

INDEX OF IMPACT ASSESSMENT REPORTS

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Impact Assessment of ICU Infrastructure Support Activity Rural Hospital, Khandala (Maharashtra)

Final Report

29th September 2023

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Impact Assessment of ICU Infrastructure Support Activity Rural Hospital, Khandala (Maharashtra)

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Abbreviations

ANM	Auxiliary Nurse and Midwife
APL	Asian Paints Ltd.
ASHA	Accredited Social Health Activist
BP	Blood Pressure
BPL	Below Poverty Line
CAP	Computer aided Personal Interview
CBOs	Community-Based Organisation
CHC	Community Health Centre
CSR	Corporate Social Responsibility
ECG	Electrocardiogram
ESG	Environment, Social and Governance
FGD	Focused Group Discussion
GNM	General Nursing and Midwifery
ICU	Intensive Care Unit
IDI	In-depth Interview
IPD	Inpatient Department
MMPL	Mott MacDonald Pvt. Ltd.
MS	Medical Superintendent
NGO	Non-Governmental Organization
OBC	Other Backward Class
OEM	Original Equipment Manufacturer
OPD	Outpatient Department
PHC	Primary Health Centre
PRI	Panchayati Raj Institutions
RFP	Request for Proposal
RH	Rural Hospital
REEIS	Relevance, Effectiveness, Efficiency, Impact, Sustainability
SC	Scheduled Caste
SDG	Sustainable Development Goals
SROI	Social Return on Investment
ST	Scheduled Tribe
SVC	Social Value Created
TB	Tuberculosis

1 Executive summary

1.1 Introduction

Asian Paints Ltd (APL) is one of India's leading paints manufacturing company. The CSR approach of APL focuses on the development of communities around the vicinity of their plants, they have also developed innovative programmes that leverage their capabilities as a paint manufacturer and home improvement service provider to enhance livelihoods of underserved communities through vocational training and skills development. Furthermore, to continue with CSR interventions around the Khandala plant, in Satara district, Maharashtra, APL under its CSR funding for FY 21-22 had supported establishment of ICU facilities at the Khandala Rural Hospital (RH) situated on Pune-Bangalore highway to cater to emergency based critical health care effectively & efficiently for the local community and travellers along the Highway. The impact assessment of the intervention was carried out by following REEIS Framework namely Relevance (R), Effectiveness (E), Efficiency (E), Impact (I) and Sustainability (S).

Figure 1.1: ICU at Rural Hospital



Source: MMPL Survey

1.2 Relevance

Located at the Pune-Bangalore highway, the Rural hospital Khandala serves as the first resort for accident cases. In the project group, 17% of individuals visit rural hospitals very often, 27% visit often, and the majority, 56%, visit sometimes. There are no individuals who never visit rural hospitals in the project group. In the project group, the majority of individuals, 44%, visit rural hospitals for regular check-ups, followed by 20% who go for X-rays, 13% for serious health issues, and another 13% for pregnancies. The data shows that Private Hospitals were the most preferred option in both groups, with 36% of respondents in the Project group and 44% in the Control group favouring this type of facility. The qualitative data state that further treatment often necessitates visits to private hospitals due to a lack of doctors. An overwhelming 96% of respondents expressed awareness of the facilities at the Rural Hospital. According to IDI conducted with community members, they are aware of Asian Paints Ltd.'s role in establishing the ICU facilities. On an average 10 to 12 patients use the ICU beds in a month with an average bed-days being 2-3 days as stated by the Medical Superintendent (MS).

1.3 Effectiveness

With the construction with the new ICU with equipment like X-ray, ECG, ventilators, Bi-pap, machine, CS system, it has increased the access of the people and also enabled the Rural hospital to provide treatment during critical care. The construction of the ICU facility has led to an increase in the number of patients as concluded in the qualitative analysis. With the construction with the new ICU with equipment like X-ray, ECG, ventilators, Bi-pap, machine, CS system, it has increased the access of the people and also enabled the Rural hospital to provide treatment during critical care. 37% of project group were aware about Asian Paints CSR intervention of the construction of the ICU Unit. In the Project group, 91% of respondents believed that the availability of the ICU facility helped in reducing the cost of critical care treatment. In the Project group, 91% of respondents believed that the ICU facility helped in cost reduction, while 95% agreed that the X-ray facility has reduced the cost to get X-rays at private clinics. A significantly large number of project group who had availed the ICU or X-ray facility agreed that the construction of the new infrastructure has been able to reduce time to receive treatment for critical care.

1.4 Efficiency

Notably, respondents held diverse views, with varying percentages believing in the hospital's readiness for critical cases (23% Yes, 9% No) and emergency cases (36% Yes, 6% No). A significant proportion remained uncertain in both instances (68% and 58% respectively). The uncertainty on the readiness of the Rural hospital was due to lack of doctors and technical staff to operate the ICU facility. Similarly, opinions on ICU infrastructure's impact were mixed, with 21% believing it helped in post-treatment and 21% uncertain, while 55% believed it provided critical care. The GNMs expressed the satisfaction of the new ICU and X-ray facility that has enabled the Rural hospital to cater to the treatment which was not possible earlier. With the increased awareness among the people about the new ICU facility at the Rural hospital, it has increased the access to the Rural hospital. All the community leaders also agreed that the intervention has enabled the Rural hospital to be ready for future critical cases but would require dedicated qualified and trained staff. During the FGDs, it was found that even though the construction of the ICU has led the Rural hospital to have very advanced equipment but due to lack of trained technical staff/doctors it is not fully functional, and the respondents mentioned that only the X-ray facility has been very beneficial for them as this has resulted in reduced cost to get X-rays done at private clinics.

1.5 Impact

A significant majority expressed satisfaction (84%) and believed in its necessity (90%). Respondents also attributed recovery support (82%), readiness for critical cases (86%), and improved medical facilities (84%) to the ICU infrastructure. However, uncertainty was notable in perceiving the ICU's impact on reducing visits to District hospital (67%). Before the intervention, the most common reasons were "Regular Check-up" (44%) and "Serious health Issues" (12%). Following the intervention, these reasons remained relatively stable at 43% and 12%, respectively. Notably, there was a significant increase in cases involving **"Accidents," rising from 10% before the intervention to 18%** after the intervention. Moreover, among the project group there has been a significant 55% and 78% of the beneficiaries have stated that there was no cost incurred while admitted at the Rural hospital or using the ICU facility respectively. The treatment facility and ICU facility were well-received by project groups, with slight favour towards the Project group. Similarly, the X-ray facility received overwhelmingly positive ratings in the Project group. The majority of respondents in the Project group rated the X-ray and ICU facilities as "Excellent" or "Good." The MS agreed that the quality of treatment has improved after the intervention and with the modern equipment, the Rural Hospital is ready to give proper medical facilities during the Golden Hour of treatment post-accident or emergency and it has reduced the mortality by 10%.

1.6 Sustainability

Among the project group there has been a shift from 8% to 55% beneficiaries who have agreed that no cost was incurred meanwhile, 72% project group who had mentioned the cost of treatment to be between Rs. 2000/- to 5000/- before the construction of the ICU was reduced to only 5% who stated the cost was the same after construction of the ICU infrastructure. This shows the massive cost reduction to avail the treatment due to the construction of the new infrastructure and better facilities. Overall, the data and inferences suggest that the ICU facility's intervention at the Rural Hospital likely played a role in reducing medical treatment costs. The intervention has also led in the reduction of referral cases by 5% to 10% due to the facilities available the ICU as stated by the Medical Superintendent. The same was also indicated in the IDI conducted with the health workers.

1.7 Maintenance of the ICU Facility

The ICU is equipped with X-ray machine, Bi-pap machine, ventilators, suction machine, ECG machine with other modern equipment. This ICU has 8 beds and all of them are functional which has been used by 70-80 patients so far. The major functional challenges in operating the ICU as there are no dedicated or qualified/trained staff to operate the highly advanced equipment which has not let the ICU to be optimally utilized. Currently, the ICU is being handled by the existing staff who lack the knowledge to operate the

equipment optimally and also lack the technical knowhow about the equipment which has lead to the underutilization of the advance facility.

1.8 Recommendations

The major functional challenges in operating the ICU as there are no dedicated or qualified/trained staff to operate the highly advanced equipment which has not let the ICU to be optimally utilized. Capacity building activities and trainings can be incorporated for existing staff. Doctors should be dedicated for the ICU facility for its functionality. While X-ray services are utilized, further treatment requires private hospital visits due to doctor shortages. Collaboration with regional/local/sub-local Community Based Organisations (CBOs) and NGOs for better community outreach. Implement better monitoring of enrolled beneficiaries through these organizations on a regular basis (fortnightly or monthly) with support from third-party monitoring agencies. Focus should also be on educating and engaging community health workers (ANMs/ASHA workers/Anganwadi Workers) to drive increased patient engagement and participation. Though the construction of the ICU facility has enabled the Rural to have very advance equipment with better treatment facility, there is a need to have dedicated doctors and trained staff to operate the ICU facilities for the Rural hospital to handle critical cases.





Introduction

2 Introduction

2.1 Introduction

Asian Paints Ltd (APL) has evolved into a prominent corporate entity, solidifying its position as India's foremost paint enterprise. APL's Corporate Social Responsibility (CSR) strategy centres on uplifting communities residing in the vicinity of their facilities. This commitment is exemplified through innovative initiatives that harness the company's expertise as a paint manufacturer and home improvement service provider. and are geared towards

empowering underserved communities. Furthermore, to continue with CSR interventions around the Khandala plant, in Satara district, Maharashtra, APL under its CSR funding for FY 21-22 had supported establishment of ICU facilities at the Khandala Rural Hospital (RH) situated on Pune-Bangalore highway to cater to emergency based critical health care

Figure 2.1: Asian Paints CSR Intervention Areas



Source: <https://www.asianpaints.com/about-us.html>

effectively & efficiently for the local community and travellers along the Highway. Now, APL plans to undertake the Impact Assessment of ICU Infrastructure Support Activity Rural Hospital, Khandala (Maharashtra) which has been undertaken by Mott MacDonald and the same is being outlined in subsequent sections.

2.2 CSR Intervention of APL

Asian paints under its CSR initiatives extended fund support to Rural Hospital Khandala in 21-22 for construction of ICU block and procurement of essential medical equipment's to ensure readiness of ICU unit for community service at RH Khandala. ICU facility at Khandala RH is extremely critical as there is no other government hospital in the area which has availability and functionality of critical health support facilities including ICU. Additionally, Khandala RH is situated on Pune-Bangalore highway, therefore, admission of accidental cases in the hospital is significantly high. On an average 80 to 90 accidental cases are dealt by the RH in a month, out of which 40-50 cases require intensive care facility. But since the ICU unit was running with insufficient/dysfunctional infrastructure, the local community and patients had to travel to district hospital or private hospitals in the area to avail ICU support. With APL CSR funding, RH provided with ICU block construction, ICU beds, ventilators, X-ray machine, ECG machine and other accessories etc. This activity ensured the availability and functionality of the ICU at RH which is serving community through providing critical health support during medical emergencies. The objective of this initiative was to provide infrastructural support to rural hospital, Khandala so that it caters to emergency based critical health care effectively & efficiently for the local community and travellers along the Highway.

2.3 Study Geography

Situated in the western part of Maharashtra, Satara district shares its boundaries with Pune district to the north, Solapur district to the east, Sangli district to the south, and Ratnagiri district to the west. Raigad district lies to the northwest. Covering an area of 10,480 square kilometers, Satara district accounts for approximately 3.4 percent of the entire state's geographical expanse. The region lies within the river basins of Bhima and Krishna. Prominent towns within Satara District include Panchgani, Mahabaleshwar, Karad, Wai, Koregaon, and Koyananagar.

According to the Census of 2011, Satara district had a total population of 30.04 lakh individuals, with a population density of 287 per square kilometre. Of this population, 24.34 lakh residents were situated in rural areas, while 5.70 lakh resided in urban centres, reflecting that 81 percent of the district's inhabitants live in rural settings. The gender ratio stands at 986 females for every thousand males. Notably, 8.76 percent of the population belongs to Scheduled Castes (SC), while 0.78 percent identifies as Scheduled Tribes (ST). The district boasts a commendable literacy rate of 92.09 percent, with 82.73 percent in rural regions and 90.43 percent in urban localities.

Specifically, Khandala is one of the 11 Tehsils within the district, housing a population of 137,418 individuals. This count comprises 70,565 males and 66,853 females. Among these, 12,975 individuals are from Scheduled Castes, and 2,073 belong to Scheduled Tribes.

Map 2.1: Demographic details of Satara district



Source: <https://www.satara.gov.in/en/>

2.4 Need of the study

Situated strategically along the Pune-Bangalore highway, Khandala Rural Hospital (RH) experiences a substantial influx of accident cases, averaging 80 to 90 per month, with around 40-50 requiring intensive care. However, the pre-existing ICU unit faced challenges of inadequate infrastructure, compelling patients and the local community to seek ICU support at district hospitals or private facilities. Addressing this critical need, Asian Paints Ltd.'s CSR funding played a transformative role by funding the construction of an ICU block and procuring essential medical equipment such as ICU beds, ventilators, X-ray, and ECG machines. Implemented in the 2021-22 period, this initiative empowered the Khandala RH's ICU unit to provide comprehensive healthcare services to the community. The ICU's significance is heightened by its unique position as the sole government hospital in the area capable of delivering critical health support, filling a crucial healthcare gap. Through this CSR intervention, the ICU's availability and functionality were ensured, enabling prompt and vital health assistance during medical emergencies for the community.

2.5 Objectives of the study

The study's scope is to conduct an impact assessment of the ICU facility at the Rural Hospital in Khandala is stated below:

Figure 2.2: Objectives of study



Source: MMPL

2.6 Present Scenario

Khandala block has the total population of 137,418 according to Censes 2011. This block has one Rural hospital covers more than 20 to 25 villages and has all the facilities to handle mild critical cases. Considering the need of ICU unit due to the large number of accident cases, an ICU unit was set up at the hospital through the CSR initiatives of APL. The proposed sample of the of the study was to cover 200 beneficiaries of the ICU/X-ray facility and 100 control sample who had availed the services of the Rrual hospital but had not used ICU/X-ray facility. However, keeping in mind the non-responses and unavailability of the respondents, the total sample covered for the study were 209 beneficiaries of the oxygen plant (project group) and 123 respondents of the control group from the nearby villages of the Rural hospital. The ICU is equipped with 8 oxygen beds along with the most advance medical equipment along with the X-ray machine to handle critical cases.

Figure 2.3: ICU Facility



Source: MMPL Survey

2.7 Alignment with Schedule VII of the Companies Act, 2013

Corporate Social Responsibility (CSR) Policy elaborates the activities to be undertaken by the Company as named in Schedule VII to the Companies Act 2013 and spend. The activities should not be the same which are done by the company in its normal course of business but aligned to Schedule VII which has been laid down by Ministry of Corporate Affairs, Government of India. The CSR activities under this schedule has been defined in 11 categories and the company has to ensure that the activities included in its CSR Policy fall within the purview of these activities. Under the CSR of APL, the ICU facility was set up at the Rural Hospital, Khandala which is a located at the Pune-Bangalore highway covering more than 20 villages. This intervention is also aligned with Schedule VII of the Companies Act, 2013.

Table 2.1: Alignment of the Intervention with Schedule VII of the Companies Act, 2013


No. of Activity according to Schedule VII	Activity	Alignment of the Intervention
(i)	Eradicating hunger, poverty and malnutrition; promoting health care including preventive health care and sanitation including contribution to the 'Swachh Bharat Kosh' set-up by the Central Government for the promotion of sanitation and making available safe drinking water	Completely Aligned


2.8 SDG Alignment of the Proposed Intervention

2.8.1 Sustainable Development Goals

In accordance with the thematic areas, as considered for the impact assessment study, have been mapped with the 17 SDGs to show the similarity between the Intervention and the nationally adopted SDGs in the table 2.2. The intervention is also aligned with the 'Social' principle of ESG.

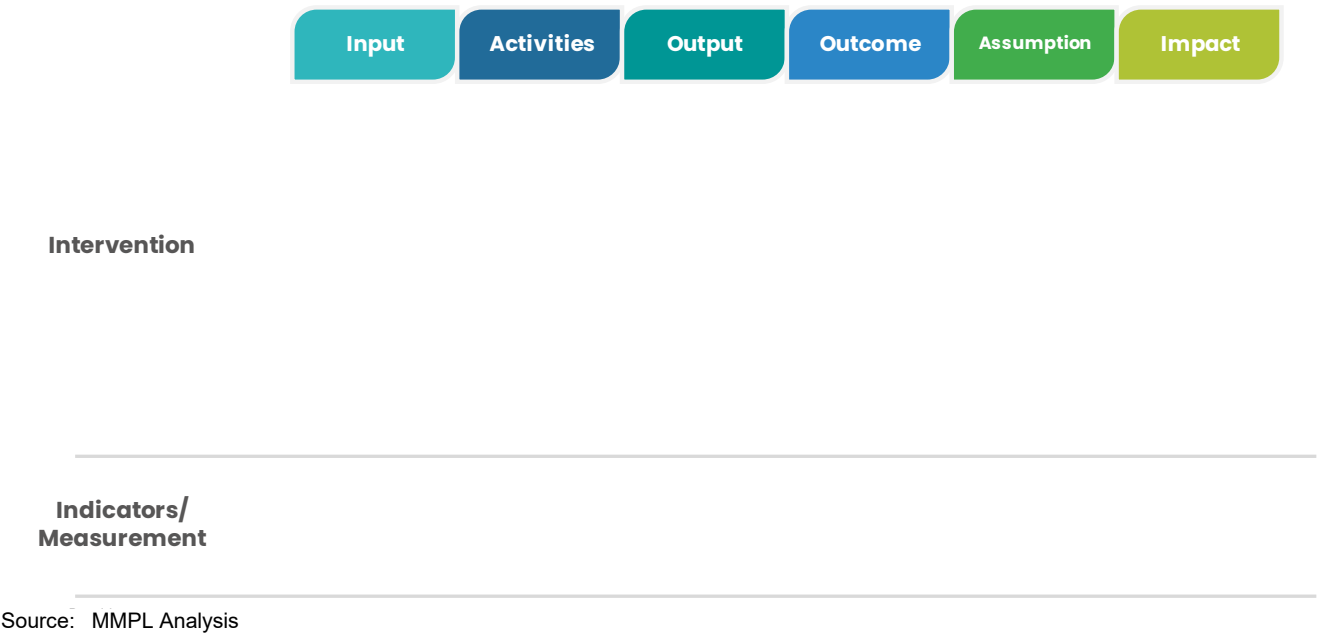
Table 2.2: Alignment of the Intervention with Sustainable Development Goals (SDGs)

SDG Goals	Indicators	Sub-indicators	Alignment with the Intervention
 Goal 1. End poverty in all its forms everywhere	1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable	1.3.1 Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable	Partially Aligned
	1.a Ensure significant mobilization of resources from a variety of sources,	1.a.1 Total official development assistance grants from all donors that focus on poverty reduction as a share of	Partially Aligned

	including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions	the recipient country's gross national income	
 <p>Goal 3. Ensure healthy lives and promote well-being for all at all ages</p>	3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	3.1.1 Maternal mortality ratio	Partially Aligned
	3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	3.2.1 Under-5 mortality rate	Partially Aligned
		3.2.2 Neonatal mortality rate	Partially Aligned
	3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents	3.6.1 Death rate due to road traffic injuries	Completely Aligned
	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	3.8.1 Coverage of essential health services	Completely Aligned
		3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income	Completely Aligned

2.9 Theory of Change

Figure 2.4: Theory of Change





Approach and Methodology

3 Approach and Methodology

In accordance with the scope of work's demands, our study had been executed through the integration of qualitative and quantitative data collection methods. In order to effectively realize the study's specific objectives while optimizing resources and our approach, a comprehensive comprehension of the intervention's reach across different levels, and the involvement of implementation partners was imperative.

Outlined below are the key components of the approach we adopted for conducting this study:

- Gathering secondary data pertaining to the program, the implementation process, other intervention in the area
- Grasping the program's objectives and its envisioned outcomes through discussions with the client's team
- Formulating a comprehensive sampling strategy in consultation with the APL team to ensure a holistic examination of each sub-component of the scheme.
- Conducting a kick-off meeting to finalize evaluation components, such as data collection tools/questionnaires, indicators, and an overall work plan, thereby ensuring the study's completion within the stipulated timeframe.
- Gathering qualitative and quantitative data through personal interviews/consultations with diverse stakeholders and beneficiaries, employing suitable research techniques, along with physically verifying records to ensure data quality.
- Aggregating and analyzing the collected data to evaluate impacts on predetermined indicators.
- Delivering draft reports aligned with the study's objectives, including suggested strategies for enhancements and a forward-looking approach to program impact.
- Engaging in discussions with the APL team to present recommendations and suggestions for future directions.
- Compiling the final report, incorporating the observations and suggestions provided by the APL team.

Through this comprehensive approach, we aimed to provide a thorough and well-informed evaluation of the intervention's impact and effectiveness.

3.1 Methodology

The impact assessment framework, as mentioned in the figure below, measured the outcomes of the project interventions by establishing causality which was important and necessary for impact assessment. To do so, a control group were considered from non-project intervention areas matching the project group in terms of its socio-economic aspects and the physical characteristics of its site. The impact assessment assessed three aspects progress, processes, and impact of the project. These aspects were measured through quantitative and qualitative assessment tools.

3.1.1 Parameters and thematic indicator for evaluation

3.1.1.1 Impact assessment indicator framework

The impact of the project intervention was assessed through the outlined parameters in the table below.

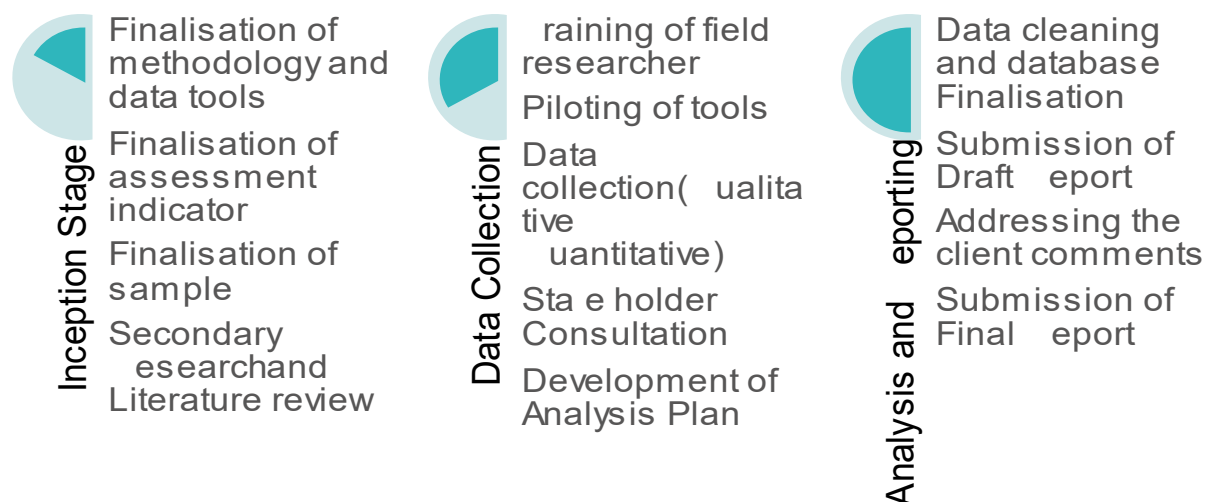
Figure 3.1: List of parameters for assessment



3.1.1 Stages of the assessment study

The study was conducted primarily in three stages as mentioned below:

Chart 3.1: Stages of the study



Source: MM Analysis

3.1.2 Sampling Methodology

Quasi experiment study design had been used for the impact study. For the study, sample from the villages of rural Khandala covered by the RH had been surveyed as primary sampling units. We used probability sampling technique to select the primary survey beneficiaries. Considering the direct beneficiaries who had availed the RH services to be 2500, with the confidence interval of 95% with 7% margin of error, a total sample of 182 respondents was proposed for the quantitative survey for beneficiaries which was rounded off to 200. 2:1 ratio was proposed to cover control group respondents covering 100 respondents who had not availed the services of the new ICU for the study which helped us to understand the level of awareness about the improved infrastructure and medical facilities at the RH along with their willingness to avail the services. Although, 209 of the target sample (project group) and 123 Control Sample (Control Group) were covered for the study.

Table 3.1: Sampling frame

Research Method	Respondent Category	Tools	Target Sample	Control Sample	Total Sample
Quantitative	Beneficiaries	Structured Questionnaire	209	123	332
	Total		209	123	332
Qualitative	Medical Officer	Semi Structured Questionnaire (IDI/KII)	1		1
	Health Workers		2		2
	ANM		1		2
	Community Leaders		2		2
	PRI Members		1		1
	Project Manager		1		1
	Implementing NGO		1		1
	Elder/Male & Female/marginalised	FGD	5		5
	Total		15		15
	Grand Total		224	123	347

3.1.3 Primary data collection

Primary data was collected from each of the categories of the respondents where structured questionnaires were used for quantitative data collection. Computer aided Personal Interview (CAPI) based interviews were conducted from beneficiaries through questionnaires, whereas for other stakeholders such as Government officials, community leaders, implementing partners and project team In Depth Interviews (IDIs) were conducted. These tools were designed based on study parameters as mentioned in Table 3.2.

The below mentioned table illustrates the type of tools used for the study for each of the respondent:

Table 3.2: Research tools for data collection

Research Methods	Respondent Type	Tools
Quantitative	Beneficiaries	Structured Questionnaire
	Medical Officer	In-Depth Interview
	Health Workers	In-Depth Interview
	ANM	In-Depth Interview
Qualitative	Community Leaders	In-Depth Interview
	PRI Members	In-Depth Interview
	Project Manager	In-Depth Interview
	Implementing NGO	In-Depth Interview
	Elder/Male & Female/marginalised	Focused Group Discussion

3.1.4 Limitations of the study

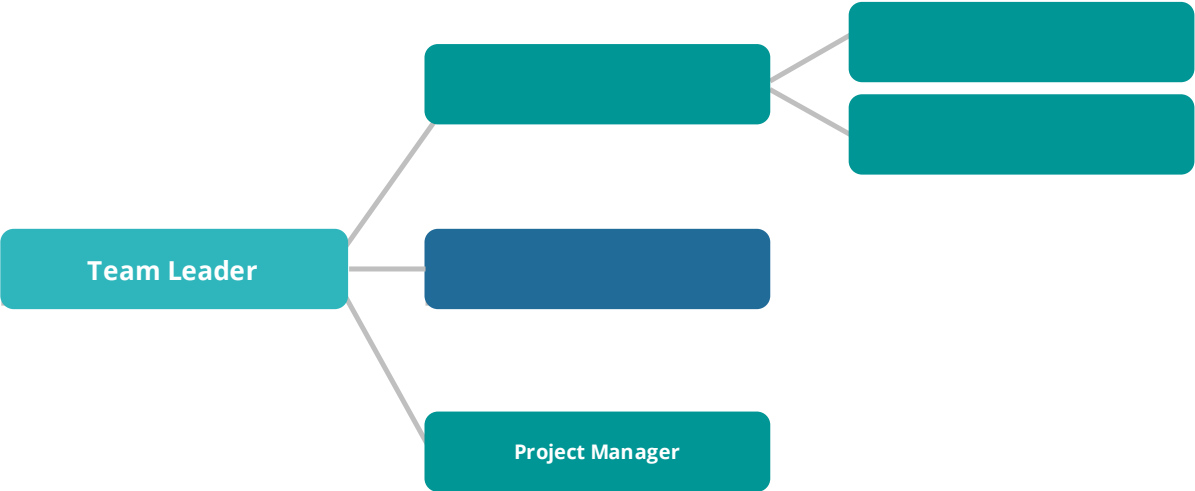
While we had completed the study using a combination of literature review as well as primary interactions seeking direct information from key stakeholders, the study had some limitations with respect to interactions and data/information. Listed below are few of the limitations of the current study:

- Primary data collection largely depended on accessibility and availability of the key respondents from the selected stakeholder's organizations and the field team had made multiple attempts to reach out the respondents
- Due to lack of baseline data, recall based method has been deployed for data to be collected and analysed
- Owing to the study duration and availability of personnel, it was pre-agreed with APL that personal interviews would be conducted with a prioritised set of stakeholders with a purposively chosen sample and as approved by APL.

3.2 Project Management Team

The project was primarily managed by three members of the core team which include the Team Leader, Project Manager and the Database and Research Analyst. The Field team included Field Coordinator and support staff which included Field Supervisor and field enumerators. Project Manager was responsible for the overall management of the evaluation and Team leader was responsible for finalization of the framework of the assessment, designing indicators and format for assessment, developing tools and reports of the assessment. The Field Coordinator visited the field visit to conduct the IDI/FGD along with qualitative survey. The team structure is represented Figure 3.2:

Figure 3.2: Team Structure



Source: MMPL



Impact Assessment Findings

4 Impact Assessment Findings

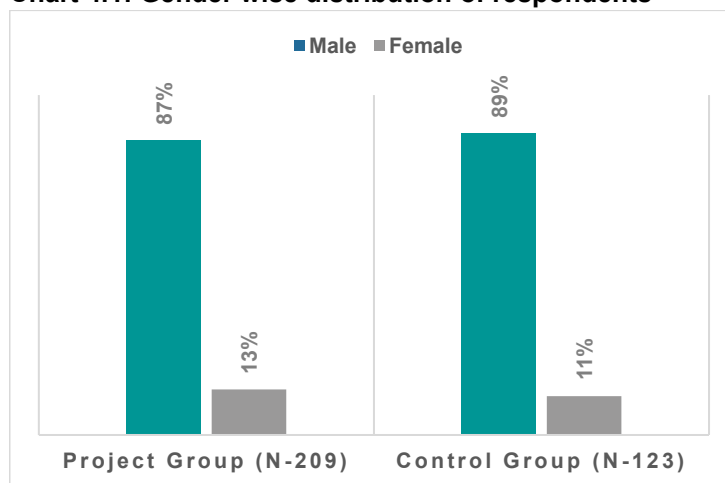
4.1 Demographic Profile of Respondents

A total of 209 respondents of the project group (who had availed the services of the ICU or the X-Ray facility at the Rural Hospital) and 123 respondents of the control group (who had not availed the services of the ICU or the X-Ray facility at the Rural Hospital) were covered for the study. The demographic profile of respondents includes information on the distribution of surveyed individuals based on various variables. These variables include their gender, marital status, social category, age group they are falling in, type of family they are residing with, category of household, type of houses and their source of income.

4.1.1 Gender wise distribution of respondents

The gender distribution of the respondents indicates that male beneficiaries constitute the majority in both the Project and Control groups. In the Project group, 87% of respondents were male, while the Control group shows an even higher percentage of male respondents at 89%. On the other hand, female respondents represent a smaller proportion in both groups, with 13% in the Project group and 11% in the Control" group.

Chart 4.1: Gender wise distribution of respondents

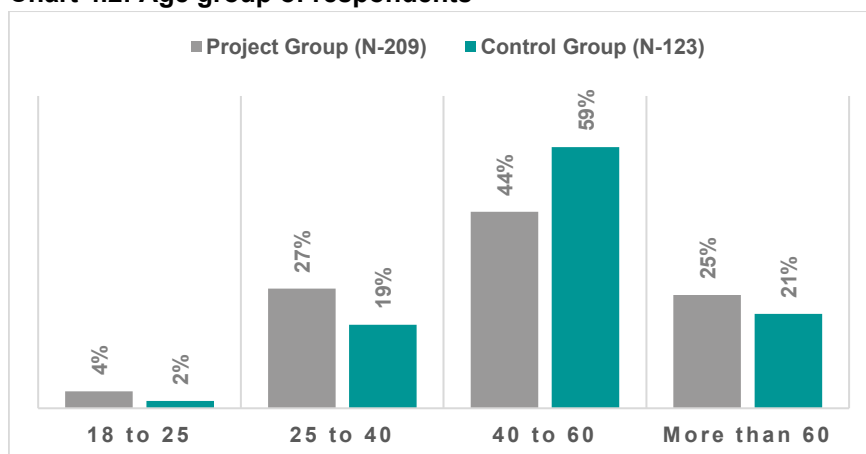


Source: Primary Survey Data

4.1.2 Age group of respondents

In the project group, the highest percentage of individuals were within the age range of 40 to 60 (44%), followed by those aged 25 to 40 (27%). Participants aged more than 60 and 18 to 25 make up 25% and 4% of the project group, respectively. In contrast, the control group has the largest proportion of individuals aged 40 to 60 (59%), while those aged 25 to 40 constitute 19% of the group. Participants aged more than 60 and 18 to 25 represent 21% and 2% of the control group, respectively. The comparison highlights differences in age distribution between the two groups, which could be relevant in interpreting study outcomes.

Chart 4.2: Age group of respondents



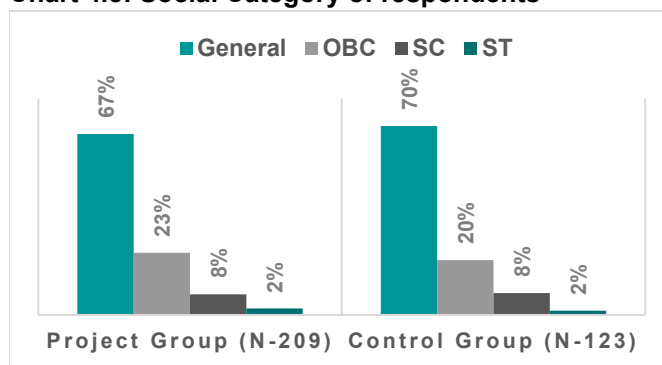
Source: Primary Survey Data

Moreover, 86% of project group and 93% of control group respondents were married at the time of the survey.

4.1.3 Respondent social category

The survey encompassed respondents who have been residing in the project location, representing diverse social categories, as indicated in theThe analysis revealed that the General category constituted the largest portion of beneficiaries in both the Project and Control groups. Specifically, 67% of beneficiaries in the Project group and 70% in the Control group belonged to the General category. Moreover, the OBC category is more predominant in the Project group, accounting for 23% of beneficiaries, compared to 20% in the Control group. Conversely, the percentage of SC beneficiaries is slightly lower in the Project group (8%) and Control group (8%). Interestingly, the representation of the ST category remained consistent, with both the Project and Control groups having 2% of beneficiaries from this category.

Chart 4.3: Social Category of respondents



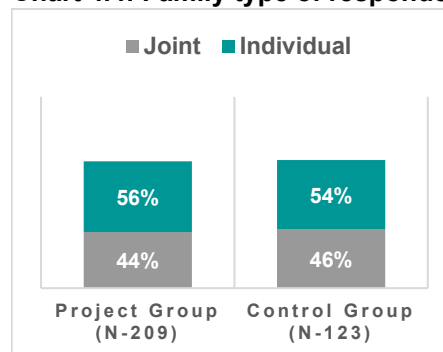
Source: Primary Survey Data

The analysis revealed that the General category constituted the largest portion of beneficiaries in both the Project and Control groups. Specifically, 67% of beneficiaries in the Project group and 70% in the Control group belonged to the General category. Moreover, the OBC category is more predominant in the Project group, accounting for 23% of beneficiaries, compared to 20% in the Control group. Conversely, the percentage of SC beneficiaries is slightly lower in the Project group (8%) and Control group (8%). Interestingly, the representation of the ST category remained consistent, with both the Project and Control groups having 2% of beneficiaries from this category.

4.1.4 Type of family of respondents

In the project group, 44% of participants belonged to joint families, while 56% came from individual families. On the other hand, the control group had a higher percentage of individuals from joint families, constituting 54%, and a lower percentage from individual families, which was 46%. The comparison revealed a slight difference in family type representation between the two groups, with the control group having a slightly higher proportion of joint families. Conversely, the project group had a slightly higher percentage of participants from individual families.

Chart 4.4: Family type of respondents



Source: Primary Survey Data

4.1.5 Family members of respondents

The **Chart 4.5** presents the distribution of family sizes in both the project and control groups. In the project group, 56% of participants belonged to nuclear families with up to 4 members, while 38% are from families with 5 to 7 members. The remaining 6% came from families with more than 8 members. On the other hand, the control group had a slightly lower percentage of individuals from nuclear families (54%) and a slightly higher percentage from families with 5 to 7 members (38%). Families with more than 8 members make up 7% of the control group. The comparison indicates that both groups have a significant representation of nuclear families, with the project group having

a slightly higher proportion. The distribution of larger families was relatively similar in both groups, with only a minor difference between them.

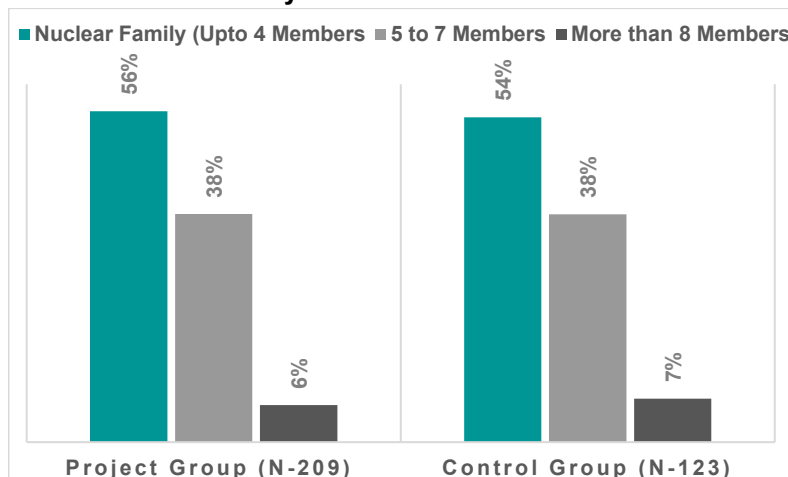
4.1.5.1 Age Group Distribution

The data provides insights into the distribution of family members across different age groups in both the project and control groups. In both groups, the highest percentage of family members were within the 19 to 45 years age group, with 42% in both the project and control groups. The age group 46 to 60 years comprised 23% of family members in both groups as well. For the age groups 0 to 5 years and 6 to 18 years, both groups had 7% and 16% respectively in the project group, while the control group had 7% and 20% respectively. Lastly, the above 60 years age group constituted 13% of family members in the project group and 9% in the control group. The comparison indicated a consistent distribution of family members across various age groups in both the project and control groups. The similarities in the proportions of family members in each age category suggests that age group demographics may not be a significant factor impacting the study outcomes.

4.1.5.2 Age and Gender Distribution of family members

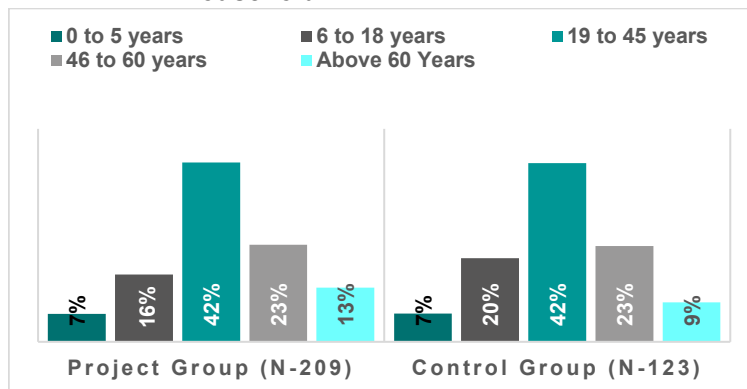
The **Chart 4.7** provides a concise overview of the distribution of participants in the project and control groups across various age groups, distinguished by gender. Both groups show similar proportions in each age category. For the age group 0 to 5, 4% were male and 2% were female in both the project and control groups. In the age group 6 to 18, there were 9% males and 7% females in the project group, compared to 11% males and 8% females in the control group. Similarly, the age group 19 to 45 had 21% males and 21% females in both groups, while the age group 46 to 60 had 12% males and 11% females in both groups. Lastly, the above 60 age group comprised 6% males and 6% females in the project group, and 5% males and 5% females in the control group.

Chart 4.5: No. of family members in household



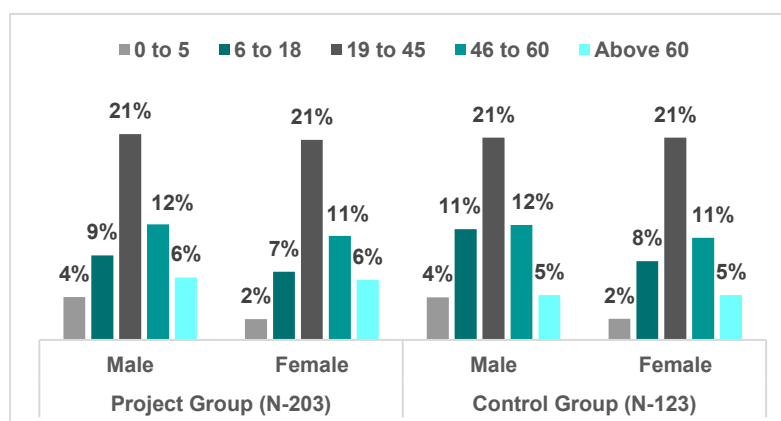
Source: Primary Survey Data

Chart 4.6: Age group distribution of family members in household



Source: Primary Survey Data

Chart 4.7: Age and Gender Distribution of family members

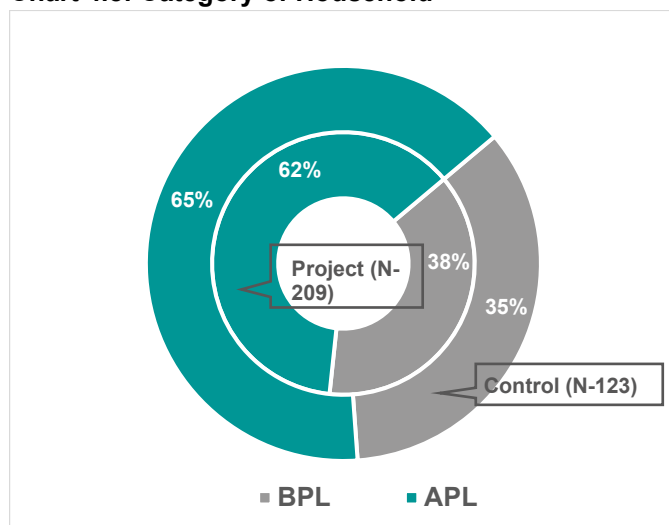


Source: Primary Survey Data

4.1.6 Category of Household of respondent

In the project group, 38% of households were under the Below Poverty Line (BPL) category, while 62% were categorized as Above Poverty Line (APL). Similarly, in the control group, 35% of households were categorized as BPL, and 65% as APL. The comparison demonstrates a relatively balanced distribution of household categories between the project and control groups. The percentage differences between the two groups was minimal, with only a one percent difference in the proportion of APL households. This suggests that the project and control groups have similar representation of households based on their economic category, potentially reducing the influence of this factor on the study outcomes.

Chart 4.8: Category of Household

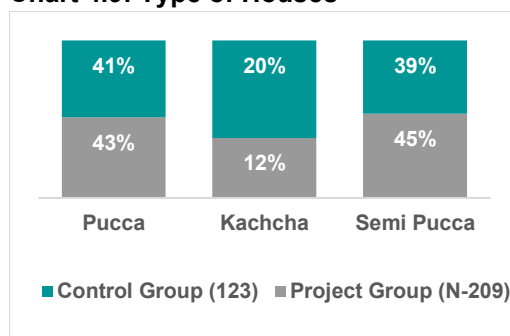


Source: Primary Survey Data

4.1.7 Type of Houses of respondents

In the project group, the majority of households had "Pucca" houses, accounting for 43% of the total. The "Semi Pucca" houses followed closely behind, constituting 45% of the households. The remaining 12% were "Kachcha" houses. In the control group, the pattern is similar, with "Pucca" houses also being the most prevalent at 41%, followed by "Semi Pucca" houses at 39%. The percentage of "Kachcha" houses was slightly higher in the control group, representing 20% of the total. Overall, the distribution of housing types was comparable in both the project and control groups, with "Pucca" and "Semi Pucca" houses being the dominant types, and "Kachcha" houses making up a smaller proportion.

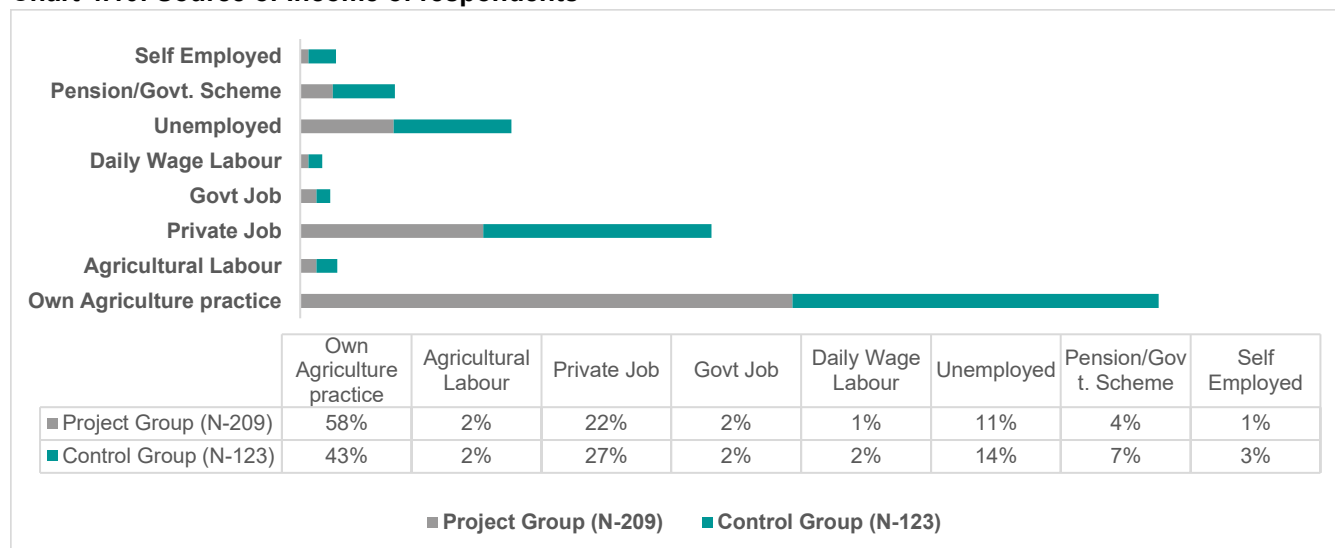
Chart 4.9: Type of Houses



Source: Primary Survey Data

4.1.8 Source of Income of respondents

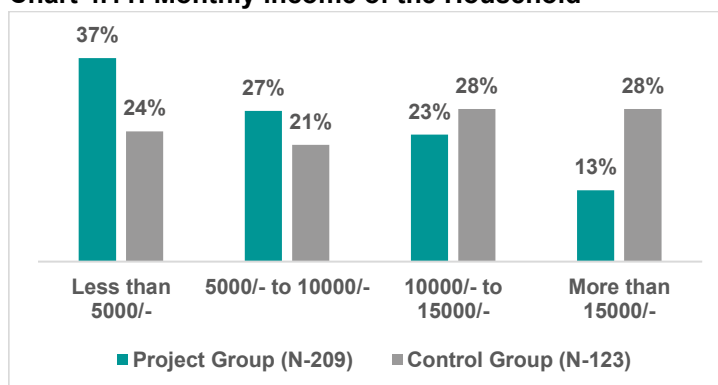
In the project group, 58% relied on their own agriculture practice as the primary source of income, while private jobs accounted for 22% of the income sources. Unemployment was reported by 11% of the individuals in this group. The control group showed a similar distribution, with 43% engaged in their own agriculture practice and 27% in private jobs. Unemployment was slightly higher at 14% in the control group. The data highlights the prevalence of agricultural activities and the diversity in income sources between the two groups.

Chart 4.10: Source of Income of respondents


Source: Primary Survey Data

4.1.9 Average monthly income of respondent household

In the project group, the largest percentage of individuals (37%) earned less than Rs. 5000/- as their income source, followed by 27% earning between Rs. 5000/- to 10000/-. The income group of Rs. 10000/- to 15000/- constituted 23% of the individuals, and those earning more than Rs. 15000/- were the smallest percentage at 13%. On the other hand, in the control group, 28% of individuals earned more than Rs. 15000/-, making it the highest income group. The income groups of less than Rs. 5000/- and Rs. 5000/- to 10000/- were 24% and 21%, respectively, while the income group of Rs. 10000/- to 15000/- was 23%. Overall, the income distribution differed between the project and control groups, with varying percentages of individuals falling into different income categories.

Chart 4.11: Monthly income of the Household


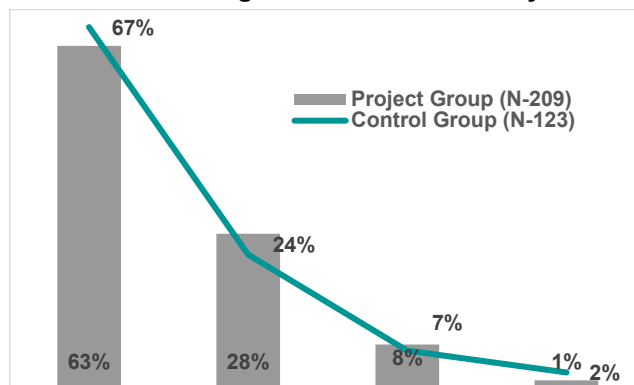
Source: Primary Survey Data

4.2 Economic Profile of the respondents

4.2.1 Earning Members in the Household

In the project group, 63% of families had only one earning member, while 28% had two earning members. Families with three earning members accounted for only 8%, and those with more than three earning members were only 1%. Similarly, in the control group, 67% of families have one earning member, and 24% have two earning members. Families with three earning members made up 7%, while those with more than three earning members were 2%. The data suggests that a significant portion of families in both groups relied on a single earner, with only a small percentage having multiple earning family members in the household. It can be inferred that majority of the household belonged to the lower economic strata.

