additional challenges are highlighted in the below figure.

Figure 146: Challenges before adoption of sprinklers (n=29)



Multiple choice question, and total may not add up to 100%.

- All respondents (100%, n=29) **acknowledged receiving assistance from SBIC and TBS** in adopting sprinkler irrigation methods, with **beneficiaries contributing to the procurement costs** of the sprinkler systems.

- With the adoption of sprinkler irrigation, farmers **reported improvements in irrigation efficiency and land use**. The first shift was seen in the total land area under irrigation. The average irrigated area increased **from 3.17 acres to 3.58 acres**, reflecting an **12.9% expansion**, enabled **by improved water-use efficiency and more reliable irrigation coverage through sprinkler systems**.

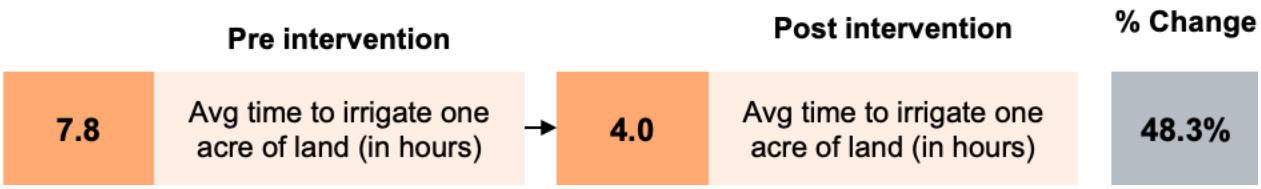
We had been using traditional irrigation for many years, and it required a lot of effort, covered land inefficiently, and cost us more. We had heard about sprinkler irrigation but did not know how

to adopt it or where to get it from. Through this project, we were able to adopt the system, and now we have more efficient water coverage while saving on effort, time, and cost.

As narrated by a farmer during our interaction at Ghata Samsabad village, Nuh

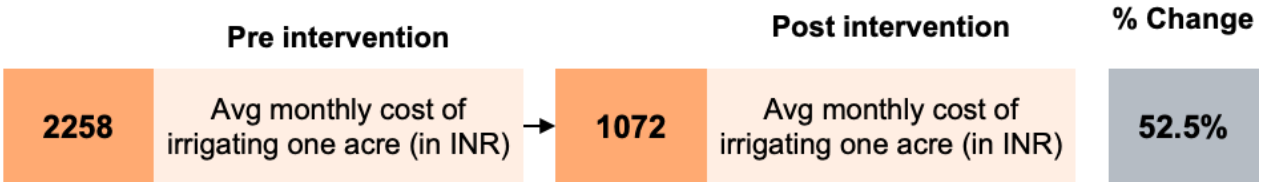
- Farmers also reported a reduction in the time required to irrigate their fields. The average time needed to irrigate one acre **decreased from 7.8 hours to 4.03 hours**. This improvement reflects the **higher application efficiency and uniform water distribution achieved through sprinkler systems, enabling farmers to complete irrigation faster and with less effort**.

Figure 147: Change in average time spent daily irrigating one acre of land (n=29)



- The adoption of sprinkler irrigation also led to **savings in recurring irrigation expenses**. The monthly cost of irrigating one acre reduced from Rs. 2,258.6 to Rs. 1,072.4. This reduction is linked to **lower water consumption, fewer pumping hours, and decreased reliance on diesel or electricity, making irrigation more affordable for farmers**.

Figure 148: Change in average monthly cost of irrigating one acre (n=29)



- During discussions, farmers also shared that the improved water-use efficiency of sprinkler systems allows them to manage their limited water more effectively. With reduced consumption and more uniform application, farmers reported that they are **occasionally able to secure an additional irrigation, particularly during the Rabi season**. This extra irrigation, when possible, provides a **useful buffer and helps them plan their irrigation schedule more comfortably and reliably**.

- The adoption of sprinkler irrigation systems has **delivered tangible improvements across all efficiency indicators - reduced water consumption, lower irrigation time, cost savings, and expanded irrigated area**. With 100% of respondents (n=29) reporting significantly improved water-use efficiency, the intervention demonstrates clear success in strengthening agricultural practices across project villages. During field interactions, farmers across villages also expressed **interest in adopting additional sprinkler sets in the future**, either through external support or through their own investment over time, indicating both satisfaction with the intervention and potential for sustained uptake.