Chart 4.12: Earning members in the family

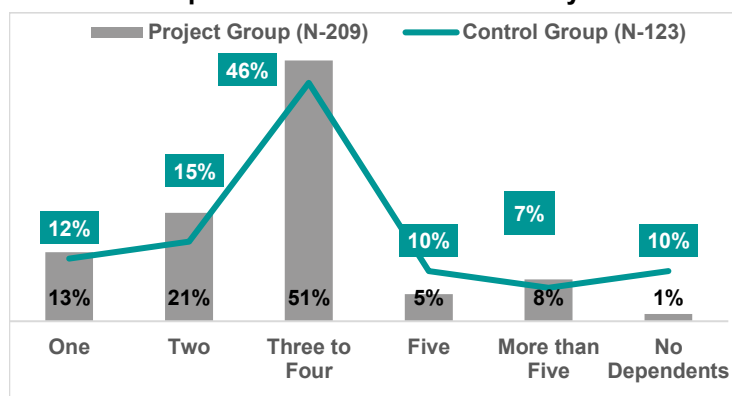


Source: Primary Survey Data

4.2.2 Dependent members in respondent household

In the project group, 13% of families had one dependent member, while 21% had two dependent members. Families with three to four dependents accounted for 51%, and those with five dependents made up 5%. A small percentage, 8%, had more than five dependents, and only 1% had no dependents. In the control group, the distribution was similar, with 12% having one dependent member, 15% with two dependent members, and 46% with three to four dependents. Families with five dependents were 10%, while those with more than five dependents were 7%. Only 1% of families in the control group have no dependents. The data suggests that the majority of families have three to four dependents, while fewer had one or two, and a small percentage have more than five dependents or none at all.

Chart 4.13: Dependent members in the family



Source: Primary Survey Data

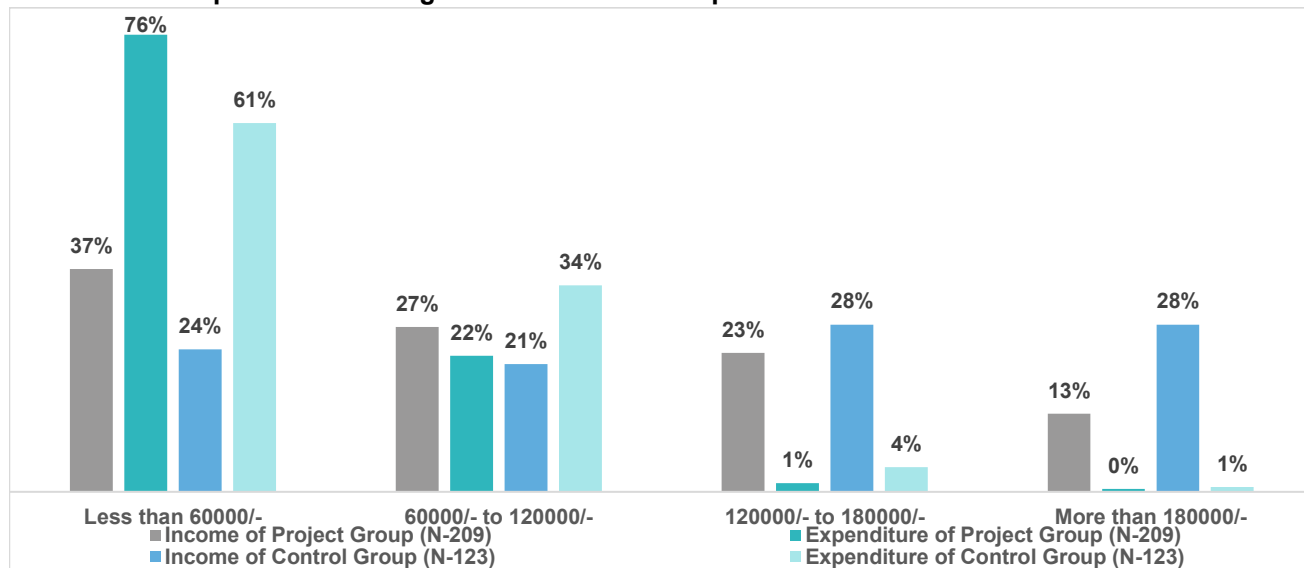
4.2.3 Household Income and Expenditure Analysis

In the project group, 37% of households had an annual income of less than Rs. 60,000/-, and 76% report annual expenditures within this range. For an annual income between Rs. 60,000/- to Rs. 120,000/-, 27% of households belonged to this category, with 22% reporting expenditures in the same range. 23% of households had an income of Rs. 120,000/- to Rs. 180,000/-, while 22% of them spend within this range. There are no households in the project group with an expenditure of more than Rs. 180,000/-, but 13% reported income in this range.

In the control group, 61% of households had an annual income less than Rs. 60,000/-, with 23% reporting expenditures within this range. For an annual income between Rs. 60,000/- to Rs. 120,000/-, 34% of households reported to be this category, with 20% reporting expenditures in the same range. Similar to the

project group, 1% of households in the control group had an income of Rs. 120,000/- to 180,000/-, and 28% report expenditures within this range. Additionally, only 1% of households in the control group have an income of more than Rs. 180,000/-, while 29% of them spent within this range. The data highlights the distribution of households based on their average annual income and expenditure and provides insights into the financial status of the project and control groups.

Chart 4.14: Comparison of average annual Income & Expenditure of the household

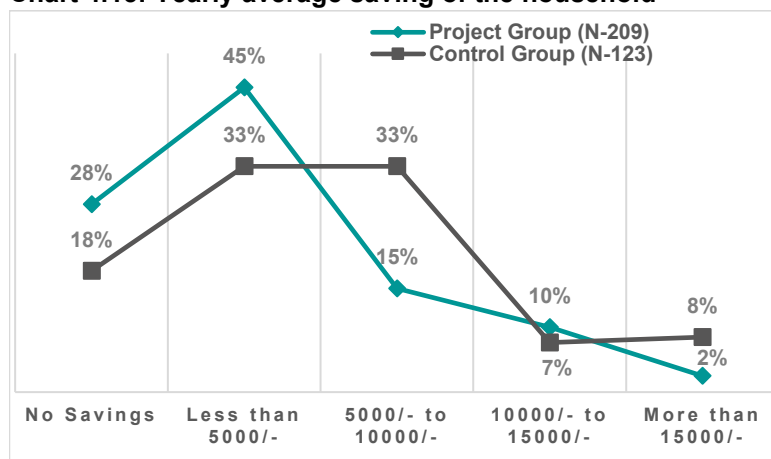


Source: Primary Survey Data

4.2.4 Household savings comparison

In the project group, 28% of households reported having no savings, while in the control group, this percentage was lower at 18%. Majority of households in both groups had savings below Rs. 5000/, with 45% in the project group and 35% in the control group falling into this category. There was a significant difference in the percentage of households with savings between Rs. 5000/- to Rs. 10000/-, with 15% in the project group and 33% in the control group. Similarly, for savings between Rs. 10000/- to Rs. 15000/-, the project group had 10% of households compared to 7% in the control group. A small percentage of households had higher savings, with only 2% in the project group and 8% in the control group reporting savings of more than Rs. 15000/-.

Chart 4.15: Yearly average saving of the household

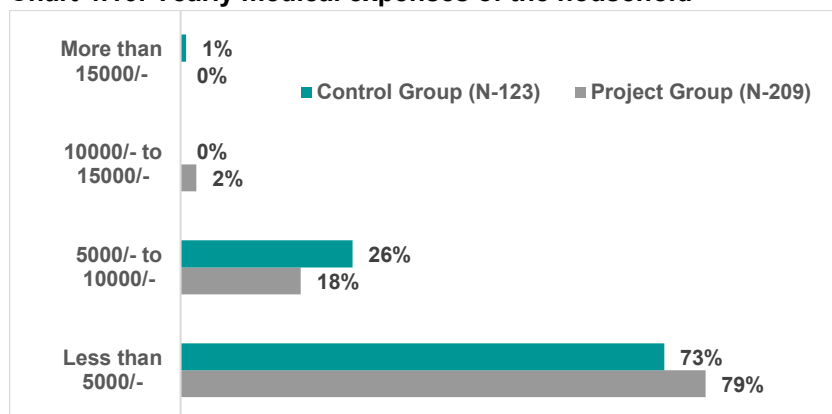


Source: Primary Survey Data

The data provides insights into the savings habits of households in both groups and highlights the variations in saving behaviour between them.

4.2.5 Yearly Medical Treatment Expenses

Chart 4.16: Yearly medical expenses of the household



Source: Primary Survey Data

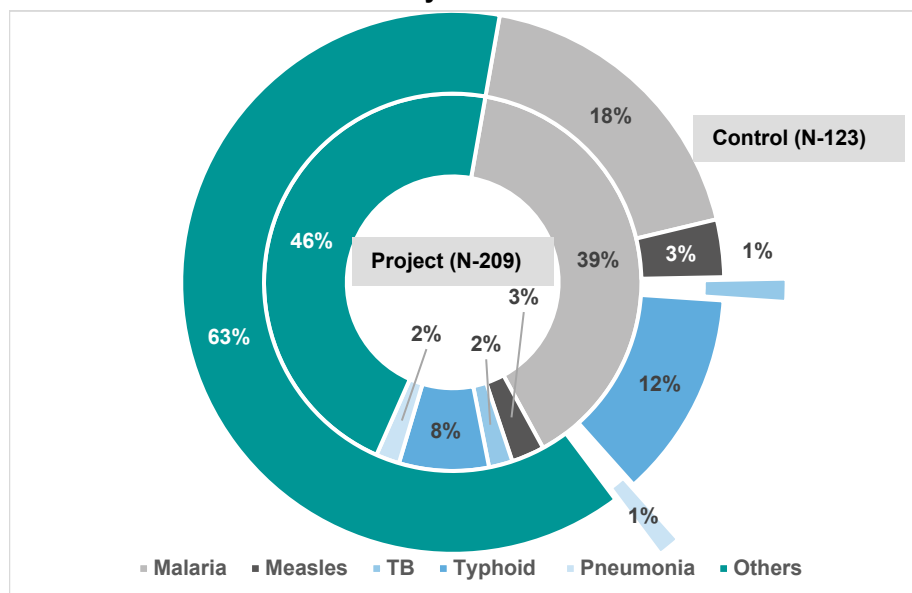
Majority of households in both groups spent less than Rs. 5000/- on medical treatment, with 79% in the project group and 73% in the control group falling into this category. For expenses between Rs. 5000/- to 10000/-, 18% of households in the project group and 26% in the control group reported this range of medical spending. A very small percentage of households incurred medical expenses between Rs. 10000/- to Rs. 15000/-, with 2% in the project group and none in the control group. Additionally, there are no households in the project group that spend more than Rs. 15000/- on medical treatment, while only 1% in the control group was into this category. The data indicated that the majority of households in both groups have relatively low medical expenses, with only a small portion incurring higher costs for medical treatment.

4.3 Availability of infrastructure and facilities at Rural Hospital-Pre-Intervention

In this section of the report, we will be highlighting the present condition of the rural hospitals in the project location.

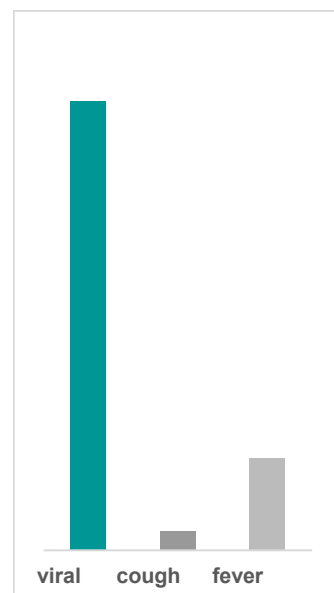
4.3.1 Health Facilities and Healthcare Access Patterns at the project location

Chart 4.17: Household affected by seasonal diseases



Source: Primary Survey Data

Chart 4.18: Other Diseases



Source: Primary Survey Data

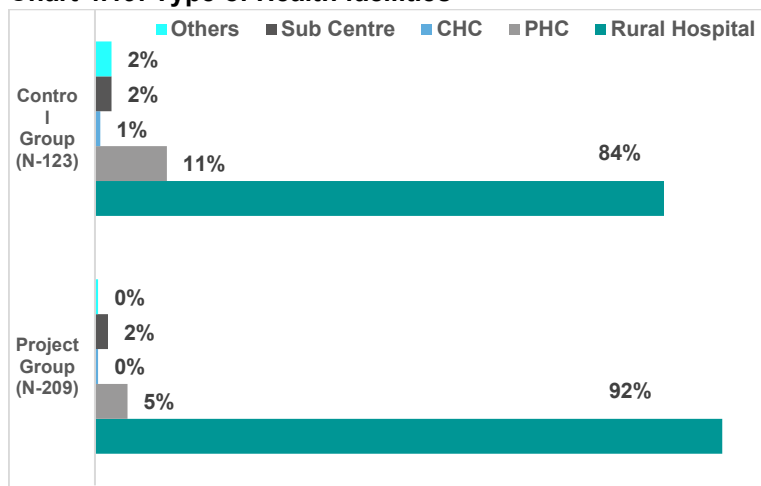
Malaria was the most prevalent seasonal disease, affecting 39% of households in the project group and 18% in the control group. Measles and tuberculosis (TB) had a lower incidence, with 3% and 2% of households in the project group and 3% and 1% in the control group, respectively. Typhoid showed an 8% prevalence in the project group and 12% in the control group. Pneumonia was reported in 2% of households in the project group and 1% in the control group. Interestingly, 46% of households in the project group and 63% in the control group

were affected by other seasonal diseases such as viral infections, cough and fever. The data provides insights into the occurrence of different seasonal diseases in both groups, which can be crucial for public health planning and intervention strategies.

4.3.1.1 Type of Health Facilities

In the project group, the majority respondents mentioned the health facilities to be Rural hospital near their village, accounting for 92%, followed by 5% mentioning primary health centre (PHC) and 2% mentioning sub-centre. There are no community health centres (CHC) or other types of facilities reported in the project group. In contrast, the control group also a significant number of respondents mentioned Rural hospital at 84%, with 11% being PHCs and 2% stating sub-centre near their villages. Additionally, there is 1% respondents who mentioned the presence of community health centres (CHC) and 3% of other types of health facilities in the control group. The data suggests that both groups heavily relied on the Rural hospital, with minor variations in the proportion of other health facility types.

Chart 4.19: Type of Health facilities

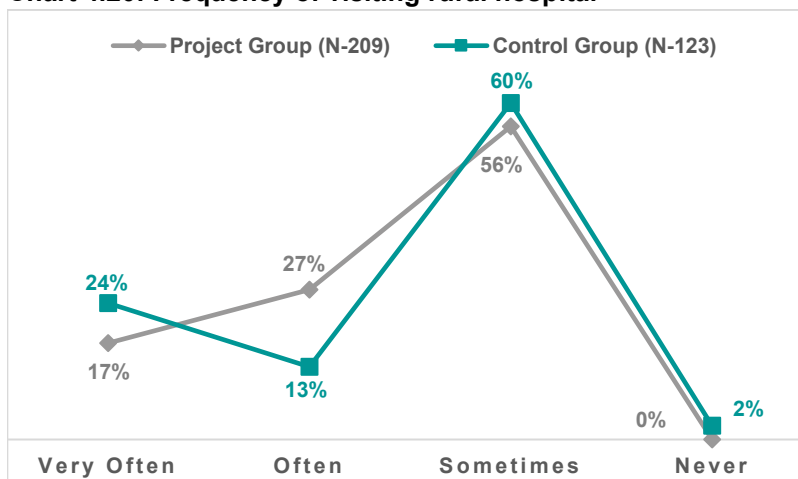


Source: Primary Survey Data

4.3.1.2 Frequency of accessing rural hospital

In the project group, 17% of individuals visited Rural hospital very often, 27% visited often, and the majority, 56%, visited sometimes. There are no individuals who never visit the Rural hospital in the project group. On the other hand, in the control group, 24% of individuals visited Rural hospital very often, 13% visited often, and 60% visited sometimes. A small percentage, 2%, never visit the Rural hospitals in the control group. The data indicates that a significant proportion of individuals in both groups visited Rural hospitals sometimes, while there are variations in the frequency of very often and often visits between the project and control groups. In support with this, IDI conducted with ANM suggest the same reasons for patient visits to the Rural hospital are regular check-ups, serious health issues, pregnancies, X-rays, and accidents.

Chart 4.20: Frequency of visiting rural hospital

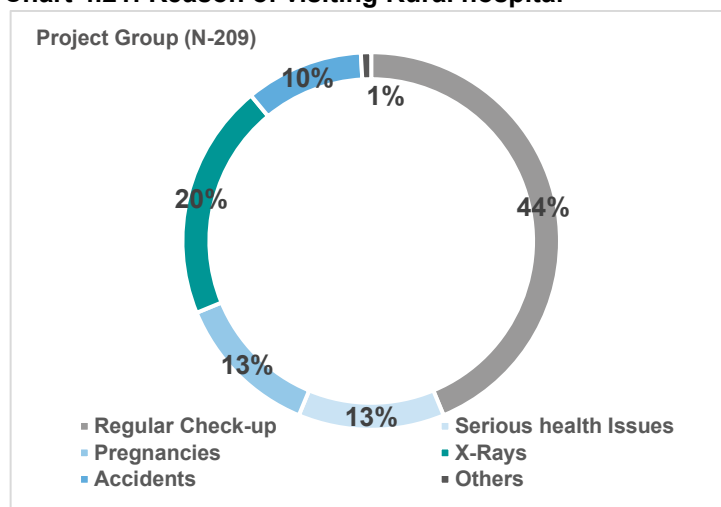


Source: Primary Survey Data

4.3.1.3 Purpose of Accessing Rural Hospital

In the project group, the majority of individuals, 44%, visited Rural hospital for regular check-ups, followed by 20% who go for X-rays, 13% for serious health issues, and another 13% for pregnancies. Additionally, 10% of individuals visit rural hospitals for accidents, and 1% for other reasons. The data shows that a significant proportion of individuals in access the Rural hospitals for regular check-ups, serious health issues, pregnancies and for accident cases. the same was corroborated by the health workers during the IDI where they stated that people usually visit the Rural hospital for regular check-up, pregnancies, X-rays and accident cases.

Chart 4.21: Reason of visiting Rural hospital

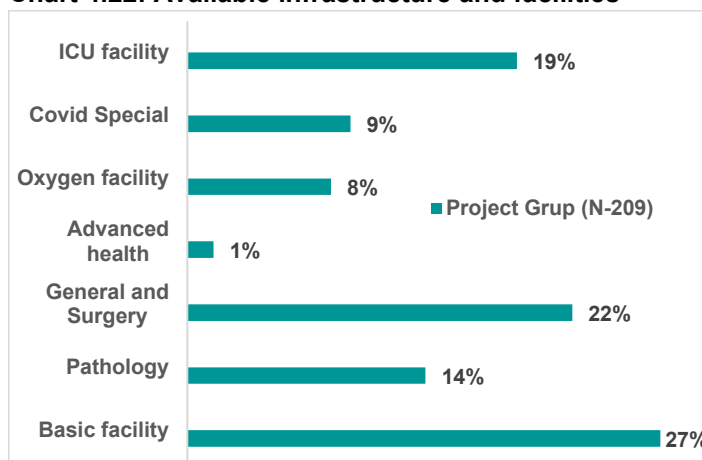


Source: Primary Survey Data

4.3.2 Facilities Provided by the Rural Hospital

In the project group, the majority of individuals, 27% indicated that the Rural hospital has basic facilities, followed by 22% who stated surgery facilities were available, 19% said ICU facility, and another 14% stated pathology facility. Additionally, 18% of individuals informed for other services such as oxygen facilities, COVID special, and advanced health. Since the Rural hospital is situated at the Pune-Bangalore highway, the respondents were aware of the surgery and ICU facility that the Rural hospital provided. During the IDIs conducted with the health workers the same was sited that the Rural hospital was a multi-speciality hospital with OPD and IPD facilities, pathology, ICU, oxygen and X-Ray facilities.

Chart 4.22: Available infrastructure and facilities



Source: Primary Survey Data

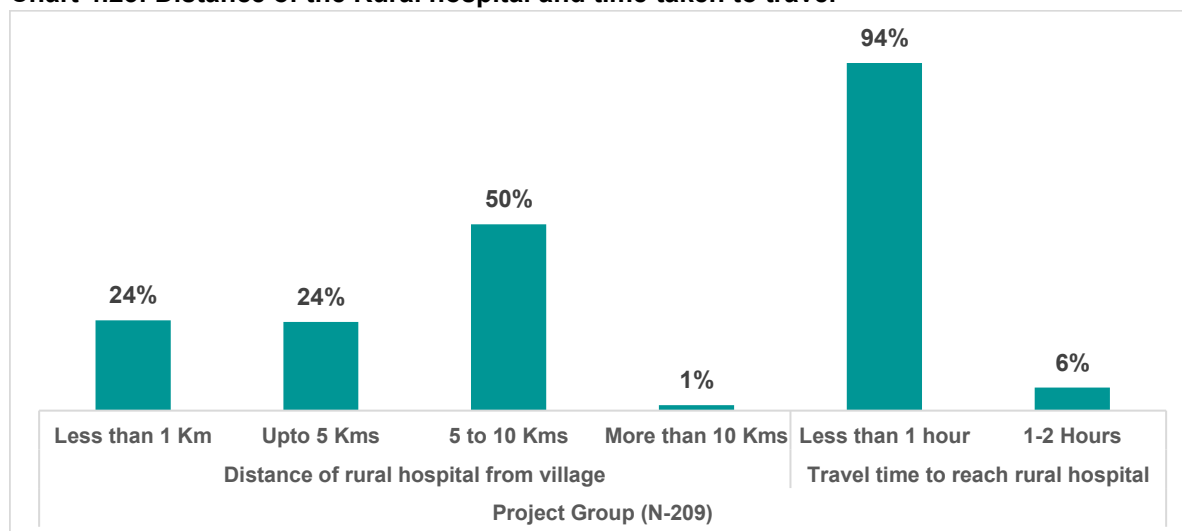
4.3.2.1 Accessibility of Rural hospital

Half of respondents stated that the Rural hospital was located between 5 to 10 kms from their villages whereas 24% stated that the Rural hospital was either less than 1 km or upto 5 kms from their villages. Conversely, the only 1% of project group respondents mentioned that the Rural hospital was located more than 10 kilometres away from their villages.

Almost all individuals, with 94% in the project group could reach the Rural hospital within one hour, indicating good accessibility. Only a small percentage, 6% of the project required 1 to 2 hours to access healthcare. this suggests a satisfactory healthcare coverage in the studied area. However, it's important to consider other factors like healthcare quality and resources to comprehensively assess the healthcare system's effectiveness for treatment.

According to the qualitative data analysis, individuals primarily seek medical treatment at the Rural Hospital and private hospitals in Khandala. Critical care and accident cases were historically managed at the Rural Hospital in Khandala and the District Hospital in Satara.

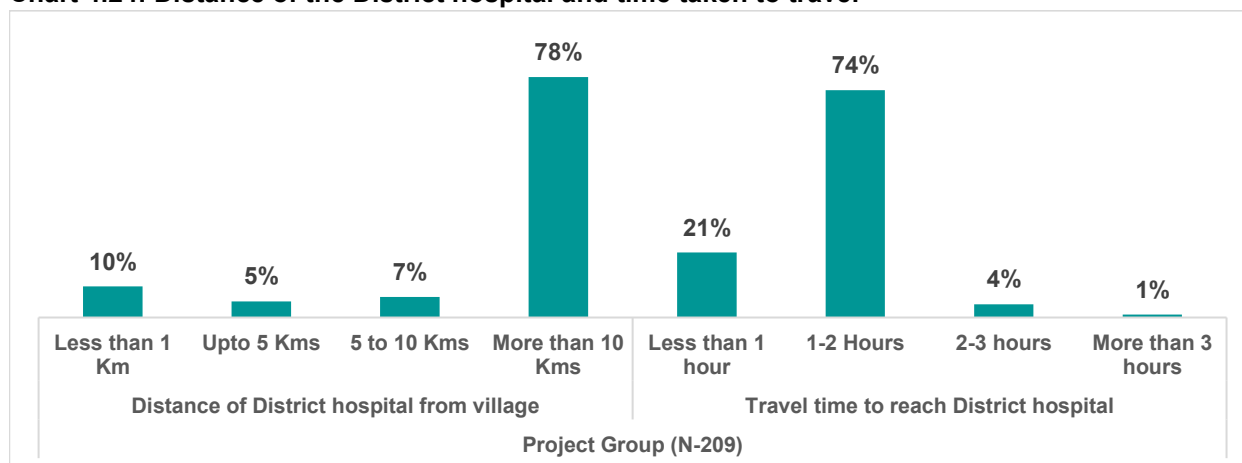
Chart 4.23: Distance of the Rural hospital and time taken to travel



Source: Primary Survey Data

4.3.2.2 Accessibility of District hospital

Chart 4.24: Distance of the District hospital and time taken to travel



Source: Primary Survey Data

The data provided represents the distance of District hospital based from the studied areas. 78% in the project group stated that the District hospital is more than 10 kilometres from their respective villages. This indicates that a significant proportion of the population may have limited access to district-level healthcare facilities due to the considerable distance involved. While this geographical analysis provides insights into the distance of the District hospital, the quality of healthcare services and additional contextual factors should be considered to gain a comprehensive understanding of the healthcare system's effectiveness in both groups.

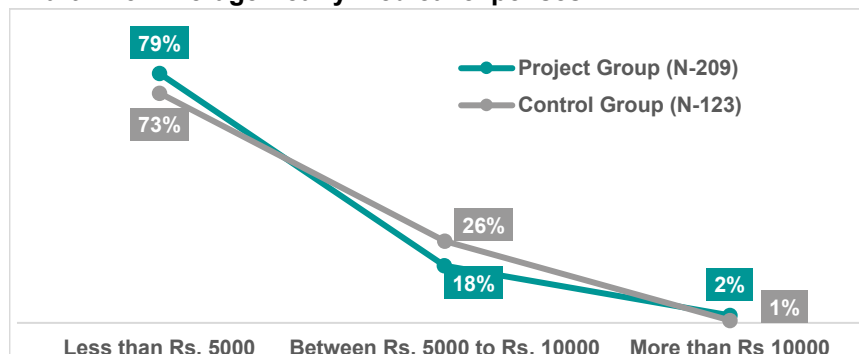
The data illustrates the time required to travel to the District hospital in both the project and control groups. The three-fourth of individuals in the project group, comprising 74%, need 1 to 2 hours to reach the District hospital. Additionally, 21% of individuals in the project group could access district hospital within 1 hour, indicating reasonably good accessibility for a proportion of the population. Only a small percentage of individuals, 5% in the project group required 2 to 3 hours for travel. Moreover, the data shows that very few people, 1% in the

project group needed more than 3 hours to reach the District hospital, suggesting that extended travel times are relatively rare. It should be noted that majority of the respondents had to travel more than 10 kms to the District hospital which might also delay the time to avail the treatment during emergencies.

4.3.2.3 Yearly medical treatment expenses

The data provided represents the distribution of medical treatment expenses incurred by individuals in both the project and control groups. The majority of individuals in the project group, comprising 79%, and in the control group, comprising 73%, have medical treatment expenses that are less than Rs. 5000/-. This can be due to the presence of Rural Hospital

Chart 4.25: Average Yearly medical expenses



Source: Primary Survey Data

that provides free of cost treatment. This indicates that a significant proportion of the population in both groups have relatively lower medical expenses. On the other hand, 18% of individuals in the project group and 26% in the control group have medical expenses falling between Rs. 5000/- to Rs. 10000/-. This indicates that a notable portion of individuals incurred moderately higher medical costs. A relatively small percentage of individuals, 2% in the project group and 1% in the control group, had medical expenses exceeding Rs. 10000/-, indicating that the number of individuals facing significantly higher medical costs is relatively low.

4.4 Availability of infrastructure and facilities at Rural Hospital-Post Intervention

In this section of the report, we will be highlighting the impact of the APL intervention on various parameters such as awareness level, accessibility, cost of critical care, enrolments, perception of respondents and availability of facilities and their regularity.

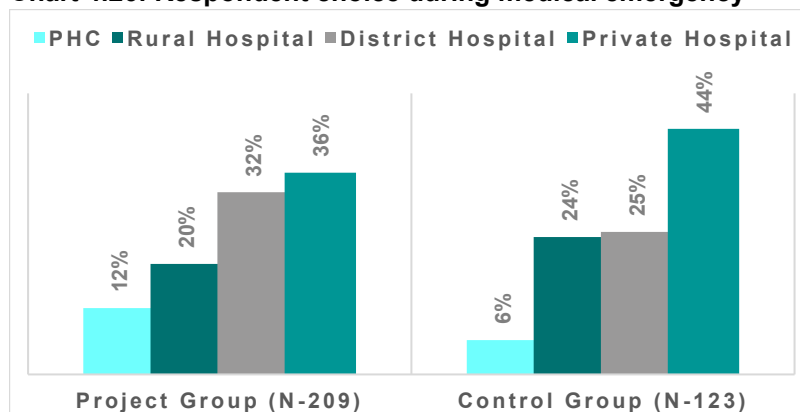
4.4.1 Level of awareness

In this section, we will be discussing the respondent's awareness level in terms of their rural hospital infrastructure and facilities.

4.4.1.1 Preference of respondents during medical emergencies

The data shows that Private Hospitals were the most preferred option in both groups, with 36% of respondents in the Project group and 44% in the Control group favouring this type of facility. District Hospitals also garnered considerable support, with 32% of respondents in the Project group and 25% in the Control group choosing them as their preferred option. Rural Hospitals received moderate preference, with 20% in the Project group and 24% in the Control group. The least favoured choice was the Primary Health Centre, with 12% in the Project group and 6% in the Control group showing preference for it. The differences in preferences between the two groups indicate that

Chart 4.26: Respondent choice during medical emergency



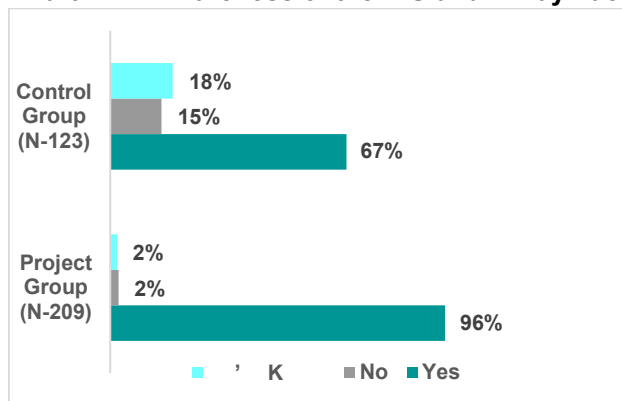
Source: Primary Survey Data

they are not aware about the facilities available in the Rural hospital. The preference of private hospitals among the respondents might be because of lack of doctors. According to qualitative data, in support with the above findings state that further treatment often necessitates visits to private hospitals due to a lack of doctors. Individuals seek medical treatment at PHC, private hospitals in Khandala, and the Rural Hospital

4.4.1.2 Awareness about ICU and X-ray facilities at rural hospital

In the Project group, an overwhelming 96% of respondents expressed awareness of the ICU and X-Ray facility, while only a small percentage of 2% stated being unaware and were uncertain. Conversely, in the Control group, 67% of respondents reported being aware, which is notably lower than the Project group's awareness level. Notably, 15% of respondents in the Control group indicated a lack of awareness, and 18% were unsure or did not know. The observed disparity in awareness levels suggests potential differences in communication or information dissemination between the two groups.

Chart 4.27: Awareness of the ICU and X-Ray Facility



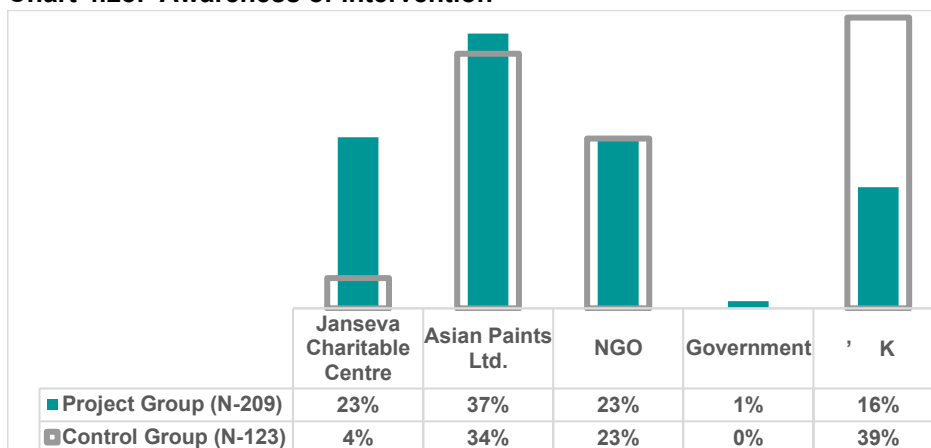
Source: Primary Survey Data

According to IDI conducted with community members, they are aware of Asian Paints Ltd.'s role in establishing the ICU facilities. Few participants have limited awareness about the current status of the ICU facility, and only the Sarpanch is informed about its establishment. In other cases, participants are aware of Asian Paints Ltd.'s role in setting up the ICU facilities, but awareness about the facility's current status varies.

4.4.1.3 Awareness about Intervention

The data provides insights into the awareness levels of respondents about the intervention. While 37% of project group are aware that Asian Paints CSR had supported the intervention, on the contrary 16% still were not aware. Similarly, control group respondents are showing the same result. These findings highlight potential areas where the project's awareness efforts may require improvement, because still major chunk of

Chart 4.28: Awareness of intervention



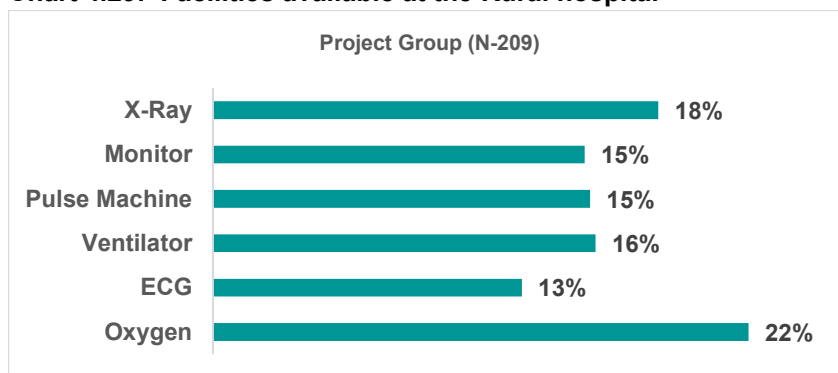
Source: Primary Survey Data

respondents 39% in project group were not aware about the agency that had established the facilities. To enhance the overall effectiveness of the intervention awareness campaign should be planned.

4.4.1.4 Availability of ICU facilities at the rural hospital

The data reveals the availability percentages of various facilities available at a Rural Hospital for the Project. Overall, levels of availability for most facilities, such as ventilators, pulse machines, and X-rays, with was observed. However, the Project group reports a slightly higher availability of oxygen (22%) and ECG machines (13%). These findings suggest that the project may have positively impacted awareness and clarity about ICU facility availability at the Rural Hospital.

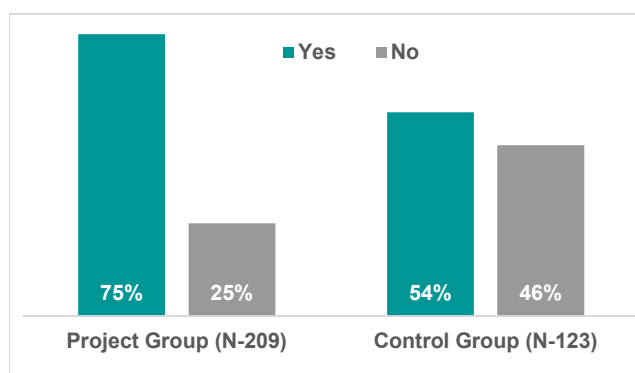
Chart 4.29: Facilities available at the Rural hospital



Source: Primary Survey Data

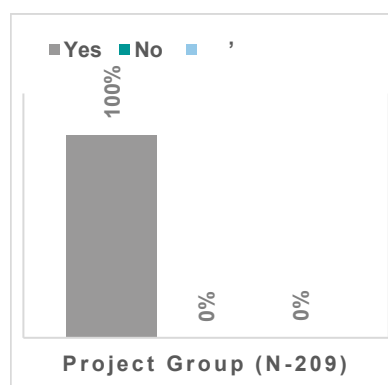
4.4.2 Accessibility

Chart 4.30: Availing services of Rural hospital in past one year



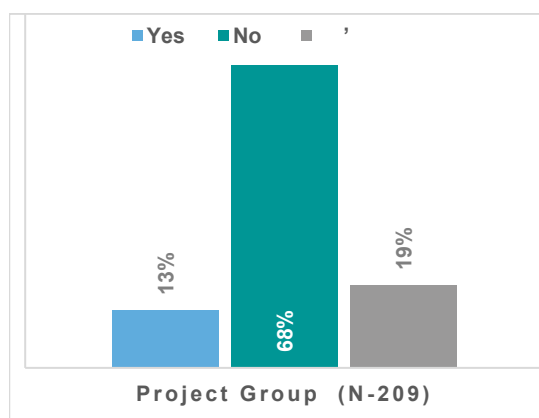
Source: Primary Survey Data

Chart 4.31: Availing the X-ray facility of Rural hospital



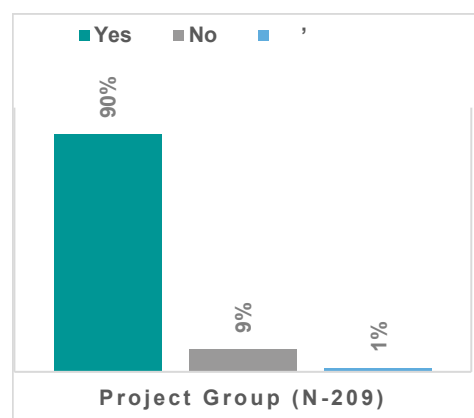
Source: Primary Survey Data

Chart 4.32: Availing the ICU facility of Rural hospital



Source: Primary Survey Data

Chart 4.33: Use of X-ray & ICU facility by other members



Source: Primary Survey Data

Among the respondents who availed the services of the Rural hospital in past one year, 75% were from the Project group, while only 54% were from the Control group. On the other hand, among those who did not avail

the services, 25% were from the Project group and 46% were from the Control group. This data suggests that the Project group had a higher proportion of individuals who sought hospital services compared to the Control group. The reasons for this difference are potential differences in healthcare access, health conditions, or awareness of available medical facilities.

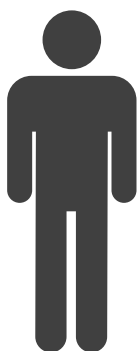
Among the respondents in the Project group, only 13% availed the ICU facility, while a significant majority of 68% did not use it. Additionally, 19% of respondents from the Project group could not recall whether they had utilized the ICU facility. These results suggest that there is a **minimal utilization of the ICU facility at the Rural hospital**, with the Project group having a slightly higher rate of utilization. The reasons for such low usage are the availability of alternative healthcare options, the severity of medical conditions, or lack of trained staff for the ICU as indicated in the qualitative study.

The Project group experienced a significant reduction in time spent in getting critical care due to the construction of the new ICU, with 96% of respondents reporting a positive outcome. Only 4% of respondents from the Project group did not experience a reduction in time in receiving critical care. The APL interventions led to this notable improvement in reducing the time spent in critical care, potentially resulting in better patient outcomes and healthcare resource management.

Remarkably, all respondents from the Project group reported using the X-ray facility, indicating a 100% utilization rate. These findings suggest that the Project group made full use of the X-ray facility at the rural hospital. The reasons for such a significant difference in utilization are awareness of the facility's availability, accessibility to medical services, or the severity of medical conditions.

The Project group experienced a significant reduction in time taken for X-ray procedures, with 97% of respondents reporting a positive outcome. Only 3% of respondents from the Project group did not observe a reduction in X-ray time. This data suggests that the APL interventions is successful in reducing the time required for X-ray procedures. The data also indicates that the Project group achieved a significant reduction in the cost of X-ray procedures, with 95% of respondents reporting a positive outcome. Only 5% of respondents from the Project group did not observe a reduction in X-ray costs. The construction of the new X-ray facility has significantly reduced the cost of getting X-rays had it done at a private health facility.

Figure 4.1: Reduction in Time and Cost



Source: Primary Survey Data

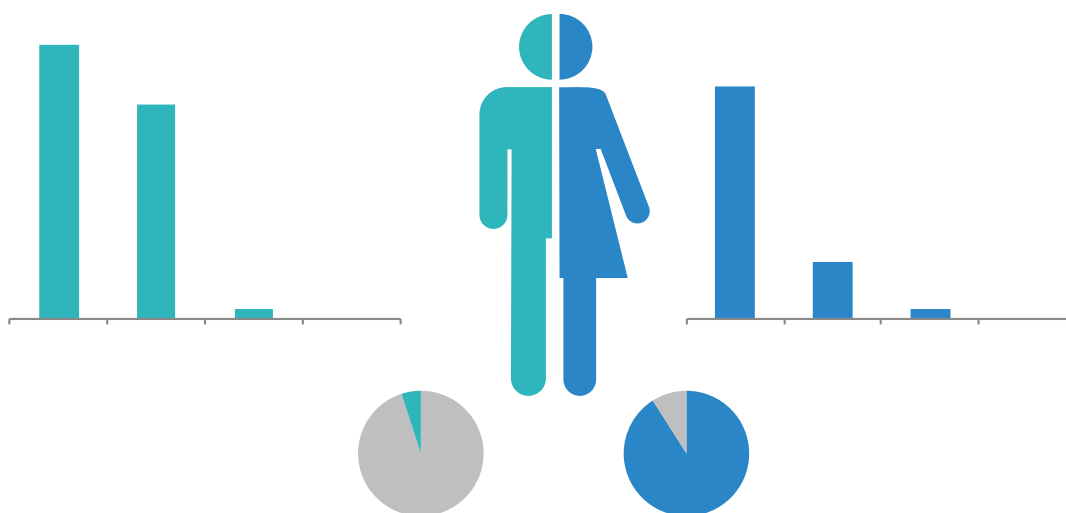
The data presents the utilization of X-ray and ICU facilities by other members of the household within the Project group. Among the respondents in the Project group, 90% reported that other household members used the X-ray facility, while 7% did not. Additionally, 1% of respondents from the Project group could not recall whether other household members used the X-ray facility.

According to the IDIs conducted with implementing NGO, the organization's broader efforts was perceived, encompassing diverse medical facilities like X-Ray, CS System, ECG, Bi-pap, enhancing healthcare accessibility substantially.

4.4.3 Cost and Reduced Time of Critical Health Care

Based on the data provided, it can be inferred that the ICU facility at the Rural Hospital has had a positive impact on reducing medical treatment costs, especially in the Project group. In the Project group, 91% of respondents believed that the availability of the ICU facility helped in reducing the cost of critical care treatment. Additionally, after the ICU facility is constructed, there is a significant increase in respondents incurring "No Cost" for medical treatment (from 55% to 78%), and a notable decrease in those with costs in the "Rs. 2000/- to 5000/-" range (from 43% to 19%). This indicates that a substantial portion of the Project group experienced reduced or no costs for medical treatment after the ICU facility's implementation.

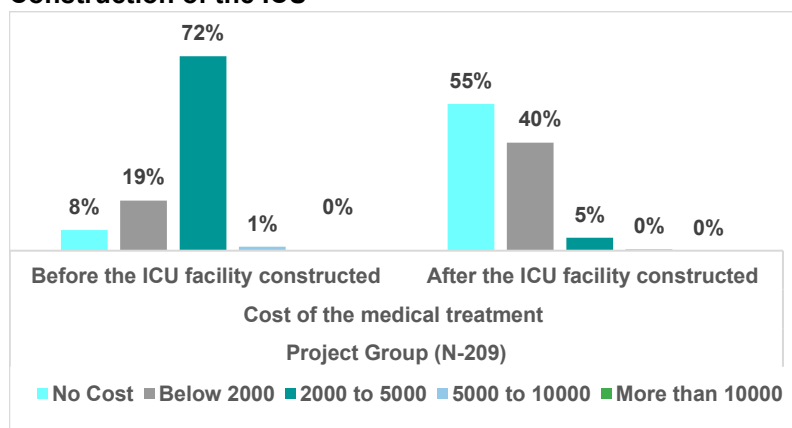
Figure 4.2: Cost Analysis



Source: Primary Survey Data

Overall, the data and inferences suggest that the ICU facility's intervention at the Rural Hospital likely played a role in reducing medical treatment costs.

Chart 4.34: Cost of Treatment Before and After the Construction of the ICU

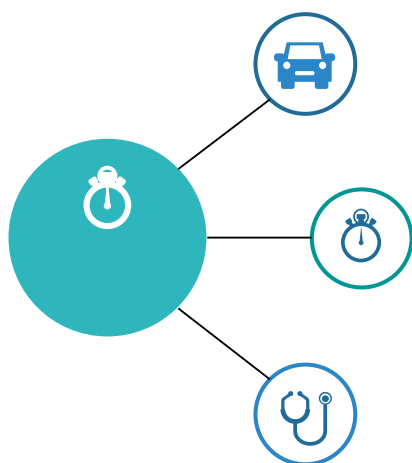


Source: Primary Survey Data

The analysis indicates that there is limited understanding among respondents from the Project group regarding the ICU facility's impact on reducing critical care treatment costs at the Rural Hospital as the setup is in its initial stages. In the Project group, 91% of respondents believed that the ICU facility helped in cost reduction, while only 95% agreed that the X-ray facility has reduced the cost to get X-rays at private clinics. Moreover, among the project group there were a significant 55% and 78% of the

beneficiaries have stated that there was no cost incurred while admitted at the Rural hospital or using the ICU facility respectively. The project stated that there has been a cost reduction in availing treatment after the construction of the ICU infrastructure and X-ray facility. Among the project group there has been a shift from 8% to 55% beneficiaries who have agreed that no cost was incurred meanwhile, 72% project group who had mentioned the cost of treatment to be between Rs. 2000/- to 5000/- before the construction of the ICU was reduced to only 5% who stated the cost was the same after construction of the ICU infrastructure. This shows the massive cost reduction to avail the treatment due to the construction of the new infrastructure and better facilities. During the discussion with the community, it was mentioned that the reduced cost to avail treatment and X-Ray facility at the Rural Hospital has helped them to utilize the amount in other household expenses and also reduced their dependency to borrow the amount from relatives/friends to cover the high treatment expense had the same treatment was availed at any private facility.

Figure 4.3: Reduction of time in availing treatment



A significantly large number of project group who had availed the ICU or X-ray facility agreed that the construction of the new infrastructure has been able to reduce time to receive treatment for critical care as 67% project group stated that they had to travel more than 15 kms to avail treatment for critical care which took 1-2 hours. With the reduction of time to avail treatment for critical care, which is available at the Rural hospital after the intervention for no cost, it can also be concluded that this has reduced the mortality of the critical cases as the time taken to get treatment in such cases has reduced.

Source: Primary Survey Data

4.4.4 Improved Infrastructure

Figure 4.4: Knowledge of Improved Infrastructure

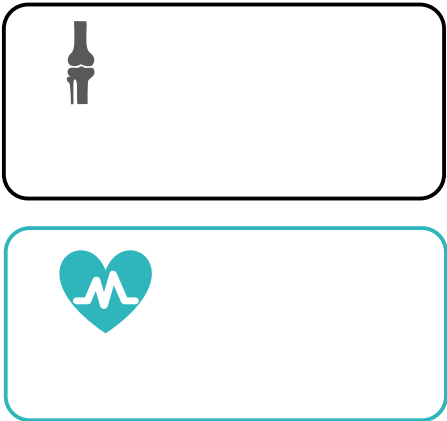


Source: Primary Survey Data

A significantly large number of beneficiaries (96%) mentioned that the X-ray facility was functional, and a similar number of beneficiaries also stated that they were satisfied by the X-ray facility.

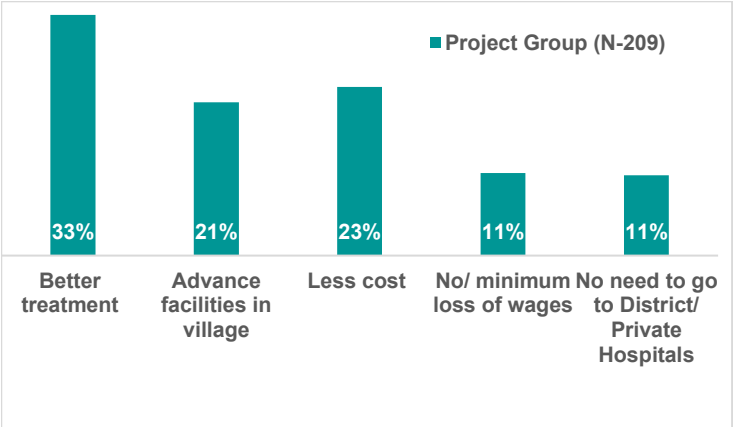
Majority of the respondents of the project group were aware of the improved infrastructure facilities at the Rural hospital. 44% of them were aware of better treatment facilities and more than one-third of them mentioned the new ICU facility at the Rural hospital. This shows that there is awareness among the people about the infrastructure improvement at the Rural hospital.

Figure 4.5: Functionality of X-ray facility



Source: Primary Survey Data

Chart 4.35: Benefits of the Improved Infrastructure



Source: Primary Survey Data

Among the project group who had availed the services of the improved infrastructure mentioned were satisfied by the services and among them one-third of them mentioned that the intervention had led the Rural hospital to provide better treatment. 23% stated that it has reduced the cost of treatment and 21% stated that this intervention has led to have advance facilities in the village.

4.4.5 Critical Assistance Benefit

The Project group generally showed higher levels of satisfaction and positive perceptions regarding critical assistance benefits and facility functionalities at the Rural Hospital. The treatment facility and ICU facility were well-received by project groups, with slight favour towards the Project group. Similarly, the X-ray facility received overwhelmingly positive ratings in the Project group. The majority of respondents in the Project group rated the X-ray and ICU facilities as "Excellent" or "Good." Further analysis and context-specific information are necessary to fully understand the reasons behind these perceptions and satisfaction levels. Overall, the data suggests that the improved facilities and critical assistance benefits in the Project group positively influenced the overall healthcare experience, potentially contributing to better healthcare outcomes and affordability for patients.

Figure 4.6: Satisfaction of using the facilities



Source: Primary Survey Data

The IDI (In-depth Interview) conducted with Asian Paints Ltd. (APL) staff has provided additional insights into the positive impacts of the ICU facility installation and related equipment at the Rural Hospital. Some key points highlighted in the IDI include:

- **Installation of ICU and Equipment:** The IDI highlighted the installation of an oxygen plant and other necessary equipment at the Rural Hospital. This indicates that the ICU facility is equipped to handle critical care cases that require oxygen support, which is crucial for patients with severe respiratory conditions.
- **Positive Impact on Financially Weaker Sections:** The IDI pointed out that the ICU facility has had a positive impact on financially weaker sections of the community. This suggests that the availability of critical care services at the Rural Hospital, including the ICU, has provided more accessible and affordable healthcare options for those who might otherwise face challenges accessing private healthcare facilities.
- **Importance of Qualified Staff:** Despite the positive aspects of the ICU facility, the IDI underlines the ongoing need for qualified staff to operate the facility effectively. This reiterates the importance of having medical professionals with the necessary expertise to provide high-quality care to patients in critical conditions.

In conclusion, the IDI with APL staff provides additional valuable information about the installation of the ICU facility, positive impacts on financially weaker sections of the community, and the crucial role of qualified staff in the successful operation of the ICU facility at the Rural Hospital.

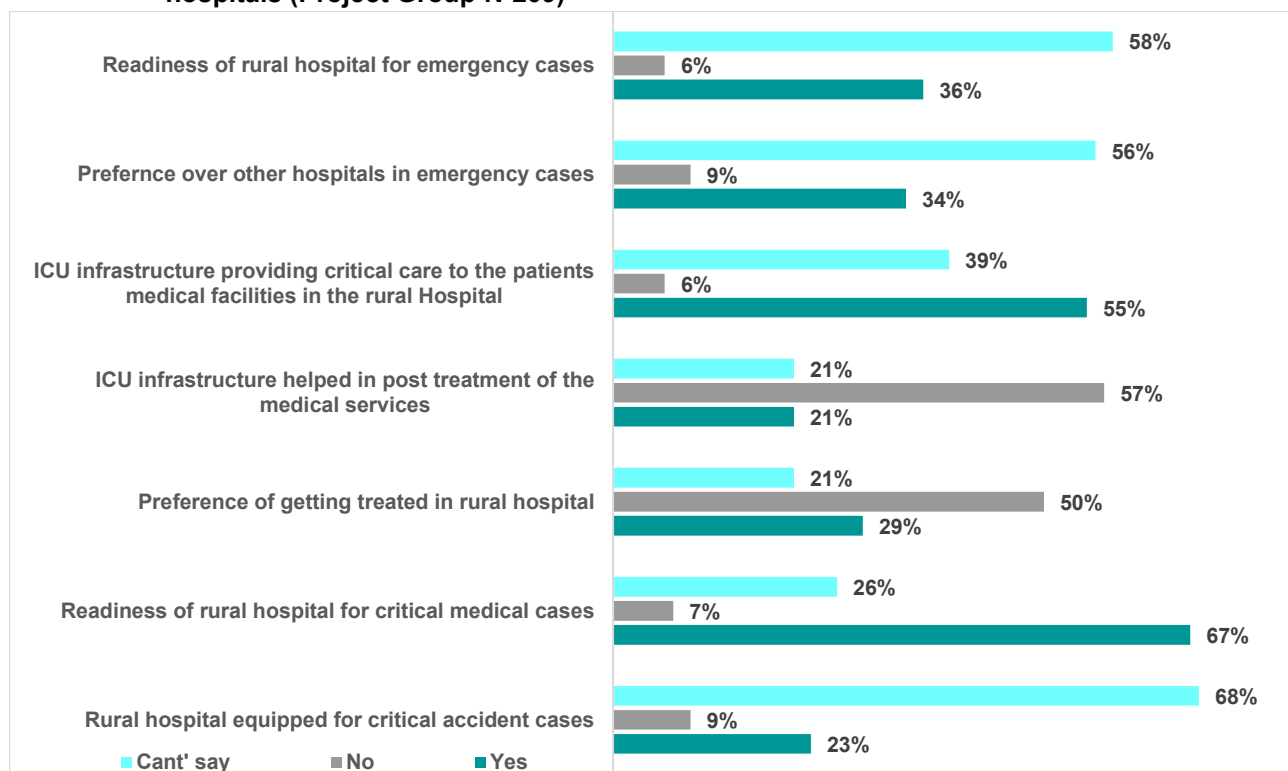
Similar thought was expressed by implementing partner NGO, that there is reduction in referrals to District hospitals for specific cases, indicating the ICU facility's effectiveness. It was emphasized that staff training for new equipment, the support from Asian Paints and the local Rural Hospital, and the positive influence on nearby villages. Despite achievements, challenges like the lack of trained staff to operate the ICU facility persist. The implementing NGO partner's recommendations underscore the crucial requirement for qualified staff, patient and staff safety measures, and fire safety protocols.

4.4.6 Perception of Community about the infrastructure in Rural Hospital

The Project group's perceptions regarding the rural hospital's readiness for critical and emergency medical situations, as well as their treatment preferences. Notably, respondents held diverse views, with varying percentages believing in the hospital's readiness for critical cases (23% Yes, 9% No) and emergency cases (36% Yes, 6% No). A significant proportion remained uncertain in both instances (68% and 58% respectively). Similarly, opinions on ICU infrastructure's impact were mixed, with 21% believing it helped in post-treatment and 21% uncertain, while 55% believed it provided critical care. Though the respondents were satisfied by the infrastructure improvement at the Rural hospital, the uncertainty about the perception of the respondents about the Rural hospital were due to lack of doctors for treatment and no trained staff to operate the ICU facility that could support in treating critical cases. The data highlights a range of perceptions within the Project group, indicating potential areas for clarifications and improvements in healthcare communication and services.

9% of the respondents think rural hospital still lacked in critical medical cases due to various reasons such as lack of staff and medical professionals in healthcare facilities. These expressions highlight concerns about the absence of medical personnel and its impact on accepting patients, handling critical situations, providing treatments, and managing facilities. The lack of doctors and staff is emphasized, along with references to available equipment but inadequate personnel. There's also a mention of the need to increase staff, particularly in ICU settings. The phrases underscore the challenge posed by insufficient staffing in delivering quality medical care.

Chart 4.36: Perception of respondents on infrastructure and facilities of the rural hospitals (Project Group N-209)



Source: Primary Survey Data

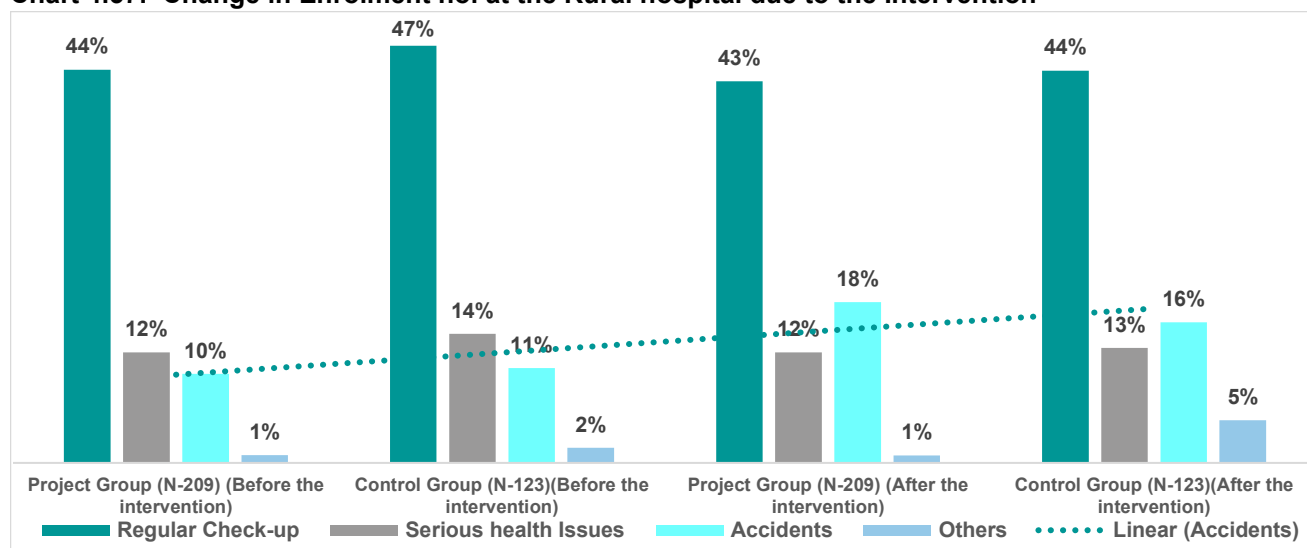
4.4.7 Changes in the enrolments

Before the intervention, the most common reasons were "Regular Check-up" (44%) and "Serious health Issues" (12%). Following the intervention, these reasons remained relatively stable at 43% and 12%, respectively. Notably, there was a significant increase in cases involving **"Accidents," rising from 10% before the intervention to 18%** after the intervention. The proportions for "Pregnancies," "X-Rays," and "Others" remained unchanged at 12%, 20%, and 1%, respectively. The findings suggest that the intervention may have contributed to an increase in cases related to accidents, potentially indicating improved access to healthcare services for such incidents.

In the Project group, 22% of respondents reported being admitted for "1 Day," while 2% mentioned "2-3 Days." No respondents reported admissions lasting "5 to 7 Days" or "More than 7 Days." The majority (76%) indicated "Not Admitted." In the Control group, 12% were admitted for "1 Day," 4% for "2-3 Days," and 1% each for "5 to 7 Days" and "More than 7 Days." A higher percentage (82%) in the Control group indicated "Not Admitted." This data suggests that a considerable proportion of respondents were not admitted to the rural hospital, and shorter admissions (1 Day) were more common in the Project group.

As per the IDI conducted with the health worker such as ANM, the average daily patient load at the Rural Hospital is indicated as a range (100-150), providing an understanding of the facility's usage and demand.

Chart 4.37: Change in Enrolment no. at the Rural hospital due to the Intervention

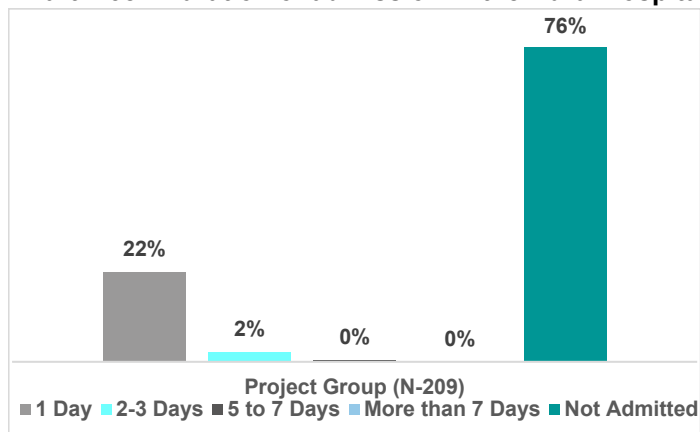


Source: Primary Survey Data

4.4.8 Regularity and familiarity of ICU Centre

A significant majority expressed satisfaction (84%) and believed in its necessity (90%). Respondents also attributed recovery support (82%), readiness for critical cases (86%), and improved medical facilities (84%) to the ICU infrastructure. However, uncertainty was notable in perceiving the ICU's impact on reducing visits to district hospitals (67%). These findings underscore the facility's positive impact on healthcare provision, while also

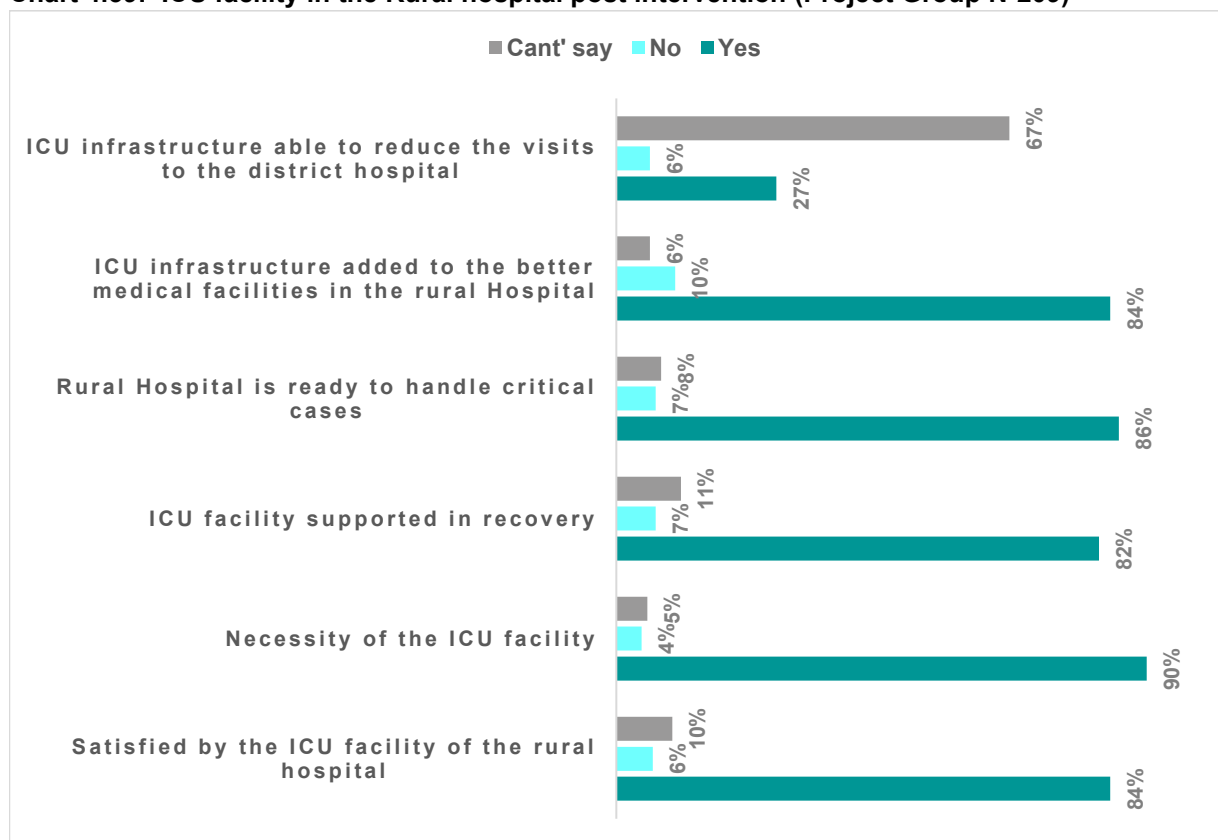
Chart 4.38: Duration of admission in the Rural hospital



Source: Primary Survey Data

highlighting the need for clearer communication regarding specific benefits, particularly in reducing visits to external healthcare centres.

Chart 4.39: ICU facility in the Rural hospital post intervention (Project Group N-209)



Source: Primary Survey Data

The project group overall agreed that the construction of the ICU facility and the X-Ray facility available at the Rural hospital has enabled the Rural hospital to have better treatment facility, supports in recovery, the rural hospital is ready for critical cases and there was a need to establish the ICU as the Rural hospital is the first resort for any accident cases considering the location of the hospital. Some respondents also could not agree to the same a large number of the project group also stated that they were not sure that the construction of the ICU has helped in reducing their visits to the District hospital. This was due to the lack of doctors or the trained staff to operate the ICU facility which has yet to reach its utilization and be fully functional.

The IDI (In-depth Interview) conducted with Asian Paints Ltd. (APL) staff has provided additional insights into the positive impacts of the ICU facility installation and related equipment at the Rural Hospital. Some key points highlighted in the IDI include:

- **X-ray Facility:** The availability of X-ray services at the Rural Hospital enables faster diagnosis and assessment of patients' conditions, aiding in effective treatment planning.
- **ECG Services:** The presence of ECG (Electrocardiogram) services allows for the quick and accurate assessment of cardiac health, enabling prompt intervention in case of heart-related issues.
- **BiPAP Support:** The inclusion of BiPAP (Bilevel Positive Airway Pressure) support is crucial for patients with respiratory difficulties, as it helps maintain proper airflow and oxygen levels, especially in cases of breathing problems.
- **Oxygen Support:** The provision of oxygen support is vital for patients with respiratory issues or those in critical condition who require additional oxygen to stabilize their health.

In summary, the establishment of the ICU facility has improved the Rural Hospital's capabilities to manage low to moderate critical cases, providing immediate care and stabilization for patients. The additional facilities such as X-ray, ECG, BiPAP, and oxygen support, along with staff training by the OEM, contribute to the enhanced medical services offered at the facility.

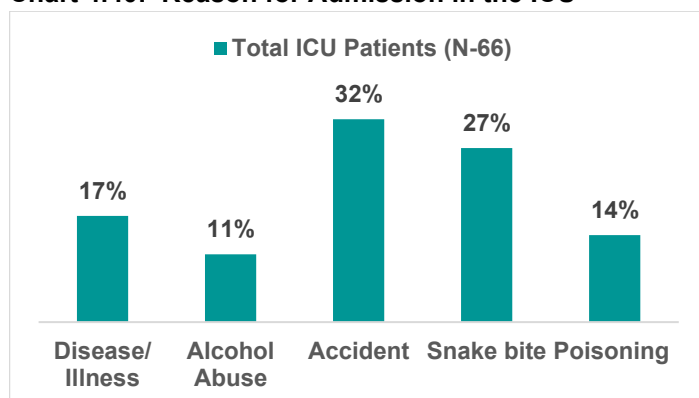
Although these facilities are lacking due to shortage of doctors and unavailability of trained staff. The ICU unit was initiated to address the geographical distance from Pune and Satara. Its potential benefits could be realized with the deployment of adequate staff. Status of Capacity utilisation of beds/infrastructure of the ICU unit

During the in-depth interviews (IDI) conducted with health workers such as ANMs (Auxiliary Nurse Midwives), it was revealed that the average daily patient load at the Rural Hospital varies within a range of 100 to 150 patients. This range provides valuable insight into the utilization and demand for the healthcare facility.

The average daily patient load reflects the number of individuals seeking medical attention, treatment, and care at the Rural Hospital on a typical day. This data indicates that the facility is consistently catering to a substantial number of patients, emphasizing its importance as a primary healthcare resource for the community. Understanding the patient load is crucial for effective healthcare planning, resource allocation, and ensuring that the healthcare facility can adequately address the healthcare needs of the population it serves. The range of 100 to 150 patients per day highlights the facility's role in providing medical services to a significant portion of the local population and underscores the importance of the services offered by the Rural Hospital.

4.5 Reasons for Admission in the ICU (From April 2022 to March 2023)

Chart 4.40: Reason for Admission in the ICU



Source: Secondary Data

After the handing over of the ICU facility to the hospital authorities in March 2022, for one year the list of beneficiaries of the ICU were maintained and reported by the Rural hospital. A list of 66 ICU beneficiaries was provided by the implementing agency that stated the beneficiaries who were admitted in the ICU from April 2022 to March 2023 along with the reason for their admission. According to the beneficiary list provided, almost one-third of beneficiaries (32%) were admitted to the ICU for the treatment of accident cases whereas 27% were admitted for treatment of snake bite cases. It can be

inferred that after the establishment of the ICU facility, the Rural Hospital has been able to cater to accident cases and can be concluded that treatment of accident cases has increased after the intervention. Furthermore, 17% of the beneficiaries received treatment for diseases/ illness. 14% of the ICU beneficiaries were admitted for treatment of poisoning cases and 11% were admitted for the treatment of alcohol abuse.

4.6 Qualitative Analysis

4.6.1 Medical Superintendent

In-depth interviews were carried out with the Medical Superintendent (MS) for the study to know the status of the Rural hospital, the ICU and X-ray facility and its usage.

4.6.1.1 About the Rural Hospital

Viral infections, fever, diarrhoea, typhoid are common seasonal diseases occurring in the area. Apart from the Rural hospital, there are Primary Health Centre, are in the area. The nearest district hospital is at Satara which is more than 30 kms from the Rural hospital and major critical cases are referred there when the treatment facility is not available at the Rural Hospital. The Rural hospital is a multi-speciality hospital with OPD and IPD facilities, ICU, oxygen and X-Ray. The Rural hospital covers 25 to 30 villages as it is situated on the highway. Mostly patients visit for accident cases and for X-rays at the Rural hospital. The patients travel for more than 10 kms to receive the treatment to this hospital. The average annual medical expenses as stated by the MS is up to Rs. 10000/- as people mostly visit private health facilities for treatment. The MS also informed that in case of medical emergencies the people visit the Rural Hospital or the District hospital.

Figure 4.7: Meeting with the MS



Source: MMPL Survey

Table 4.1: Staff Strength of the Area Hospital

Staff	Doctors	GNM	Technical Staff	Cleaning Staff	Other Staff	Total
Number	1	5	5	2	1	14

4.6.1.2 Construction of the new ICU infrastructure and X-ray Facility

The ICU was needed as the Rural hospital is situated at the Pune highway which is prone to accidents and the Rural hospital was the first resort for medical treatment for critical accident cases. The construction of the ICU facility has led to an increase in the number of patients. The ICU is equipped with X-ray machine, Bi-pap machine, ventilators, suction machine, ECG machine with other modern equipment. This ICU has 8 beds and all of them are functional which has been used by 70-80 patients so far. The peak month for medical cases is June to July where the number of patients increase to 125 to 150 per day. Among those who have used the ICU infrastructure, 70% belonged to the economically weaker section of the society. On an average 10 to 12 patients use the ICU beds in a month with an average bed-days being 2-3 days. With the construction with the new ICU with equipment like X-ray, ECG, ventilators, Bi-pap, machine, CS system, it has increased the access of the people and also enabled the Rural hospital to provide treatment during critical care. The MS agreed that the quality of treatment has improved after the intervention and with the modern equipment, the Rural Hospital is ready to give proper medical facilities during the Golden Hour of treatment post-accident or emergency and it has reduced the mortality by 10%. The X-ray machine has drastically reduced the cost of getting the X-rays done at private clinics. The intervention has also led in the reduction of referral cases by 5% to 10% due to the facilities available the ICU. The major functional challenges in operating the ICU as there are no dedicated or qualified/trained staff to operate the highly advanced equipment which has not let the ICU to be optimally utilized. Overall, the MS expressed the satisfaction of the new ICU and X-ray facility that has enabled the Rural hospital to cater to the treatment which was not possible earlier.

4.6.1.3 Safety Measures at the Rural Hospital

As mentioned by the MS, the Rural hospital has emergency doors and smoke detectors for the safety of both the staff and the patients. The hospital also has fire extinguishers in case there is a fire emergency at the hospital.

4.6.1.4 Awareness about CSR Interventions

The nearest APL plant is 5 kms from the Rural hospital and it was stated by the MS that under the CSR interventions, APL is working in Khandala block on the themes of education, health and sanitation in the villages and the schools. The MS was not aware of CSR interventions of other companies in the area.

4.6.2 ANM/GNMs

4.6.2.1 About the Rural Hospital

Viral infections, fever, diarrhoea, typhoid are common seasonal diseases occurring in the area. Apart from the Rural hospital, there are Primary Health Centre, are in the area. The Rural hospital has an average footfall of 70-80 per day. The nearest district hospital is at Satara which is more than 30 kms from the Rural hospital and major critical cases are referred there when the treatment facility is not available at the Rural Hospital. The Rural hospital is a multi-speciality hospital with OPD and IPD facilities, pathology, ICU, oxygen and X-Ray facilities. People usually visit the Rural hospital for regular check-up, pregnancies, X-rays and accident cases. The Rural hospital covers 25 to 30 villages as it is situated on the highway. The patients travel for 5 to 10 kms to receive the treatment to this hospital. The average annual medical expenses as stated by the GNMs is up to Rs. 10000/- as people mostly visit private health facilities for treatment. The GNMs also informed that in case of medical emergencies the people visit the District hospital.

4.6.2.2 Construction of the new ICU infrastructure and X-ray Facility

The construction of the ICU facility has led to an increase in the number of patients. The ICU is equipped with X-ray machine, Bi-pap machine, ventilators, suction machine, ECG machine, monitors, computers with other modern equipment. The GNMs were aware that the intervention was carried out by Jan Seva Trust with the support of APL. This ICU has 8 beds and all of them are functional. The peak month for medical cases is June to July where the number of patients increase to more than 500 per day. On an average 10 to 12 patients use the ICU beds in a month with an average bed-days being 1-2 days. With the construction with the new ICU with equipment like X-ray, ECG, ventilators, Bi-pap, machine, CS system, it has increased the access of the people and also enabled the Rural hospital to provide treatment during critical care. The GNMs agreed that the quality of treatment has improved after the intervention and with the modern equipment, the Rural Hospital is ready to give proper medical facilities during the Golden Hour of treatment post-accident or emergency. The X-ray machine has drastically reduced the cost of getting the X-rays done at private clinics and there has been an increase in number of patients using the X-ray facility. they also stated that the construction of ICU had reduced the cost of treatment which was much higher before. The intervention has also led in the reduction of referral cases due to the facilities available the ICU. The major functional challenges in operating the ICU as there are no dedicated or qualified/trained staff to operate the highly advanced equipment which has not let the ICU to be optimally utilized. Overall, the GNMs expressed the satisfaction of the new ICU and X-ray facility that has enabled the Rural hospital to cater to the treatment which was not possible earlier.

4.6.2.3 Safety Measures at the Rural Hospital

As mentioned by the GNMs, the Rural hospital has emergency doors and smoke detectors for the safety of both the staff and the patients. The hospital also has fire extinguishers in case there is a fire emergency at the hospital.

4.6.2.4 Awareness about CSR Interventions

The nearest APL plant is 5 kms from the Rural hospital and it was stated by the GNMs that under the CSR interventions, APL is working in Khandala block on the themes of education, health and sanitation in the villages and the schools. The MS was not aware of CSR interventions of other companies in the area.

4.6.3 Community Leaders

In-depth interviews were conducted with one Sarpanch and two Nagar Sewaks to understand their perception of the new ICU infrastructure with advanced equipment.

4.6.3.1 About the Rural Hospital

Viral fever and typhoid are common seasonal diseases occurring in the area. Apart from the Rural hospital, there are Primary Health Centre, are in the area. The Rural hospital has an average footfall of 70-80 per day. The nearest district hospital is at Satara which is more far from the Rural hospital and major critical cases are referred there when the treatment facility is not available at the Rural Hospital. All the community leaders stated that the Rural hospital is a has OPD and IPD facilities, pathology, ICU, oxygen, X-Ray facilities and to avail ICU facility. People usually visit the Rural hospital for regular check-up, pregnancies, X-rays and accident cases. The Rural hospital covers 25 to 30 villages as it is situated on the highway. The patients travel for 5 to 10 kms to receive the treatment to this hospital. The average annual medical expenses as stated by the community leaders is less than Rs. 5000/- as people mostly visit Rural or District hospital for treatment. for major health issues people visit private health facilities which increases their cost of treatment. The leaders also informed that in case of medical emergencies the people visit the District hospital.

Figure 4.8: Meeting with the Sarpanch



Source: MMPL Survey

4.6.3.2 Construction of the new ICU infrastructure and X-ray Facility

All the leaders were aware of the intervention and that it has been supported by APL. All agreed that the Rural hospital, being situated at the busy highway, witnesses many accident cases which was not in the capacity of the hospital to treat. Hence all the cases were referred to the District hospital increasing the mortality cases. The construction of the ICU has at least helped the rural hospital to take mild to moderate cases and provide treatment to such cases and decrease referrals to the District hospital and also has reduced mortality. The intervention has increased the number of patients and has decreased the referral to the District hospital. X-ray facility was also established along with the ICU as stated by the leaders. Earlier, for the treatment of critical cases people visited private health facilities or the District hospital, Satara for treatment. All the leaders agreed that the intervention has made the Rural hospital ready to treat critical accident cases and the hospital has also witnessed an increase in accident cases as the ICU facility has enabled to treat mild accident cases. The X-ray facility under the intervention made it possible for the people to avail the facility without visiting private clinics. All the leaders stated the ICU facility had all the advance equipment but it requires dedicated trained staff to operate the ICU and make it fully functional. On an average people used to spend between Rs. 15000/- to Rs. 20000/- before the intervention which has reduced to less than Rs. 5000/- after the intervention. With the increased awareness among the people about the new ICU facility at the Rural hospital, it has increased the access to the Rural hospital. All the leaders also agreed that the intervention has enabled the Rural hospital to be ready for future critical cases but would require dedicated qualified and trained staff.

4.6.3.3 Awareness about CSR Interventions

The nearest APL plant is as mentioned by all the leaders ranged from 2 to 8 kms from their villages and it was stated by the leaders that under the CSR interventions, APL is working in Khandala block on the themes of health but apart from the establishment of the ICU at the Rural hospital but could not specify other CSR interventions carried out by APL. Only one leader was aware of the of CSR interventions of other companies in the area i.e Ashtvinayak Glass Company that works with schools.

4.6.4 Focused Group Discussions (FGDs) with the Community Members

Five FGDs were conducted in Ajnuj, Asauli, Dawad Wadi, Morve and Wagoshi villages.

4.6.4.1 About the Rural Hospital

The respondents of Ajnuj and Asauli stated that they visited the Rural hospital and the respondents of Dawad Wadi, Morve and Wagoshi stated that they visited their nearest PHC for medical treatment. Besides this, all the respondents also stated that they visit private health facilities too for availing medical treatment. All the respondents also stated that they visited private health facilities, Rural hospital or the District hospital to avail critical care/accident treatment. BP Check-up, X-Ray, free medicines for Regular check-ups and treatment and oxygen facility were some facilities available at the Rural Hospital. Most of the respondents visit the Rural hospital some times as the PHC is nearer. Only the respondents of Wagoshi village mentioned that they rarely visit the Rural hospital as only visits when it is extremely necessary. All the respondents stated that they visited the Rural hospital to avail the X-ray facility. The respondents of Ajnuj, Asauli, Wagoshi and Morve also mentioned that they visited the Rural hospital for regular check-up and only the respondents of Morve mentioned that they visited the Rural hospital to avail oxygen facility.

Figure 4.9: FGD at Wagoshi Village



Source: MMPL Survey

4.6.4.2 Construction of the new ICU infrastructure and X-ray Facility

Almost all the respondents agreed that the ICU is important, but it is not being optimally used due to lack of trained staff to operate the ICU. Only the respondents of Ajnuj and Asauli stated that the ICU is used for critical illness, accident cases and snake bite cases whereas the respondents of Dawad Wadi, Morve and Wagoshi stated that only the X-ray facility is being used at the Rural hospital. The awareness of the construction of the ICU facility was limited among few respondents and those who were aware, they had the knowledge that the facility has been established by APL. Majority of the respondents of all the villages except for Morve stated that there was a need for the ICU to be established at the Rural hospital as both Pune and Satara District hospital is far for getting emergency treatment and was very difficult during the Pandemic to get proper treatment for critical cases. The respondents of Ajnuj, Asauli, Dawad Wadi villages agreed that with adequate trained staff the ICU establishment would definitely be useful for the community but all the respondents of all the villages were reluctant to get treatment in the newly constructed ICU due to lack of trained staff to operate the ICU. Even though the construction of the ICU has led the Rural hospital to have very advanced equipment but due to lack of trained technical staff/doctors it is not fully functional, and the respondents mentioned that only the X-ray facility has been very beneficial for them as this has resulted in reduced cost to get X-rays done at private clinics. All the respondents stated that they either visited the private health facilities or the Satara District hospital in case of medical emergency and whenever treatment was needed for critical care which was time consuming. Very few respondents had availed the services of the ICU for mild cases due to lack of trained staff. If the case was severe, they were referred to the District hospital. All the respondents agreed that the X-ray facility has improved and is functional and is used by majority of them. However, all the respondents agreed that they would visit the Rural hospital for treatment for critical care as their first resort. The average annual

expenditure on medical treatment as stated by the respondents of Asauli, Dawad Wadi, Morve and Wagoshi villages ranged between Rs. 10000/- to Rs. 20000/- whereas the average annual expenditure stated by the respondents of Ajnui villages was reported to be less than Rs. 5000/-. Though the Rural hospital is equipped with advanced technology and facilities, yet it has not been able to reduce the cost of treatment as mentioned by many respondents as they are not able to avail the services of the ICU fully due to lack of trained staff to operate the ICU infrastructure.

4.6.4.3 Awareness about CSR Interventions

Almost all the respondents were aware of the APL support in construction of the ICU facility, but many were not aware of other CSR interventions of APL. Few of the respondents of Dawad Wadi village could mention that APL, under its CSR intervention, works on the theme of education, health and water. Only some respondents were aware of the CSR interventions of other companies such as Praspe Casting Company that provided IEC material at the Anganwadis and Datwhyler Company as they have provided water filter in the villages.

4.7 Functionality of Major Assets provided under the Intervention

Under this intervention, APL had supported to the establishment of the ICU infrastructure at the Rural hospital Khandala which is located at Pune-Bangalore highway and is the first resort for accident cases. With the need for an high functional ICU to enable the Rural hospital to be ready for critical cases, the ICU was set-up by the implementing partner Jan Seva Trust, with the support of APL. The ICU was established with very advanced machines and equipment. All the equipment provided had a stock number registered to it in the format APL/CSR/2021-22/ICU BED-01. All the assets had this registered number mentioned instead of the logo of APL. Below are some major equipment that were provided and their status.

Table 4.2: Functionality of Major Equipment provided in the ICU

SI No.	Asset	Quantity	Stock no. registered	Functionality
1	Crash Cart	1	Yes	Functional
2	Stretcher on Trolley	1	Yes	Functional
3	Folding Wheelchair	2	Yes	Functional
4	Bed Head Panel	8	Yes	Functional
5	Multipara Monitors	8	Yes	Functional
6	Biphasic Defibrillator	1	Yes	Functional
7	ECG Machines 12 Channel	1	Yes	Functional
8	Ventilator	3	Yes	Functional
9	Suction Machines	2	Yes	Functional
10	Nebulizer	2	Yes	Functional
11	Laryngoscope set	2	Yes	Functional
12	Bipap	2	Yes	Functional
13	100 mA X-ray Machine	1	Yes	Functional
14	Computer Unit Set	1	Yes	Functional
15	Refrigerator 551 L double door	1	Yes	Functional
16	Analyser Machine	1	Yes	Functional
17	Tabletop Capnograph	1	Yes	Functional
18	ICU beds	8	Yes	Functional

Source: MMPL Survey

4.8 Case Study: Way to Recovery

Dhananjay Dhaygude, a resident of Ahire village, is a retired employee who used to work as a government labourer on contract and has very little income that he receives as pension which is not even sufficient to support the family of four members. He has two sons out of which one works as a daily wage labourer and the younger son is a student and will be completing his higher secondary education soon. His elder son, who is a semi-skilled labourer, earns around Rs. 400/- per day. His employment is erratic and is dependent on the requirement of work which leads to days that he is unemployed. With the small income of the elder son and Dhananjay's minimal pension the whole family income is less than Rs. 10000/- per month which makes it very difficult to maintain the expenses of the family. In 2022 Dhananjay was infected with Covid-19 and was treated at the Rural hospital as it was not possible to get treatment at private health facilities owing to his poor financial condition. Post his recovery, he suffered complications in breathing. They first visited the private health clinic to have a first aid care but he was informed that the cost of treatment would be approximately Rs. 5000/- per day as he will need oxygen supply and will have to be admitted in the ICU. This treatment offered was beyond their means to afford and they decided to visit the Rural hospital. His chest X-ray was done which concluded that there was a mild infection and was admitted in the ICU. He recalled the ICU to be well equipped with advance machines and oxygen facility. He availed the oxygen facility for few hours until he was stable and after 2 days in the ICU, he was shifted to the general ward till he recovered and was discharged with no expense to him. Had he availed the treatment at the private health facility, that would have cost him more than he could afford, and he would have to borrow from their relatives for his treatment or had he travelled to the District hospital, the time taken to avail the treatment would have perhaps, made his situation worse.

Figure 4.10: Interviewing



Source: MMPL Survey

4.9 Case Study: Stabilized at the ICU

Figure 4.11: Interaction with Mangesh



Source: MMPL Survey

Mangesh Wadekar of Ajnuj village, 35 years old farmer, who has his own agriculture practice. His son is 4 years old, and his wife is a home maker who sometimes also helps him in his agriculture practice. He is the only earning member of his family with the monthly income of less than Rs. 10000/- per month. The area is very prone to snakes and anyone working in the agriculture field is exposed to them which is a risk for everyone. During the monsoon season while he was working in his field, he was bitten by a snake which made him dizzy. He knew he needed help. He was rushed to the Rural hospital for treatment as he could not afford the treatment at private health facilities. The Rural hospital had recently been upgraded with the new ICU infrastructure. He was getting unconscious and was admitted to the ICU. He received the preliminary treatment at the ICU and also availed the oxygen facility as he was becoming breathless. His condition was becoming severe, and he was attended urgently. He was treated at the ICU with continuous oxygen support. After 24 hours, when his condition was stabilized, he was referred to the district hospital where he received the rest of his treatment and survived. It was because of the availability of the ICU at the Rural hospital that Mangesh could be provided by the preliminary treatment. He may have not survived

had he chosen to first visit the District Hospital which would have taken him more than 2 hours to reach.



Inferences of the Impact Study

5 Inferences of the Impact Study

In lieu of the previous chapter we have elucidated a detailed quantitative and qualitative assessment of the impact the ICU infrastructure support activity has created in the study geography. In this chapter, we have summed up the observations and challenges faced by the implementing NGO and beneficiaries and the responses we have collected from our field visits and observations. The brief outcomes and inferences of the “ICU Infrastructure Support Activity” are provided in the subsequent section:

5.1 Outcomes of the impact assessment study

The overall assessment exercise has compared various aspects of the area hospitals with respect to facilities and infrastructure, few components of service delivery as well as community engagement. With focus on improvement in facilities and infrastructure that can aid in providing better service delivery to the beneficiaries of the area.

The outcomes of the impact assessment study have been illustrated in the figure below:

Chart 5.1: Parameters of evaluation - outcomes of the impact assessment study

he IC and ray facility has been providing critical assistance benefits to the community.	he ray facility is being used by more no. of members.	ural hospital is dealing with the critical patients and providing emergency services.	he infrastructure have reduced their cost of treatment.	here is increase in the enrolments no. of patients in the rural hospital.
ural hospital is now able to handle the critical cases.	he beneficiaries are satisfied with the intervention.	ural hospital also deal critical health care of the local community and travellers along the ighway	he referral cases to district private hospitals have decreased.	he savings of the beneficiaries have increased tremendously.

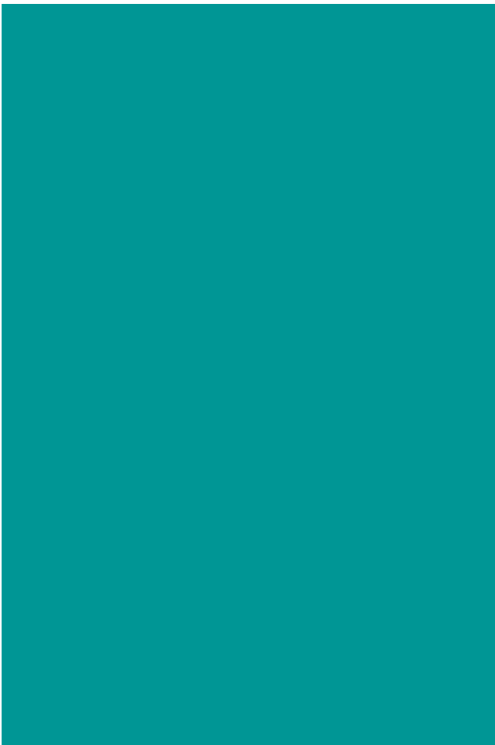
Source: MM Analysis

5.2 Gap areas as per the impact assessment study

Owing to the findings of the impact assessment study and as cited by the beneficiaries, mentioning below the gaps and deficiency areas of the ICU infrastructure support intervention:

Table 5.1: Identified Gap areas of the impact study

Parameters	Identified areas of gap
Relevance	<ul style="list-style-type: none"> The access of ICU facility of the rural hospital by the beneficiaries is less in comparison to X-ray facility
Effectiveness	<ul style="list-style-type: none"> The functionality of ICU facility is limited due to shortage of trained staff and doctors to operate the ICU facility
Efficiency	<ul style="list-style-type: none"> The readiness of the Rural Hospital for emergencies or future pandemics remains uncertain due to limited awareness about the ICU facility. Any severe cases are referred to the District hospital due to the lack of doctors and trained staff
Sustainability	<ul style="list-style-type: none"> While X-ray services are utilized, further treatment requires private hospital visits due to doctor shortages. The potential benefits of the ICU unit could be fully realized with proper staffing and training on the usage of equipment
Impact	<ul style="list-style-type: none"> The post intervention impact of ICU facility is lacking due to unawareness level. Lack of doctors and trained staff are hinderances in optimally utilization of the ICU.



Social Return on Investment (SROI)



6 Social Return on Investment (SROI) of the Intervention

The primary objective of conducting an SROI analysis is to assess the economic and social gains experienced by individuals affected by APL's investments in the intervention. The calculation of impact on primary beneficiaries is determined after recognizing pertinent outcomes and financial indicators. To ensure accurate evaluation without exaggeration, specific factors such as deadweight, drop-off, attribution, and displacement are deducted from the social benefits' valuation.

6.1 SROI for APL ICU Infrastructure CSR activity

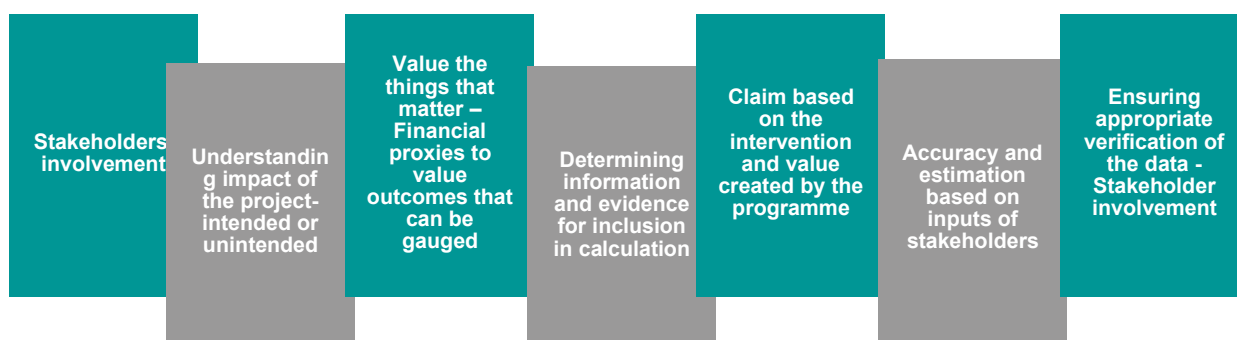
The **Evaluative** Social Return on Investment (SROI) framework has been employed by APL to retrospect the effectiveness of their ICU Infrastructure interventions. This approach involves comprehending and quantifying the outcomes stemming from program interventions, shedding light on areas of both social value generation and depletion. A crucial aspect is engaging stakeholders and assessing the significance they attach to various factors.

SROI is rooted in the theory of change, which aims to amalgamate distinct cases cantered around each project stakeholder. It outlines the envisaged transformation, the executed activities, the tangible outputs, and the resulting outcomes that coalesce to form the overall impact. This process also encompasses unintended consequences, assumptions, and proxies to elucidate how the intervention translates its objectives into tangible actions. Consequently, SROI, when devoid of a theory of change, presents an incomplete overview. This methodology provides an estimate of the social value generated per unit of currency invested.

6.1.1 Principle of SROI calculation exercise

The principles of SROI calculation that have been used to understand and determine the impact of the programme are enlisted below:

Chart 6.1: Principles of SROI



Source: <https://assets.kpmg.com/content/dam/kpmg/in/pdf/2019/01/Social-Return-on-Investment%E2%80%93Measuring-Impact.pdf>

6.1.2 Evidencing outcomes and including financial proxy value

Parameters/Indicators related output has been identified and against each, outcomes for stakeholders have been mapped and data is collected from the stakeholders including ANMs and beneficiaries which have been assessed based on their relative significance by valuing them.

There are four steps: Developing outcome indicators, collecting outcome data, establishing how long outcomes last and putting a value on the outcome. The same are indicated in the table below:

Table 6.1: Outcome and their Financial Value (ICU Facility)

Output	Outcome	Financial Proxy	Value (in INR)	Basis
Medical Treatment during Emergency	Treatment and handling critical medical case	Cost to get similar service (Doctor's consultation cost)	900/-	Doctor's consultation cost is Rs 300 every visit. 3 visits expected in each case of emergencies. Instead, the same is provided through Rural Hospital
Availability of ICU bed facility	Use of the ICU facility at the Rural Hospital rather than other health facility	Cost to get same service at private health facilities	12,000/-	Approx cost of ICU bed in private health facility is Rs 4,000 per day. At least 3 days hospitalization is assumed
Reduction in Travel cost	Travel cost reduced to the District Hospital to avail the facility	Travel cost from Rural Hospital to the District Hospital	4000/-	Approx cost of travel through hired vehicle from Rural Hospital to the District Hospital which is more than 50 kms in distance and included return journey
Provision of Medicines	Availability of medicines free of cost at the Rural Hospital	Cost of medicines from private pharmacy	5,000/-	Approx cost of medicines required for critical care to be Rs. 1000/- per day for 5 days
Wage/Income loss	Reduction in wage loss due to the unavailability of ICU facility at the Rural Hospital and visiting other health facilities	Daily wage	2,500/-	Approx daily wage to be Rs. 500 and loss of average of 5 days if referred to District Hospital
Total			Rs. 24,400/-	

Table 6.2: Outcome and their Financial Value (X-Ray Facility) Cost of Machine

Output	Outcome	Financial Proxy	Value (in INR)	Basis
Medical Treatment during Emergency	Treatment and handling critical medical case	Cost to get similar service (Doctor's consultation cost)	300/-	Doctor's consultation cost is Rs 300 every visit.
Availability of X-ray	Use of X-ray facility at the Rural Hospital	Cost of X-ray facility in private health facilities	500/-	Approx cost of availing x-ray facility in private health facility is Rs 500 per X-Ray.
Total			Rs. 800/-	

6.1.3 Establishing Impacts

This stage is to establish the impact which will attribute the changes or outcomes that would have happened in the absence of the intervention. The changes in the study region are not solely attributable to APL only as it is the result of various factors. Various factors such as deadweight, displacement, attribution, and drop-off are considered in this step and subtracted from the monetized outcomes if it is established that there are other contributing factors to the outcomes or change. There are four parts to this section:

- Attribution - Assessment of how much of the outcome was caused by the contribution of other organizations or people
- Deadweight – Assessment of whether an outcome would have been achieved regardless of the intervention assessed
- Drop-off – Assessment of the diminishing impacts and for the change in the value of money over time accounted for by the inclusion of estimates for drop-off and discount rate
- Displacement - Assessment of how much of the outcome has displaced other outcomes

6.1.4 Social value Generated

In the last stage, social value was calculated by adding all outcomes and subtracting from drop-off, displacement, deadweight and attribution which have had varied discounting effects based on secondary and primary research. Further, social value created (SVC) is divided with total investments to arrive at SROI value is indicated for each of the thematic areas in the table below.