5. Increased Awareness through Community Engagement and Sensitisation Initiatives

- In addition to infrastructure-based interventions, the project also invested in community engagement and sensitisation initiatives to strengthen awareness, trust, and long-term participation in water conservation efforts. Through the **Kisan Jagruti Shivir, Exposure Visits, and Yuva Jagruti Shivir**, community members were introduced to the **importance of groundwater recharge, rainwater harvesting, efficient irrigation practices, and collective responsibility** in building a water-secure future for the region.

- The Kisan Jagruti Shivir enhanced community awareness of the region's water crisis, including declining groundwater levels and climate stress. During field interactions, farmers expressed **improved understanding of rainwater harvesting, groundwater recharge, and efficient irrigation practices for strengthening water availability**. The sessions also built project trust and community readiness for water conservation efforts while **reinforcing the importance of water security for domestic use, livestock, and sustainable livelihoods**.

- These learnings were **further supplemented by the Exposure Visit**, which gave some community members an opportunity to witness successful water conservation efforts and river revival models in Karauli & Alwar districts of Rajasthan. Farmers in discussions shared that seeing these examples **firsthand strengthened their belief that community-led water conservation can bring visible and lasting change even at a large scale**. Many noted that, earlier, they had assumed such efforts could only create small, localised improvements, but the visit helped them **recognise the broader transformative potential of collective action**.

- The Yuva Jagruti Shivir further carried these awareness efforts to the younger generation by sensitising school students of 6th, 7th and 8th grades to water conservation, rainwater harvesting, and the role of youth in building a water-secure future for the region. Students from Government Middle School, Bhond, Nuh shared that the awareness sessions and visits to RWHS sites and the nursery improved their understanding of groundwater recharge and efficient water-use practices. Shivir also encouraged them to see water conservation as a shared responsibility and highlighted the role young people can play in promoting sustainable practices within their households and communities. Additionally, participants shared the knowledge gained during the awareness sessions with their family members, extending the impact of the initiative beyond individual households and strengthening collective understanding and adoption of improved practices.

Image 66: One of the many awareness wall paintings observed during the field visit in Nuh

- In addition to these targeted efforts, the project expanded its outreach through wall paintings across villages and the distribution of printed awareness material on carry bags, further reinforcing water conservation messages within the community. Overall, community members expressed satisfaction with the interventions and a greater willingness to contribute to future efforts, underscoring the importance of collective action for long-term water security.

IRECS Analysis

Parameters	Assessment from study
Inclusiveness	• The project demonstrates economic and social inclusion, with 77% of households earning below ₹50,000 annually, 42% holding BPL cards, and the drinking water tank component explicitly prioritising widows. This shows that support was directed toward highly vulnerable households in water-stressed rural areas. • The intervention design combined household-level, farm-level, and community-level benefits, allowing different segments to participate and benefit. Rainwater harvesting structures benefited broader village communities, tanks supported vulnerable households directly, and sprinkler systems targeted farmers willing to co-invest in efficient irrigation. • Awareness activities extended inclusion beyond immediate asset recipients by engaging farmers, youth, and local communities through shivirs, exposure visits, wall writings, and printed carry bags. This widened the project's social reach and helped build shared understanding of water conservation as a collective responsibility.
Relevance	• The project is aligned with the local development context, as both Nuh and Alwar face acute water stress, weak irrigation access, and groundwater depletion. Its focus on rainwater harvesting, drinking water storage, and irrigation efficiency directly addresses the area's most pressing water-related constraints. • The intervention responded well to livelihood realities in the project area, where most respondents depend on farming, agricultural labour, and low informal incomes. By improving irrigation reliability, reducing water collection drudgery, and lowering irrigation costs, the project addressed both economic vulnerability and everyday survival needs.
Effectiveness	• The project demonstrates clear effectiveness through measurable improvements in water access and agricultural outcomes. RWHS interventions improved average groundwater depth from 560.7 feet to 528.3 feet, increased irrigated and cultivated land, and enabled more frequent irrigation in both Kharif and Rabi seasons. • The project demonstrates strong effectiveness in enhancing the economic outcomes of farming households. It contributed to reduced irrigation costs and improved timeliness of water access, which in turn enhanced crop performance and lowered production risks. These gains translated into a measurable ~26% increase in average annual agricultural income, rising from ₹32,607 to ₹41,019, indicating a positive impact on household livelihoods.