Table 6.3: Current SROI of the ICU Facility

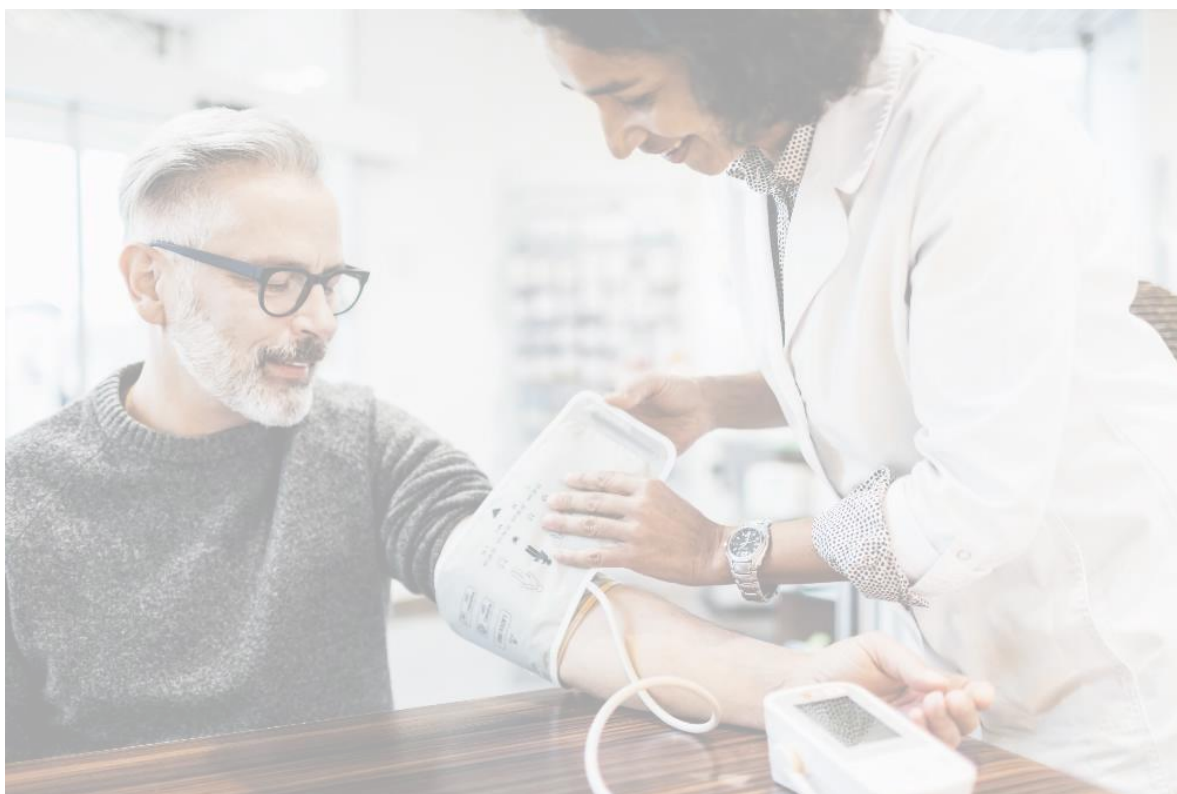
Outcome Value (based on the table 4.1)	Discounting effect to Establish Impact	Outcome Value (in INR)	No of Beneficiaries	Value (in INR)	Investment	SROI
24,400	50%	12,200	66	8,05,200	1,24,47,968	0.06

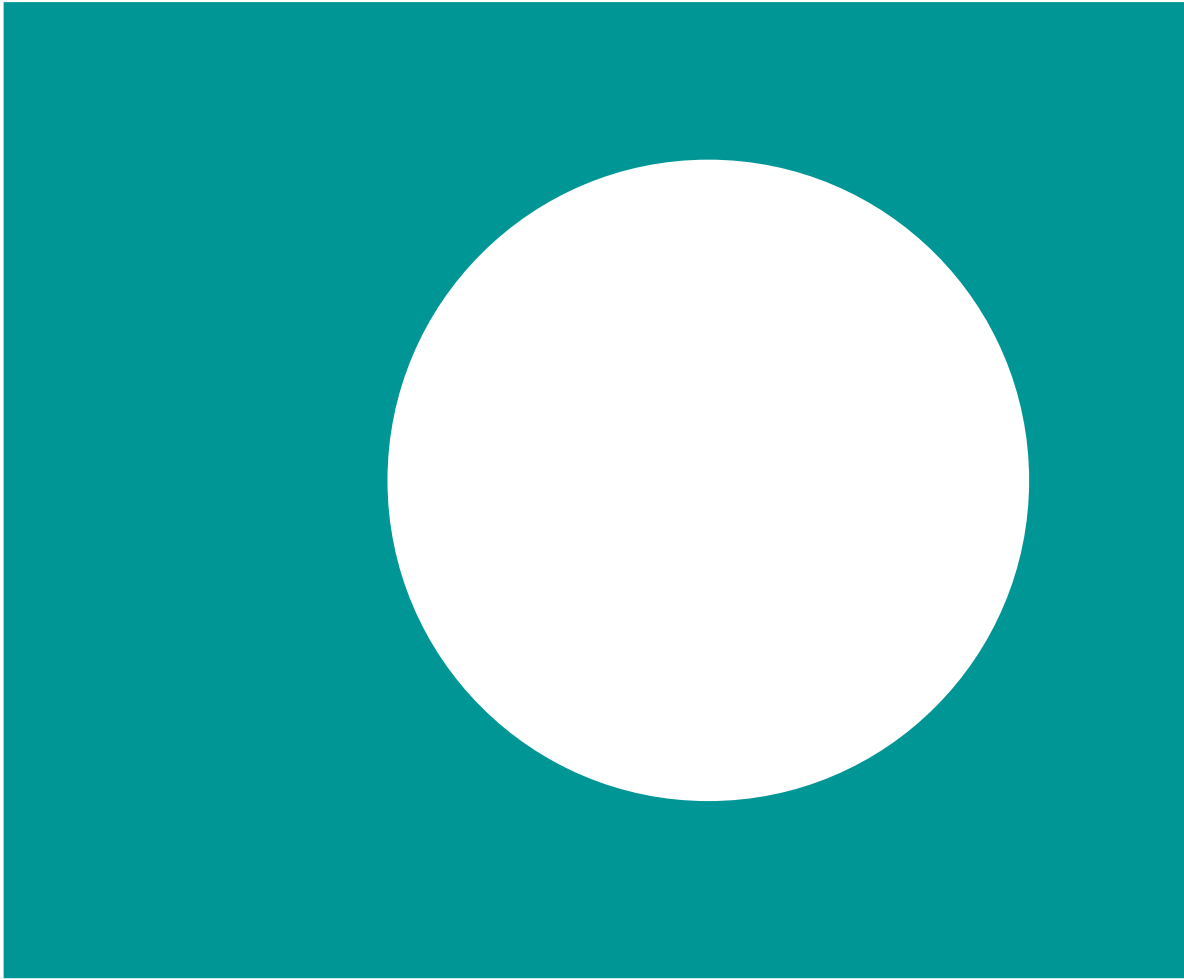
The current SROI states that Re. 1 spent = Rs. 0.06 social investment considering the current capacity of ICU facility in rural hospitals. The total beneficiaries of the ICU facility are 66 **according to the beneficiary list provided by the implementing agency.**

Table 6.4: Current SROI of the X-Ray Facility

Outcome Value (based on the table 4.1)	Discounting effect to Establish Impact	Outcome Value (in INR)	No of Beneficiaries	Value (in INR)	Investment	SROI
800	30%	560	2488	13,93,280	10,47,200	1.3

The current SROI states that Re. 1 spent = Rs. 1.3 social investment considering the current capacity of ICU facility in rural hospitals. The total beneficiaries of the ICU facility are 2488 **according to the beneficiary list provided by the implementing agency.**





Recommendations and Way Forward

7 Recommendations and Way Forward

During the course of the interactions with various types of beneficiary and stakeholder groups including, the government officials (medical officers, block health, health workers and ANMs), community leaders, PRI members, project manager, implementing NGO, it was evident that awareness about ICU facility needs to be enhanced through community engagement activities so that the CSR interventions can help in transforming the lives of the beneficiaries.

Drawing from the aforementioned understanding, the recommended suggestions that can support in enhancing the programme intervention are provided in the subsequent section.

7.1 Identifying possible areas of improvement and way forward

The programme has been designed quite well to provide equitable development of beneficiaries and aid them in ensuring better health facilities. The initial findings pertaining to the impact assessment have been put forth for clearer understanding on the areas where further improvement can lead to better impact on the beneficiaries.

In observance to the above gap areas mentioned in **Table 5.1**, a few recommendations have been suggested for addressing the community concerns have been mentioned herein, where APL could play a critical role in the implementation of the same.

Some of these include:

Table 7.1: Gaps and Suggestions

S. No.	Gap Areas	Suggestion
1.	The accessibility of the ICU facility at the rural hospital is comparatively lower than that of the X-ray facility.	<ul style="list-style-type: none"> Raising awareness about the ICU facility among both the community and health workers, particularly in nearby villages, is essential to enhance accessibility to the Area Hospital for emergencies, necessitating effective beneficiary record-keeping.
2.	The limited functionality of the ICU facility due to a shortage of trained staff.	<ul style="list-style-type: none"> Capacity building activities and trainings can be incorporated for existing staff Staff, surgeons and doctors should be hired for the ICU facility functionality. Also, capacity building of the existing staff should be done for proper utilisation of the facility.
3.	The Rural Hospital's readiness for emergencies or future pandemics is uncertain due to limited awareness about the ICU facility.	<ul style="list-style-type: none"> Conducting awareness campaign through SHGs, local administrative body, block level officials and word of mouth Addition of eye surgery and dental treatment in the rural hospital
4.	While X-ray services are utilized, further treatment requires private hospital visits due to doctor shortages.	<ul style="list-style-type: none"> Collaborate with regional/local/sub-local Community Based Organisations (CBOs) and NGOs for better community outreach. Implement better monitoring of enrolled beneficiaries through these organizations on a regular basis (fortnightly or monthly) with support from third-party monitoring agencies.
5.	The post-intervention impact of the ICU facility is hindered by a lack of awareness.	<ul style="list-style-type: none"> Collaborate with regional/local/sub-local CBOs and NGOs to enhance community outreach. Raise awareness about the installation of the ICU facility at the Area Hospital. Focus on

S. No.	Gap Areas	Suggestion
		educating and engaging community health workers (ANMs/ASHA workers/Anganwadi Workers) to drive increased patient engagement and participation.

These recommendations are aimed at bridging the gaps and maximizing the positive impact of the program on beneficiary communities. By actively engaging with stakeholders and implementing these suggestions, APL can contribute significantly to improving healthcare accessibility and outcomes for the beneficiaries.





Annexures

A. Annexures

A.1 Photographs of the Study

Figure 7.1: ICU Infrastructure



Source: MMPL Survey

Figure 7.2: Monitor in ICU



Source: MMPL Survey

Figure 7.3: Equipment in ICU



Source: MMPL Survey

Figure 7.4: Equipment in ICU



Source: MMPL Survey

Figure 7.5: X-Ray System



Source: MMPL Survey

Figure 7.6: Meeting with Hospital Staff



Source: MMPL Survey

Figure 7.7: ICU Bed



Source: MMPL Survey

Figure 7.8: X-Ray Machine



Source: MMPL Survey

Figure 7.9: FDG at Morve Village



Source: MMPL Survey

Figure 7.10: Meeting with Community Leader



Source: MMPL Survey

Figure 7.11: Quantitative Data Collection



Source: MMPL Survey

Figure 7.12: Quantitative Data Collection



Source: MMPL Survey

Figure 7.13: Quantitative Data Collection



Source: MMPL Survey

Figure 7.14: Quantitative Data Collection



Source: MMPL Survey

Figure 7.15: Quantitative Data Collection



Source: MMPL Survey

Figure 7.16: Quantitative Data Collection



Source: MMPL Survey



Leaf Savi

Impact Assessment of Oxygen Plant Support Activity Area Hospital, Patancheru (Telangana)

Final Report

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Abbreviations

ANC	Antenatal care
ANM	Auxiliary Nurse and Midwife
APL	Asian Paints Ltd.
ASHA	Accredited Social Health Activist
BPL	Below Poverty Line
CAPI	Computer aided Personal Interview
CBOs	Community-Based Organisation
CSR	Corporate Social Responsibility
DRDO	Defence Research and Development Organisation
ESG	Environment, Social and Governance
FGD	Focused Group Discussion
GOI	Government of India
ICU	Intensive Care Unit
IDI	In-depth Interview
IPD	Inpatient Department
KII	Key Informant Interview
LPM	Litre per Minute
MMPL	Mott MacDonald Pvt. Ltd.
MS	Medical Superintendent
NGO	Non-Governmental Organization
OPD	Outpatient Department
PHC	Primary Health Centre
PRI	Panchayati Raj Institutions
PSA	Pressure Swing Adsorption
RFP	Request for Proposal
RHC	Rural Health Centre
REEIS	Relevance, Effectiveness, Efficiency, Impact, Sustainability
RMO	Regional Medical Officer
SDG	Sustainable Development Goals
SROI	Social Return on Investment
SVC	social value created
TB	Tuberculosis
UPHC	Urban Primary Health Centre



Executive Summary

1 Executive Summary

1.1 Introduction

Asian Paints Ltd (APL) is one of India's leading paints manufacturing company. The CSR approach of APL focuses on the development of communities around the vicinity of their plants, they have also developed innovative programmes that leverage their capabilities as a paint manufacturer and home improvement service provider to enhance livelihoods of underserved communities through vocational training and skills development. Furthermore, to continue the CSR activities in the Patancheru near their plant, Sangareddy district, APL had set up an oxygen plant at the Government Area Hospital. The plant has a generation capacity of 500 litre per minutes with 30Nm³/Hr flowrate having purity of 93±3%. The plant is based on pressure swing adsorption (PSA) technology developed by DRDO. This plant was installed and commissioned at area hospital, Patancheru and was handed over to the hospital

Figure 1.1: Oxygen Plant installed by APL at the Area Hospital



Source: MMPL Survey

authorities in March 2022. The impact assessment of the intervention was carried out by following REEIS Framework namely Relevance (R), Effectiveness (E), Efficiency (E), Impact (I) and Sustainability (S).

1.2 Relevance

It was observed that the Area Hospital acted as the first resort for any medical need which has all required facilities and during the time of the Pandemic, the Area Hospital was also a designated Covid treatment centre with oxygen. There are 80 beds in the Area Hospital that has oxygen supply. Before the installation of the oxygen plant the Area Hospital was heavily dependent on oxygen cylinders from vendors for oxygen supply. During the time of the Pandemic, when there was an extreme crisis of the oxygen supply, the irregular supply and shortage of oxygen cylinders led to the installation of the oxygen plant at the Area Hospital. People usually visited the Area Hospital for regular check-up and for serious health issues and for pregnancies. For majority of the respondents the Area Hospital was within 5 kms of distance which saved time to get treatment. The awareness of the oxygen plant among the beneficiaries is immaterial as they had availed the oxygen facility during the time of emergency. Focus was to have an uninterrupted and regular oxygen supply rather than to create awareness on the installation of the oxygen plant.

1.3 Effectiveness

Among those beneficiaries who had availed the services of the ICU were satisfied by the facility. A little more than half of the beneficiaries of the ICU of the of the project group found the ICU facility to be good and one-third of them found the ICU facility to be excellent. Half of the project group and one-third of them stated that the oxygen facility and the ICU are the improved infrastructure at the Area Hospital. The awareness of the improved oxygen facility might be because the respondents had availed the oxygen facility at the Area Hospital. The installation of the oxygen plant has enabled the hospital to take up mild to moderate risk cases and critical care patients which was not possible before and have increased the number of IPD patients. It was observed that the majority of both project and control group the respondents stated that the improved ICU facility reduced the cost of treatment. Half of the beneficiaries who had availed

the ICU facility had spent less than Rs. 2000/- on the treatment and 46% of them mentioned that there was no cost incurred while availing treatment at the Area Hospital. It can be inferred that for initial treatment and not for severe emergencies, where the people have to visit the private health facilities or the District Hospital, the cost of treatment is low if it is being treated at the Area Hospital. A significantly large number of respondents who had availed the oxygen facility at the Area Hospital agreed that the installation of the oxygen plant has been able to reduce time to receive treatment for critical care, at least at the initial stage of the treatment. They also agreed that with the availability of regular oxygen supply has been able to reduce their time to travel to the District Hospital which is more than 20 kms away from the Area Hospital to avail oxygen facility during emergencies. With the reduction of time to avail the oxygen facility, which is available at the Area Hospital for no cost, it can also be concluded that this has reduced the mortality of the critical cases as the time taken to get treatment in such cases has reduced. A large number of the respondents who had availed the oxygen facility at the Area Hospital agreed that no cost was incurred for treatment. This shows that there has been a massive cost reduction of treatment for the patients after the installation of the oxygen plant at the Area hospital. 92% and 85% respondents agreed that the Area Hospital is ready to deal with critical cases and handle future Pandemic crisis respectively.

1.4 Efficiency

The installation of the oxygen plant has done away with the dependency on the oxygen cylinders and the hospital is self-sufficient for oxygen need which was stated by the Medical Superintendent. The installation of the oxygen plant at the Area Hospital has helped the patients to get proper and regular oxygen supply free of cost that has also been indicated by the project group. More than one-third project group stated that they visited the District Hospital to avail the oxygen facility before the installation of the oxygen plant at the Area Hospital. Within one year of the installation of the oxygen plant, it was stated by the stakeholders that the regular oxygen supply has improved the treatment facility at the Area Hospital. The oxygen facility at the Area Hospital has able to reduce the cost of treatment and has reduced the visits to the District Hospital.

1.5 Impact

Overall, majority of the respondents agreed that it was necessary of the oxygen plant to be set up at the Area Hospital. The respondents were of the opinion that the Area Hospital is ready to handle critical cases. Almost all the respondents who had availed the oxygen facility at the Area Hospital had a positive outlook towards the oxygen supply at the Area Hospital. Those who had use the oxygen facility were satisfied by the oxygen supply. As stated by the Medical Superintendent of the Area Hospital, the installation of the oxygen plant has been able to reduce the dependency of the Area Hospital for oxygen cylinders from vendors which has resulted in providing better treatment to critical care patients which has reduced the cost of treatment for the patients and also minimized wage loss that might happen if the treatment was carried out at other health facilities. Since the installation of the oxygen plant the Area hospital has witnessed an increase in the number of patients by approximately 50%-60%.

1.6 Sustainability

There is a need to create awareness of the installation of the oxygen plant among the health workers to increase the access of the oxygen facility at the Area Hospital. The study revealed that the quality of treatment has improved after the installation of the oxygen plant but there are technical issues in the plant that leads to non-functioning of the plant and is beyond the capacity of the hospital staff to repair due to lack of technical knowhow to maintain the oxygen plant. The capacity of the plant is 500 LPM but the utilization is 100-150 LPM which can be increased with the increase in the number of patients using the oxygen facility. Partnering with regional/local/sub local Community Based Organisations (CBOs), ASHA/Anganwadi workers and NGOs for better community outreach and information dissemination about the installation of the oxygen plant at the Area Hospital to increase the access of the oxygen supply in the Area Hospital.

1.7 Maintenance of the Oxygen Plant

The capacity of the oxygen plant is to produce 500 LPM and the actual utilization of oxygen is 100-150 litres. A separate register is maintained by the hospital staff to monitor the usage of the oxygen facility. Maintenance of the oxygen plant is extremely challenging as the hospital staff does not have the technical expertise to maintain the oxygen plant. Two hospital staff were trained initially on the operational aspect after the installation of the oxygen plant but in case of any technical fault, the hospital is dependent on the technical experts of the Oxygen plant company who try to work remotely on the issue with the help of the hospital staff which takes considerable time. Till the time the oxygen plant is repaired, it is not functional disrupting the oxygen supply. Due to the lack of a technical expert the functionality of the oxygen plant is hampered.

1.8 Recommendations

Awareness activities in the villages near the Area Hospital is needed for the health workers to be aware that there is an oxygen plant at the Area Hospital to increase the access to the Area Hospital for emergency cases. The oxygen plant has technical issues that leads to the interruption in the functioning of the oxygen plant and needs a dedicated technical resource who is responsible for the maintenance of the oxygen plant to reduce any non-functionality of the oxygen plant. Partnering with regional/local/sub local Community Based Organisations (CBOs) and NGOs for better community outreach is recommended providing better medical facilities to reduce the cost of the patients. Engaging the community health workers on the awareness and advantages of the oxygen plant to encourage the community to use the oxygen facility at the Area Hospital.

A blurred photograph of a hospital corridor. In the foreground, an IV drip is visible, hanging from a stand. The background shows a long, brightly lit hallway with people walking, but they are out of focus. The word "Introduction" is overlaid on the left side of the image.

Introduction

2 Introduction

2.1 Background

Asian Paints Ltd (APL) has come a long way since its small beginnings in 1942. It was set up as a partnership firm by four friends who were willing to take on the world's biggest, most famous paint companies operating in India at that time. Over the course of 25 years, Asian Paints became a corporate force and India's leading paints company. The CSR approach of APL focuses on the development of

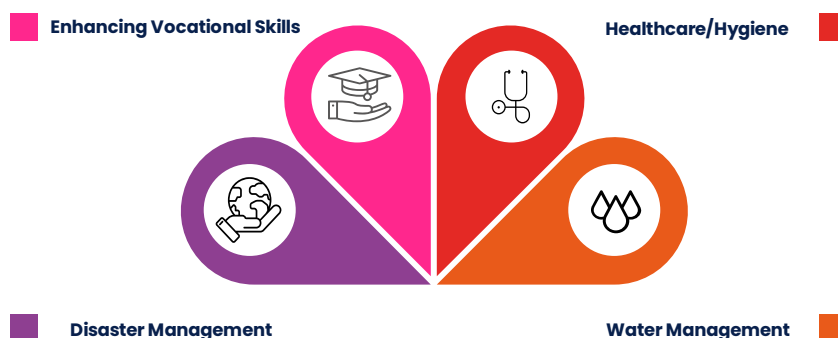
communities around the vicinity of their plants, they have also developed innovative programmes that leverage their capabilities as a paint manufacturer and home improvement service provider to enhance livelihoods of underserved communities through vocational training and skills development.

Furthermore, to continue the CSR activities in the Patancheru near their plant, Sangareddy district, APL plans to undertake the Impact Assessment of Oxygen Plant Support Activity Area Hospital, Patancheru (Telangana).

2.2 CSR Intervention of APL

The Asian Paints under its CSR interventions in 21-22 extended support to area hospital, Patancheru to set up medical oxygen plant so that to ensure the hospital is ready to generate and supply adequate oxygen to the patients at the time of medical emergencies. The plant has generation capacity of 500 litre per minutes with 30Nm³/Hr with purity 93±3% based on pressure swing adsorption (PSA) technology developed by DRDO. This plant was installed and commissioned at area hospital, Patancheru and was handed over to the hospital authorities in March 22. This oxygen plant has done away with the need for transporting liquid medical oxygen and hospital has become self-sufficient to meet the needs of 80 oxygen beds it has. This regular oxygen supply has helped the Area Hospital, Patancheru to be prepared to fight any future pandemic situation and to deal with other health crises/emergencies.

Figure 2.1: Asian paints CSR Thrust Areas



Source: <https://www.asianpaints.com/about-us.html>

2.3 Demographic Description of Sangareddy

Map 2.1: Map of Sangareddy District

Sangareddy district, is a district in the Indian state of Telangana. This district contains a part of the Hyderabad Metropolitan Region. The district shares boundaries with Medak, Medchal, Vikarabad, Kamareddy and Rangareddy districts and with the state boundary of Karnataka. The geographical area of Satara district is 4403 Sq. Km. As per the Census 2011, the total population of the Sangareddy district was 15.27 lakh with a population density of 347 per square kilometre. Out of the total population, 65.31% reside in rural areas while 34.69% are in urban areas. The ratio of female population per thousand of male was 965. Out of the total population, 18 percent belong to SC and 6% percent to ST communities. The district has a literacy level of 56 percent. Patancheru is located in the north-western end of Hyderabad. It is an industrial zone located about 32 km from the city centre on the Hyderabad-Solapur highway, and around 18 km from HITEC City. Earlier, it was the headquarters of Bidar and Gulshanabad revenue divisions.



Table 2.1: Demographics of Sangareddy District

Sl no.	Indicators	Values
1	Area in Square Kilometre	4403
2	Number of households	329208
3	Total population	1527628
4	Male Population	777235
5	Female Population	750393
6	Sex Ratio	965
7	Scheduled Castes population	276971
8	Scheduled Tribes population	86710
9	Total Literates	853960
10	Male Literates	494705
11	Female Literates	359255
12	Total workers	688156
13	Male Workers	428642
14	Female Workers	259514
15	Total Cultivators	109650
16	Male Cultivators	72728
17	Female Cultivators	36922
18	Total Agricultural labourers	298990
19	Male Agricultural labourers	140391
20	Female Agricultural labourers	158599
21	Health Sub-Centres	198
22	Primary Health Centres	30
23	Community Health Centres	4
24	Area Hospitals	2
25	District Hospitals	1

Source: Planning Department, Sangareddy – Government of Telangana

Table 2.2: Demographics of Patancheru

SI no.	Indicators	Values
1	Area in Square Kilometre	212
2	Number of households	27,265
3	Total population	1,12,936
4	Male Population	57,763
5	Female Population	55,173
6	Scheduled Castes population	16,518
7	Scheduled Tribes population	2,008
8	Total Literates	70,864
9	Male Literates	40,173
10	Female Literates	30,691
11	Total workers	47,273
12	Male Workers	33,323
13	Female Workers	13,950
14	Total Cultivators	2,784
15	Male Cultivators	2,045
16	Female Cultivators	739
17	Total Agricultural labourers	5,906
18	Male Agricultural labourers	3,014
19	Female Agricultural labourers	2,892

Source: District Census Handbook - Medak

2.4 Need of the Study

Patancheru is a major industrial hub of Telangana having many companies set up their plants in this area. This also includes Asian Paints. During the Pandemic there was oxygen need throughout the country for which the hospitals to be ready to support critical medical cases that needed oxygen supply. The Asian Paints under its CSR interventions in 2021-22 extended support to area hospital, Patancheru to set up medical oxygen plant so that to ensure the hospital is ready to generate and supply adequate oxygen to the patients at the time of medical emergencies. The plant has generation capacity of 500 litre per minutes with 30Nm³/Hr with purity 93+3% based on pressure swing adsorption (PSA) technology developed by DRDO. This plant was installed and commissioned at area hospital, Patancheru and was handed over to the hospital authorities in March 22.

2.5 Objectives of the Study

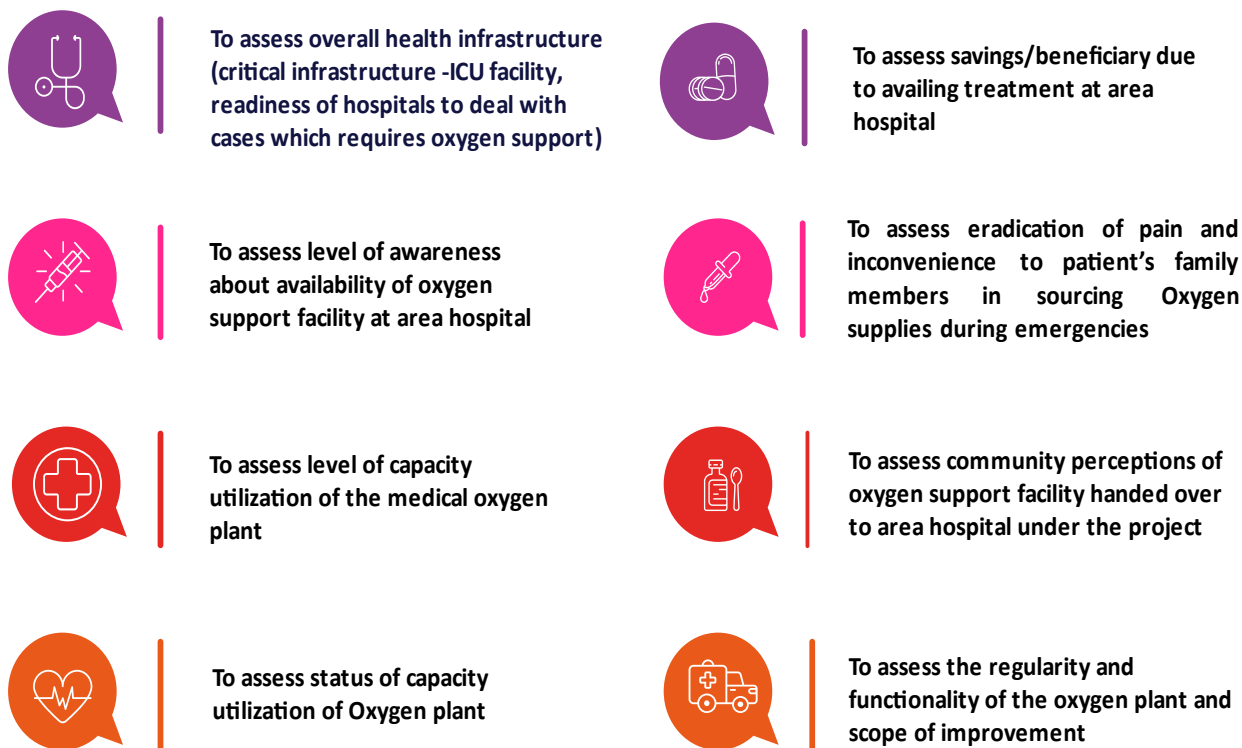
The scope for this study has been clearly laid out by the client in the RFP of the study. This involves the consultant to undertake an Impact Assessment of Oxygen Plant Support Activity at the Area Hospital, Patancheru (Telangana).

Figure 2.2: The Area Hospital, Patancheru



Source: MMPL Survey

Figure 2.3: Objectives of the Study



Source: MMPL

2.6 Present Scenario

Sangareddy district has the total population of 15,27,628 and has total 3,29,208 according to Censes 2011. It has the total population density (per sq. km) of 347. This district has one District hospital and two Area Hospital, one of which is located in Patancheru. The Government Area Hospital covers more than 20 villages and has all the facilities to handle mild to moderate critical cases. Considering the need of oxygen supply in the Area Hospital, as it was heavily dependent on the oxygen cylinders, an oxygen plant was set up at the hospital through the CSR initiatives of APL. The proposed sample of the of the study was to cover 200 beneficiaries of the oxygen plant and 100 control sample who had availed the services of the Area hospital but had not used the oxygen facility. However, keeping in mind the non-responses and unavailability of the respondents, the total sample covered for the study were 241 beneficiaries of the oxygen plant (project group) and 131 respondents of the control group from the nearby villages of the Area hospital. The Area Hospital is the sub-district hospital which has the capacity to handle more than 500 OPD patients and 100 In-Patients in a day with all the basic facilities, specialist doctors and ICU facilities for critical cases. The oxygen plant was set up by Child Survival India, a non-governmental organization, with the support of APL CSR. This oxygen plant has the capacity of 500 LPM that would support 80 beds of the Area Hospital.

Figure 2.4: Oxygen Plant at the Area Hospital



Source: MMPL Survey

2.7 Alignment with Schedule VII of the Companies Act, 2013

Corporate Social Responsibility (CSR) Policy elaborates the activities to be undertaken by the Company as named in Schedule VII to the Companies Act 2013 and spend. The activities should not be the same which are done by the company in its normal course of business but aligned to Schedule VII which has been laid down by Ministry of Corporate Affairs, Government of India. The CSR activities under this schedule has been defined in 11 categories and the company has to ensure that the activities included in its CSR Policy fall within the purview of these activities. Under the CSR of APL, the oxygen plant was set up at the Area Hospital, Patancheru which is a sub-district hospital covering more than 20 villages. This intervention is also aligned with Schedule VII of the Companies Act, 2013.

Table 2.3: Alignment of the Intervention with Schedule VII of the Companies Act, 2013


No. of Activity according to Schedule VII	Activity	Alignment of the Intervention
(i)	Eradicating hunger, poverty and malnutrition; promoting health care including preventive health care and sanitation including contribution to the 'Swachh Bharat Kosh' set-up by the Central Government for the promotion of sanitation and making available safe drinking water	Completely Aligned


2.8 SDG Alignment of the Proposed Intervention

2.8.1 Sustainable Development Goals (SDGs)

In accordance with the thematic areas, as considered for the impact assessment study, have been mapped with the 17 SDGs to show the similarity between the Intervention and the nationally adopted SDGs in the table 2.4. The intervention is also aligned with the 'Social' principle of ESG.

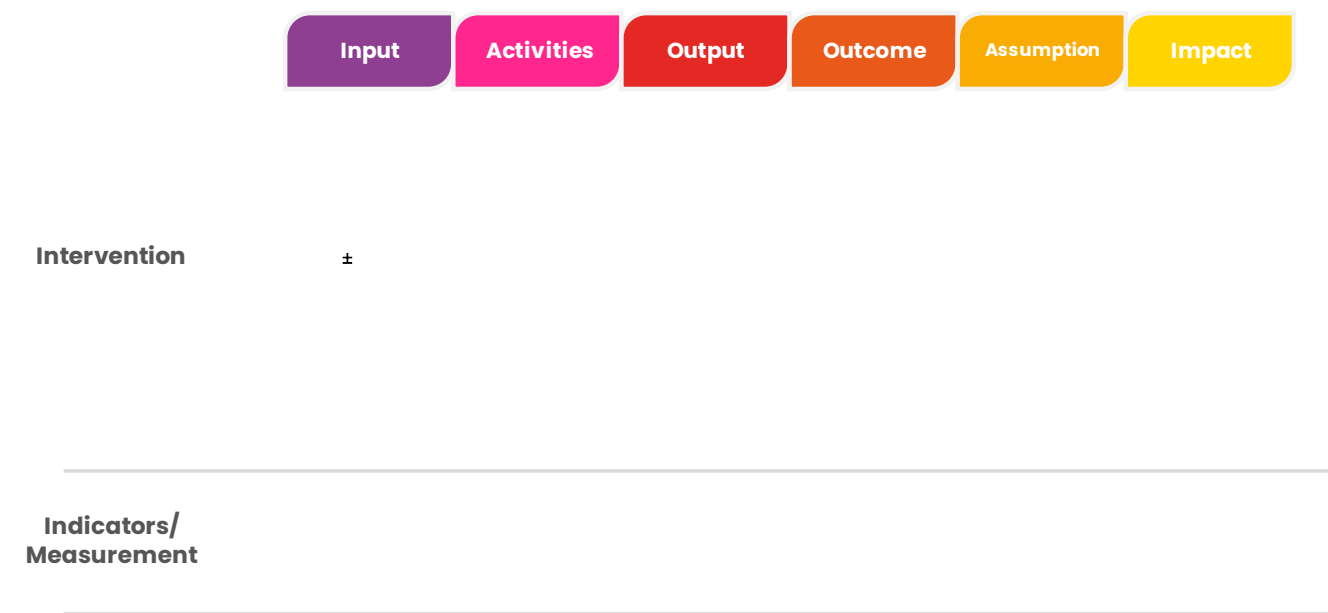
Table 2.4: Alignment of the Intervention with Sustainable Development Goals (SDGs)

SDG Goals	Indicators	Sub-indicators	Alignment with the Intervention
 Goal 1. End poverty in all its forms everywhere	1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable	1.3.1 Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable	Partially Aligned
	1.a Ensure significant mobilization of resources from a variety of sources, including through	1.a.1 Total official development assistance grants from all donors that focus on poverty reduction as a share of	Partially Aligned

	enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions	the recipient country's gross national income	
 <p>Goal 3. Ensure healthy lives and promote well-being for all at all ages</p>	3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	3.1.1 Maternal mortality ratio	Partially Aligned
	3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	3.2.1 Under-5 mortality rate	Partially Aligned
		3.2.2 Neonatal mortality rate	Partially Aligned
	3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents	3.6.1 Death rate due to road traffic injuries	Completely Aligned
	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	3.8.1 Coverage of essential health services	Completely Aligned
		3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income	Completely Aligned

2.9 Theory of Change

Figure 2.5: Theory of Change



Source: MMPL Analysis

Approach and Methodology

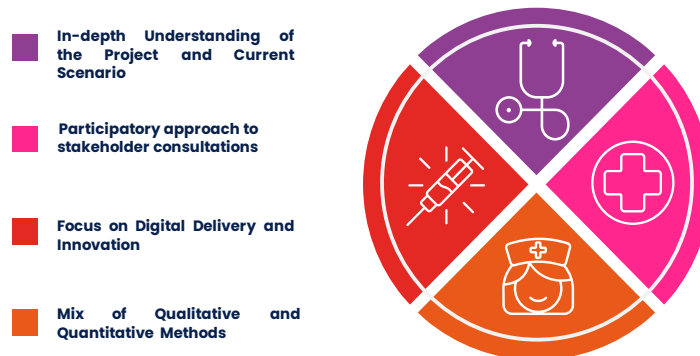
3 Approach and Methodology

3.1 Approach for the Assignment

3.1.1 In-depth Understanding of the Project and Current Scenario

To conduct a comprehensive assessment study for any project, it is imperative to scan the horizon under purview and gauge full context of existing and developing operational environment of the locality. In that regard, a review of the census/ district reports, district portal/ surveys conducted, and other available reports was conducted to gather a basic understanding about the socio-economic context of the project area. This exercise only aided in gauging the existing scenario but also paved way in understanding the impact of the oxygen plant in the community.

Figure 3.1: Approach for the Assignment



Source: MMPL

3.1.2 Participatory approach to stakeholder consultations

Participatory research is based on its fundamental principle that the subjects of the research are involved as partners in the process of enquiry, and their knowledge and capabilities are respected and valued. Based on pillars of participatory approach, our experienced delivery team will develop an inter-personal relationship with the local people to gauge needs of the community. Considering the nature of this assignment, it is recognised that the stakeholders had not only been involved in gathering data for the assessment but also had been instrumental in successive cycles of analysis, reflection, and action. In that regard, a participatory approach was adopted to bring out the views of local people, challenges they faced, and potential solutions to those problems.

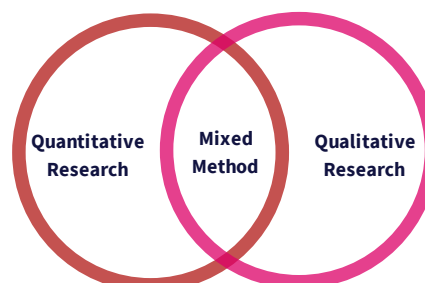
3.1.3 Focus on Digital Delivery and Innovation

Digital tools was used for collection of good quality data minimising the scope of errors during data collection. For this, Computer Assisted Personal Interview (CAPI) software compatible with Android was designed for data collection. Data from a CAPI based software could be easily exported in a format suitable for data analysis. Recognising the importance and role of beneficiaries in providing feedback on the oxygen plant, a list of respondents was compiled with their basic information which can be used by the client for other purposes. Geo-tagged and time-stamped pictures were taken with consent while conducting qualitative research.

3.1.4 Mix of Qualitative and Quantitative Methods

Both qualitative and quantitative methods was adopted as part of our approach for this study. Leveraging on a mix of these tools had not only helped us gather data about the existing scenario/ factual information but will also helped us to identify challenges and feedback of the community in detail. The status and socio-economic related variables might vary across localities depending upon their socio-economic status. Therefore, through the quantitative assessments, important aspects were imperative to capture including- socio cultural norms, enterprising environment and medical facility usage pattern which have long term and short-term bearing on the project outcome. On the other hand, qualitative methods was adopted to explain the perception of the community on the installation of the oxygen plant at the Area Hospital.

Figure 3.2: Mixed Method



Source: MMPL

3.2 Triangulation of Research Tools

A mixed method study was proposed keeping in mind the key research concerns and the diversity in the stakeholders. The quantitative survey using structured questionnaires helped to understand the impact of the installation of the oxygen plant on the target community. It clearly identified the real and current situations pertaining to health and provision of oxygen has been able to provide better healthcare for the critical care patients.

It was primarily helped to generate data which could be used to assess the impact of the installation of the oxygen plant on the community and provide recommendations. The qualitative data on the other hand with in-depth interviews, key informant interview (KIIs), FGDs conducted with key informants was be able to go deeper into the attitudes and the belief systems held by the different stakeholders. This helped in not just identifying the gaps but also provide insight on the sustainability of the intervention.

The list of stakeholders along with the research tool to be used to gauge their response has been presented in the matrix below.

Table 3.1: List of stakeholders and their respective Research Tools

Research Methods	Respondent Type	Tools
Quantitative	Beneficiaries	Structured Questionnaire
	Block Development Officer	In-Depth Interview
	Medical Officer	In-Depth Interview
	Health Workers	In-Depth Interview
	ANM	In-Depth Interview
Qualitative	Community Leaders	In-Depth Interview
	PRI Members	In-Depth Interview
	Project Manager	In-Depth Interview
	Implementing NGO	In-Depth Interview
	Patients and family members	Focused Group Discussion

3.3 Research Design

The assessment was carried out by focusing the programme assessment under five distinct dimensions, namely, Relevance (R), Effectiveness (E), Efficiency (E), Impact (I) and Sustainability (S). Through this, the assessment measured the programme's success in achieving the desired outputs and outcomes.

3.3.1 Parameters for Evaluation

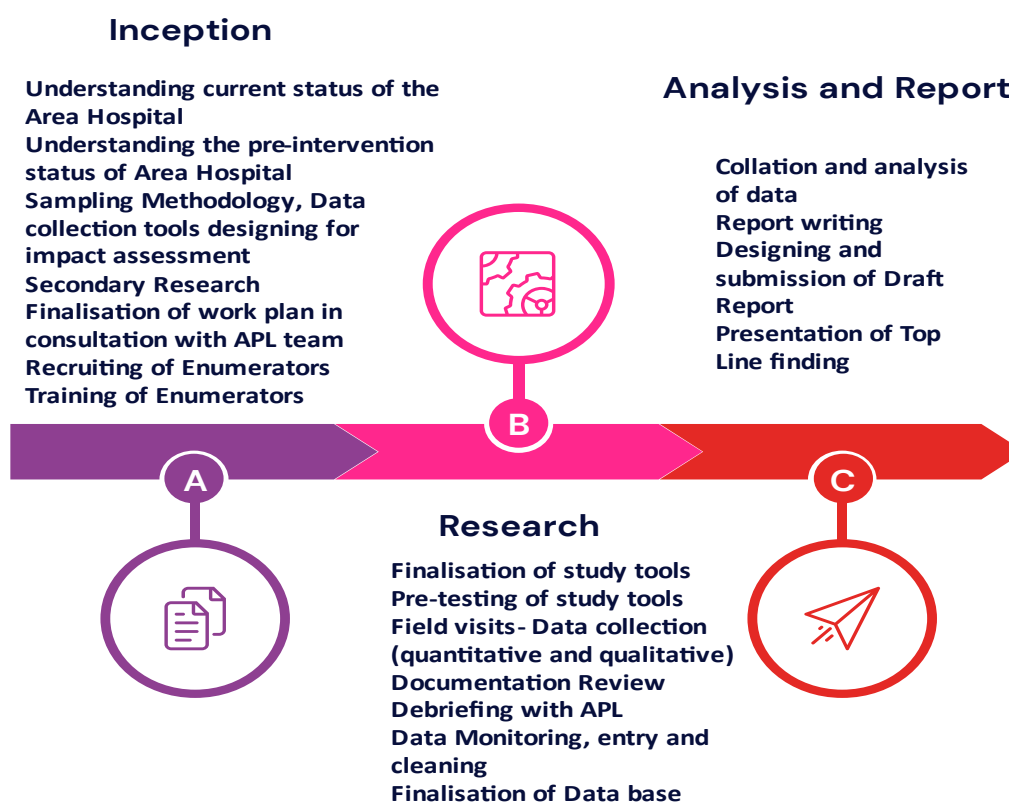
The impact assessment measured the outcomes of the project interventions by establishing causality which is important and necessary for assessment. This assessment would assess three aspects progress, processes, and impact of the project. These aspects were measured through quantitative and qualitative assessment tools, which was based on the REESI framework. The major output at this stage shortlisted the requisite data collected during site visits. An illustrative list of parameters covered were as follows:

Figure 3.3: List of Parameters for Assessment



3.4 Stages of Implementation

Figure 3.4: Stages of the Assessment Study

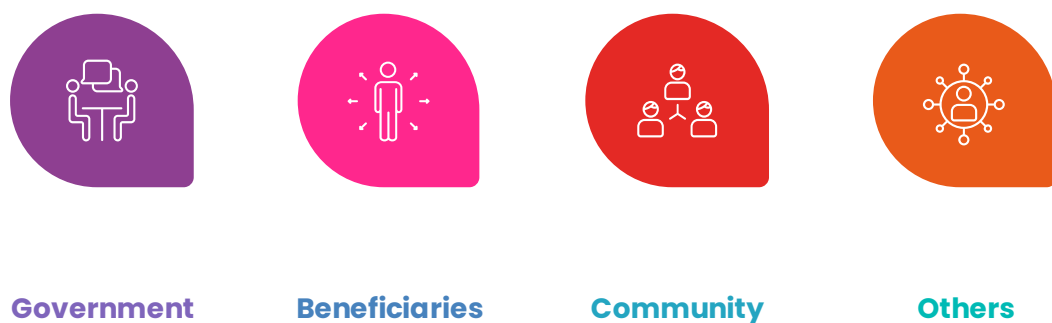


Source: MMPL Analysis

3.5 Stakeholder Mapping

Based on the review of all relevant literature, a detailed mapping of key stakeholders was undertaken to identify their roles and involvement in the programme. The RFP enlisted the key respondents for the assessment, which have been mapped below. The stakeholder matrix was finalized in consultation with APL team.

Figure 3.5: Stakeholder Mapping



Source: MMPL

3.6 Sampling Methodology

Quasi experiment study design was followed to conduct the impact assessment study. For the study, sample from the villages of Patancheru covered by the area hospital were surveyed as primary sampling units. For this assignment the Probability Sampling method was followed. This is a sampling technique which the project beneficiaries will be selected for the primary survey. Since the beneficiaries availed the oxygen services in the area hospital considering in the range of 10000 to 100000 (since it is not stated in the RFP) with the confidence interval of 95% with 7% margin of error, a total sample of 196 respondents, which was rounded off to 200 and the same was proposed for the quantitative survey for beneficiaries. 2:1 ratio was proposed to cover non-intervention respondents covering 100 respondents who have not availed the services of the new oxygen plant for the study which would help to understand the level of awareness about the improved infrastructure and medical facilities at the area hospital along with their willingness to avail the services. Although, 241 of the target sample (project group) and 131 Control Sample (Control Group) were covered for the study.

Table 3.2: Proposed Sample Distribution for the Study

Research Method	Respondent Category	Tools	Target Sample	Control Sample	Total Sample
Quantitative	Beneficiaries	Structured Questionnaire	241	131	372
	Sub-Total		241	131	372
Qualitative	Block Development Officer	Semi Structured Questionnaire (IDI/KII)	1		1
	Medical Officer		1		1
	Health Workers		2		2
	ANM		1		1
	Community Leaders		2		2
	PRI Members		1		1
	Project Manager		1		1
	Implementing NGO		1		1
	Patients and family members	FGD	5		5
	Sub-Total		15		15
Grand Total			256	131	387

3.7 Tools for Data Collection

Both qualitative and quantitative methods were adopted as part of our approach for this study. The enumerators collected the quantitative information from the beneficiaries whereas the MMPL team collected qualitative information from the community members, implementing partners and APL project team. The study tools were prepared based on findings from the desk review as well as discussions with APL team. The survey tools was pre-tested to fine tune the survey tools. A brief on the learnings from pre-testing exercise and subsequent improvements in the tools was shared with APL team. The survey tools was translated in Telugu so that they are appropriately coded and are useful in obtaining relevant responses. The translation process was undertaken carefully so that the interpretation was simple and does not invite unintended responses. The study instrument were handed over to language experts for translation into Telugu and further was reviewed to verify the correctness of the translation in terms of both words and phrases and structuring of sentences.

3.8 Field Data Collection Methodology and Tools

All quantitative data was collected through **computer assisted personal interviewing (CAPI)** model while qualitative research is proposed through paper-based survey where in-depth interview is proposed. A thorough survey manual and protocol was developed for data collection and submission of the data gathering and analysis centre. Team followed the systematic data gathering and submission process to ensure timely collection and passing of information to right hands considering confidentiality of data for further process and analysis.

The MMPL researchers collected the qualitative information from opinion makers and community leaders, PRI members, Medical Superintendent, health workers, ANMs, family members of the patients, NGO partners and APL team.

For obtaining quantitative informant and understand the different emerging needs of the areas, a household Survey tool was devised by the team. The team used different qualitative tools like Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) to understand and obtain the qualitative data about the impact of the oxygen plant on the community and how it has been crucial in providing treatment to critical care patients requiring oxygen.

3.9 Data Analysis Methodology

3.9.1 Quantitative Analysis

The proposed methods for quantitative analysis are detailed in the following:

3.9.1.1 Descriptive analysis

This was used in most evaluations and is ideal with limited sample size. Descriptive techniques such as frequency and mean of values was computed. The insights were also cross tabulated wherever possible. The primary analysis was integrated with the secondary meta-analysis, providing quantitative insights into areas such as access, participation, and satisfaction of beneficiaries with the project.

3.9.1.2 Frequency tables

This was used to add insights of ‘frequency statistics’ to identify the most/ least effective aspects of the intervention. Based on the most frequently answered category in the survey, the total number of responses was calculated and then the analyst divided the number in each category by the total.

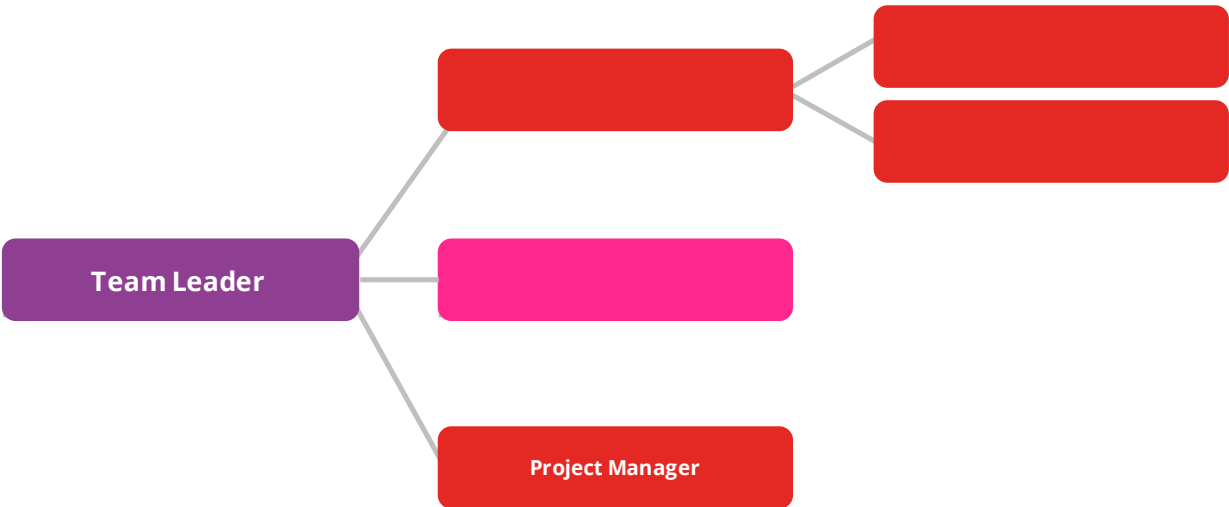
3.9.2 Qualitative Analysis

Qualitative data from the stakeholders from the respondents provided the necessary context to explain and nuance the quantitative findings. Both qualitative and quantitative insights were integrated with the literature review and field insight reports to derive supporting or contrasting insights.

3.10 Project Management Team

The project was primarily managed by Three members of the core team which included the Team Leader, Project Manager and the Database and Research Analyst. The Field team includes Field Coordinator and support staff which includes Field Supervisor and field enumerators. Project Manager was responsible for the overall management of the evaluation and Team leader was responsible for finalization of the framework of the assessment, designing indicators and format for assessment, developing tools and reports of the assessment. The Field Coordinator conducted the field visit to conduct the IDI/FGD along with qualitative survey. The team structure is represented as follows:

Figure 3.6: Team Structure



Source: MMPL

3.11 Research and Ethical Protocol

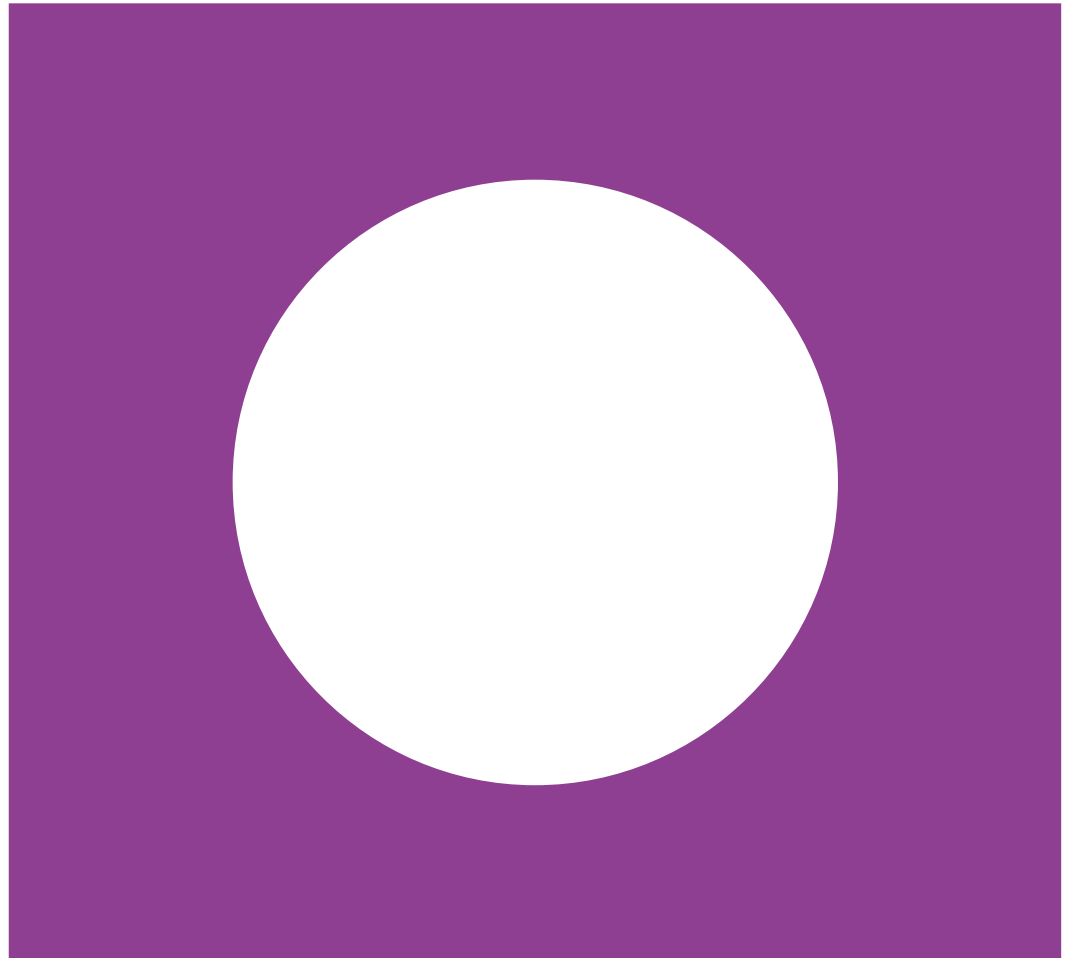
In case of research the importance of ethical considerations while conducting the study maximises and hence it is matter of paramount importance to understand and follow the ethical standards during the study. Our experts followed highest ethical considerations and propose to employ the same in this project. The assessment agency abides by standard research ethical protocols. This involves:

- **Do no Harm:** Understanding that it is best to safeguard the interest of the participant, avoiding provoking reaction to any traumatic experience or situation during the interview.
- **Privacy and Anonymity:** Ensuring privacy and anonymity of participants by removing identifying information from the records. In case the information is decided to be made public, a prior permission should be obtained from the participants
- **Confidentiality:** Confidentiality to be dealt with high responsibility, especially confidentiality of vulnerable people to be dealt with more sensitivity.
- **Informed Consent:** Understand the responsibility of apprising participants regarding the nature of the study, post which the respondents may or may not decide to participate in the study.
- **Intrusiveness:** Ascertain that the conduct of the data collectors is not excessively intrusive in nature – be it intruding their time, space, or personal life

3.12 Limitation of the Study

- The major challenge was to obtain the beneficiary list from the Area Hospital which took time and when the list was received it only had the contact details of 201 beneficiaries out of the total 286 beneficiaries.
- The beneficiary list received did not mention the name of the village of the beneficiary making it challenging to locate them for the study.
- The extreme rainy weather delayed the fieldwork and challenging to travel in the villages and locate the beneficiaries.





Analysis and Findings

4 Analysis and Findings

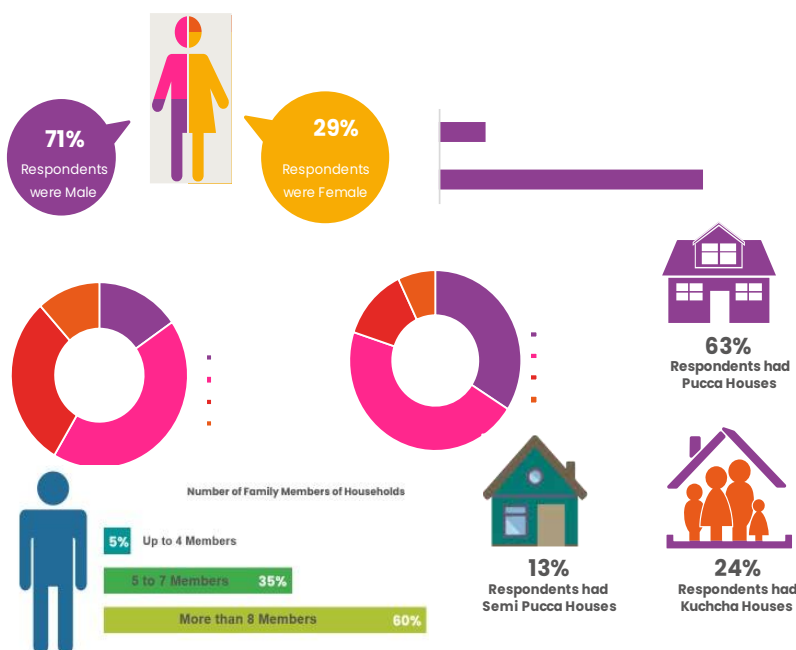
4.1 Quantitative Research Findings

4.1.1 Profile of the Respondents

4.1.1.1 Project Group:

A total of **241 project sample** were covered for the study (project samples are beneficiaries who had availed the oxygen facility at the Area hospital). Out of the total respondents, 71% were males and 29% were females who were interviewed. Majority of the respondents were between the age group of 25 to 40 years and 85% of total respondents belonged to Below Poverty Line (BPL). To have a representation of all the strata of the sample, respondents of all categories, castes and housing type were covered for the study. Nearly half of the respondents belonged to Other Backward Castes and 24% of the respondents lived in kuchcha houses. Majority of the sample household had a large family size with more than 8 members in the household.

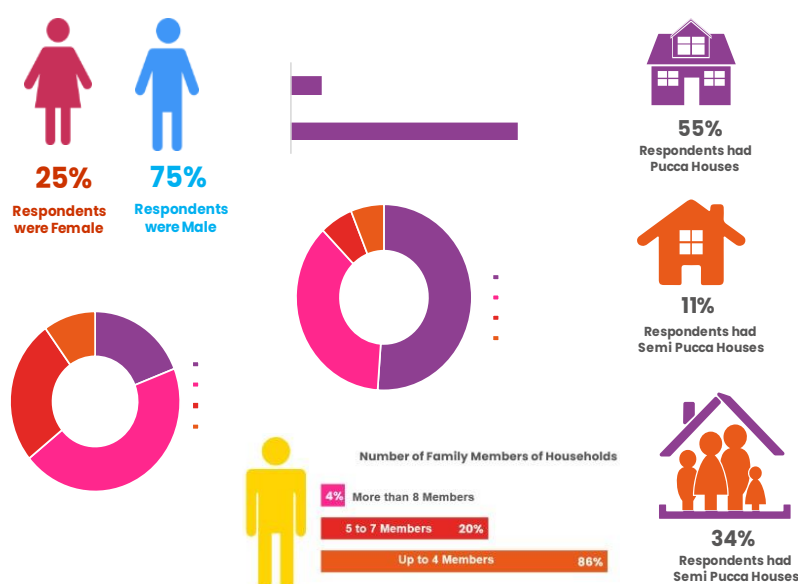
Figure 4.1: Demographic Profile of Project Group



Source: MMPL Analysis

4.1.1.2 Control Group:

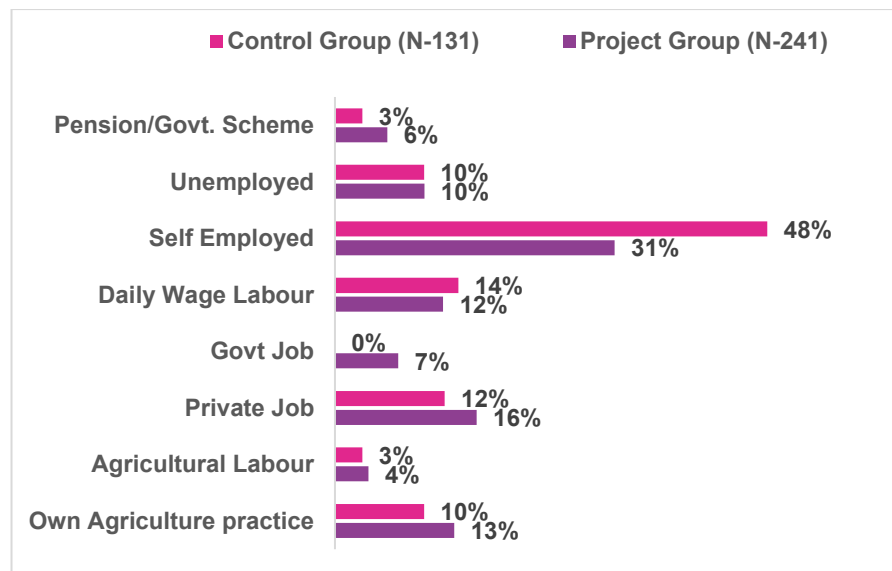
Figure 4.2: Demographic Profile of Control Group



Source: MMPL Analysis

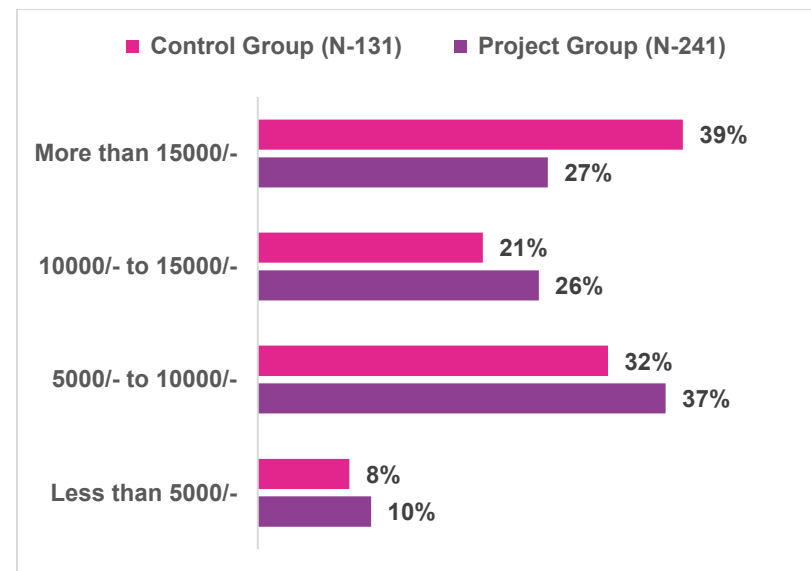
A total of **131 control sample** (Control samples are beneficiaries who had availed the services at the Area Hospital but not availed the oxygen facility) were covered from the neighbouring area of the Area Hospital who had availed the services of the hospital but had not availed the oxygen facility. Among the total control sample, three-fourth of them were males and nearly half of the total respondents belonged to the age group of 25 to 40 years. 88% of the respondents belonged to Below Poverty Line (BPL) and nearly half of the respondents belonged to OBC, SC and ST caste categories. One-third of the respondents lived in kuchcha houses and majority of the respondents had up to four members in the household.

Figure 4.3: Sources of Income of the Household



Source: MMPL Analysis

Figure 4.4: Average Monthly Income of the Household (in Rs.)



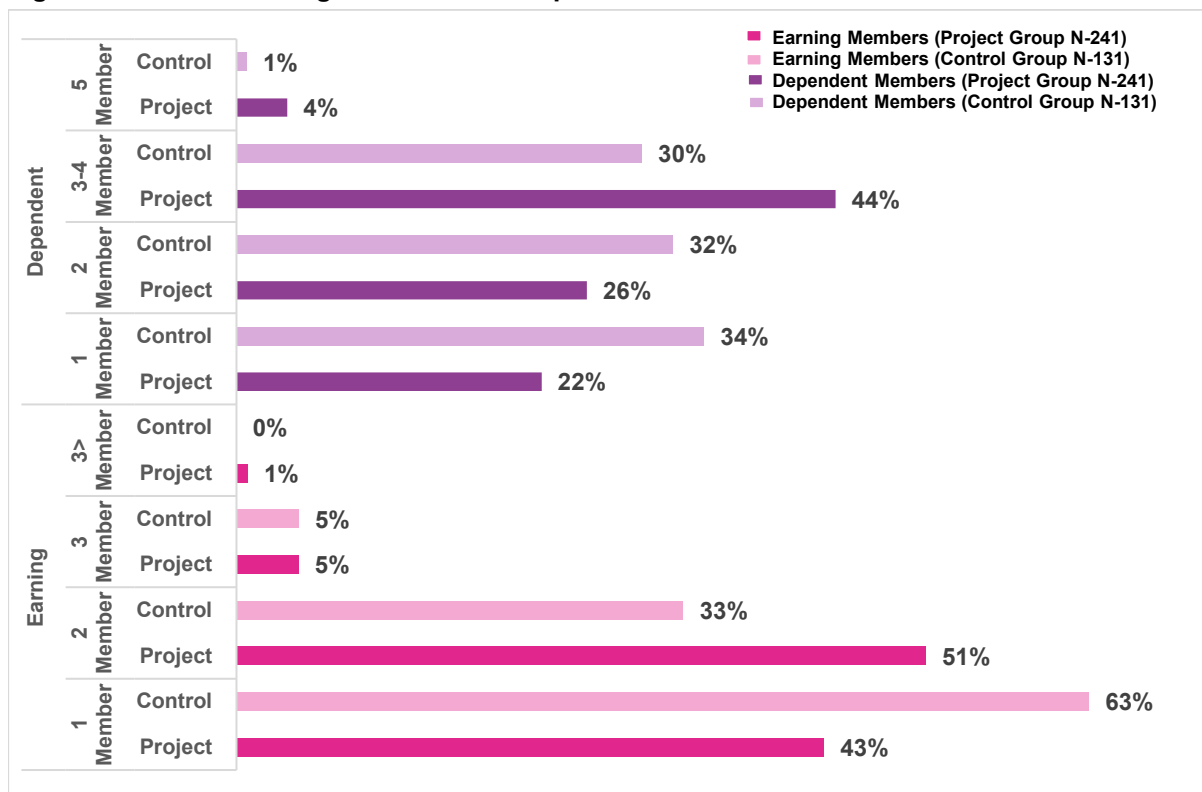
Source: MMPL Analysis

4.1.1.3 Income of the Household

31% of the project Group who were interviewed were self-unemployed at the time of the interview followed by 16% respondents who were having a private job and 13% who were engaged in their own agriculture practice. Similarly, nearly half of the respondents of the control group were self-employed followed by 14% respondents who had a government job. More than one-third of the Project group had the average monthly household income between Rs. 5000/- to 10000/- which was similar with the control group respondents. 27% of the project group had the monthly average household income of more than Rs. 15000/-. Almost three-fourth of the project group who availed the oxygen facility at the Area hospital had an average monthly household income of less than Rs. 15000/-.

4.1.2 Economic Profile of the Respondents

Figure 4.5: No. of Earning Members and Dependent Members of the Household

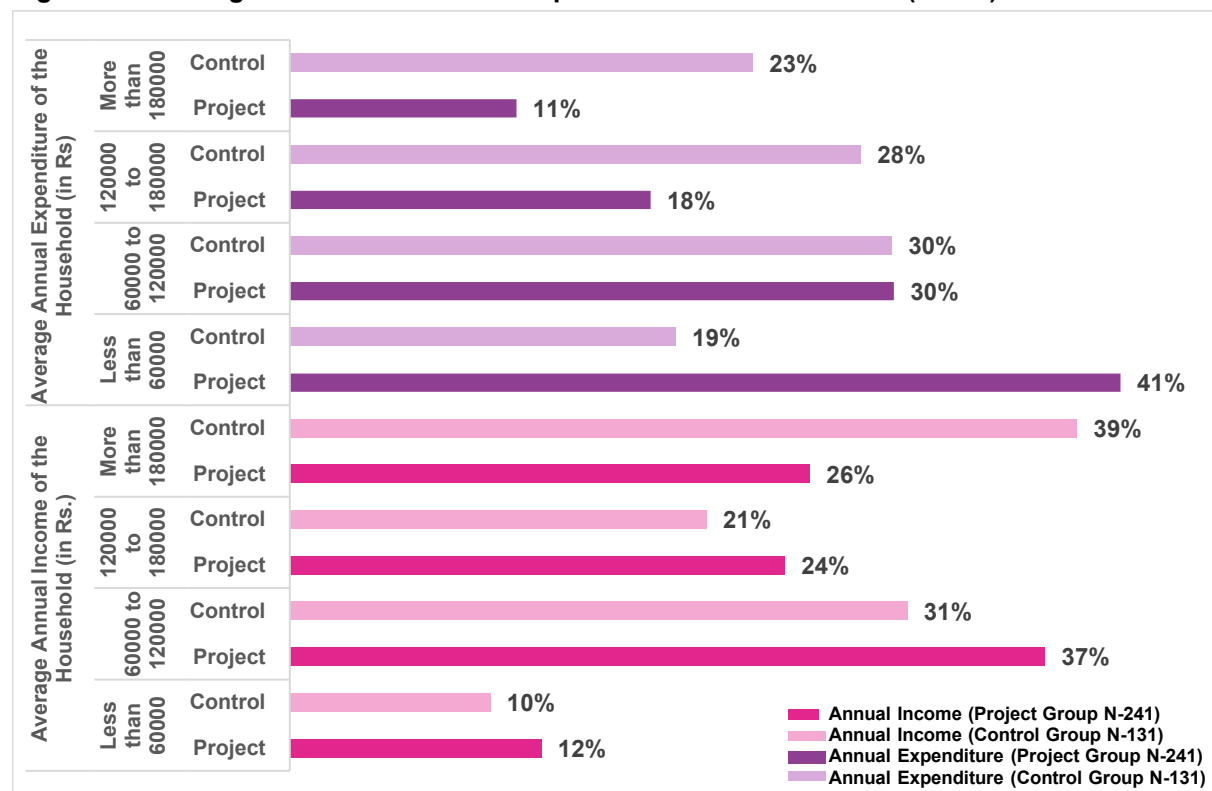


Source: MMPL Analysis

Among the respondents who had availed the oxygen facility at the Area Hospital, a little more than half of households had two earning members whereas 43% of the households had only one earning member in the household. In 44% of the households, there were three to four dependent members. Considering only 27% households have the average monthly income of more than Rs. 15000/- the majority of the households belong to the lower economic strata. In case of the control group, it was observed that a large number of households (63%) had only one earning member in the household and 44% of the household had three to four dependent family members.

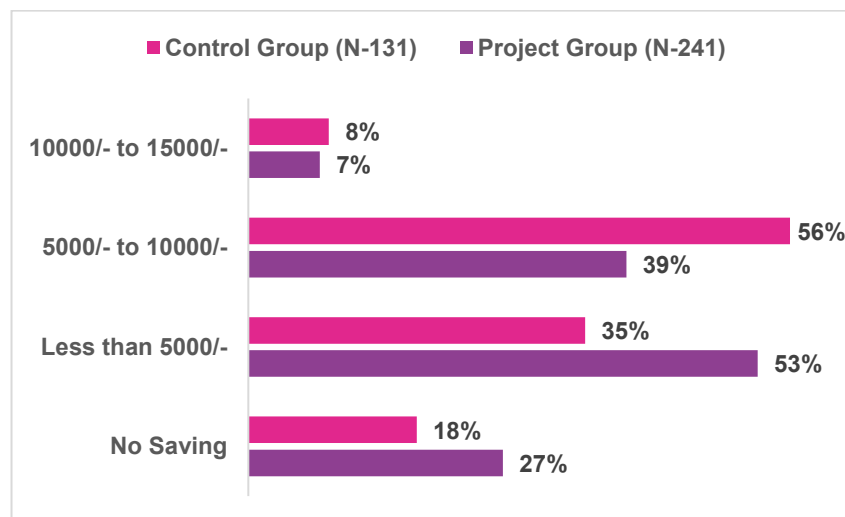
An estimated income and expenditure of the household was captured during the study to know the economic background of the respondents. 37% of the project group respondents and 31% of the control group respondents had the average household income between Rs. 60000/- to 120000/- whereas 30% of both the project and control group respondents' household had the average annual expenditure between Rs. 60000/- to 120000/-. 12% of the respondents who had availed the oxygen facility had the average annual income of less than 12% and 41% of them had the average annual expenditure of less than Rs. 60000/-

Figure 4.6: Average Annual Income and Expenditure of the Household (in Rs.)



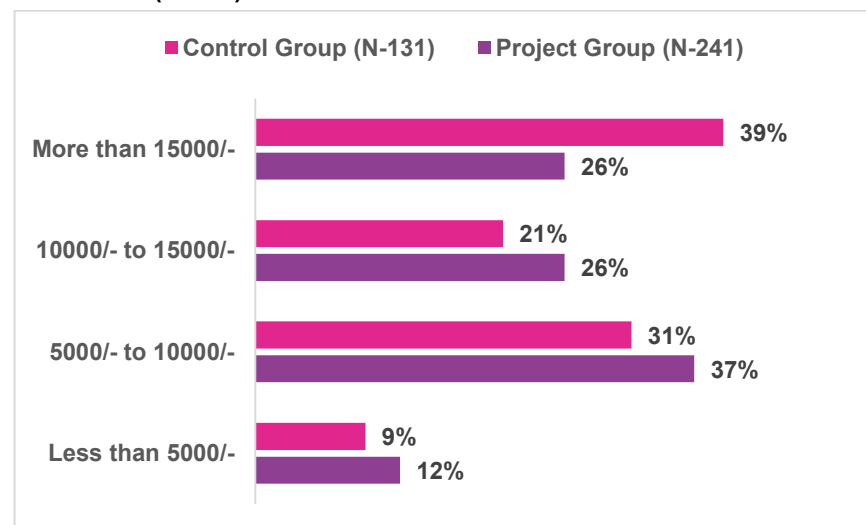
Source: MMPL Analysis

Figure 4.7: Average Annual Savings of the Household (in Rs.)



Source: MMPL Analysis

Figure 4.8: Average Annual Expenditure on Medical Treatment of the Household (in Rs.)

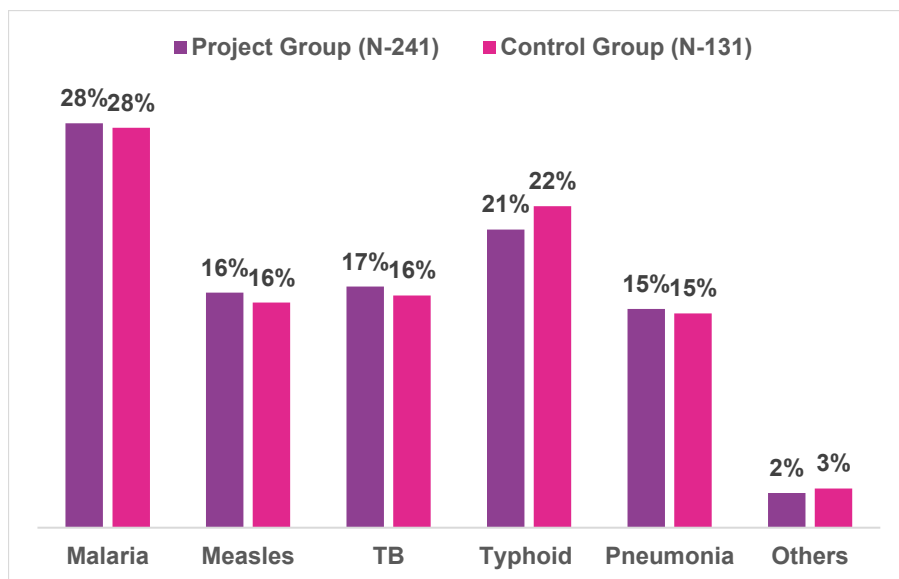


Source: MMPL Analysis

More than half of the respondents who had availed the oxygen facility at the Area Hospital had the average annual savings of less than Rs. 5000/- and a little more than one-third of the respondents (39%) had the average annual savings between Rs. 5000/- to 10000/-. 27% of the project group had mentioned that they did not save any amount after all the expenditure of the household. More than half of the respondents of the control group (56%) had the average annual savings between Rs. 5000/- to 10000/-. With the low income and savings of the household and the, the average annual expenditure on medical treatment was between Rs. 5000/- to 10000/- for 37% of the project group and 26% of the project group mentioned that their average annual expenditure on medical treatment is both between Rs. 10000/- to 15000/- and more than Rs. 15000/-. Very few of the respondents mentioned that their average expenditure on medical treatment was below Rs. 5000/-. In spite of the low cost/free of cost treatment provided at the Area Hospital, the high expenditure on medical treatment can be explained by the visits the respondents had to make to the District Hospital or to the private health facilities either for treatment or for tests that are not available at the Area Hospital. In some cases, in spite of getting treatment at the Area Hospital, there are also many medicines that are not available at the Area Hospital and the same has to be purchased from private medical pharmacy that becomes expensive for the patients.

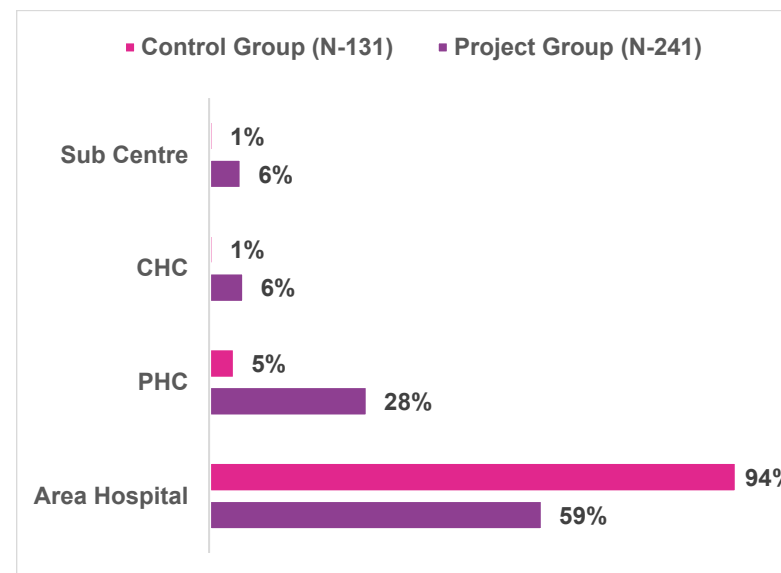
4.1.3 Present Health Status

Figure 4.9: Common Diseases



Source: MMPL Analysis

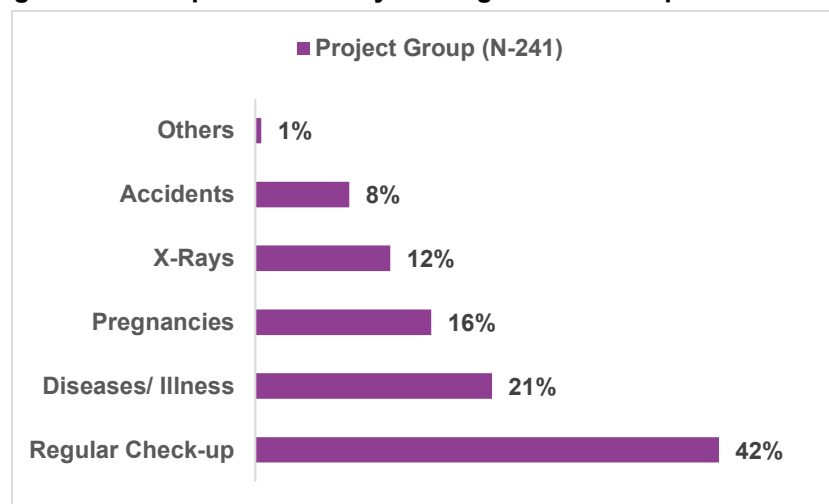
Figure 4.10: Health Facilities in the Village



Source: MMPL Analysis

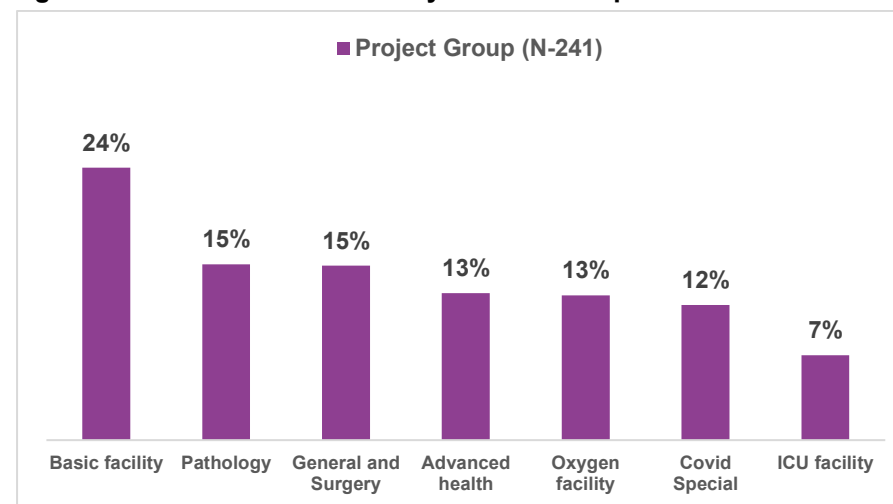
Malaria and Typhoid were the most common diseases that were mentioned by all the respondents that were prevalent in the villages. Apart from these diseases, common cold, fever dengue and viral infections were indicated by the respondents for which they visited the health centres. Most of the respondents of the control group mentioned that the Area hospital was the health facility near their village whereas 59% of the project group stated that Area Hospital was the nearest health facility in their village followed by PHC that was reported by a little more than one-fourth of the respondents.

Figure 4.11: Purpose of Usually Visiting the Area Hospital



Source: MMPL Analysis

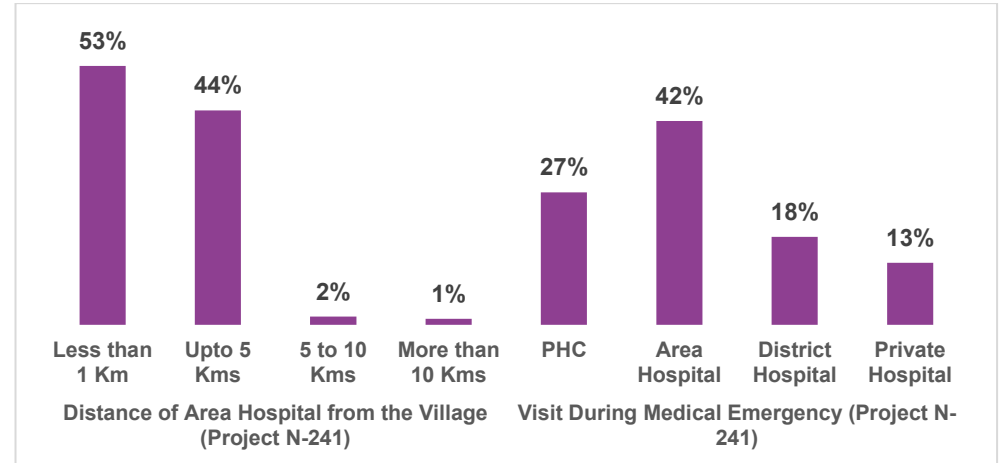
Figure 4.12: Facilities Provided by the Area Hospital



Source: MMPL Analysis

A fairly large number of respondents of both the project and the control group respondents stated that they usually visited the Area Hospital for regular check-ups followed by serious health issues. The respondents also stated that they visited the Area hospital for deliveries which was also corroborated by the female respondents during the focused group discussions (FGDs) that were conducted in the villages. More respondents of the control group visited the Area Hospital for accident cases which might be because these respondents belonged to the nearby area of the Area hospital and being a district-sub-hospital located at the highway with easy access, this might be the first choice of the respondents for initial first-aid. Although, the Medical Superintendent stated in the in-depth interview that the Area Hospital is capable to handle mild to moderate critical cases after which the cases are referred to the District hospital. Highest number of respondents stated that the Area Hospital provides the basic facilities that is needed for treatment. The Area Hospital also has pathology facilities where basic tests, X-Rays and basic ultrasound can be done about which the respondents were also aware of. During the time of the Pandemic, the Area Hospital was a designated Covid treatment centre with oxygen facility (oxygen cylinders) of which the people of the nearby villages were aware of and was also stated by both the project and the control group respondents.

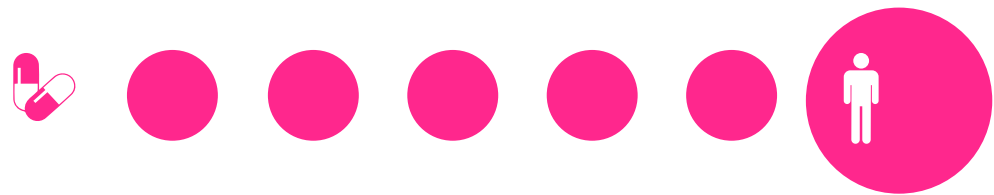
Figure 4.13: Distance of Area Hospital and Visit during Medical Emergency



Source: MMPL Analysis

More than half of the respondents of both the project and control group stated that the Area Hospital is within one Kilometre from their villages 44% of the respondents stated that the Area hospital is up to 5 km distance from their villages. Almost same number of respondents also mentioned that they visit the Area Hospital during medical emergencies. This shows that the majority of the people are dependent on the Area hospital for their medical need and it is the first resort for any emergency for majority of the people.

Figure 4.14: Reasons for Admission in the Area Hospital



Source: MMPL Analysis

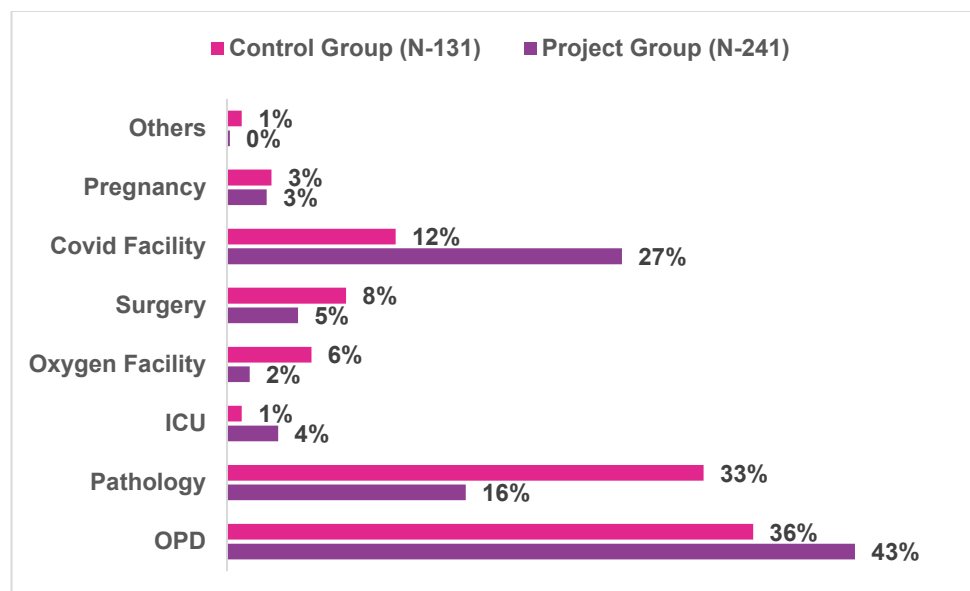
4.1.4 Treatment Availed at the Area Hospital

Regular Check-up remained the main reason for visiting the Area Hospital by both the project and the control group of respondents. However, both the respondent groups mentioned that they were admitted in the Area Hospital because of an accident that they or their family members had undergone. Among those respondents who had availed the oxygen facility at the Area Hospital (Project group), 78% of them were admitted for 5 to 7 days. The same was also mentioned by the Medical Superintendent that the average number of days a patient using the ICU bed was 5 days. On the contrary, among the total

respondents of the controlled group who had not availed the oxygen facility, two-third of the respondents were admitted only for one day as they had not availed the ICU or the oxygen facility

4.1.5 Facilities at the Area Hospital

Figure 4.15: General Facilities Available at the Area Hospital

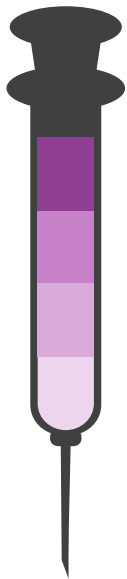


Source: MMPL Analysis

Almost all the respondents of the project and control group had visited the Area Hospital in past one year. The facility of OPD is mentioned by majority of the respondents for both project and control group. The Area Hospital provides or had provided Covid facility of mentioned by a greater number of project group who had availed the oxygen facility than the respondents who had not availed the oxygen facility. This might be because the use of oxygen facility among the project group. The pathology facility was stated by one-third of the control group respondents compared to only 16% project group mentioned it as the facilities provided by the Area hospital. Considering the control group respondent to be in the immediate radius of the Area hospital, the awareness about the pathology might be more among these respondents.

4.1.6 Use of the Oxygen Facility and the ICU

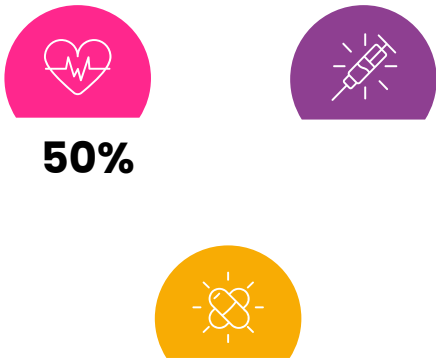
Figure 4.16: Satisfaction of Using the ICU Facility



Source: MMPL Analysis

Out of the total respondents, 81% of the project group had used the ICU facility of the Area Hospital. Among these beneficiaries who had availed the services of the ICU were satisfied by the facility. A little more than half of the beneficiaries of the ICU of the of the project group found the ICU facility to be good and one-third of them found the ICU facility to be excellent. Half of the project group and one-third of them stated that the regular and uninterrupted oxygen facility and the ICU have improved at the Area Hospital. Half of the project group and one-third of them stated that the regular oxygen facility and the ICU are the have improved at the Area Hospital. The awareness of the improved oxygen facility might be because the beneficiaries had availed the oxygen facility at the Area Hospital. It can be inferred that the regular and uninterrupted oxygen supply has enabled the ICU to function better.

Figure 4.17: Improvement in the Area Hospital



Source: MMPL Analysis

4.1.7 Cost of Treatment and Reduced Time to Avail Treatment

Majority of both the respondents who had availed the oxygen facility and those who had not, stated that the improved ICU facility reduced the cost of treatment. Half of the beneficiaries (50%) who had availed the ICU facility had spent less than Rs. 2000/- on the treatment and 46% of them mentioned that there was no cost incurred while availing treatment at the Area Hospital. It can be inferred that for initial treatment and not for severe emergencies, where the people have to visit the private health facilities or the District Hospital, the cost of treatment is low if it is being treated at the Area Hospital.

Figure 4.19: Reduced time in Availing treatment after the installation of the Oxygen Plant



Source: MMPL Analysis

Figure 4.18: Reduced cost of Treatment



Source: MMPL Analysis

A significantly large number of respondents who had availed the oxygen facility at the Area Hospital (project group) agreed that the regular oxygen supply has been able to reduce time to receive treatment for critical care, at least at the initial stage of the treatment. The project group also agreed that with the availability of regular oxygen supply has been able to reduce their time to travel to the District Hospital which is more than 20 kms away from the Area Hospital to avail oxygen facility during emergencies. The same was also reflected in the qualitative research where the community leaders and the community members agreed that regular supply of oxygen facility at the Area Hospital has reduced the time to avail treatment during medical emergencies. With the reduction of time to avail the oxygen facility, which is available at the Area Hospital for no cost, it can also be concluded that this has reduced the mortality of the critical cases as the time taken to get treatment in such cases has reduced.

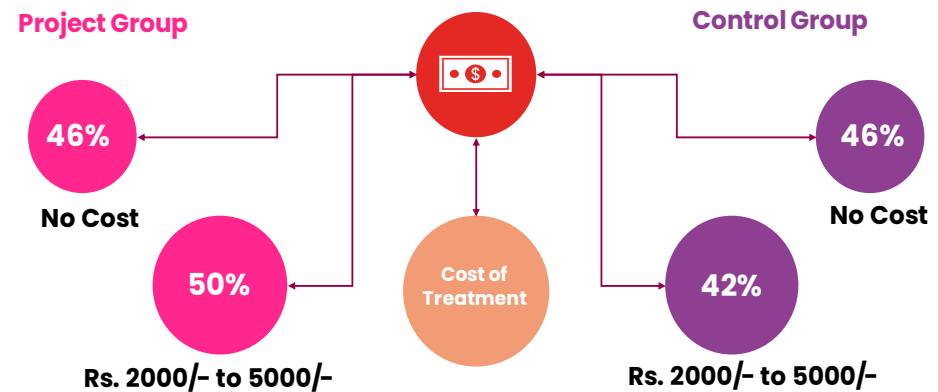
Majority of respondents of both the group (project and control groups) stated that the cost of admission in the Area Hospital was up to Rs. 5000/-. Among them, 46% of both the respondents who had availed the oxygen facilities and those who had not availed the oxygen facilities responded that no cost of treatment was incurred at the Area Hospital. During the FGDs with the community members, the same was stated by the respondents that's the cost of treatment was either nil or very low (only the cost of medicines that were not available at the hospital or tests not done at the hospital) if the treatment was carried out at the Area Hospital and not referred to the District Hospital or the treatment is done in private health facilities. The community members also stated during the FGDs that the availability of oxygen supply at the Area hospital has considerably reduced the cost of availing the oxygen facility at private health facilities when needed. The regular oxygen supply has also

Figure 4.20: Cost of Treatment Before and After the Installation of the Oxygen Plant

reduced the visits to the District hospital to avail to avail oxygen

facility which has reduced the time to avail treatment and also has reduced the transportation cost.

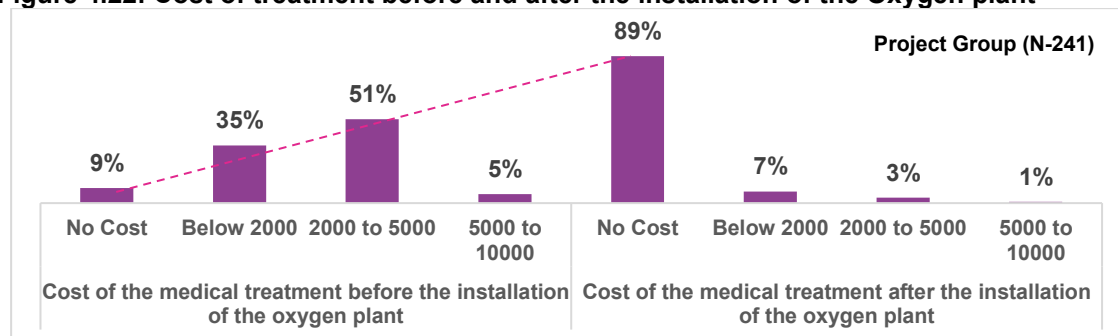
Figure 4.21: Cost Incurred While Admitted in the Area Hospital



Source: MMPL Analysis



Figure 4.22: Cost of treatment before and after the installation of the Oxygen plant



Source: MMPL Analysis

Out of the total 241 respondents who had availed the oxygen services at the Area Hospital, 95% of them stated that the cost of treatment before the installation of the oxygen plant was up to Rs. 5000/-. Among them only 9% stated that no cost was incurred during the treatment while 35% and 51% respondents stated that the cost of treatment at the Area Hospital before the installation of the oxygen plant was below Rs. 2000/- and between Rs. 2000/- and Rs. 5000/- respectively. On the contrary, 89% of the respondents agreed that no cost was incurred for treatment after the installation of the Oxygen plant. This shows that there has been a massive cost reduction of treatment for the patients after the installation of the oxygen plant at the Area hospital.

4.1.8 Improved Oxygen Facility

The installation of the oxygen plant at the Area Hospital has helped the patients to get proper and regular oxygen supply free of cost that has also been indicated by those respondents who had availed the oxygen facility at the Area Hospital. Among those respondents who had availed the oxygen facility (project group), half of them visited the Area hospital when oxygen was needed before the installation of the oxygen plant. At this time there was oxygen facility was available at the Area Hospital through oxygen cylinder. It was indicated by the respondents during the FGDs that the oxygen supply was available at the Area Hospital before the installation of the oxygen plant, but it was through the cylinders which was based on the availability of the oxygen cylinders and in case there was a shortage, the patients were referred to the District Hospital. More than one-third project group stated that they visited the District Hospital to avail the oxygen facility before the installation of the oxygen plant at the Area Hospital that made it possible to have regular and uninterrupted oxygen supply. 35% of the project group stated that the regular oxygen supply has improved the treatment facility at the Area Hospital whereas 22% project group agreed that the regular supply of oxygen plant at the Area Hospital has been able to reduce the cost of treatment and also has reduced the cost to get treatment at other health facilities. 15% of project group stated that the oxygen supply at the Area Hospital has able to reduce the wage loss as the treatment is carried out at the Area Hospital and they do not have to visit the District Hospital which results in their loss of daily wages. It can be inferred that the installation of the oxygen plant has been able to reduce the dependency of the Area Hospital for oxygen cylinders from vendors which has resulted in providing better treatment to critical care patients which has reduced the cost of treatment for the patients and also minimized wage loss that might happen if the treatment was carried out at other health facilities. Moreover, 87% of the project group stated that the oxygen supply at the Area Hospital has reduced their visits to other health facilities for emergencies. During the discussion with the community, it was mentioned that the reduced cost to avail oxygen facility and treatment

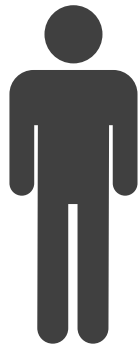
Figure 4.23: Source of Oxygen Supply Before the Installation of the Oxygen Plant



Source: MMPL Analysis

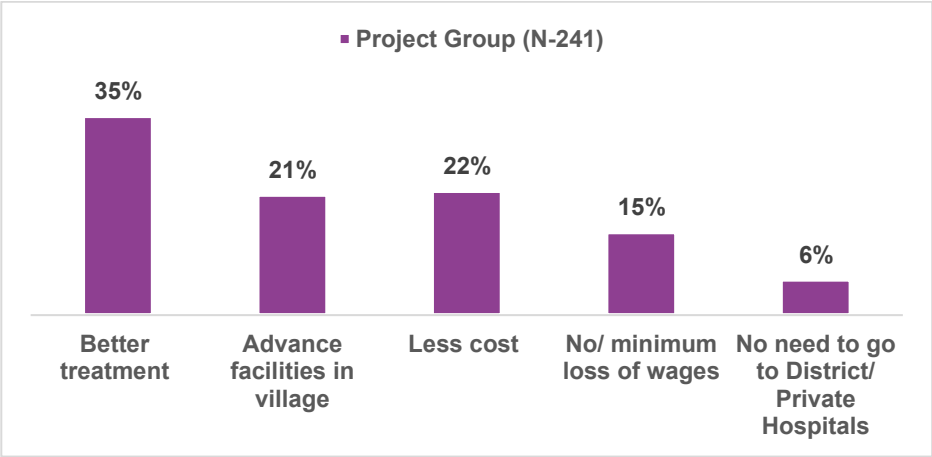
at the Area Hospital has helped them to utilize the amount in other household expenses and also reduced their dependency to borrow the amount from relatives/friends to cover the high treatment expense had the same treatment was availed at any private facility.

Figure 4.24: Visits to Other Health Facilities



Source: MMPL Analysis

Figure 4.25: Benefits of Improved Infrastructure at the Area Hospital

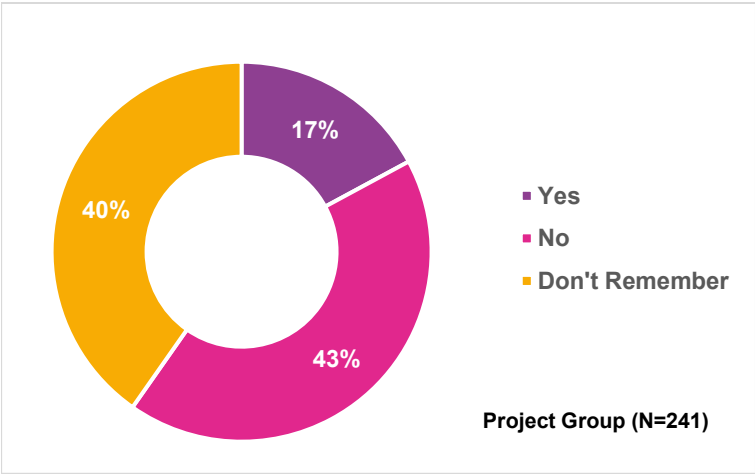


Source: MMPL Analysis

4.1.9 Use of Oxygen Facility during Treatment

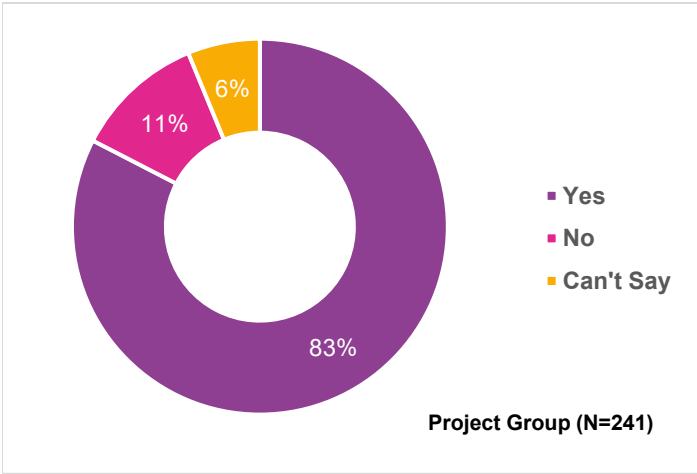
Among the 241 respondents who had availed the oxygen facility at the Area Hospital, 43% of them stated that the oxygen supply was not interrupted during their time of admission for treatment whereas 17% had experienced interruption of oxygen supply. This might have caused due to technical issues in the oxygen plant. Majority of the respondents who had availed the oxygen facility at the Area Hospital agreed that they were satisfied by the oxygen facility and were of the opinion that there is regular and adequate oxygen supply at the area Hospital after the installation of the oxygen plant and that the oxygen supply is regular.