Parameters	Assessment from study
	• The drinking water tank component was effective in reducing household drudgery. Daily water collection trips were eliminated, average time spent on water procurement fell from 188 minutes to 35 minutes, and access to storage capacity rose sharply from 158 litres per household to 17,000 litres for 4-6 families. • The sprinkler intervention delivered strong efficiency gains, with irrigation time per acre falling from 7.8 hours to 4.03 hours and monthly irrigation cost per acre dropping from Rs. 2,258.6 to Rs. 1,072.4. This shows the project effectively translated technology adoption into practical on-farm savings. • Beneficiary satisfaction was consistently high across components, with 100 percent satisfaction reported for RWHS, tanks, and sprinkler support. This strengthens the evidence that project output was not only delivered but was also experienced by communities as useful and impactful.
Convergence	• The project shows policy-level convergence by complementing national priorities around water conservation, groundwater recharge, and community participation under Jal Shakti Abhiyan - related efforts. This alignment strengthens the project's coherence and positions it as a locally grounded contribution to broader public water security goals.
Sustainability	• Groundwater recharge through RWHS has a cumulative sustainability effect, as benefits are likely to strengthen over successive monsoons with continued rainfall and recharge. Early evidence such as the revival of water-sensitive crops like tomato near the structures indicates that the intervention can generate increasing livelihood returns beyond the immediate project period. • Beneficiary contributions across both the water tank and sprinkler components, comprising cash, in-kind materials, labor, machinery, and equipment for tanks and a 25% monetary contribution for sprinklers, enhance sustainability by fostering a strong sense of ownership, financial stake, and shared responsibility for the long-term management and maintenance of the assets. • Sustainability is further strengthened by awareness-building efforts that targeted farmers, youth, and communities, helping shift attitudes from short-term asset use to longer-term water stewardship. This behavioural foundation is critical in water-stressed regions where collective action influences lasting outcomes.

Alignment to UN SDGs & SBI Card's ESG Goals

The project is aligned with the following UN Sustainable Development Goal (SDGs2 - Zero Hunger, 6 - Clean Water and Sanitation, and 13 - Climate Action.

The project is also aligned with SBI Card's internal ESG vision of "Give Rs. 50 Crores contribution to environment initiatives by FY 2029".

Project Recommendations

The study identified the following project level recommendation which has been summarised below:

- **Scaling Up the Integrated Water Security Model**: In view of the project's **demonstrated results** across groundwater recharge, household water access, irrigation efficiency, and community awareness, the **integrated intervention model presents strong potential for scale**. Expanding this approach across additional water-stressed villages would help **address continuing gaps through a combination of community assets, household-level infrastructure, and sensitisation efforts, while extending water security benefits to a larger rural population**.

Case Stories

Case Story: From Daily Water Hardship to Household Relief

Rizwana (Name changed for anonymity), from Basimeo Village in Nuh, had for years managed the daily burden of collecting water for her household. In the absence of adequate storage at home, she had to walk nearly 2 kilometres for each trip to fetch water, making about five trips a day. This routine consumed a significant portion of her time and energy and was especially exhausting during summers and other periods of acute water scarcity. Water collection was not only physically demanding but also disrupted her ability to attend to other household responsibilities with ease.

Under the project implemented by Tarun Bharat Sangh with support from SBI Card, a household water storage tank was constructed for her family. The tank now gets filled through a private water tanker, ensuring that water can be stored safely and accessed conveniently within the household premises. As a result, Rizwana no longer has to undertake repeated long-distance trips for water collection.

This intervention has significantly reduced her daily drudgery and brought visible improvement in her quality of life. Time and physical effort earlier spent on fetching water have been saved, making daily life more manageable. For Rizwana, the water tank has not only improved water access but also restored dignity, convenience, and relief in everyday living.

Case Story: Improving Irrigation Efficiency and Reducing Farm Drudgery

Aftab (Name changed for anonymity), from Bhond Village in Nuh, had long relied on conventional flood irrigation for watering his fields. This method required considerable manual effort, consumed a great deal of time, and often led to significant water wastage. Irrigation days were physically demanding, as water had to be managed across the field through repeated supervision and labour. Despite the effort involved, the distribution of water was often uneven, and a substantial amount was lost before being effectively used by the crop.

Through the project implemented by Tarun Bharat Sangh with support from SBI Card, Aftab received access to a sprinkler irrigation system. With this shift, irrigation on his farm has become significantly easier and more efficient. The sprinkler system has reduced the physical effort involved, lowered the time required to irrigate his land, and helped ensure more uniform water application. It has also enabled him to use available water more carefully, reducing unnecessary wastage and improving overall irrigation management.

For Aftab, the intervention has brought practical and immediate relief in day-to-day farming. Tasks that were once laborious and time-intensive are now more manageable. Encouraged by these benefits, he has expressed interest in purchasing additional sprinkler sets in the future, either gradually on his own or with support, so that he can further improve irrigation efficiency across his land.