Figure 4.26: Interruption of Oxygen Supply



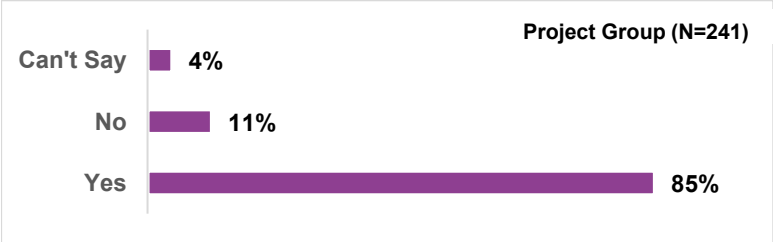
Source: MMPL Analysis

Figure 4.27: Satisfaction of the Oxygen Facility



Source: MMPL Analysis

Figure 4.28: Regular and Adequate Oxygen Supply After the Installation of the Oxygen Plant

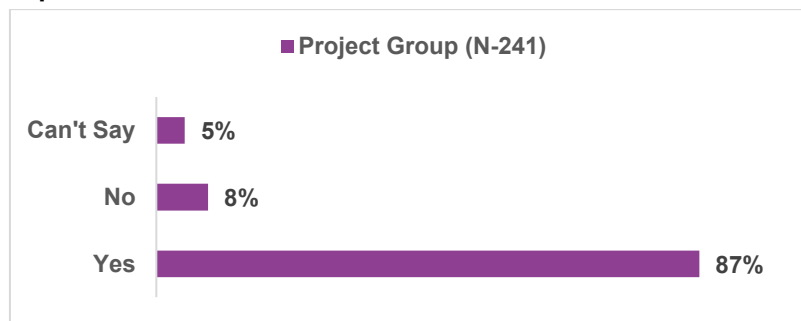


Source: MMPL Analysis

4.1.10 Opinion on the Installation of the Oxygen Plant at the Area Hospital

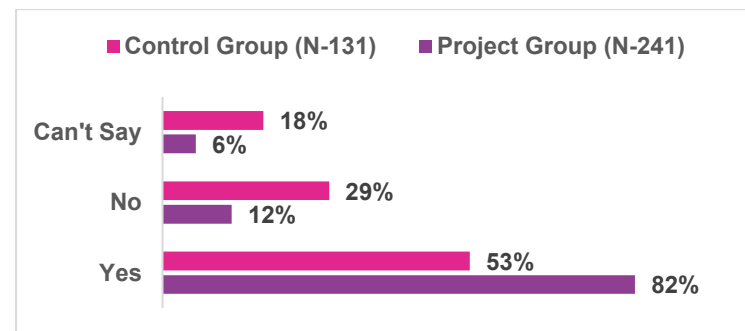
The oxygen plant was set up during the time of the Pandemic when there was a nationwide crisis of oxygen supply, and the Area Hospital was struggling to have regular oxygen supply through cylinders. From the time the oxygen plant was installed the beneficiaries have availed the oxygen facility through the oxygen plant. Majority of the beneficiaries who had availed the oxygen supply (82%) and 53% respondents who had not availed the oxygen supply were of the opinion that the Area Hospital is ready to handle critical cases. More of the project group agreed to this as they or their family members had availed the oxygen facility and were satisfied by it.

Figure 4.29: Necessity of the Oxygen Plant to be set up at the Area Hospital



Source: MMPL Analysis

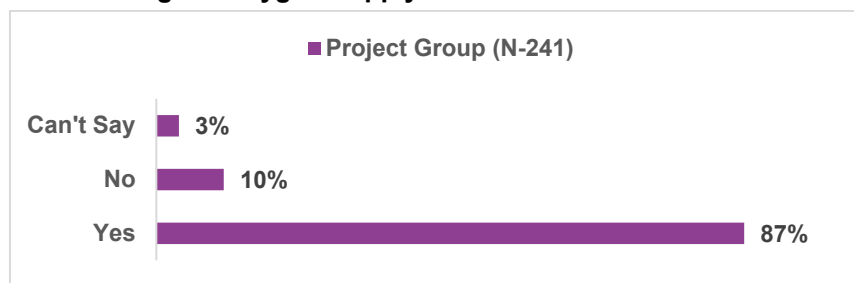
Figure 4.30: Readiness of the Area Hospital to Handle Critical Cases



Source: MMPL Analysis

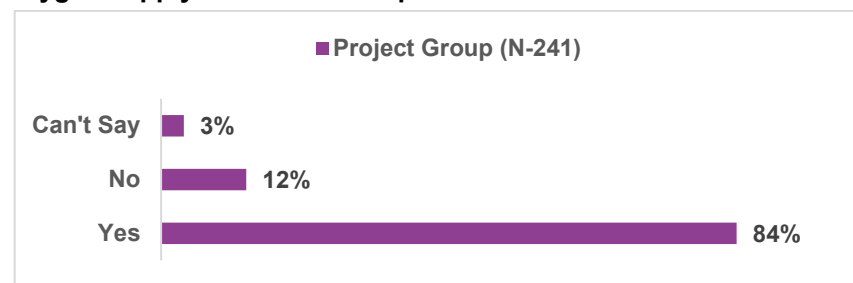
All the respondents agreed that the installation of the oxygen plant at the Area Hospital has enabled the Area Hospital to have better treatment facility than it had before the installation of the oxygen plant. This opinion was higher among the respondents who had availed the oxygen facility at the Area Hospital as they had availed the services of the oxygen facility and were aware of the advantages and regular oxygen supply. Similarly, among the respondents who had availed the oxygen facility, 84% of them agreed that the installation of the oxygen plant at the Area Hospital has reduced the visits to the District Hospital in case of emergencies that needs oxygen supply as the same is available at the Area Hospital at all times. Those respondents who differed in agreeing to the readiness of the Area Hospital to handle critical cases were concerned that the lack of technical support, lack of specialized doctors or not able to provide advance treatment by the Area Hospital were some of the reasons cited for their disagreement.

Figure 4.31: Availability of Better Treatment Facility at Area Hospital due to the Regular oxygen Supply



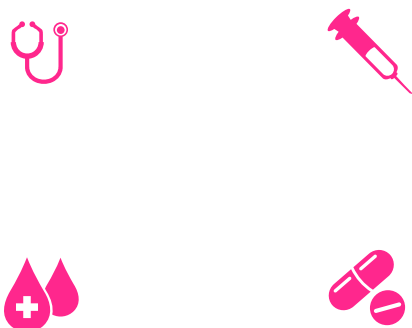
Source: MMPL Analysis

Figure 4.32: Reduced visits to the District Hospital due to the regular oxygen supply at the Area Hospital



Source: MMPL Analysis

Figure 4.33: Perception of the Area Hospital after the Installation of the Oxygen Plant

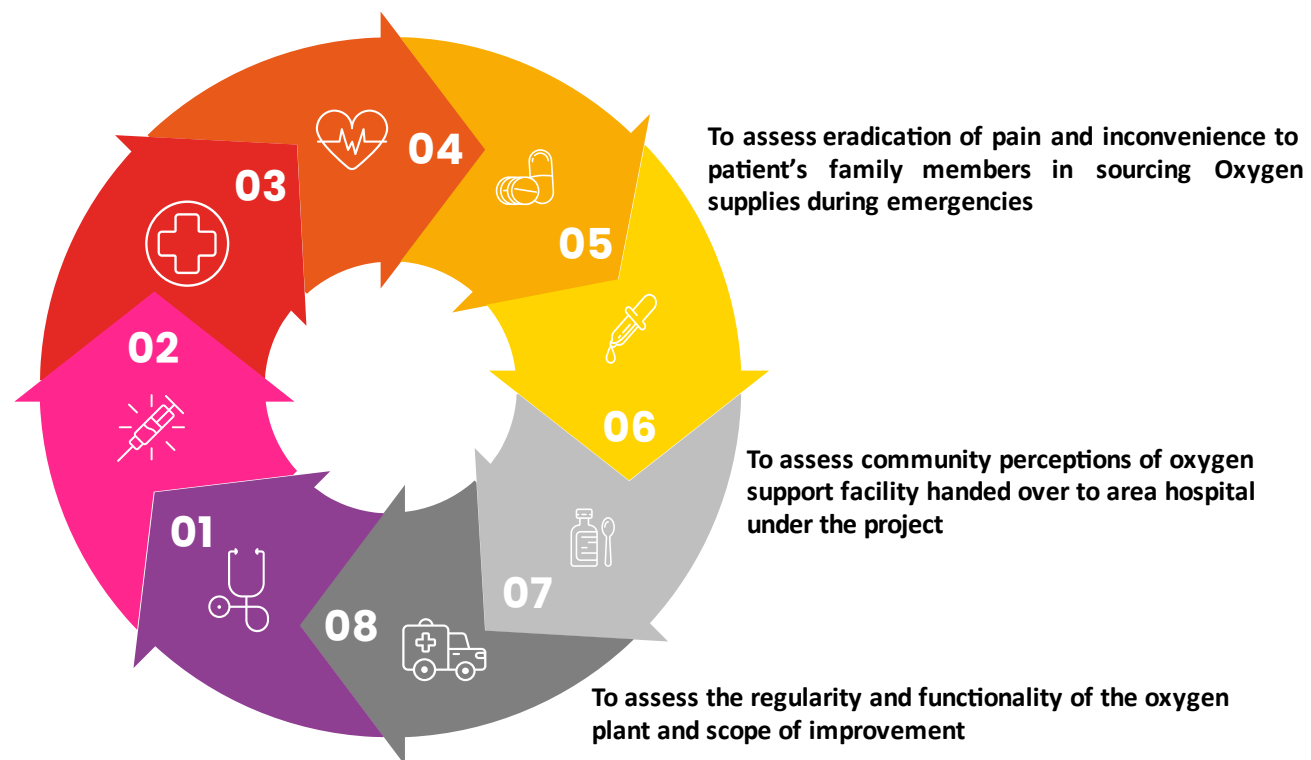


Source: MMPL Analysis

Almost all the respondents who had availed the oxygen facility at the Area Hospital had a positive outlook towards the oxygen supply at the Area Hospital. Though very few of them were aware of the installation of the oxygen plant or who had carried out the intervention, they had experienced the use of the oxygen facility on the basis of which they were satisfied by the oxygen supply. Among them, 80% agreed that the quality of facilities and treatment has improved at the Area Hospital. This might be because the Area Hospital is no longer dependent on the oxygen cylinders and there is an uninterrupted oxygen supply. In case of the control group, 57% agreed that the treatment has improved. Significant number of project group, 92% and 85% agreed that the Area Hospital is ready to deal with critical cases and handle future Pandemic crisis respectively. This was also agreed by 73% and 79% respectively of the control group. The Area Hospital is the sub-district hospital with a capacity of 80 oxygen beds and all the basic facilities and team of doctors, with the added regular oxygen supply, it is preferred by 91% of the project respondents as a first resort of treatment for emergencies rather than visiting the District Hospital or the private health facilities. Almost two-thirds (74%) respondents of the control group preferred to visit the Area Hospital rather than the District Hospital or private health facilities for medical treatment.

4.2 Findings According to the Objectives of the Study

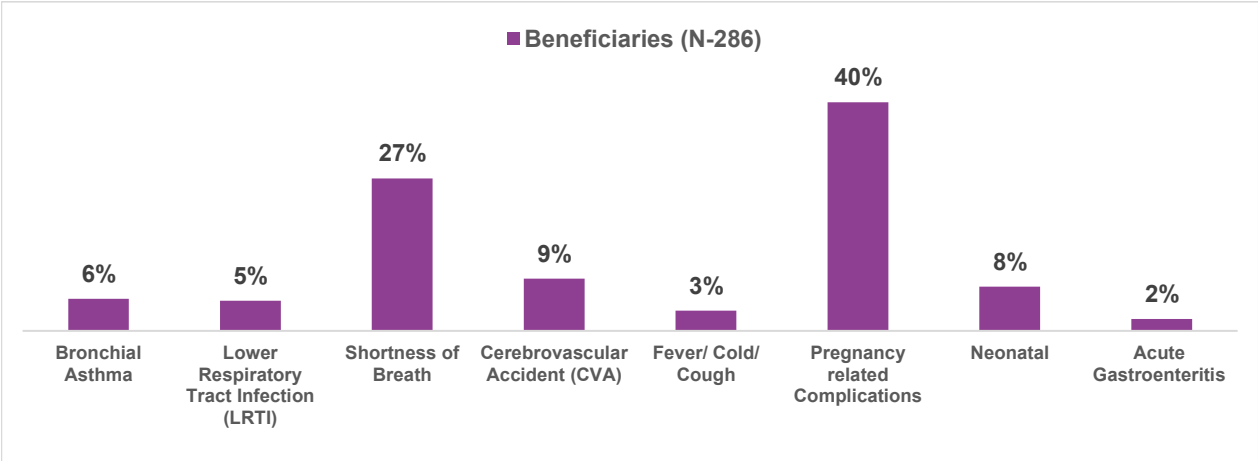
Figure 4.34: Findings of the Study according to the objectives



Source: MMPL Analysis

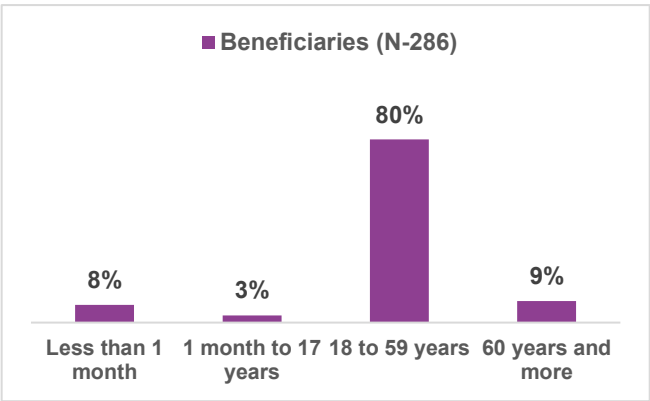
4.3 Reasons for availing Oxygen Facility at the Area Hospital

Figure 4.35: Reasons for availing Oxygen Supply at the Area Hospital*



Source: *Beneficiary list provided by the Area Hospital

Figure 4.36: Age distribution of the oxygen beneficiaries*



Source: *Beneficiary list provided by the Area Hospital

A list of 286 beneficiaries was provided by the Area Hospital who had availed oxygen facility from April 2022 to March 2023 after the oxygen plant was handed over to the hospital authorities. The oxygen supply was majorly used by pregnant women (40%) who needed oxygen supply due to complications during delivery. 27% beneficiaries had availed the oxygen facility due to shortness of breath while 9% were provided oxygen supply who had suffered Cerebrovascular Accident (CVA) and needed immediate oxygen supply. 80% of the beneficiaries who had availed the oxygen supply were between the age group of 18 to 59 years inferring that the workforce population had been treated.

4.4 Suggestions for the Area Hospital by the Respondents of the Study

4.4.1 Increase in Oxygen Beds

Currently, the Area Hospital has the capacity of 100 oxygen beds which caters to the patients of more than 25 villages. One of the many scope of improvement as mentioned by the respondents of the study was to increase the number of oxygen beds in the hospital. The Area Hospital has a footfall of more than 500 patients in a day and many require ICU bed facilities. The average occupancy of the ICU bed is 5 days and in case if there is no availability of the ICU beds for new patients, they are referred to the District Hospital.

4.4.2 More Equipment

Though the Area Hospital has all the basic facilities with testing facilities such as X-Rays and Ultrasound facilities, the respondents suggested that more equipment can be added to enable the Area Hospital to handle critical cases which are now being referred to the District Hospital. It was also suggested that 3D imaging ultrasound facilities can also be included in the hospital for which the patients have to visit private facilities which incurs more cost to them.

Figure 4.37: Interview with the Respondent



Source: MMPL Survey

4.4.3 Cleanliness in the Hospital

The multi-speciality Area Hospital has various departments for different types of cases and also has the Rural Health Centre which is a part of the Area Hospital infrastructure. Being a large infrastructure to maintain may also be challenging for the administration department of the hospital considering the high number of ODP and In-Patient footfall of the patients. One of the suggestions by the respondents was to maintain the cleanliness in the hospital.

4.4.4 More availability of Medicines

The Area Hospital has a pharmacy but has limited medicine stock. There are many medicines that are prescribed by the doctors of the Area Hospital but the same are not available at the hospital pharmacy. Many of the respondents of the study indicated that the hospital pharmacy should have adequate medicines that are prescribed by the hospital doctors so that they do not have to buy them from private pharmacy that is expensive. The same was also indicated by the participants during the FGDs that were conducted in the villages.

4.5 Qualitative Research Findings

4.5.1 Medical Superintendent

In-depth interviews were carried out with the Medical Superintendent (MS) and the Regional Medical Officer (RMO) for the study to know the status of the Area hospital, the oxygen plant and the usage of the oxygen plant.

4.5.1.1 About the Area Hospital

Viral infections, fever, diarrhoea, typhoid are common seasonal diseases occurring in the area. Apart from the Area hospital, there are Rural Health centre, Urban Primary Health centre and private hospitals in the area. The nearest district hospital is at Sangareddy which is more than 20 kms from the Area hospital and major critical cases are referred there when the treatment facility is not available at the Area Hospital. The Area hospital is a multi-speciality hospital with OPD and IPD facilities, pathology, surgery, ICU, oxygen, X-Ray and multidiscipline doctors and departments. There is no limit of the coverage of the Area Hospital as patients from nearby villages as well as very far of villages come to the Area hospital for treatment.

Figure 4.38: Meeting with the RMO



Source: MMPL Survey

Table 4.1: Staff Strength of the Area Hospital

Staff	Doctors	Nurses	ANM	Technical Staff	Cleaning Staff	Managerial Staff	Total
Number	28	32	2	9	34	3	108

The patients travel for more than 10 kms to get treatment at the Area Hospital and in case of emergencies they travel to the district hospital at Sangareddy. The treatment is free of cost at the Area hospital for all the patients including those using the ICU and the oxygen facility. The MS informed that in case of medical emergencies the people visit the Area Hospital of the District hospital at Sangareddy.

4.5.1.2 Installation of the Oxygen Plant

Since the installation of the oxygen plant the Area hospital has witnessed an increase in the number of patients by approximately 50%-60%. Prior to the installation of the oxygen plant all the emergency cases were referred either to the District Hospital or the Government Gandhi Hospital. There was a decrease in oxygen saturation and the Area hospital was heavily dependent on oxygen cylinders especially for Acute Respiratory Syndrome cases where regular oxygen supply is crucial. As stated by the RMO, there are 80 beds in the Area Hospital that has oxygen supply. Due to lack of adequate oxygen cylinders the emergency cases needing prolonged oxygen supply were referred to other government hospitals. The oxygen plant set up by APL supports 80 beds and since its installation 25% of the total IPD patients have availed the oxygen facility, among whom 5% were children and 15% were elderly patients. On an average, 20-25 patients use the oxygen facility in a day. It was also informed by the MS that the peak month with the highest number of patients is from November to January with 130 patients in a day for IPD and on an average a patient uses an ICU bed for five days. During the Pandemic, as the Area hospital was fully dependent on the oxygen cylinders, there was always a shortage of oxygen when the need of oxygen was at its peak. It was then the oxygen plant was installed by APL at the hospital which has done away with the dependency on the oxygen cylinders and the hospital is self-sufficient for oxygen need. The installation of the oxygen plant has enabled the hospital to take up mild to moderate risk cases and critical care patients which was not possible before and have increased the number of IPD patients. The

oxygen supply is not only used in the ICU but is also used in the operation theatre. This has also improved the quality of treatment at the Area hospital. The availability of oxygen supply has reduced the referral cases by 5% to 10% which was higher before the installation of the oxygen plant.

4.5.1.3 Maintenance of the Oxygen Plant and Challenges

As informed by the MS, the capacity of the oxygen plant is to produce 500 LPM and the actual utilization of oxygen is 100-150 litres per day. A separate register is maintained by the hospital staff to monitor the usage of the oxygen facility. Maintenance of the oxygen plant is extremely challenging as the hospital staff does not have the technical expertise to maintain the oxygen plant. Two hospital staff were trained initially on the operational aspect after the installation of the oxygen plant but in case of technical fault, the hospital is dependent on the technical experts of the Oxygen plant company who try to work remotely on the issue with the help of the hospital staff which takes considerable time. Till the time the oxygen plant is repaired it is not functional disrupting the oxygen supply. Due to the lack of a technical expert the functionality of the oxygen plant is hampered.

4.5.1.4 Safety Measures at the Area Hospital

The Area hospital maintains cleanliness at all the floors and departments. There are three exits in the hospital in case of emergencies. The staff are vaccinated regularly and are provided with PPE kits, caps, apron, safety glasses, gloves to the staff. All the equipment and beds are sterilized before use. There are proper biochemical disposal management followed at the hospital. The fire safety measure is well in place and fire extinguishers are placed at accessible places. Fire sprinklers have been installed at all the rooms and common places in the building by the fire department and all staff have been trained to use the fire extinguishers. There are also mock drills organized for the staff for fire safety measures.

4.5.1.5 Knowledge about CSR Interventions

The MS and the RMO were aware of the Asian Paints plant which is 2-3 away from the Area hospital. Apart from the installation of the oxygen plant at the Area hospital the MS and the RMO were mentioned about the painting/branding work done by APL in the nearby Government Degree College. Apart from the CSR initiatives of APL they were also aware of the CSR initiatives of Paragon, who had constructed a model operation theatre with latest equipment at the Area Hospital. They also informed that Toshiba and Nirman have provided chairs and water cans and BP operators and 5 ICU beds respectively. BHEL CSR has also provided oxygen cylinders, stretchers and wheelchairs to the hospitals. The MS and the RMO were aware of the CSR activities carried out in the hospital and not in the nearby areas.

4.6 Consolidated findings of Interaction with the Health Workers

4.6.1.1 About the Area Hospital

All the four health workers mentioned Dengue, fever, cold and viral infection as common health

issues and everyone. One of the ANM mentioned that their village had a sub-centre. All the health workers stated that people visited the Area Hospital for regular check-up, pregnancies and for pathology facility and agreed that the Area Hospital provided basic health facility, general OPD and surgery whereas only one ANM could mention that it also provided oxygen and ICU facility. All the health workers stated that the District Hospital is more than 10 kms away from their respective villages. All of them agreed that the people generally visit the Area Hospital for medical emergencies and their cost of treatment is less than Rs. 5000/- if the treatment is taken in the Area Hospital.

Figure 4.39: Discussion with Health Workers of Patancheru



Source: MMPL Survey

4.6.1.2 Installation of the Oxygen Plant

Only one health worker was not aware of the installation of the oxygen plant at the Area Hospital but all the four of them were not aware the agency that had installed the oxygen plant or support received by APL CSR. Lack of oxygen supply during Covid-19 and for emergency cases was the major reason for the installation of the oxygen plant and all of them mentioned that cases were referred to the District Hospital before the installation of the oxygen plant. The average number of days an ICU bed is occupied was mentioned to be 1 week by 2 of the health workers. Three of them stated that the Area Hospital was fully dependent on the oxygen cylinders before the installation of the oxygen plant. All of them agreed that the rainy season was the peak month with highest number of patients with an average number of 200 OPD patients as mentioned by one of the health workers. None of the health workers were aware of the number of beds at the Area Hospital having oxygen supply or how many patients use the oxygen supply. Three of the health workers agreed that the Area Hospital is ready to handle critical cases and for future Pandemic with the installation of the oxygen plant it has reduced the referral cases to the District Hospital. Three of the health workers who were aware of the intervention agreed that it has increased the number of patients and all the treatment is free of cost at the Area Hospital but if the treatment is availed at a private health facility then the average cost of the treatment is Rs. 10000/-.

4.6.1.3 Safety Measures at the Area Hospital

Aprons and headcaps used by the doctors and nurses were the most common safety measures mentioned by three of the health workers. The health worker of Sultanpur was not aware of any safety measures followed at the Area Hospital. For the patients stretchers and wheelchair was the safety measures available. Only one of the health worker (ANM of Patancheru) was aware of the fire extinguisher as a precautionary measure in case of fire safety.

4.6.1.4 Knowledge about CSR Interventions

Only two out of the four health workers were aware of the medical van facility as a part of the CSR intervention of APL and three of them mentioned the education initiative of Aurobindo Pharma. All of them could not mention any other CSR intervention of APL or any other companies.

4.7 Consolidated findings of Interaction with the Community Leaders

4.7.1.1 About the Area Hospital

Common diseases as mentioned by all the Community Leaders fever and viral infections and the

nearest health facilities apart from the Area hospital. Mostly people visit the Area hospital for basic health facility, pregnancies and for accident cases. As stated by all the community leaders, the patients travel for more than 10 kms to get treatment at the hospital and the treatment is free of cost for all medical cases.

The Area Hospital provides basic facilities, general and surgery, Advanced health facilities

and ICU facilities at the Area Hospital. In case the patients visit private health facilities, they spend more than Rs. 10000/-. The patients generally visit the Area Hospital or private health facilities in case of emergencies as mentioned by the Sarpanch of Sultanpur and Patalguda villages.

Figure 4.40: Meeting with the Sarpanch, Sultanpur



Source: MMPL Survey

4.7.1.2 Installation of the Oxygen Plant

Two Community Leader were aware of the installation of the oxygen plant and also mentioned that the oxygen plant and the hospital was dependent on oxygen cylinders and cases were referred to the District Hospital. Only the community leader of Patancheru was aware that the oxygen plant was set up with the help of APL CSR. Those who were aware, all of them agreed that the installation of the oxygen plant has increased the number of patients and there has been decrease in the referral cases. Lack of oxygen supply was the major reason for installation of the oxygen plant as mentioned by two of the community leaders. Two of them stated that people either visited the District Hospital or Government Gandhi Hospital for treatment of critical cases. These community leaders also agreed that the installation of the oxygen plant has enabled to have regular oxygen supply and made the Area Hospital ready to handle critical cases or future Pandemic situation.

4.7.1.3 Knowledge about CSR Interventions

Only two of the community leaders were aware of the medical van facility as a part of the CSR intervention of APL and one of them (Community Leader of Patancheru) was aware of the installation plant at the by APL and also the only one who was aware of the CSR interventions of Paragon, Kirby, Aurobindo Pharma, MSN Pharma Mylan Pharma.

4.8 Consolidated findings of the Focused Group Discussions (FGDs)

4.8.1.1 About the Area Hospital

Almost all the respondents stated that they visited the nearby PHC or the Area Hospital for

medical treatment and visited the District Hospital during critical care along with the Area Hospital. Basic facilities, doctors and pathology, X-Ray and radiology were some benefits that were available at the Area Hospital and almost all of them visited the Area Hospital very often or at least once a month for check-up, emergencies or in case of pregnancies. The respondents of Patancheru stated that because of the ICU facility at the Area Hospital, they do not have to visit the district or private Hospital for treatment which reduces the cost.

Figure 4.41: FGD with Women



Source: MMPL Survey

4.8.1.2 Installation of the Oxygen Plant

Though all the respondents had availed treatment at the Area Hospital and some of the respondent's family members had availed the oxygen facility, they were all unaware of the installation of the oxygen plant or who or what was the need for the intervention. Those who had experienced the oxygen facility were of the view that it is important for the patients, and they agreed that there is regular oxygen supply. The participants stated that they would get treatment at the Area Hospital and would also refer others to visit the Area Hospital but for critical emergency cases they will have to visit the District Hospital. In case of critical care, the respondents first visit to the Area Hospital and when they are referred, they often visit private health facilities for treatment that increases their annual cost of treatment to between Rs. 10000/- to 30000/- which makes it difficult to manage. Almost all the participants agreed that the Area hospital is ready to fight future Pandemic saturation but could not state that the installation of the oxygen plant has been beneficial for the community.

4.8.1.3 Knowledge about CSR Interventions

Only the respondents of Rama Chandra Puram and Ambedkar Colony were aware of the medical van that frequently visits their village but only few of them aware that it is a part of the CSR intervention of APL. None of the respondents were not aware of any other activities carried out by CSR of other companies.

4.9 Oxygen Plant: A Ray of Hope for All (Case Study)

Md. Anwar, a 47-year-old living in Patancheru, works as a daily wage earner to support his family. His family of four members, his wife, a daughter and his son are dependent on his income along with for meetings the ends for the family. His son works at an entry level job at a nearby industry with the income of Rs. 10000/- per month. Anwar is fully dependent on his daily wages which is between Rs. 400/- to 500/- depending on the demand and he finds employment only for half a month and for the remaining days the family depends on the income of the son which makes it difficult for the family to have savings or afford heavy medical expenditure during a time of need. Anwar suffers from respiratory illness as a result of an accident that happened four years back and has breathing difficulties whenever there are other health issues he has. Four months back, he suffered food poisoning which resulted in difficulty in breathing. Immediately he was rushed to a private health facility by his family members where his X-Ray was done which

cost him Rs. 300/- and was suggested to be on oxygen supply which would cost him Rs. 7500/- per day apart from other medical/hospitalization charges. The family's poor financial position could not afford the expensive treatment and decided to get admitted in the Area Hospital instead. He was immediately kept on oxygen supply at the Area hospital as he had trouble breathing properly. His treatment was carried out at the Area hospital where he was admitted for 15 days till the time he recovered. He was on oxygen supply for two days throughout his treatment. This saved his cost of oxygen facility, and which was unaffordable at the private health facility and also saved time to get treatment had he chosen to travel to the District Hospital. The total cost incurred on his treatment at the Area hospital was Rs. 1500/- which was only for the tests and the medicines that were not available at the hospital. He was aware that the Area Hospital had oxygen facility but was not aware of the installation of the oxygen plant. He recalled that the oxygen supply was regular and was satisfied by the facility and the treatment which saved his life and was thankful for the free oxygen facility which is a boon for the community.

Figure 4.42: Md. Anwar



Source: MMPL Survey

4.10 Oxygen as Supportive Therapy

Mamatha, 19 years old pregnant woman, was admitted in the Area Hospital for delivery. Her husband, Dayanandh, works as an entry level worker in a nearby industry in Patancheru and earned Rs. 12000/- per month. They were expecting their first child and when signs of labour was observed, Mamatha was taken to the Area hospital. She had been placed in the labour room as there was still time for delivery and she was not dilated enough. She was in pain as the labour was taken longer than expected. Even after 15 hours of labour she was not ready for the delivery and was in constant pain. This led to foetal distress.

The vitals of the Mamatha were not normal due to prolonged labour. The heart rate of the foetus was reducing and the oxygen level of Mamatha was saturating which was affecting the foetus. The situation was becoming worse and risky for both the mother and the baby. She was immediately provided oxygen to stabilize the distress. She was kept on oxygen for some time till the heart rate of the foetus was normalized and then she was taken for C-section. The oxygen supply acted as a supportive therapy because of which the baby survived and Mamatha was saved. They were shifted to the ICU and the baby was put in intensive care till both of them recovered and were healthy to be discharged.

Figure 4.43: Mamatha with her new-born



Source: MMPL



Social Return on Investment (SROI) of the Intervention

5 Social return on investment (SROI) of the Intervention

The aim of the SROI is to evaluate the economic and social returns achieved by those who are impacted by APL's investments in establishing the oxygen plant at the Area Hospital, Patancheru. The value of the impact created on primary beneficiaries is calculated post identifying the relevant outcomes and the financial proxies. To prevent over-valuation of the impact, certain parameters like deadweight, drop-off, attribution, and displacement are subtracted from the value of the social benefits.

5.1 SROI for the Oxygen Plant

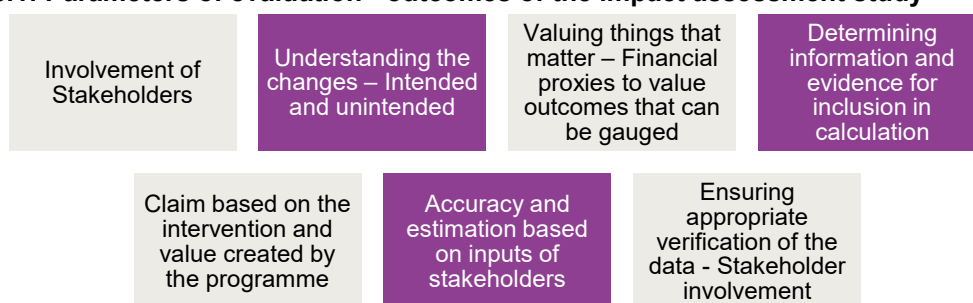
To measure social return on investment of the intervention by APL, SROI has been devised based on the approach to understand and measure outcomes which are created due to program interventions, and it helps to understand where social value is being created and erased by involving stakeholders and valuing what matters to them.

SROI has been based on theory of change, where it has been an endeavor to aggregate the various cases built together around each stakeholder involved in the project. It conveys the intended change, the activities undertaken, the outputs and the outcomes that finally come together to create the impact. In this process, unintended impact, assumptions and proxies are also captured to understand with evidence how the particular intervention is translating its goals into actions. Hence, SROI without the theory of change does not give a complete picture. SROI is an estimate of social value created for every rupee spent.

5.2 Principles of SROI calculation exercise

The principles of SROI calculation that have been used to understand and determine the impact of the programme are enlisted below:

Figure 5.1: Parameters of evaluation - outcomes of the impact assessment study



5.3 Evidencing outcomes including allocation of Financial Proxy Values

Thematic area related output has been identified and against each, outcomes for stakeholders have been mapped and data is collected from the stakeholders including Area Hospital, Community Leaders and beneficiaries which have been assessed based on their relative significance by valuing them.

There are four steps: Developing outcome indicators, collecting outcome data, establishing how long outcomes last and putting a value on the outcome. The same are indicated in the table below:

Table 5.1: Outcome and their Financial Value

Output	Outcome	Financial Proxy	Value (in INR)	Basis
Medical Treatment during Emergency	Treatment and counselling for medical emergencies	Cost to get similar service provided (Doctor's consultation cost)	1,500/-	Doctor's consultation cost is Rs 500 every visit. 3 visits expected in in cases of emergencies. Instead, the same is provided through Area Hospital
Availability of ICU bed facility	Use of the ICU facility at the Area Hospital rather than other health facility	Cost to get same service at private health facilities	5,000/-	Approx cost of ICU bed in private health facility is Rs 1,000 per day. At least 5 days hospitalization is assumed
Availability of Oxygen Facility in the ICU	Use of Oxygen facility at the Area Hospital	Cost of oxygen facility in private health facilities	7,500/-	Approx cost of availing oxygen facility in private health facility is Rs 1,500 per day. At least 5 days hospitalization is assumed
Reduction in Travel cost	Travel cost reduced to the Area Hospital to avail oxygen facility	Travel cost from Area Hospital to the District Hospital	2,000/-	Approx cost of travel through hired vehicle from Area Hospital to the District Hospital which is more than 20 kms in distance
Provision of Medicines	Availability of medicines free of cost at the Area Hospital	Cost of medicines from private pharmacy	5,000/-	Approx cost of medicines required for critical care to be Rs. 1000/- per day for 5 days
Wage/Income loss	Reduction in wage loss due to the availability of oxygen facility at the Area Hospital and not visiting other health facilities	Daily wage	2,250/-	Approx daily wage to be Rs. 450 and loss of average of 5 days if referred to District Hospital
Total			Rs. 23,250/-	

5.3.1 Establishing Impacts

This stage is to establish the impact which will attribute the changes or outcomes that would have happened in the absence of the intervention. The changes in the study region are not solely attributable to APL only as it is the result of various factors. Various factors such as deadweight, displacement, attribution, and drop-off are considered in this step and subtracted from the monetized outcomes if it is established that there are other contributing factors to the outcomes or change. There are four parts to this section:

- Attribution - Assessment of how much of the outcome was caused by the contribution of other organisations or people
- Deadweight – Assessment of whether an outcome would have been achieved regardless of the intervention assessed

- Drop-off – Assessment of the diminishing impacts and for the change in the value of money over time accounted for by the inclusion of estimates for drop-off and discount rate
- Displacement - Assessment of how much of the outcome has displaced other outcomes

5.3.2 Social value Generated

In the last stage, social value was calculated by adding all outcomes and subtracting from drop-off, displacement, deadweight and attribution which have had varied discounting effects based on secondary and primary research. Further, social value created (SVC) is divided with total investments to arrive at SROI value is indicated for each of the thematic areas in the table below.

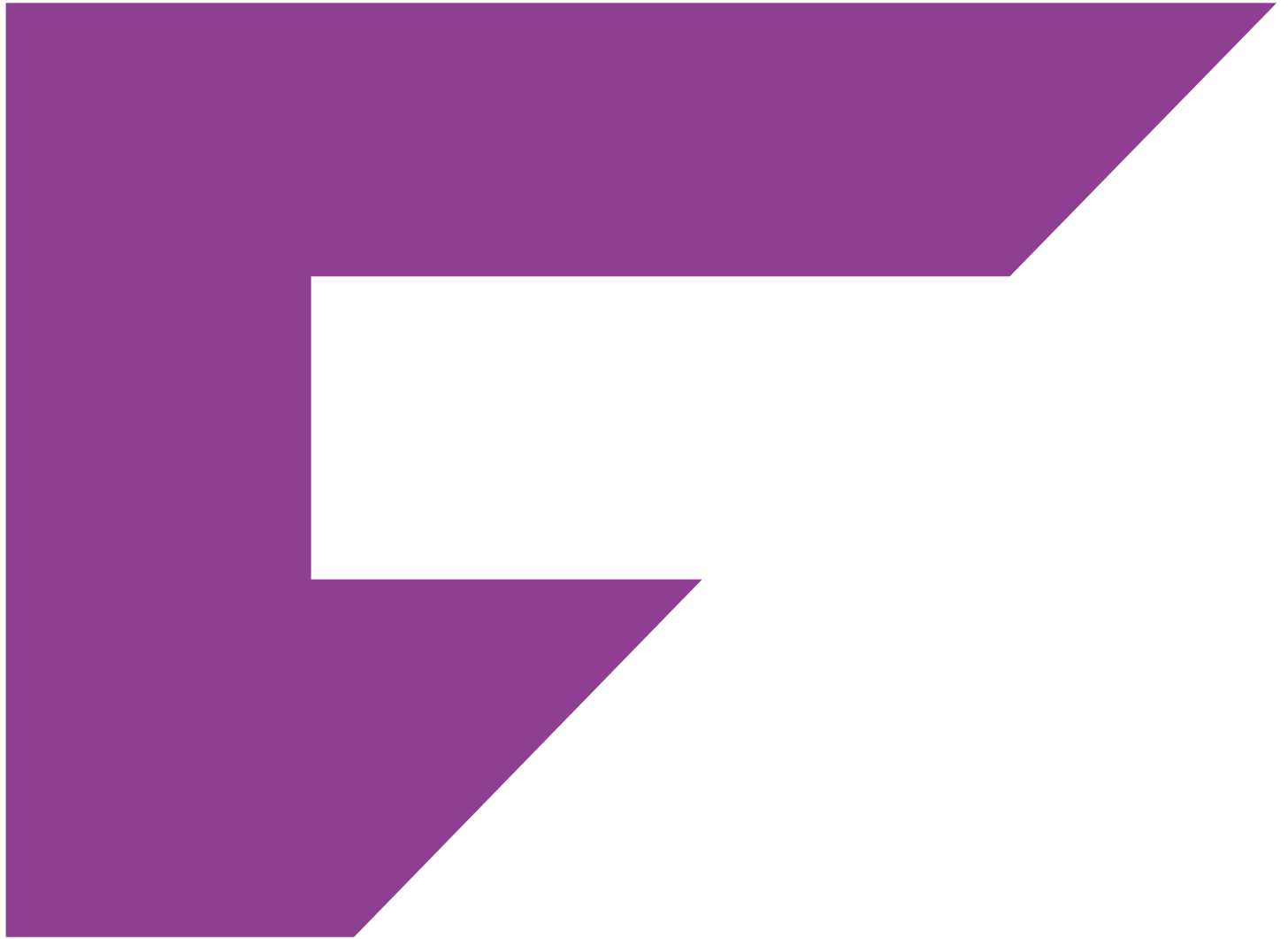
Table 5.2: Current SROI

Outcome Value (based on the table 5.1)	Discounting effect to Establish Impact	Outcome Value (in INR)	No of Beneficiaries	Value (in INR)	Investment	SROI
23,250	50%	11,625	286	33,24,750	1,10,00,000	0.30

The current SROI states that Re. 1 spent = Rs. 0.30 social investment considering the current capacity of oxygen beds and. The total beneficiaries of the oxygen plant are 286 **according to the beneficiary list provided by the Area Hospital**. At present the oxygen plant has not been able to reach its break-even on social return. This will be achieved when the number of beneficiaries of the oxygen plant is more than 1000. Below table states the expected social return when there is an increase in the no. of beneficiaries with the other factors remaining the same.

Table 5.3: Expected SROI with an increase in the no. of Beneficiaries

Outcome Value (based on the table)	Discounting effect to Establish Impact	Outcome Value (in INR)	No of Beneficiaries	Value (in INR)	Investment	SROI
23,250	50%	11,625	1,000	1,16,25,000	1,10,00,000	1.06



Key Inferences and Recommendations

6 Key Inferences and Recommendations

In lieu of the previous chapter we have elucidated a detailed quantitative and qualitative assessment of the impact of the oxygen plant installed at the Area Hospital has created in the study geography. In this chapter, we have summed up the observations and recommendations based on the quantitative and qualitative Survey.

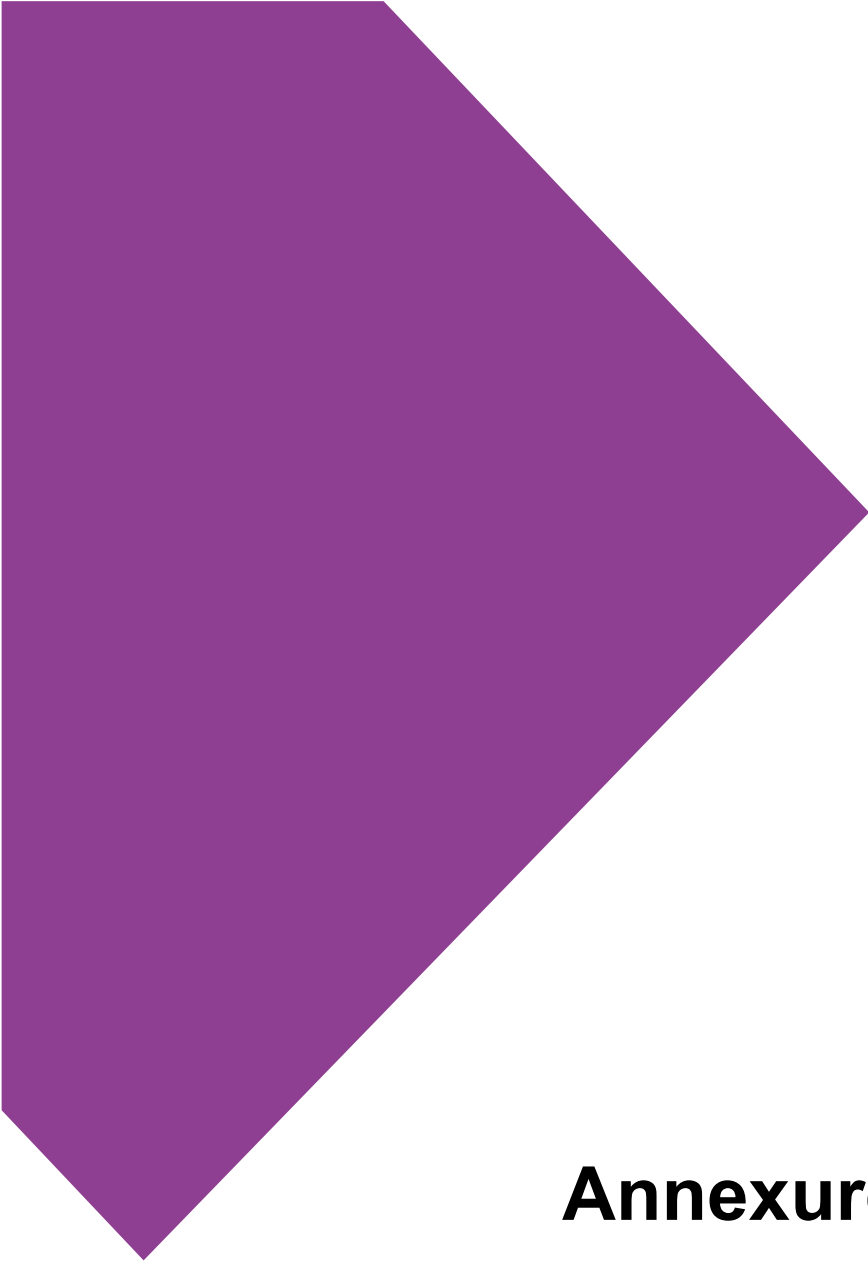
6.1 Outcomes with Recommendations of the Impact Assessment Study According to the Evaluation Framework

The overall assessment exercise has compared various aspects of the oxygen plant with respect to its awareness, functionality, time and cost reduction and perception of the beneficiaries. It was found that the oxygen plant has been very beneficial for the community and to the Area Hospital to provide regular oxygen supply to the patients. The Area Hospital is considered to be the first resort for medical emergencies. Below are the some observations and recommendations based on the findings of the study.

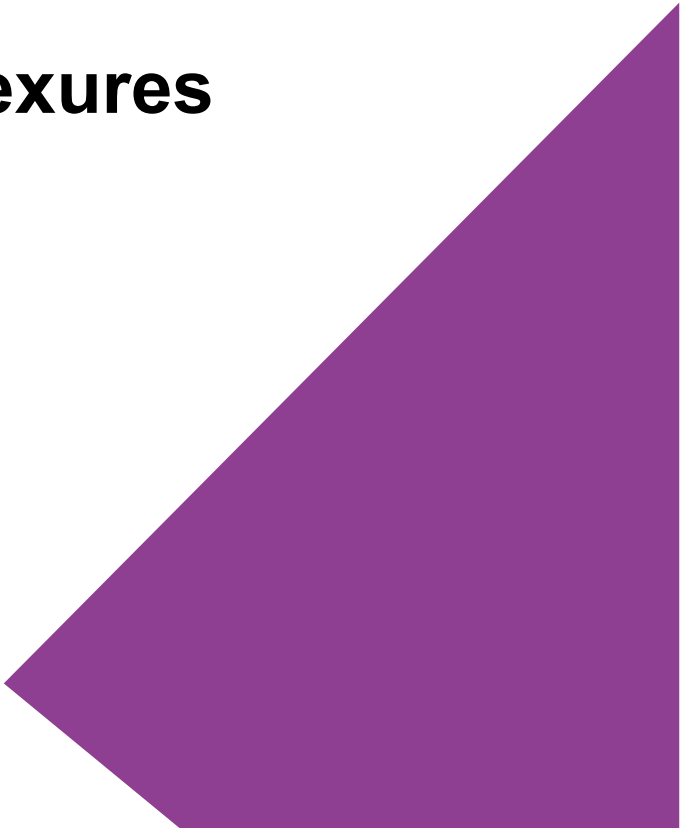
Table 6.1: Observations and Recommendations on the Evaluation Parameters

Relevance	
Observation	The Oxygen Plant was installed when there was a nationwide crisis of the oxygen supply during the Pandemic. The Area Hospital was heavily dependent on the oxygen cylinders provided by the vendors. The installation of the oxygen plant has enabled the Area hospital to have regular oxygen making it ready for cases that requires oxygen supply. It is not necessary that the beneficiaries will be aware of the oxygen plant as the purpose of the plant is to provide regular oxygen supply that will save lives. The awareness of the intervention remained low among the health workers.
Recommendation	There is a need to create awareness of the installation of the oxygen plant among the health workers, ASHA workers, which would increase the access to the Area Hospital for emergency cases. The Area Hospital should maintain a proper record of the beneficiaries availing the oxygen facility.
Effectiveness	
Observation	The installation of the oxygen plant has increased the number of patients at the Area Hospital requiring the oxygen facility. The oxygen supply is reported to be regular and adequate when the oxygen plant is functional and has been able to reduce the cost of treatment for receiving oxygen facility and the ICU facility after the installation of the oxygen plant. The Study revealed that the quality of treatment has improved after the installation of the oxygen plant.
Recommendation	The oxygen plant has technical issues that leads to the interruption in the functioning of the oxygen plant and needs a dedicated technical resource or the hospital staff to be trained who will be responsible for the maintenance of the oxygen plant to reduce any non-functionality of the oxygen plant.
Impact	

Observation	There has been a reduction in the cost of treatment if the treatment is availed at the Area hospital but for advance testing facility and advance radiology the patients have to visit private clinics increasing the cost of these particular facilities. Area Hospital are no longer dependent on oxygen cylinders and are self-sufficient for oxygen supply due to the installation of the oxygen plant. There has been an increase in the number of patients and reduction in referral cases to the District Hospital and only major critical cases are referred. The regular oxygen supply has enabled the hospital to provide timely treatment to patients needing critical care. The referral case to the District hospital has decreased and it has reduced the transportation time and cost of the patients to get treatment at the District hospital which has reduced the time in getting treatment and reduced the wage loss of the patients. The regular oxygen supply by the Area Hospital has also made the hospital ready to handle critical cases.
Recommendation	More community engagement activity is needed to create awareness of the oxygen plant and more patients avail the oxygen facility and not visit the District Hospital or private health facilities. More testing facility and adequate medicine supply is needed to reduce more cost of the patients to avail the facilities at private clinics/pharmacies. Partnering with regional/local/sub local Community Based Organisations (CBOs) and NGOs for better community outreach is recommended providing better medical facilities to reduce the cost of the patients. Engaging the community health workers on the awareness and advantages of the oxygen plant to encourage the community to use the oxygen facility at the Area Hospital. Better monitoring of the enrolled beneficiaries for availing the oxygen facility through regional/ local/sub local CBOs and NGOs through third party monitoring agencies
Efficiency	
Observation	The beneficiaries were satisfied by the oxygen supply. The Area Hospital has become self-sufficient for oxygen supply and is no longer dependents on oxygen cylinders provided by vendors. The oxygen plant often has technical issues which the hospital staff are not able to resolve, resulting to the dependency on the technical agency or other resources for the repair which consumes significant time resulting in the non-functionality of the oxygen plant for that time interrupting the oxygen supply.
Recommendation	Partnering with a technical agency for technical maintenance of the oxygen plant to reduce any technical issues of the oxygen plant
Sustainability	
Observation	The consumption of the oxygen plant is 100-150 LPM against the capacity of 500 LPM supporting 80 beds of the Area Hospital.
Recommendation	Partnering with regional/local/sub local Community Based Organisations (CBOs) and NGOs for better community outreach and information dissemination about the installation of the oxygen plant at the Area Hospital. Awareness creation among the community health workers (ANMs/ASHA workers/Anganwadi Workers) to increase the number of patients. More number of beds with oxygen supply to increase the capacity of the patients.



Annexures



7 Annexure 1

7.1 Photographs of Study

Figure 7.1: FGD with Women of Ambedkar Colony



Source: MMPL Survey

Figure 7.2: Meeting with Community Leader of Patancheru



Source: MMPL Survey

Figure 7.3: Meeting with the RMO



Source: MMPL Survey

Figure 7.4: FGD at Patancheru



Source: MMPL Survey

Figure 7.5: Meeting with Community Leader of Sultanpur



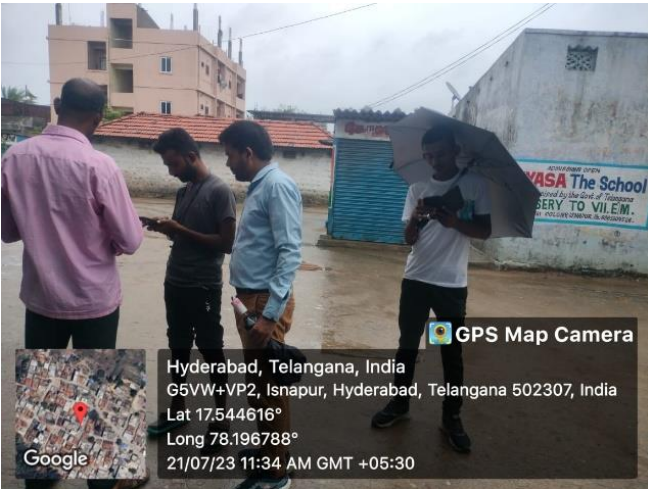
Source: MMPL Survey

Figure 7.6: Discussion with Health Workers of Patancheru



Source: MMPL Survey

Figure 7.7: Primary Data Collection



Source: MMPL Survey

Figure 7.8: Primary Data Collection



Source: MMPL Survey

Figure 7.9: Primary Data Collection



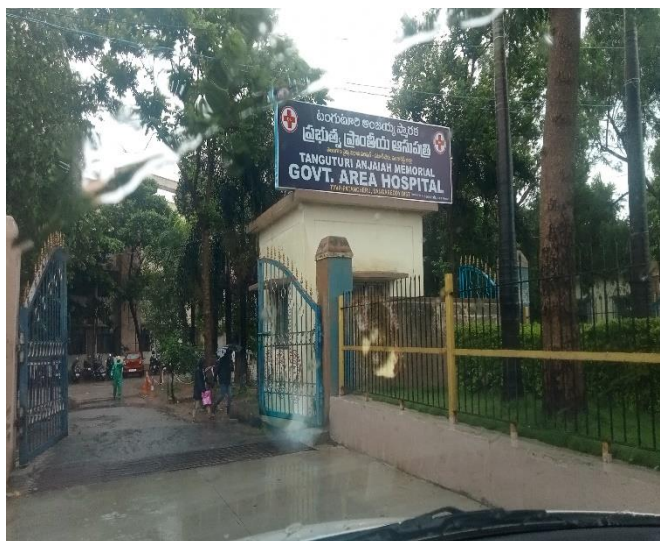
Source: MMPL Survey

Figure 7.10: Primary Data Collection



Source: MMPL Survey

Figure 7.11: Government Area Hospital, Patancheru

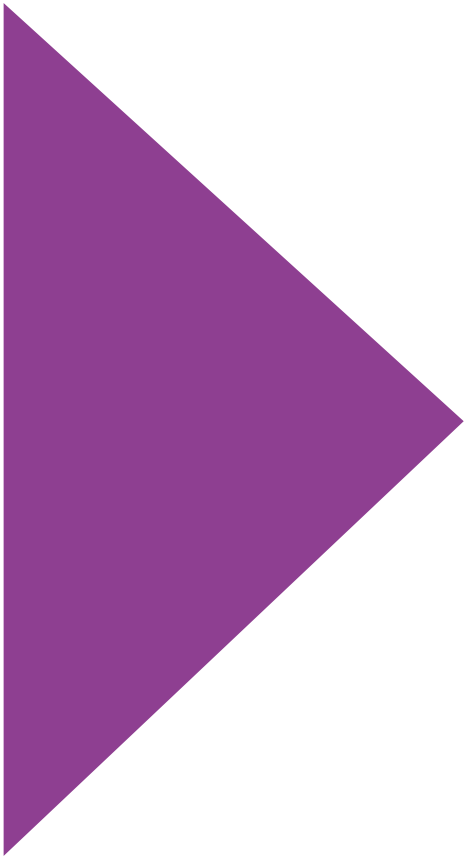
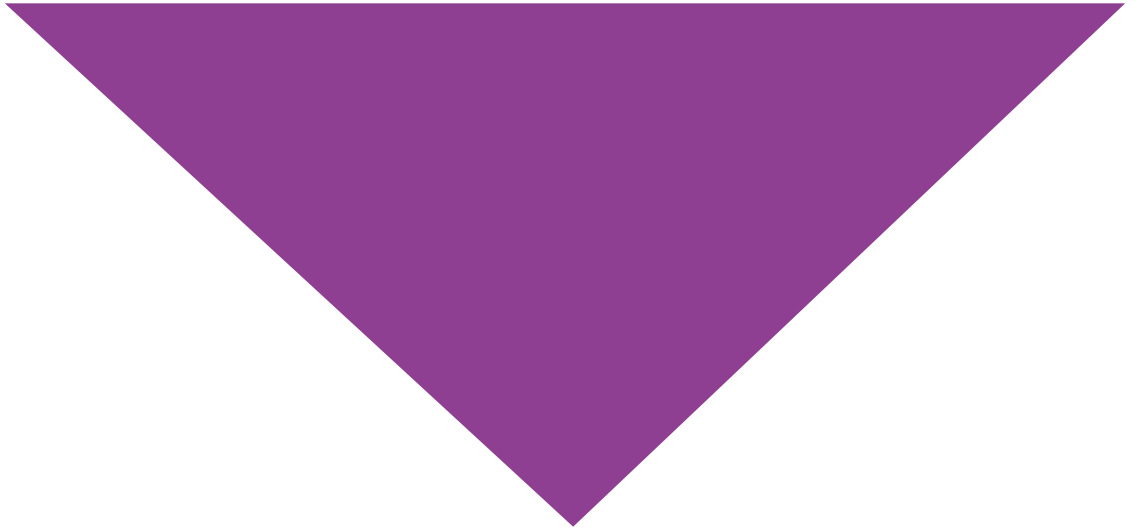


Source: MMPL Survey

Figure 7.12: Oxygen Plant setup by APL



Source: MMPL Survey



Life Sri

Impact Assessment Report

Mobile Health Unit

(Ankleshwar, Cuddalore, Kasna, Khandala, Mysore,
Patancheru, Rohtak, Sriperumbudur)



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Disclaimer

- This report has been prepared solely for the purpose set out in the Memorandum of Understanding (MoU) signed between Renalysis Consultants Pvt. Ltd. (CSRBOX) and Asian Paints Limited to undertake the Impact Assessment of their “Mobile Health Unit Project” implemented in the financial year 2021-22.
- This impact assessment is pursuant to the Companies (Corporate Social Responsibility Policy) Amendment Rules 2021, notification dated 22nd January 2021.
- This report shall be disclosed to those authorised in its entirety only without removing the disclaimers.
- CSRBOX has not performed an audit and does not express an opinion or any other form of assurance.
- Further, comments in our report are not intended, nor should they be interpreted to be legal advice or opinion.
- This report contains an analysis by CSRBOX considering the publications available from secondary sources and inputs gathered through interactions with the leadership team of Asian Paints Limited, project beneficiaries, and various knowledge partners. While the information obtained from the public domain has not been varied for authenticity, CSRBOX has taken due care to obtain information from sources generally considered to be reliable.
- Specific to the Impact Assessment of the project, funded through Asian Paints Limited, CSRBOX has relied on data shared by the Asian Paints Limited’s team.

With Specific to Impact Assessment of “Mobile Health Unit Project”

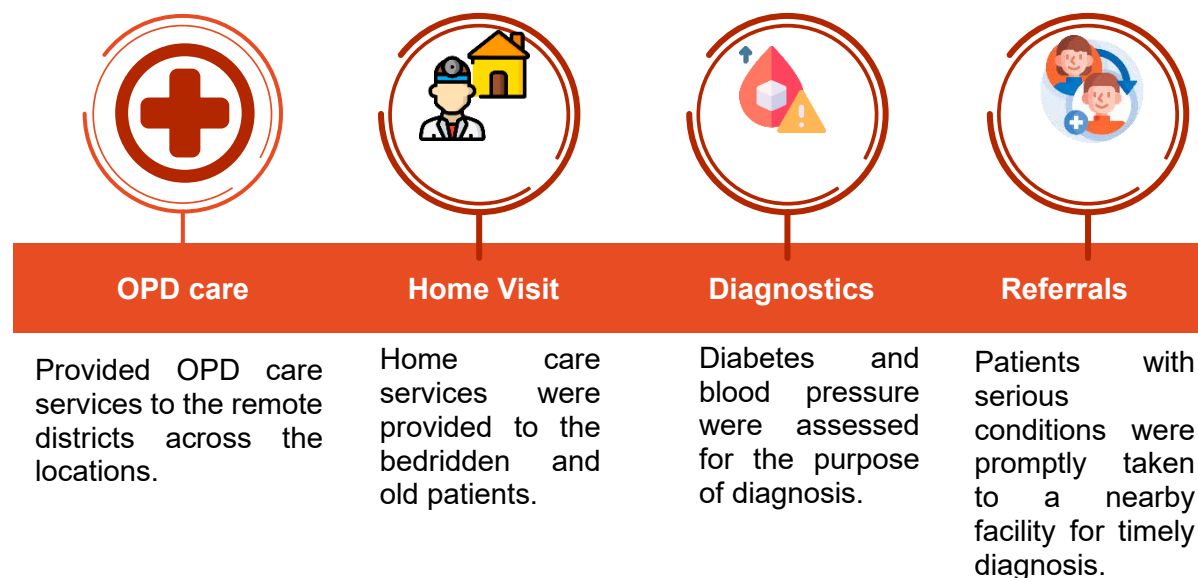
- CSRBOX has neither conducted an audit nor due diligence nor validated the financial statements and projections provided by Asian Paints Limited.
- Wherever information was not available in the public domain, suitable assumptions were made to extrapolate values for the same;
- CSRBOX must emphasise that the realisation of the benefits/improvisations accruing out of the recommendations set out within this report (based on secondary sources) is dependent on the continuing validity of the assumptions on which it is based. The assumptions will need to be reviewed and revised to reflect such changes in business trends, regulatory requirements, or the direction of the business as further clarity emerges. CSRBOX accepts no responsibility for the realisation of the projected benefits.
- The premise of an impact assessment is ‘the objectives’ of the project along with output and outcome indicators pre-set by the programme design and implementation team. CSRBOX’s impact assessment framework was designed and executed in alignment with those objectives and indicators.
- For the sake of confidentiality, the identities and the name of the village for the recipients have been changed.

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Executive Summary

Under its CSR initiative, Asian Paints Limited, in partnership with HelpAge India, provided medical health services in remote villages of 8 district. The programme primarily included the following interventions:



As per OECD-DAC framework, summarized impact findings are stated below:

Relevance

- 37% of the of the beneficiaries catered belong to middle-aged population. This signifies the MHU effectively addresses the healthcare needs of the working age group.
- The MHU serves a significant portion of the female population across all the locations which averages out to be 68%.
- **Around 55% of all the beneficiaries travelled to government hospitals to avail primary healthcare services.**
- The MHU services were highly relevant to the members of the community as around 42% of the beneficiaries across all the locations had monthly family income of less than INR 5000.
- **Around 42% of the individual across all the locations highlighted high travel time as the concern before the availability of the MHU services.**
- On average, approximately 35% of beneficiaries in all locations had to forgo their daily wages prior to the introduction of MHU services in the villages.

Coherence

SDG Alignment



National policy Alignment



Effectiveness

- Each MHU has achieved 100% compliance with all documented procedures and record-keeping across all the locations.
- It has a GPS tracking mechanism installed which ensures effortless monitoring and mapping of its routes and locations.
- More than 75% of the beneficiaries availed and were aware about the medication services in the MHU.
- More than 80% of the community members were aware and availed the primary health care services from MHU.
- The majority of beneficiaries in Cuddalore (11%) and Khandala (17%) locations were knowledgeable about the referral services and their advantages.
- Most prevalent disease across all the locations was common flu.
- Typically, around 22% of the middle-aged and elderly population across various locations received treatment for generalised weakness.
- On average, over 20% of patients within the middle and elderly age brackets were diagnosed with high blood pressure, a condition often associated with lifestyle factors.
- The patients were typically referred to the nearby government hospital for further treatment.
- During the fiscal year 2021-2022, over 160 home visits were carried out as part of the intervention across all locations.
-

Efficiency

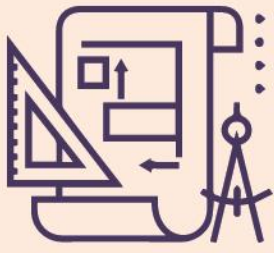
- The average waiting time across the locations has reduced drastically from 1-2 hour at other facility to less than 30 min at MHU.
- The detailed detection rates of various common communicable and lifestyle diseases can be found in the section below.
- Average of around INR 2312 saved per beneficiaries across all the locations.

Sustainability

- Community education on lifestyle diseases, early NCD detection via regular checkups, and behavioural changes through awareness sessions boost sustainability.

Impact

- The majority, constituting 93% of the participants across locations, provided favorable feedback, rating both the services and demeanour of the doctors as either good or excellent.
- More than 90% of the beneficiaries across all the locations rated the consultation services as good or excellent.
- 100% reduction in out-of-pocket expenditure for medical services across all the locations
- Early diagnosis of common communicable and lifestyle diseases.
- Reduction of waiting time from 1-2 hours at other facilities to 30 min at MHU to avail doctors' consultation and medicines.
- Increased treatment adherence of the patient and regular intake of medicines.
- INR 6.43 social value generated from the programme on every investment of INR 1.



Chapter 1

Project Background and Overview



This section provides an overview of the funding organisation, the programme cardinals and the detailed interventions.

CSR initiatives of Asian Paints

In adherence to its Charter, the organisation endeavours to enhance the quality of individuals' lives by embodying a CSR vision founded upon the principles of trust, equity, and compassion. Asian Paints' intent for its CSR activities is multifaceted, encompassing both social and environmental concerns.



Health and Hygiene: APL's integrated healthcare initiatives aim to ensure universal access to primary healthcare. The organisation is dedicated to increasing awareness of government schemes and facilitating referrals for advanced treatments at hospitals. Additionally, they have initiated women's health sensitisation programmes in specific locations.



Enhancing Vocational Skills: The APL team is committed to the idea of inclusive growth, advocating for equal opportunities that enable everyone to lead a dignified life. They serve as a catalyst, providing a platform for more individuals to transcend their immediate circumstances and pursue loftier aspirations.



Water: The APL team is supporting communities near their manufacturing sites in preserving water through the implementation of comprehensive watershed management programs. This initiative has enhanced water resources and contributed to the conservation of water in agricultural practices and related activities.

The APL team is dedicated to making primary healthcare services accessible to the lower-income group and marginalised communities.

The interventions for the project include:

Consultation, Treatment, Medicine, Diagnosis, Referral

- The SHU/MHU provides free consultation, treatment, medicine, diagnosis and referral ensuring comprehensive healthcare support in the communities they serve.

Healthcare services for bedridden patient:

- The doctors and support staff provide healthcare services to the bedridden patients by conducting home visits. This helps in demonstrating the commitment to addressing the specific needs of the individuals.

Awareness sessions on range of health topics

- The SHU/MHU is tasked with organising informational sessions on diseases. These educational endeavours are designed to empower communities with knowledge, encouraging a proactive stance toward health concerns and enhancing overall well-being.

Health Camps

- The SHU/MHU team organizes health camps for the beneficiary of the villages they are catering to and neighbouring villages. Various health camps, including diabetes health camps, eye screening and spectacle distribution camps, and distribution of assistive devices for the elderly population, are conducted.




Alignment with CSR Policy

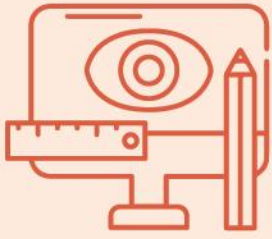
The Schedule VII (Section 135) of the Companies Act, 2013 specifies the list of activities that can be included by the company in its CSR policy. The table below illustrates the alignment of the intervention with the approved activities by the Ministry of Corporate Affairs.

Sub-Section	Activities as per Schedule VII	Alignment
(i)	Eradicating hunger, poverty and malnutrition, (Promoting health care including preventive Health) and sanitation (Including contribution to the Swacch Bharat Kosh set-up by the Central Government for the promotion of sanitation) and making available safe drinking water;	Completely

Alignment with SDGs

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2016 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

Sustainable Development Goal	Target	Alignment
 <p>3 GOOD HEALTH AND WELL-BEING</p>	<p>Goal 3: Good Health and Well-being</p> <p>3.4. Non-communicable diseases By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.</p> <p>3.8. Universal health coverage Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services, and access to safe, effective, quality and affordable essential medicines and vaccines for all.</p>	Completely
 <p>5 GENDER EQUALITY</p>	<p>Goal 5: Gender Equality</p> <p>5.1 End all forms of discrimination against all women and girls everywhere.</p>	Partially
 <p>10 REDUCED INEQUALITIES</p>	<p>Goal 10: Reduce inequalities</p> <p>10.2. By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.</p>	Completely



Chapter 2

Design and Approach for Impact Assessment



This section provides an overview of the objectives of the study, the adopted research methodology and other details revolving around the study.

2.1 Objective of the Study

1. To assess the overall infrastructure of the MHU/SHU.

- To check on the availability of the required infrastructure in MHU/SHU.
- Regularity & functionality of MHU in the area
- To Check the necessary registration/tax invoices related to the vehicle
- Medicine stock record & lab consumables maintenance in MHU/SHU & at the central office
- Manpower: qualifications, availability & attrition
- Record keeping mechanism.

2. To assess the health scenario of the area, quality of medical consultation, and medicine distribution.

- Health status of the community: major ailments prevalent in the area, NCD cases, age-specific illnesses, occurrence of communicable diseases, seasonal illnesses.
- To assess accessibility (% population from elderly/other community members) of primary healthcare services through MHU/SHU.
- To understand the age & gender wise disease trend in the given community & its peak outburst.
- Availability & functionalities of the medical infra in the operational area: government health infrastructure, private clinics, work hours of private clinics, chemist shops in the area
- Awareness about the MHUs/SHUs includes providing medical consultation and free medicine distribution, including details about the frequency of visits in a month, follow-up visits, the type of medicines served, and their effectiveness.
- Ensuring quality consultation by medical practitioners and briefings on dosage by the pharmacist.

3. To assess referral services for primary, secondary & tertiary care.

- To assess nearby/preferred medical facilities equipped for primary, secondary & tertiary care.
- To understand the age & gender-wise disease trend in the given community & its peak outburst
- Functionality of follow-up mechanism & its outcomes.

4. To assess the conducted home visits & counselling sessions.

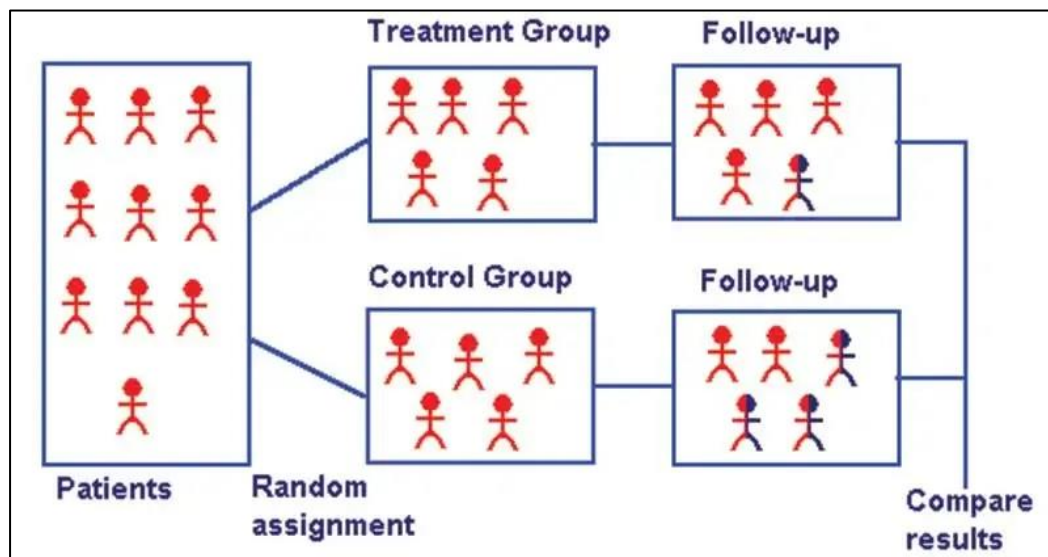
- Average time spent on one household, frequency of home visits to one household.
- Topics covered in-home visits & reasons for conducting home visits.
- Major topics focused on counselling sessions.
- Frequency & duration of counselling sessions
- To access the efficacy of IEC materials used for counselling sessions.

5. Other Impact areas apart from MHU/SHU services

- To assess knowledge and adoption level of hygiene & sanitation practices in the community
- Knowledge enhancement in terms of health, hygiene & sanitation, common communicable diseases & non-communicable diseases in the community
- Perception & opinions of the key stakeholders in the community regarding the services provided under MHU/SHU.
- Social Return on Investment by the Intervention

2.2 Evaluation Methodology and Framework

Aligned with the study's objective and key investigative areas, the evaluation design underscores the primary aim of gaining insights. In this section, the CSRBOX team details the strategy for crafting and implementing a robust, flexible, and results-oriented evaluation framework/design.

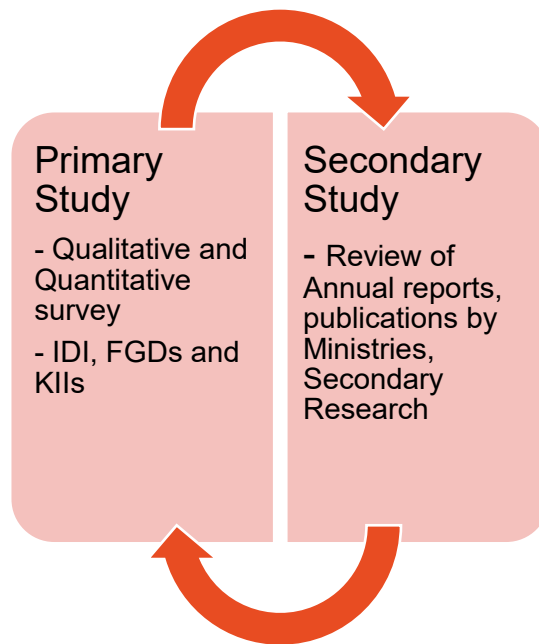


To assess the impact, the team employed a case-control programme evaluation approach. The case-control methodology for Impact Assessment involved comparing individuals or cases that were impacted with those that were not. This aimed to identify factors contributing to the observed effects. This method helped assess the causal relationship between an intervention or event and its impact by analysing differences in exposure or characteristics between the impacted and unaffected groups.

In the context of Impact Assessment for static/mobile health units, the case-control methodology involved systematically comparing individuals who received medical services through the mobile/static units (cases) with those who did not utilise such services (controls). The objective is to discern the factors contributing to the observed health outcomes or impacts. This methodology assessed how static/mobile health units enhanced healthcare accessibility and outcomes for the targeted population by analysing differences in health status, awareness levels, and treatment adherence between the groups.

Methodology

For the assessment of the programme, the team employed a two-pronged approach to data collection and review that included secondary data sources and literature, as well as primary data obtained through quantitative and qualitative methods of data collection. The figure below illustrates the study approach used in data collection and review. The secondary study involved a review of annual reports, monitoring reports, and other studies and research by renowned organisations available in the public domain for drawing insights into the situation of the area.



The primary study comprised qualitative and quantitative approaches to data collection and analysis. The qualitative aspects involved in-depth interviews (IDIs) with the MHU doctors, Driver cum support staff, pharmacists, PHC/CHC staff and other associated stakeholders.

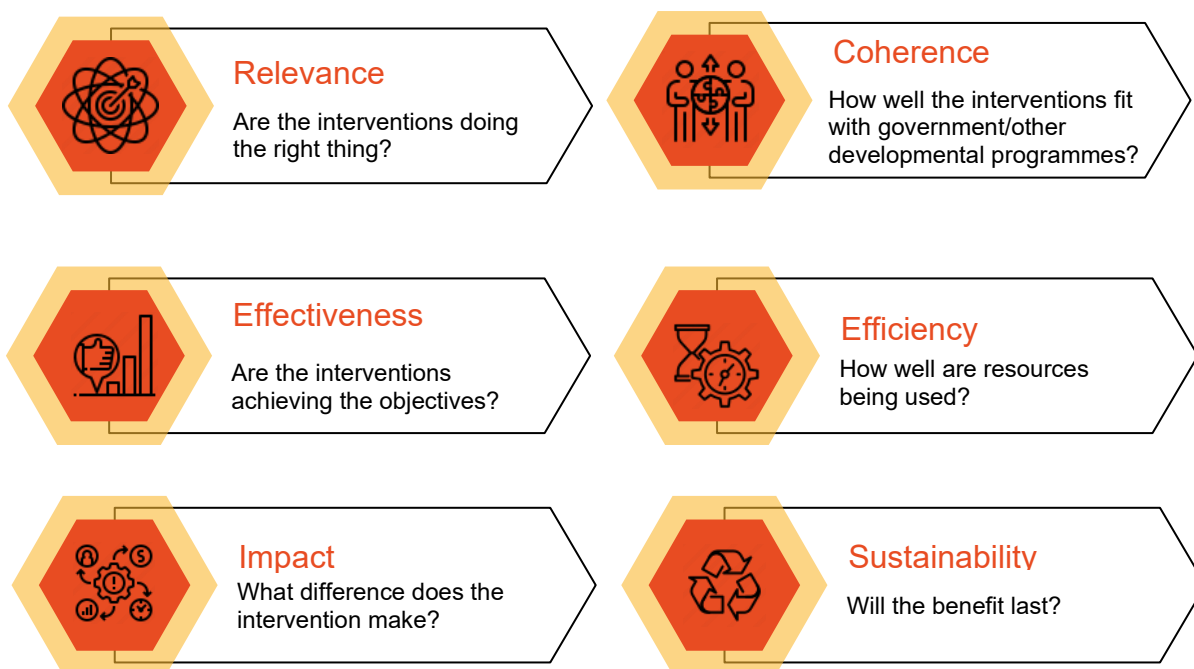
In addition to primary data collection, the CSRBOX team studied various project documents like Project Proposal, Project log-frame (Logical Framework Analysis), Baseline and Project cost and other available documents, Project implementation timelines, Communication and M&E reports, documentation products and other relevant reports/literature related to the projects.

The CSRBOX team also studied project implementation-related documents, specifying details of activities carried out, processes undertaken, no. of beneficiaries reached, and details of spent & unspent budgets under different budgetary heads.

OECD-DAC Framework

To assess the Relevance, Coherence, Effectiveness, Efficiency, Impact, and Sustainability of the project, the evaluation employed the OECD-DAC framework. Utilising the logic model and the criteria of the OECD-DAC framework, the evaluation analysed the APL team's contribution to the results, considering the various factors that might have influenced the overall outcome.

The social impact assessment hinged on the following pillars:



2.3 Stakeholder Mapping

Primary Stakeholders	Mode of Data Collection
Patients accessing MHU	Physical Survey

Sr. No.	Stakeholder	Mode of Data Collection
1	Medical officer / Doctor	In-Depth Interviews
2	Driver cum support staff	In-Depth Interviews
3	Pharmacists	In-Depth Interviews
4	Social Protection officer	In-Depth Interviews
5	Panchayat members	In-Depth Interviews
6	PHC/CHC/Government hospital staff	Focused-group discussion
7	AAA: ASHA, ANM and Anganwadi workers	Focused-group discussion
8	Project implementation Team	Key Informant Interview

2.4 Sampling approach

Quantitative Sampling

A stratified random sampling approach was used for the Impact Assessment. For the calculation of the sample size, a 95% Confidence level and a 5% Margin of error were considered. The samples for the control group were selected from the villages that did not have any intervention from the APL project.

Beneficiaries	Universe (per location)	Sample (per location)	Sample Bifurcation	
Patients who availed services of the MHU.	~2000	323 (95% CL, 5% MOE)	Treatment Villages	263
			Control Villages	60

Location	Stakeholders	Number of villages covered	Mode of Data collection	Sample Size
Ankleshwar	Beneficiaries (Treatment villages)	9	Survey	308
	Community members (Control villages)	2	Survey	68
Cuddalore	Beneficiaries (Treatment villages)	4	Survey	287
	Community members (Control villages)	2	Survey	70
Kasna	Beneficiaries (Treatment villages)	8	Survey	264
	Community members (Control villages)	2	Survey	60
Khandala	Beneficiaries (Treatment villages)	10	Survey	264
	Community members (Control villages)	2	Survey	61
Mysore	Beneficiaries (Treatment villages)	9	Survey	263
	Community members	2	Survey	60

	(Control villages)			
Patancheru	Beneficiaries (Treatment villages)	12	Survey	259
	Community members (Control villages)	4	Survey	63
Rohtak	Beneficiaries (Treatment villages)	6	Survey	271
	Community members (Control villages)	5	Survey	60
Sriperumbudur	Beneficiaries (Treatment villages)	10	Survey	277
	Community members (Control villages)	2	Survey	70

Sr. No.	Stakeholder	Mode of Data Collection	No. of Interviews per location
1	Medical officers / Doctors	In-Depth Interviews	1
2	Pharmacist	In-Depth Interviews	1
3	Social Protection officer	In-Depth Interviews	1
4	Driver cum support staff	In-Depth Interviews	1
5	Sarpanch	In-Depth Interviews	1
6	PHC/CHC/Government hospital staff	Focused-group discussion	1
7	AAA: ASHA, ANM and Anganwadi workers	Focused-group discussion	1

Limitations of the study

The team encountered minimal challenges during the study. Age-wise stratification was not achieved across all the locations due to the unavailability of beneficiaries in a particular age group.

Theory of Change

Activities	Output	Outcome	Impact
Providing consultation to beneficiaries visiting the SHU and MHU	+1,50,000 beneficiaries availed doctor consultation through the MHU throughout the year.	<ul style="list-style-type: none"> • Increase in early detection of chronic diseases and immediate medical assistance among the community. • Decreased the medical expenditure by the family. 	<ul style="list-style-type: none"> • 100% reduction on out-of-pocket expenditure on medical services. • Average of around 80% of respondents were able to avoid traveling to the nearby hospital, as the MHU is conveniently located within walking distance. • Issues such as long travel time, loss of daily wages, and treatment cost were eradicated through MHU, impacting a considerable portion of respondents highlighting financial and continuity-of-care through MHU.
Referral of patients to secondary and tertiary care for further treatment	Over 500+ beneficiaries referred to government and community health centres for high-quality, affordable medical care across all the locations	<ul style="list-style-type: none"> • Reduction in the burden on primary centres • Increased effectiveness in planning the patient footfall at each level 	
Conducting home visits of bedridden and follow - up patients	Health monitoring and follow-up visits were conducted for 170+ bedridden individuals at their homes.	<ul style="list-style-type: none"> • Ensured well-being and recovery of bedridden beneficiaries at frequent intervals. 	
Conducting basic lab tests such as diabetes, hypertension and treatment for general weakness	7000+ diabetes tests conducted across all the locations 20,000+ medicine treatment conducted for Generalized Weakness, Hypertension and regional specific disorders	<ul style="list-style-type: none"> • Increased detection of diabetic and hypertensive cases. 	

Conducting health camps, awareness drives and distribution of support equipment.	2,500+ beneficiaries attended awareness camps organised by MHU across all the locations.	<ul style="list-style-type: none"> • Increased participation in health camps and awareness drives. 	
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Chapter 3

Finding of the Impact Assessment Study

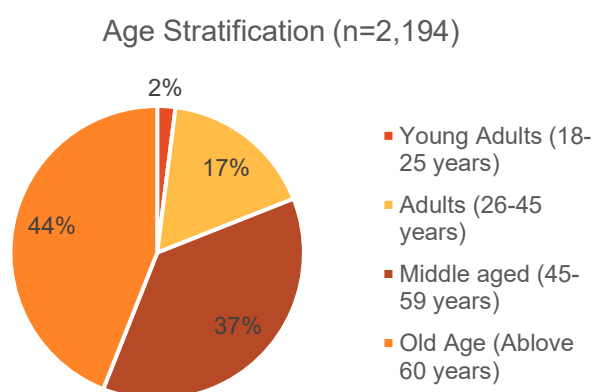


The following section of the report indicates the key findings and insights drawn from the impact assessment study based on the OECD-DAC framework's standard parameters as outlined. The insights have been drawn adopting a 360-degree approach to data collection by gathering data through quantitative and qualitative methods from multiple stakeholders involved in the programme.

3.1. Relevance

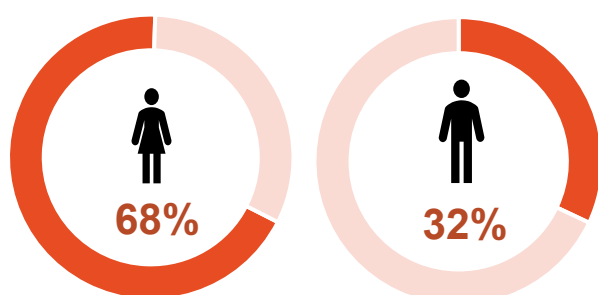
The program's relevance assesses the community's perceived need for interventions, gauging whether the interventions align with the community's actual requirements and are on the right track.

The Mobile Health Unit project implemented had an objective of making the primary healthcare services accessible to the remote locations of the selected districts. The MHU effectively address the health concerns of the middle-aged and old-aged individuals. Its relevance can be established by understanding the unique healthcare needs and challenges faced by elderly. The graph below clearly signifies that the 44% of the surveyed population falls into old age category. This demographic group typically experiences an increased prevalence of chronic health conditions, mobility limitations, and difficulties accessing healthcare facilities due to transportation constraints or limited mobility.



37% of the of the beneficiaries catered belong to middle-aged population. This signifies the MHU effectively addresses the healthcare needs of the working age group. It caters to the needs by providing tailored healthcare services such as screenings for chronic diseases like diabetes and hypertension, promoting healthy lifestyle behaviours, and offering preventive care interventions to mitigate health risks associated with aging.

The MHU serves a significant portion of the female population across all the locations which averages out to be 68%. This establishes the fact that the MHU services are more accessible to the female population, likely aligning with their availability at home due to family responsibilities and work schedules.



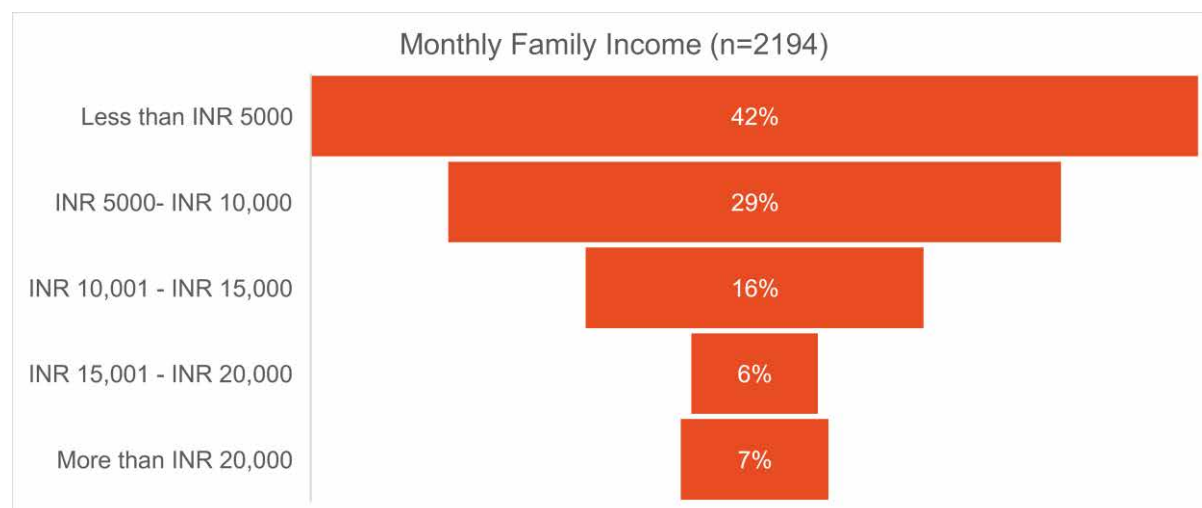
Despite not providing specialized gynaecology services, the MHU offers a range of general healthcare services that appeal to women, including primary care and preventive screenings.

Women may prioritize accessing these comprehensive services conveniently during the MHU's visits, recognizing the value of receiving holistic care in their communities.

The MHU services were highly relevant to the members of the community as around 42% of the beneficiaries across all the locations had monthly family income of less than INR 5000.

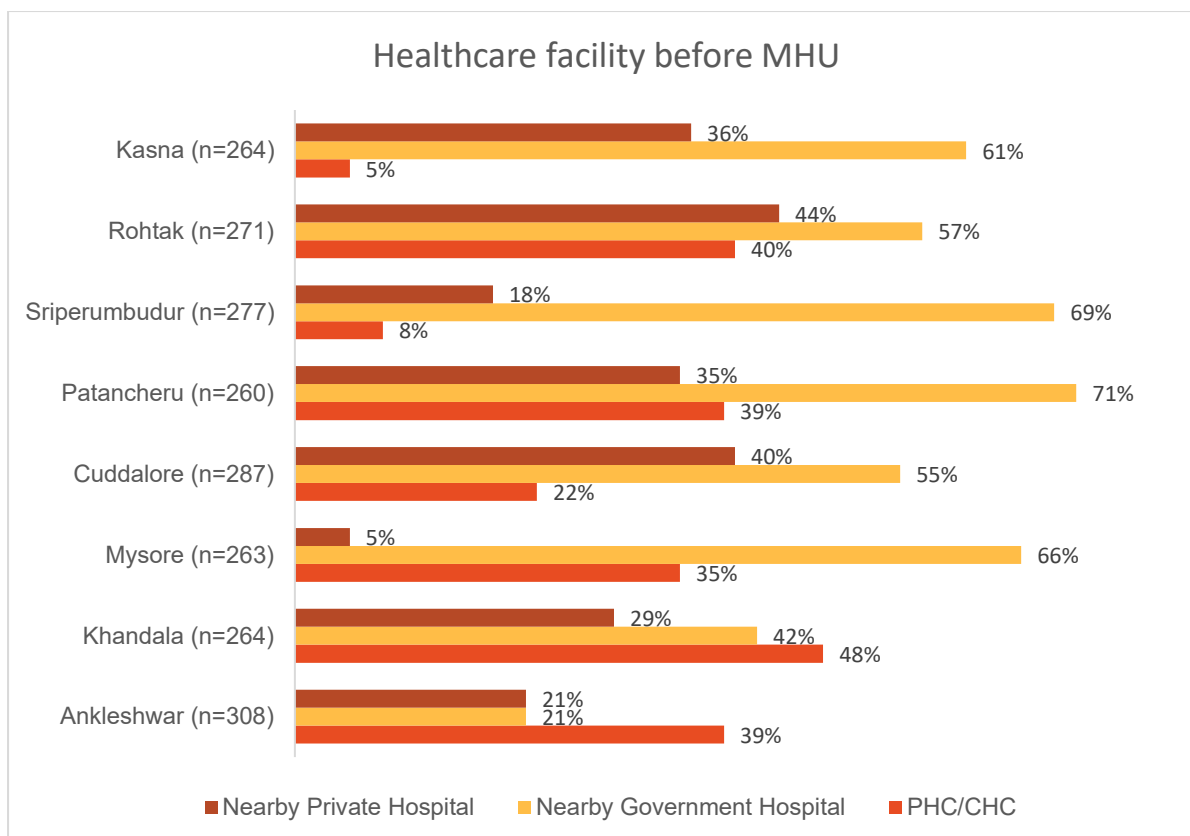
Community members with lower family incomes faces financial constraints that limit their ability to access healthcare services.

The MHU provides an essential lifeline by offering free of cost healthcare services, ensuring that individuals and families with limited financial resources can still receive the care they need without incurring significant expenses.



Many families with incomes below 5000 monthly often rely on just one earning member to support the entire household financially. In such households, prioritizing healthcare expenses can be challenging. The MHU offers a lifeline by providing accessible and affordable healthcare services, relieving financial strain on single-earner families and ensuring that they can access necessary medical care without compromising other basic needs. By addressing the healthcare needs of these families, the MHU contributes to improving overall family well-being and economic stability in the community. Therefore, MHU assisted in minimising the risk of catastrophic health expenses for the members of the community.

On interacting with the community members, it was derived that before the availability of MHU services, patients with low incomes typically relied on government hospitals for their healthcare needs. **Around 55% of all the beneficiaries travelled to government hospitals to avail primary healthcare services.** However, the operationality of MHUs has brought about several significant changes, demonstrating their relevance in serving these patients. Government hospitals are often centralized in urban areas, requiring patients from rural or remote communities to travel long distances to access healthcare services. This poses a significant barrier to access, especially for individuals with limited financial resources. The introduction of MHUs addresses this issue by bringing healthcare services directly to the doorstep of underserved communities.

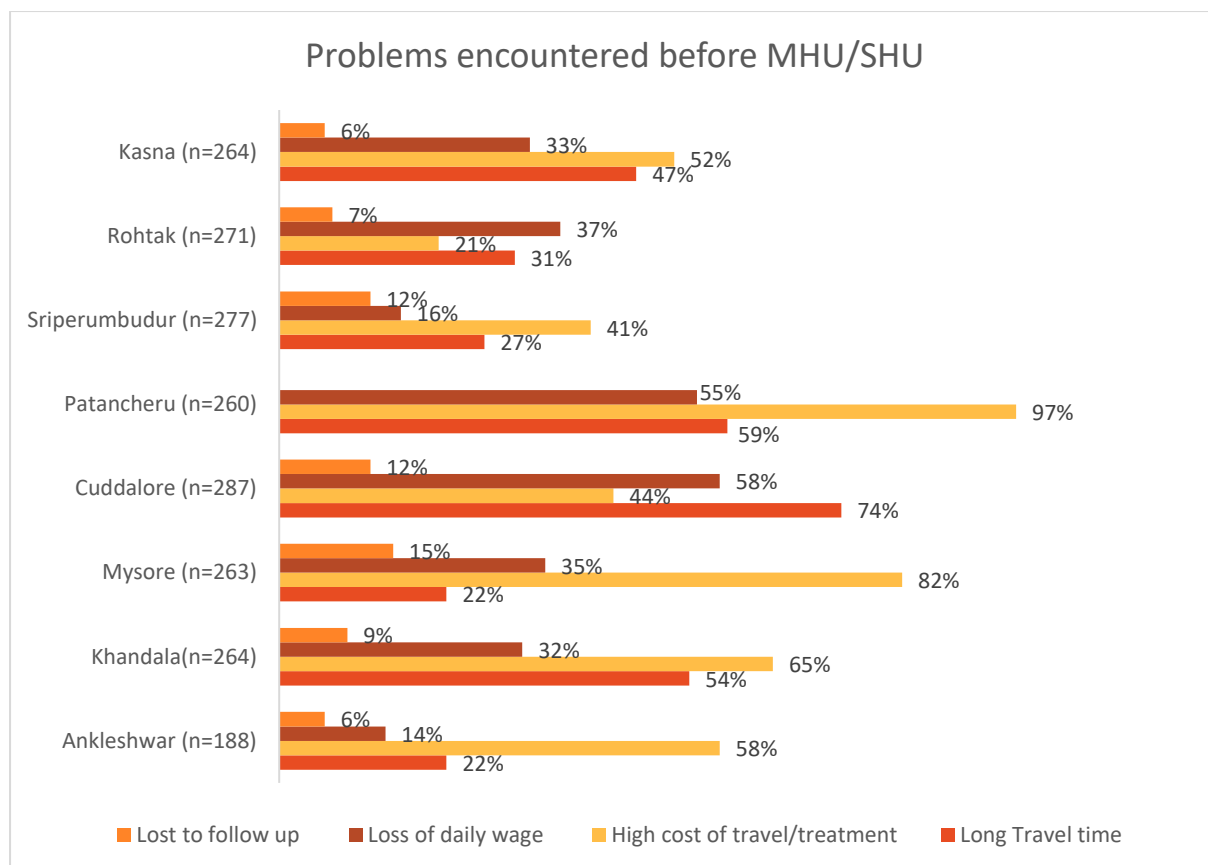


Before the availability of MHU services, individuals from rural or remote communities often had to travel long distances to reach healthcare facilities, resulting in significant time and financial costs. **Around 42% of the individual across all the locations highlighted high travel time as the concern before the availability of the MHU services.** MHUs bring healthcare services directly to these communities, reducing travel time and making medical care more accessible. This reduction in travel time not only improves convenience for patients but also increases the likelihood of seeking timely medical attention, leading to better health outcomes and reduced risks of complications.

Furthermore, Government hospitals, while offering subsidized or free healthcare services, often impose indirect costs on patients, including transportation expenses and loss of wages due to time spent seeking care. Moreover, in case of emergency the community members seek treatment from private healthcare facilities which incur them high cost of treatment.


Seeking healthcare often necessitates taking time off work, resulting in loss of daily wages for individuals with low incomes who cannot afford to forego their earnings. **On average, approximately 35% of beneficiaries in all locations had to forgo their daily wages prior to the introduction of MHU services in the villages.**

MHUs prioritize continuity of care by offering follow-up services directly within the community, ensuring that patients can easily access ongoing medical support and monitoring. **Prior, to the MHU services, the community faced difficulty accessing the follow-up care while visiting government hospital or a Primary health center.**



Therefore, the relevance of MHU services in addressing issues such as long travel times, high treatment costs, loss of daily wages, and challenges with follow-up care is evident in their ability to bring affordable, accessible, and comprehensive healthcare services directly to underserved communities. By addressing these barriers to healthcare access, MHUs played a vital role in improving health outcomes, promoting equity in healthcare delivery, and enhancing the overall well-being of individuals with low incomes.

3.2. Coherence

Sustainable Development Goal	Alignment
	<p>Goal 3: Good Health and Well-being</p> <p>The MHU/SHU programme contributes to Goal 3 by providing essential healthcare services, promoting health awareness, and facilitating access to medical treatments, thereby supporting efforts to ensure good health and well-being.</p>
	<p>Goal 5: Gender Equality</p> <p>The MHU/SHU addresses gender-specific health needs or works towards ensuring equal access to healthcare for all genders.</p>
	<p>Goal 10: Reduce inequalities</p> <p>By providing healthcare services to underserved or marginalised communities, the MHU/SHU contributes to Goal 10, which aims to reduce inequalities within and among countries.</p>

National Rural Health Mission



India's NRHM, under the **National Health Mission (NHM)**, includes initiatives for mobile healthcare services. Mobile Medical Units (MMUs) are deployed to remote areas, providing essential healthcare services, maternal and child health services, and disease prevention.

The Mobile Health Unit and Static Unit programme implemented by APL is in full accordance with the government's mission to ensure the availability of healthcare services in remote regions. This initiative underscores APL's commitment to supporting the government's objective of extending healthcare access to areas that are

geographically distant and often face challenges in receiving essential medical services.

3.3. Effectiveness

Effectiveness defines the extent to which the interventions are achieving its objectives. The insights drawn from the data collected as a part of the survey are stated below.

One of the primary objectives of the study, was to assess the presence of necessary infrastructure in the MHU and ensure its consistent functionality in the region. This intervention aimed to facilitate the delivery of consistent, timely, and high-quality medical treatment to the underserved population.

Overall Infrastructure of MHU

Mobile Medical Units (MMUs) within the framework of the National Health Mission (NHM) are now inclusive of both NRHM and NUHM. As mentioned in the guidelines¹, the objective of a MMU is to make public healthcare services available and accessible to all, especially for individuals residing in distant, challenging, underserved, and unreached regions. Additionally, it aims to serve the unreached with more comprehensive healthcare beyond basic OPD services and a limited range of RCH services (Reproductive Child Health).

The guidelines were established to help states reorganise the implementation of Mobile Medical Units (MMUs). The goal is to ensure that MMU outcomes align with reaching the most remote areas.

The Mobile Health Unit project, launched by Asian Paints, conformed to the government guidelines for Mobile Medical Units (MMU) as outlined in the National Health Mission. Additional details regarding this compliance are elaborated below. The comprehensive assessment of the MMU's infrastructure was conducted using a developed checklist with predefined criteria to evaluate its impact. The level of compliance was calculated employing the following formula:

Calculation of the percentage: $\text{Score obtained} \times 100 / \text{No of checkpoints in checklist} \times 2$

Location	Medical Equipment and Instruments	Precautionary Consumables	Services Provision	Medications	Man Power	Documents of the MHU
Ankleshwar	78%	50%	50%	82%	60%	100%
Khandala	63%	63%	71%	73%	60%	100%
Mysore	88%	38%	41%	46%	60%	100%
Patancheru	62%	63%	68%	64%	60%	100%
Sriperumbudur	72%	75%	41%	36%	80%	100%
Rohtak	56%	50%	41%	55%	60%	100%
Kasna	84%	88%	31%	64%	80%	100%
Cuddalore (SHU)	66%	63%	36%	73%	50%	NA

After careful observation, the team found that the MHU achieved 100% compliance with all documented procedures and record-keeping across all the locations. The MHU displayed consistency across all locations in dispensing necessary and urgent medications. However, there is room for improvement in its adherence to standards by incorporating family planning kits and intravenous fluids for immobilized patients. Attention is required in procuring precautionary consumables, especially ABC type fire extinguishers at all sites, and ensuring strict adherence to safety protocols during patient examinations. To enrich its services, there's

¹ https://nhm.gov.in/images/pdf/NHM/NHM-Guidelines/Mobile_Medical_Units.pdf

a recommendation to expand offerings by including basic sample collection for tuberculosis and haemoglobin testing.

The MHU van meets all required qualifications, licenses, and fitness certifications at all project locations. Nonetheless, upgrading to a more advanced vehicle could facilitate service expansion. The enhanced van could accommodate a doctor's chair and patient examination table for patient comfort and convenience. Additionally, it would provide ample space for storing medications.

Best practices of wearing masks and gloves while examining patients can be adopted. This practice is necessary to avoid the spread of infection and ensure safety.

Operational details of MHU/SHU.

The MHU complies with a GPS-based tracking system, which helps monitor and map the route and locations easily. The van makes 4 trips in a month to a particular village, it may vary location wise. **It has a GPS tracking mechanism installed which ensures effortless monitoring and mapping of its routes and locations.**

The MHU possesses a designated parking location, and employs a distinctive siren, facilitating mobilization and alerting people to its arrival. **Therefore, the interventions have significantly assisted remote communities in accessing primary healthcare services conveniently at their doorsteps.**

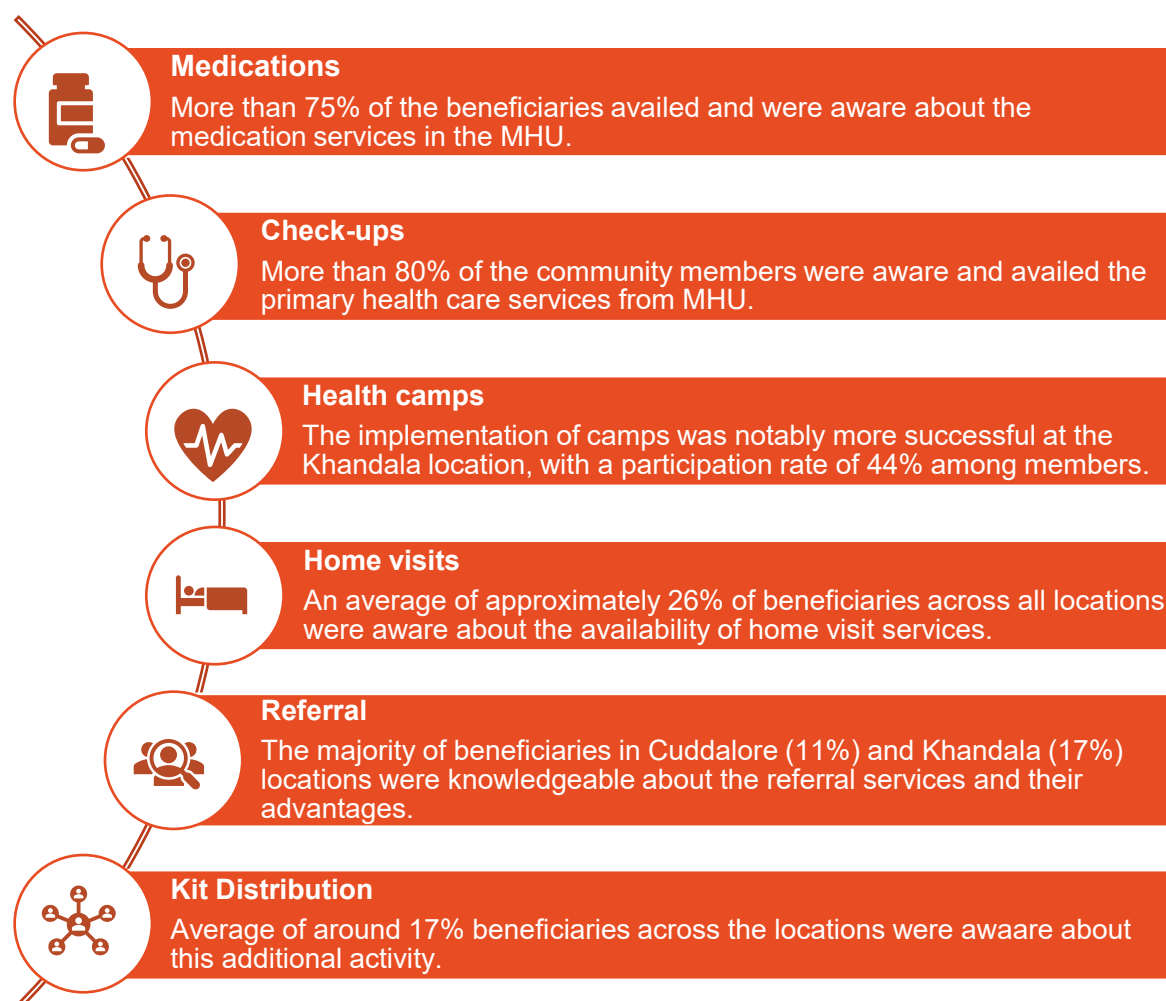
The MHU adheres to a consistent and structured routine by visiting the designated villages on a weekly basis.

The detailed schedule followed by MHU across each location can be found in [Annexure I](#)

These weekly visits of the MHU were deemed convenient for the villagers. This regularity ensures that the communities receive timely and dependable healthcare services. By following a predefined schedule, the MHU establishes a sense of reliability and predictability among the residents, allowing them to anticipate and plan for its arrival. This consistent presence fosters trust and engagement within the communities, as residents become familiar with the routine and are more likely to seek out the MHU's services when needed. Additionally, the weekly visits enable the MHU team to maintain continuity of care and monitor the health status of community members over time, facilitating early detection and intervention for any emerging health issues.

At certain locations, Saturdays are utilized for conducting health camps, which serve to raise awareness and encourage a shift in community health-seeking behavior. Implementing a similar strategy at all locations could enhance program effectiveness.

Participation of community member in MHU/SHU services



The recipients of the MHU program were well-informed about the diverse range of services offered by the mobile unit. Active community participation in the program's activities, coupled with positive word-of-mouth communication, has played a pivotal role in fostering a shift in health-seeking behaviour within the community. This indicates a growing awareness and acceptance of the MHU services, resulting in improved engagement and uptake of healthcare resources among community members.

Manpower: Qualification, Availability and Attrition



The MHU is staffed with qualified doctors, pharmacists, and a driver-cum-support team to deliver services. They are available during MHU visits to provide optimal treatment to the community.

The presence of skilled personnel within the MHU is instrumental in guaranteeing the delivery of high-quality services to the community. The qualified staff brings expertise and proficiency, contributing to the overall effectiveness and excellence of the services provided by the MHU.

The implementation team encounters specific difficulties in retaining highly skilled doctors due to the demanding nature of the work. To address this issue, the team may consider appointing individuals with Bachelor of Ayurvedic Medicine and Surgery (BAMS) or Bachelor of Homeopathic Medicine and Surgery (BHMS) qualifications, which could potentially improve the retention rate of medical professionals. This strategy aims to attract candidates who are suited to the demands of the role, thereby enhancing the stability of the medical workforce within the program.

Record Keeping Mechanism

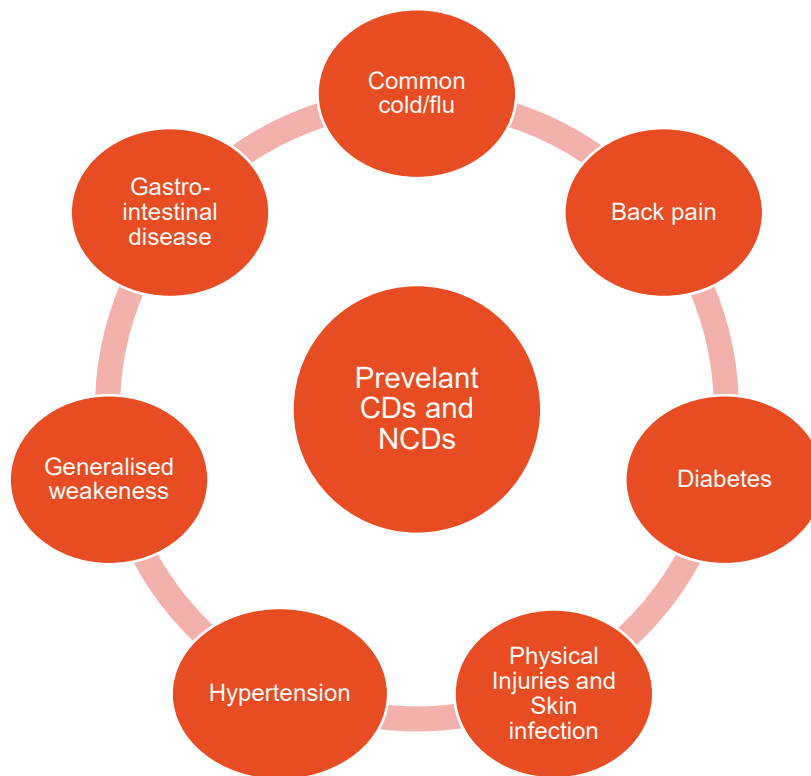
The driver duals responsibility as a support staff and is responsible for managing all OPD records. Patient records for individuals visiting the MHU are initially documented manually in registers during their MHU visit. Subsequently, these records are digitally entered into the Goodera platform for the purpose of maintaining them in a digital format. The village-wise registers contribute to the organised maintenance of patient records.

New patients are provided with a patient card for unique identification, while the recurring patient record is tracked with the help of registers maintained during the visit to the village. Additionally, doctors maintain case papers to monitor the health history of patients.

Health Status of the community across the intervention locations

The services provided by the MHU have proven highly efficient in delivering primary healthcare to remote areas of the community. These services have significantly contributed to the management of a wide range of prevalent communicable and lifestyle-related illnesses. By conducting regular visits, the MHU has facilitated the early detection of health issues, enabling timely intervention and treatment initiation. This proactive approach has played a pivotal role in enhancing health outcomes and addressing healthcare needs effectively within underserved populations.

The following figure represents the most prevalent diseases across the locations:



Age associated disorders:

Common flu: The MHU conducted assessments and administered care for individuals experiencing symptoms of the common cold, providing both relief from discomfort and guidance on suitable self-care measures. By addressing common cold symptoms comprehensively, MHU helped alleviate suffering and empower individuals to manage their health effectively, ultimately contributing to the overall well-being of the community. This ailment was widespread among individuals of all age groups in every location.

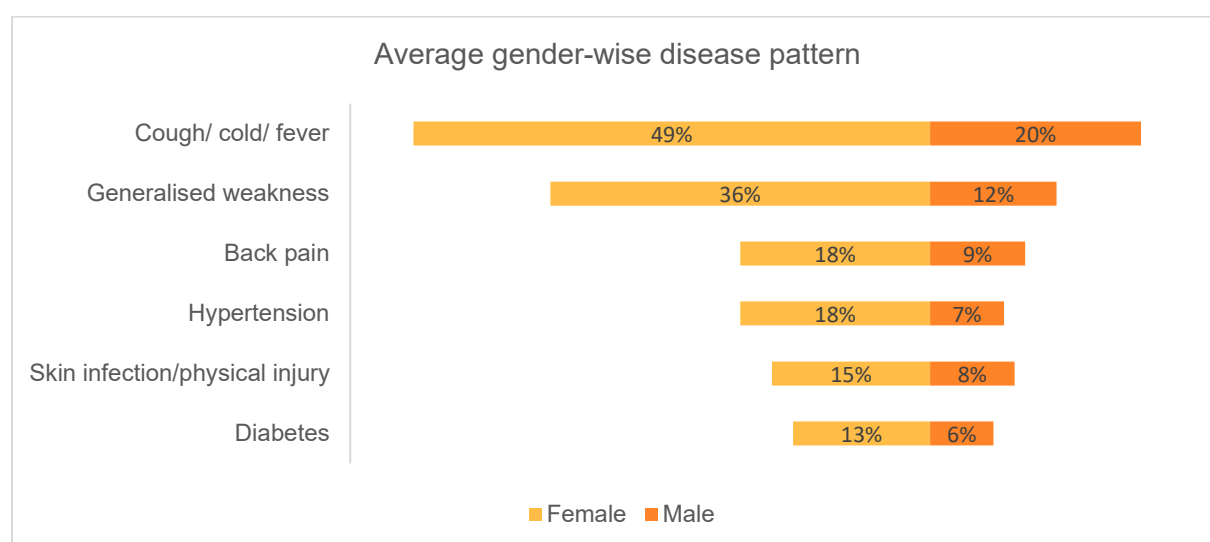
Generalised weakness: The MHU plays a crucial role in addressing generalized weakness prevalent among middle-aged and elderly populations. **Typically, around 22% of the middle-aged and elderly population across various locations received treatment for generalised weakness.** Through targeted interventions and medical evaluations MHU aims to enhance strength, vitality, and quality of life for middle-aged and elderly individuals in the community. By addressing generalised weakness, MHU contributes to promoting healthier and more active lifestyles among these age groups, thereby positively impacting their overall health outcomes.

Back Pain: The MHU provides evaluations and fundamental treatments for back pain, encompassing pain management strategies and medications, particularly focusing on individuals aged 45 and above. **The majority of beneficiaries within this demographic were concentrated in the Kasna and Patancheru areas.**

Skin infection and physical injuries: MHU provided first aid, wound care, and initial assessments for various physical injuries, ensuring prompt attention and appropriate referrals for follow-up care as needed. Additionally, it offered evaluations and treatments for common skin infections, including bacterial and fungal infections, ensuring proper management and prevention of complications. **Patients in Ankleshwar sought treatment for skin infections due to the presence of contaminated water in the area.**

Diabetes: With a focus on early detection and prompt treatment, MHU provided screenings, and support for individuals with diabetes, aiming to effectively manage their condition through preventive care and comprehensive management strategies.

Hypertension: MHU conducted blood pressure screenings and provides counselling on lifestyle modifications and medication management to help individuals maintain healthy blood pressure levels. **On average, over 20% of patients within the middle and elderly age brackets were diagnosed with high blood pressure, a condition often associated with lifestyle factors.**



The diagram depicted illustrates the average prevalence of diseases among both male and female populations across various locations. It reveals that females exhibit a higher rate of disease compared to males in all areas. This discrepancy can be attributed to the visiting hours of the MHU, which resulted in a larger number of female beneficiaries being present at home during data collection. Consequently, lifestyle-related diseases, which tend to affect females more, are more commonly observed among this demographic.

The MHU is dedicated to delivering fundamental OPD care, ensuring a comprehensive approach to healthcare encompassing infectious and acute health concerns within the community. Hence, **it is adeptly addressing common communicable diseases such as flu and skin infections along with non-communicable and lifestyle diseases including diabetes, back pain, gastrointestinal and hypertension across all the locations catered.**

Additional activities

Health Camps

To offer specialized healthcare services to the elderly community, health camps were organized regularly at Khandala, Mysore, Kasna, Sriperumbudur, Rohtak and Cuddalore.

These camps included the distribution of spectacles, walking sticks, and screenings for various diseases, contributing significantly to supporting the health needs of the elderly population. The provision of such targeted services aimed to address specific health concerns and enhance the overall well-being of the elderly individuals in the community.

Referral Services

The MHU offered comprehensive referral services to ensure patients receive appropriate care beyond its scope. Upon diagnosis or identification of conditions requiring specialised treatment, patients were referred to nearby healthcare facilities or specialists.

Major reasons of referral to another facility across all the locations includes:

	Limited services at MHU	Need for specialist doctor for further consultation	Need for lab test	Need for hospitalisation
Ankleshwar (n=136)	44%	25%	25%	7%
Khandala (n=143)	40%	14%	13%	10%
Rohtak (n=159)	84%	38%	13%	32%
Sriperumbudur	No major referrals			
Kasna (n=63)	48%	31%	9%	10%
Patancheru (n=73)	86%	29%	0%	4%
Cuddalore (n=15)	47%	43%	13%	53%
Mysore (n=68)	85%	15%	9%	7%

Of all the locations the major reason for referral was the limited services at MHU.

Other common reasons for referral include the absence of specialised services at the MHU, the severity of the illness, the need for specialised medical advice, and the necessity for laboratory tests to ensure precise diagnosis.

The patients were typically referred to the nearby government hospital for further treatment. During qualitative interactions, it became apparent that patients were hesitant to visit the health facility to which they were referred due to following reasons:

Increased expense of travel	Loss of daily wage	Increased travel time	Lack of transportation
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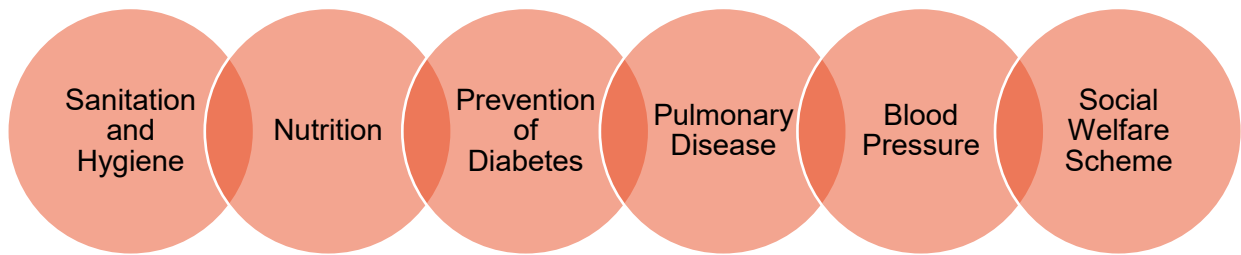
Referral services provided by MHUs had a significant positive impact on community health outcomes. These services facilitated access to specialised medical care not readily available locally, ensuring timely intervention and treatment for patients with complex health needs.

Awareness session

The primary aim of the MHU project was to instigate behavioural change within the community. Scheduled awareness sessions were organized to disseminate information and inspire individuals to prioritize their health. Consequently, this initiative led to the early identification of illnesses and encouraged adherence to treatment regimens among community members. These sessions served as valuable platforms for disseminating essential health information, raising awareness about prevalent health issues, and promoting healthy behaviours and preventive measures. By addressing topics such as Sanitation and hygiene practices, nutrition, prevention of diabetes, pulmonary disease and blood pressure awareness sessions

equipped community members with the knowledge and tools necessary to maintain and improve their health.

Some of the topics include:



The impact of awareness sessions extended beyond individual behaviour change to encompass broader community-level outcomes. By promoting health-seeking behaviours and preventive practices, these sessions contributed to the overall improvement of community health indicators and reduced the burden of preventable diseases. They also helped create a supportive environment where health-promoting norms were reinforced, leading to sustainable improvements in community health and well-being over time.

Home Visits

The MHU had a service of providing home visits. It was essentially offered to the bedridden patients, offering medical care at their residences. These visits ensured accessibility to medical care for patients with limited mobility or transportation options, eliminating barriers to healthcare access.

During the fiscal year 2021-2022, over 160 home visits were carried out as part of the intervention across all locations.

MHU healthcare providers assessed the specific needs and conditions of bedridden patients in their home environment, allowing for tailored care plans that address individual medical needs and preferences. Regular monitoring and follow-up during home visits enabled healthcare providers to closely track the patient's health status, adjust treatment plans as necessary, and provide ongoing support for optimal health outcomes.

Conducting healthcare services in the patient's home preserved their sense of dignity and comfort, recognizing their individual preferences and promoting autonomy. Overall, MHU home visits played a crucial role in improving health outcomes, enhancing quality of life, and promoting dignity for bedridden individuals by bringing healthcare directly to their doorstep.

3.4. Efficiency

Efficiency refers to how effectively resources are utilized, measuring the time and cost-effectiveness of interventions. The following insights are derived from the data gathered during the survey.

Disease wise increase in detection rate across project locations.

The following tables are compiled using secondary data provided by Helpage India. It was used to map the detection rate of diseases across different locations.

1. Common flu

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Ankleshwar	17%	28%	20%	41%
Khandala	8%	13%	8%	8%
Kasna	10%	15%	15%	12%
Patancheru	4%	4%	4%	3%

The table provides insights into the detection rates of cough and cold across different locations throughout various quarters. In Ankleshwar, there is notable variability, with a sharp increase to 41% in Quarter 4,

indicating a potential seasonal trend during that period. Khandala maintains a relatively stable but lower detection rate, ranging from 8% to 13% across all quarters, suggesting a consistent prevalence of cough and cold in the region. Kasna exhibits a moderate detection rate, peaking at 15% during Quarters 2 and 3, possibly reflecting environmental factors or local health patterns.

Conversely, Patancheru consistently shows the lowest detection rates, declining gradually to 3% by Quarter 4, indicating either fewer cases or potential underreporting in this area. These findings shed light on the regional variations in the prevalence and detection of cough and cold, which could inform targeted public health interventions and resource allocation strategies.

2. Diabetes

Location	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Khandala	10%	8%	6%	6%
Mysore	23%	14%	12%	6%
Kasna	10%	9%	9%	8%
Sriperumbudur	25%	20%	18%	25%
Patancheru	7%	7%	7%	6%

The table illustrates the detection rates of diabetes across various locations during the fiscal year 2021-2022. Notably, Sriperumbudur consistently shows the highest detection rates, peaking at 25% in Quarters 1 and 4, suggesting a significant prevalence of diabetes in that area. Mysore follows with relatively high detection rates in Quarter 1 but shows a decline over subsequent quarters. Khandala and Kasna exhibit lower but consistent detection rates, while Patancheru consistently demonstrates the lowest rates.

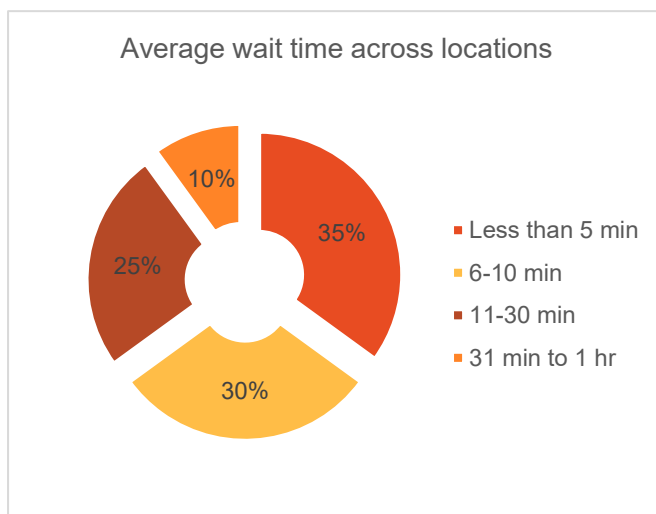
The MHU played a crucial role in facilitating these detections by providing access to healthcare services, especially in rural or underserved areas where healthcare infrastructure was limited. Its presence contributed to the identification and management of diabetes cases across these diverse locations.

3. Hypertension

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Khandala	5%	13%	8%	8%
Mysore	16%	20%	17%	7%
Kasna	15%	11%	11%	8%
Sriperumbudur	41%	35%	31%	24%
Patancheru	8%	9%	8%	8%

As the table suggests Sriperumbudur exhibits consistently high detection rates across all quarters, with a peak of 41% in Quarter 1. Mysore and Kasna also show relatively elevated detection rates, with fluctuations observed over the quarters. Khandala and Patancheru display lower but consistent detection rates throughout the year. Overall, the data suggests that MHU services have played a crucial role in identifying hypertensive patients across these locations, facilitating early intervention and management of the condition.

The consistent presence of the MHU in the village led to the prompt identification of lifestyle disorders. There has been a notable rise in the detection of hypertensive patients throughout the quarters



Prior to the introduction of MHU services, patients had to travel to a nearby district hospital or PHC, investing 2-3 hours every time for monthly medication retrieval.

The average waiting time across the locations has reduced drastically from 1-2 hour at other facility to less than 30 min at MHU. Furthermore, the doorstep delivery of medicines has played a crucial role in enhancing treatment adherence among patients, potentially contributing to improved health conditions.

The MHU has played a pivotal role **in reducing waiting times for doctor consultations by providing on-the-spot medical services in communities.** With its ability to travel to remote or underserved areas, the MHU brought healthcare directly to individuals' doorsteps. By offering medical consultations, screenings, and treatments on-site, the MHU alleviated the need for community members to travel long distances or wait for appointments at traditional healthcare facilities.

This resulted in faster access to healthcare services, timely diagnosis, and prompt treatment, ultimately enhancing overall community well-being.

Cost savings per beneficiary across project sites

The table provides insights into the amount of money saved per beneficiary across different locations as a result of interventions by the MHU. The primary costs mitigated include expenses related to doctor consultations, travel to alternative health facilities, and the purchase of medications throughout the year. MHU services play a vital role for individuals from lower-income backgrounds who require regular medication due to their medical conditions. These interventions alleviate financial burdens on beneficiaries, especially those with limited resources, ensuring access to essential healthcare services and medications despite financial constraints.

Location	Cost saved
Ankleshwar	INR 2,687
Mysore	INR 1,584
Khandala	INR 2,472
Sriperumbudur	INR 1,967
Cuddalore	INR 2,584
Rohtak	INR 2,862
Kasna	INR 2,797
Patancheru	INR 1,539

3.5. Sustainability

Sustainability involves assessing the longevity of interventions. The subsequent sections provide a thorough comprehension of the project's enduring viability.

The initiative is centred on promoting well-being and operates with funding assistance from Asian Paints. This welfare-oriented project is sustained and made possible through the financial backing generously provided by Asian Paints.

The project is sustainable as:

1. Awareness activities helps in changing health seeking behaviour

The awareness activities involve educating the community about prevalent lifestyle diseases. The MHU played a crucial role in the early identification of these non-communicable diseases (NCDs). **These awareness sessions aim to instil behavioural changes, encouraging patients to adhere to treatment and remain connected to the healthcare system. Therefore, this enhances sustainability, as patients are more likely to continue seeking regular treatment from PHC/CHC even if the MHU is non-operational.**

However, the project faces significant challenges that threaten its sustainability.

A few challenges are as follows:

1. Continuous Funding Essential for MHU Operations:

Sustaining the functionality of the MHU is contingent upon a steady and uninterrupted flow of financial resources. Adequate and consistent funding is crucial to ensure the seamless and ongoing operation of the MHU, allowing it to fulfil its mission of providing essential healthcare services to the community. Regular financial support is vital for maintaining the MHU's medical infrastructure, sustaining healthcare initiatives, and meeting the diverse needs of the population it serves.

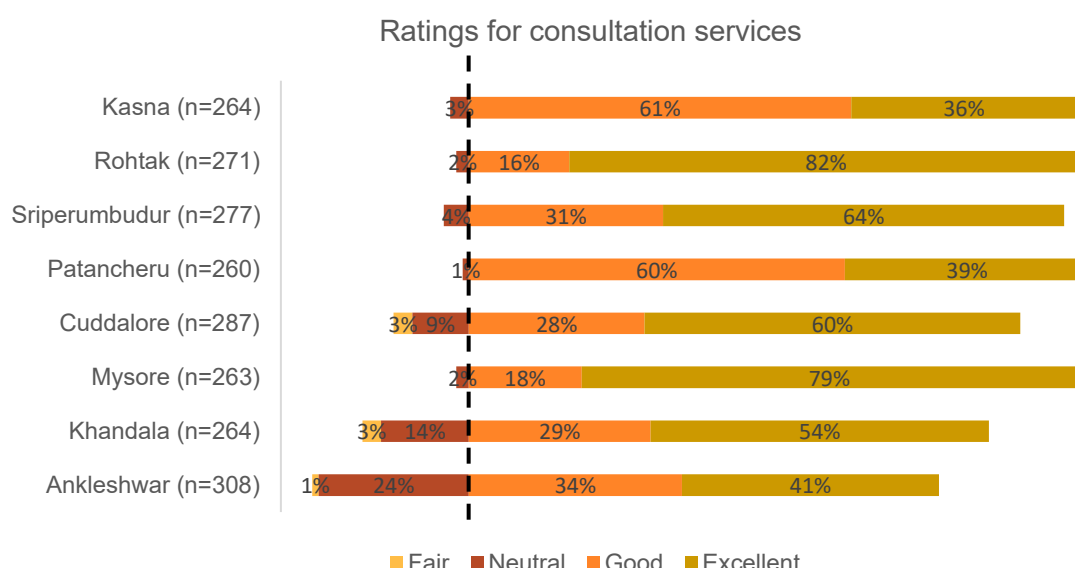
2. Staff Retention

Ensuring a skilled and motivated workforce is essential for the sustained effectiveness of the MHU. The implementation team faces challenges in recruiting qualified and experienced healthcare professionals to deliver services at the MHU at few locations like Ankleshwar.

In summary, the welfare-oriented initiative, supported by Asian Paints, is sustained through efficient medicine supply management and awareness activities promoting a positive shift in health-seeking behaviour. However, the project faces significant challenges, particularly in continuous funding for MHU operations and staff retention, which pose threats to its overall sustainability. Addressing these challenges is essential to maintain the project's effectiveness in providing essential healthcare services to the community.

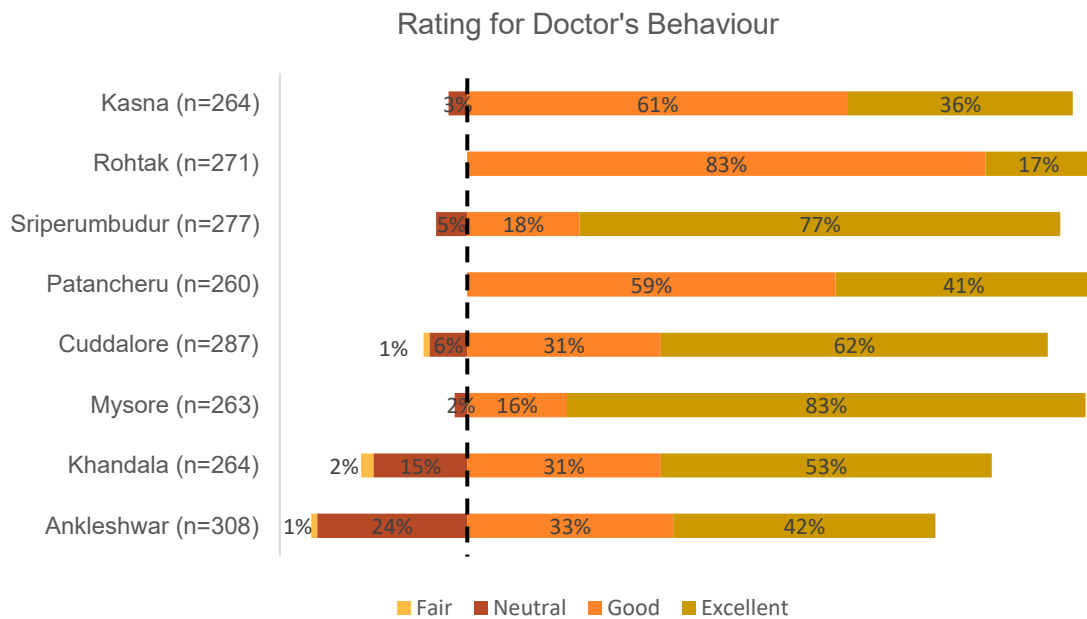
3.6. Impact

This segment assesses how the programme has affected and is rated by the community. It looks into the overall impact and effectiveness of the programme in contributing to the community's well-being and development.



The beneficiaries expressed contentment and satisfaction with the overall medical consultation services offered by the doctors and the dosage of medicine provided by the pharmacist. More than 90% of the beneficiaries across all the locations rated the consultation services as good or excellent.

The majority, constituting 93% of the participants across locations, provided favorable feedback, rating both the services and demeanour of the doctors as either good or excellent.



The medications supplied by the MHU proved to be more potent, accelerating the healing and recovery process.

The field observations and interaction revealed the medications provided by the MHU demonstrated notable effectiveness, leading to a quicker and more efficient healing and recovery process for patients. This effectiveness could be attributed to factors such as the appropriateness of the prescribed medications for the specific health conditions, the quality of the pharmaceuticals used, and the expertise of the healthcare professionals involved in prescribing and administering the treatments. Additionally, the timely provision of medications by the MHU might have contributed to better adherence to treatment regimens among patients, further enhancing the therapeutic outcomes.

Recipients further mentioned that the doctor's home visits were beneficial for their treatment, offering timely care.

There was dissatisfaction with the health awareness sessions due to inadequate dissemination of information about their occurrence. This has resulted in comparatively less than expected community members attending the sessions. The duration of these sessions was a crucial factor in assessing its effectiveness.

The implementing team can explore creative methods to enhance message delivery and boost community participation.



Increased rate of diagnosis

The screening services offered by the MHU have led to a higher rate of identifying individuals with common communicable and non-communicable disease.



Increased adherence to the treatment

MHU provides door-step medicine and consultation which has resulted in increase in adherence.



Reduced out-of-pocket expenditure

Provision of free medicine and primary doctor's consultation have drastically reduced the out of-pocket expenditure of beneficiaries.



Reduced average waiting time

The mobile health services have effectively saved the time beneficiaries would otherwise spend accessing medical services and acquiring medications.



Increased accessibility of primary health services

The MHU enhanced accessibility by delivering primary consultation services to marginalised and elderly individuals.

3.7. Social Return on Investment

Social Return on Investment helps us determine the values traditionally not reflected in financial statements, including social, economic, and environmental factors. This method helps quantify the value of the social impact of projects, programmes, and policies. SROI helps in evaluating the general progress of certain developments, showing both the financial and social impact the organisation has. This method takes standard financial measures of economic return a step further by capturing the social and financial values.

For the current project by Asian Paints Limited, we have computed the value based on the actual outcomes of the programme. The data has been sourced from the field survey and secondary research.

Indicators	Rationale	Proxy Estimation	Source
Average annual cost of Doctor's consultation fees	The MHU services were easily accessible at people's doorsteps, eliminating the need for patients to travel to other locations to receive primary medical care.	Average savings on Doctor's consultation fees	Field Survey

Wage forgone	The MHU prevented individuals under the age of 60 from experiencing a loss of daily wages.	Average saving on daily wage forgone ²	Field Survey and Secondary research
Average annual travelling cost to health facility	The on-site services provided by the MHU resulted in cost savings for beneficiaries who would otherwise have had to incur travel expenses to access alternative health facilities.	Average savings on travelling cost	Field Survey
Average annual cost of medicine	The distribution of medication contributed to reducing the expenses that beneficiaries would have otherwise spent on purchasing medicine prior to MHU services.	Average saving on the cost of medicine	Field Survey

The following table represents values across the project locations:

Locations	SROI
Ankleshwar	3.76
Khandala	4.88
Mysore	2.24
Kasna	0.80
Rohtak	19.73
Cuddalore	8.43
Patancheru	5.52
Sriperumbudur	1.57

The total SROI for the entire program stands at **6.43**.

² <https://rbi.org.in/scripts/PublicationsView.aspx?Id=22174>



Chapter 4

Recommendation to the Program



Scope of Improvement	Current Scenario	Recommendations	Best Practices
Strategic Outreach and Awareness Campaigns	<ul style="list-style-type: none"> Limited awareness about MHU services and medicines among the general population. Less than expected respondents participate in the awareness sessions. 	<ul style="list-style-type: none"> Resources can be allocated for strategic outreach and awareness campaigns to enhance the visibility of the MHU within the community. 	<ul style="list-style-type: none"> Employ a variety of communication channels, including local announcements and wall paintings to reach diverse audiences. Community events, fairs, and gatherings can be utilised to disseminate information about MHU services.
Government Convergence	<ul style="list-style-type: none"> The status of government connect varies location wise, but there is always the scope to increase the collaboration and make implementation effective. 	<ul style="list-style-type: none"> The team can actively engage with the relevant government authorities to foster collaboration and alignment with existing healthcare infrastructure and policies. Collaborative efforts with ASHA workers, Anganwadi workers, and ANM (AAA) can be done to work in alignment with government targets. 	<ul style="list-style-type: none"> Partner with local influencers, community leaders, and healthcare professionals to amplify the impact.
Expansion of services	<ul style="list-style-type: none"> MHU operates as a medical van providing outpatient care. Currently dispenses medications and record only vitals for diagnosis. 	<ul style="list-style-type: none"> Opportunities to enhance the MHU programme by expanding the range of healthcare services can be explored. 	<ul style="list-style-type: none"> Camps for screening for sickle cell anaemia can be organised Explore the integration of preventive health measures and the

Scope of Improvement	Current Scenario	Recommendations	Best Practices
	<ul style="list-style-type: none"> Recognised potential for expanding services within the current setup. 	<ul style="list-style-type: none"> Pregnant women can be served by outfitting the MHU with a portable foetal doppler and a Hb testing kit. Awareness regarding disease prevention and hygiene can be conducted frequently. Female doctor can be deployed (once a week) to provide gynaecology services. 	<p>introduction of additional medical specialties, such as tailored health services for pregnant women (PNC, ANC) and Tuberculosis.</p> <ul style="list-style-type: none"> Enhance diagnostic capabilities by conducting periodic lab tests on specified dates or in health camps. Integration of telemedicine services can be implemented to support early diagnosis and offer advanced medical treatment.
Deploying Human Resources	<ul style="list-style-type: none"> The team faces challenges in finding qualified resources. Community connect with the doctors is decreasing. 	<ul style="list-style-type: none"> BHMS and BAMS can be considered to provide basic OPD services. Doctors can be deployed part time (once in a week) to serve particular community. 	<ul style="list-style-type: none"> Expansion of services and highlighting the growth opportunities for doctors.

Scope of Improvement	Current Scenario	Recommendations	Best Practices
Exploration of Uncharted Locations and revision of schedule of MHU	<ul style="list-style-type: none"> The constant operational schedule limits flexibility needed for organising and implementing community-focused initiatives. Some village areas have minimal patient turnout for medical attention. Remote villages face a lack of access to crucial medical services. 	<ul style="list-style-type: none"> MHU service provision days can be reassessed for improved efficiency. The frequency of the visit of MHU catering to less patients can be reduced. At least two Saturdays monthly can be allocated for route planning, collaboration exploration, and community engagement. 	<ul style="list-style-type: none"> The MHU's visits to the same villages can be rescheduled to 2 times a month, allowing for coverage of remote villages on alternate weeks.
Location: Cuddalore Switching timings of the SHUs for blood test	<ul style="list-style-type: none"> SHU has a morning or afternoon schedule fixed for every 3 days of operation. Problem in conducting Diabetes test since prior fasting is required and it will be a problem to conduct diabetes test in SHU locations which only function in the afternoon. 	<ul style="list-style-type: none"> The timings for the SHU can be switched from morning to afternoon hours throughout the week, accommodating the fasting session before the blood test for diabetes. 	<ul style="list-style-type: none"> The SHUs with higher footfall can operate twice in the morning hours every week, while those with less footfall can operate once in the morning hours every week.

Scope of Improvement	Current Scenario	Recommendations	Best Practices
Location: Rohtak Dedicated Special Protection Officer for the Rohtak MHU	<ul style="list-style-type: none"> At the time of this impact assessment, the MHU in Rohtak faces operational challenges as it lacks a dedicated Special Protection Officer (SPO) 	<ul style="list-style-type: none"> Appointment of a dedicated SPO for MHU Rohtak will ensure effective administrative management, community engagement, and seamless operations. 	<ul style="list-style-type: none"> Ensure SPO is aligned with the implementing agency's goals and objectives. Timely resolution of staff concerns. Timely appointment of vacant positions.
Location: Mysore Streamlined Collaboration with APL Clinic	<ul style="list-style-type: none"> The joint effort between the APL clinic and the MHU has effectively addressed various healthcare needs within the community. However, there is room for improvement to enhance the overall impact. 	<ul style="list-style-type: none"> A more streamlined and efficient system for patient referrals and information exchange between the MHU and APL clinic could enhance the continuity of care for beneficiaries. By fostering closer alignment and strategic coordination, this collaboration can evolve into an even more potent force for delivering comprehensive and accessible healthcare services to the community. 	<ul style="list-style-type: none"> Establish regular coordination meetings between the MHU and APL Clinic teams to foster open communication, align strategies, and address any challenges faced in patient referrals.

Scope of Improvement	Current Scenario	Recommendations	Best Practices
<p>Location: Sriperumbudur</p> <p>Diversification of available medications to include a wider range beyond antibiotics, nutrients, and general medicine.</p>	<ul style="list-style-type: none"> Availability of medications were limited to Antibiotics, nutrients and General Medicine 	<ul style="list-style-type: none"> Considering the limited availability of medications at the Mobile Health Unit (MHU), having majorly antibiotics, nutrients, and general medicine, it is crucial to diversify the range of available medications to address communicable disease prevention as well. Additionally, it is important to ensure the inclusion of IV fluids and other emergency medications to cater to urgent medical needs. 	<ul style="list-style-type: none"> Diversifying medication offerings at MHU to include provisions for communicable disease prevention and urgent medical needs with IV fluids and emergency medications.



Chapter 5

Impact Stories



Location: Ankleshwar

Note: For the sake of confidentiality, the identities and the name of the village for the recipients have been changed.

Case Story: Healing Hands: Alpana Ben's Path to Wellness with MHU



Alpana Ben Panchal, a resident of Ankleshwar village, faces unique health challenges as she endeavours to make a living as a house help. Living with her parents, Alpana Ben's life revolves around her work, providing a vital source of income for her family. However, her dedication to her job has taken a toll on her health, leading to a persistent skin allergy.

Alpana Ben's primary occupation as a house help involves extensive cleaning of dishes and utensils, exposing her skin to harsh chemicals and allergens regularly. This prolonged exposure has resulted in a troublesome skin allergy, causing discomfort and rashes.

In her pursuit of relief, Alpana Ben turned to the MHU service for medical assistance. The health unit provided her with the necessary medications, leading to a notable decrease in her allergy symptoms and skin rashes. She was prescribed Betamethasone Ointment, Clotrimasol Ointment, Paracetamol, Diclofenac, and Dilco gel ointment. The prompt and accessible medical support from the MHU has proven to be instrumental in alleviating Alpana Ben's health concerns. The medical treatment received from the MHU service has been effective, and Alpana Ben has experienced improvement in her condition. Interestingly, the same treatment in a private hospital would have incurred a substantial expense of approximately INR 500 per month.

This emphasises the financial constraints individuals like Alpana Ben face when seeking healthcare from private facilities.

Access to affordable healthcare, as provided by the MHU service, plays a crucial role in addressing health issues for those with limited financial means. This case serves as a reminder of the importance of accessible and cost-effective healthcare solutions for marginalised communities, contributing to overall well-being and quality of life.



Location: Cuddalore

Note: For the sake of confidentiality, the identities and the name of the village for the recipients have been changed.

Case Story: A path towards wellness and good health.



In the village of Karaikadu, Mrs Divya, a 72-year-old daily wage worker and widow of two decades, found herself burdened by persistent joint pains over the last six months. Living alone, her journey toward relief led her to the Static Health Unit (SHU) based on doctors' advice from the government hospital. At the SHU, Mrs Divya underwent a diagnosis of osteoporosis, supported by X-rays taken at the government hospital. The SHU not only provided her with free medications but also guided her through diet modifications recommended by the SHU doctor. This holistic approach has significantly alleviated Mrs Divya's pain, granting her the ability to walk more comfortably.

The project, facilitated by Asian Paints and HelpAge India, has not only addressed her physical ailments but has become a symbol of community support. Mrs Divya expresses her heartfelt thanks to these organisations for their instrumental role in making this healthcare initiative accessible to individuals like her.

Location: Kasna

Note: For the sake of confidentiality, the identities and the name of the village for the recipients have been changed.

Name: Ms. Patralekha

Age: 80



In the quiet solitude of her 80 years, Ms. Patralekha, a woman who endured a tragic accident that took her only child, found herself living alone with no source of income. The profound grief led her to a desperate moment, attempting self-harm as a means of escape. Fortunately, vigilant neighbours intervened, preventing the tragedy. Enter the Mobile Health Unit (MHU), a beacon of hope for her. Struggling to cope with the loss and the financial burden of hospital bills, the healing touch of MHU's medicine played a pivotal role in her recovery, both physically and emotionally. Patralekha is not just grateful for the physical healing but also for the compassionate treatment she receives from the MHU staff. Their support, extending beyond medical care, has become a lifeline for Patralekha, enabling her to navigate through the aftermath of her heart-wrenching loss.

Location: Mysore

Note: For the sake of confidentiality, the identities and the name of the village for the recipients have been changed.

Suman, Balihalli - Utilising a Walking Stick



Suman, a resident of Balihalli, faced significant challenges in mobility before receiving a walking stick from the Mobile Health Unit (MHU) around 5-6 months ago. Prior to having the walking stick, he endured the pain of walking without any assisting device, making each step a discomforting experience.

Gratefully, he obtained the walking stick as part of a collaborative effort between HelpAge and Asian Paints Limited (APL), delivered through the MHU. Suman expresses immense satisfaction with the quality of the walking stick, emphasising its role not only in aiding his mobility but also in enhancing his balance and overall safety. He acknowledges the efforts of HelpAge and APL, highlighting the positive impact of their collaborative initiative.

While Suman suggests a sturdier walking stick for added confidence in bearing weight, he is nonetheless content with the current stick provided by the MHU. The significance of this walking stick goes beyond its physical utility—it represents substantial savings for Suman. He estimates that he has saved upwards of INR 500, considering that acquiring a walking stick

would have required him to travel to purchase one due to the remoteness of his village. The provision of the walking stick free of cost by the MHU has not only saved him money but also valuable time that would have been spent on travel.

Location: Rohtak

Note: For the sake of confidentiality, the identities and the name of the village for the recipients have been changed.

Case Study: Bodh Singh's Journey to Affordable and Accessible Diabetes Care



Bodh Singh (name changed to protect privacy), who is sixty-two years old, resides in his village with his spouse. For the last eight years, he has been dealing with diabetes. He had previously been seeing doctors for his illness at a private hospital in Rohtak. He was not satisfied with the service. However, using the service costs money and requires more time for travel. He used to pay about Rs 3,000 a month for his medicines. He is currently utilising the services offered by the MHU, supported by Asian Paints, as part of their corporate social responsibility programmes. This service has not only saved his money and time by providing free emergency medical care at the doorstep but it also sustainable. He is satisfied with the assistance and is recovering well. He can now save money to fulfil other necessities.

Location: Khandala

Note: For the sake of confidentiality, the identities and the name of the village for the recipients have been changed.

Case Story: A help for clear vision ahead

Ram Chavan, a resident of a village in Khandala, lives a solitary life as his son works in a company elsewhere. Financial constraints have added to his challenges, especially when it comes to meeting basic needs like healthcare. Struggling with poor vision due to broken glasses, Ram found it increasingly difficult to carry out his daily tasks, especially working in the farm. However, with limited resources, replacing his glasses seemed like an unattainable luxury.

Fortunately, during a health camp organized in their village, Helpage India and Asian Paints collaborated to provide essential healthcare services, including free glasses for those in need.

For Ram, this intervention was life-changing. The provision of new glasses not only restored his vision but also restored his ability to work comfortably on the farm. With clarity in his sight, Laxman regained his independence and productivity. This assistance from Helpage India and Asian Paints not only improved Ram's quality of life but also alleviated financial burdens.

Ram Chavan expresses his heartfelt gratitude to Asian Paints and Helpage India for their invaluable support.

Location: Sriperumbudur

Note: For the sake of confidentiality, the identities and the name of the village for the recipients have been changed.

Case study: The long-term goal to success,



Karunakar, aged 64, along with his spouse, has been benefiting from the services of the Mobile Healthcare Unit (MHU). Karunakar has been under MHU's care from it started its service, efficiently managing his health with proper treatment and attention. He has received treatment for conditions such as blood pressure, vitamin deficiency, and allergies.

Karunakar's story is intriguing as he was not initially proactive about his health. However, thanks to the MHU, he has been consistently caring for his health over the past five years. Despite his reluctance to visit hospitals, the MHU has played a crucial role in monitoring his health through regular blood pressure and diabetes tests, providing updates on his health levels.

The cost efficiency of MHU's services is noteworthy, as Karunakar would spend over 500 rupees per week if he sought medication outside the MHU. Overall, Karunakar's positive health journey and improved well-being underscore the valuable impact of MHU's accessible and cost-effective healthcare services.



Annexures



Schedule of Ankleshwar

Day of the week	Timing	Site Name
Monday	9:30 am to 1:00 pm	Borbhata Bet
	1:45 pm to 3:00pm	Surwadi
	3:20 pm to 5:30 pm	Chhapra
Tuesday	9:30 am to 1:30 pm	Mandva
	2:15 pm to 3:15 pm	Motali
	3:30 pm to 5:30 pm	Amratpara
Wednesday	09:30 am to 12:15 pm	Jitali
	12:30 pm to 1:30 pm	Dadhal
	2:15 pm to 5:30 pm	Sarangpur
Thursday	9:30 am to 11:30 am	Gadkhol
	11:45 am to 1:30 pm	Andada
	2:30 pm to 3:45 pm	Nava Kasiya
Friday	4:00 pm to 5:30 pm	Samor
	9:30 am to 1:00 pm	Kondh
	2:00 pm to 3:30 pm	Kosamdi
Saturday	3:45 pm to 5:30 pm	Kapodra
	9:30 am to 12:45 pm	Bhadkodra
	1:45 pm to 3:00pm	Sanjali
	3:30 pm to 5:15 pm	Piraman

Schedule of Khandala

Day of the week	Name of the morning site	Name of the afternoon site
Monday	Naygav	
	Sangvi	Palshi
Tuesday	Kesurdi (After every 15 Day)	Salav (After every 15 Day)
	Kanehri (After every 15 Day)	Bavda
Wednesday	Shekmirwadi (After every 15 Day)	
	Tondal (After every 15 Day)	
	Loni	Bholi
Thursday	Morve	Dhawadwadi
	Waghoshi (After every 15 Day)	
Friday	Pisalwadi	Dhangarwadi

Schedule of Cuddalore SHU

Days	Morning	Afternoon
Monday	Pachankuppam	Kudikadu
Tuesday	Echankadu	Karaikadu
Wednesday	Pachankuppam	Kudikadu
Thursday	Echankadu	Karaikadu
Friday	Pachankuppam	Kudikadu
Saturday	Echankadu	Karaikadu

Schedule of Mysore

	Name of the morning site	Area populati on	Distance from APL plant	Name of the afternoon site	Area population	Distance from APL plant
Monday	Hebya	614	5 KM	Chikkayana Chatra	592	5 KM
	(Somesh wara Pura)	2340	7 KM	Thandavapura	6951	6 KM
Tuesday	Moddaha Ili	2038	12 KM	Hadinaru mole	2290	11 KM
	(Mallaraj nahundi)	782	12 KM			
Wednesday	Basavanapura	742	5 KM	Imnavu Hundi	964	3 KM
	KS Hundi	3724	4 KM			
Thursday	Hulimavu 2	706	5KM	Himmavu	755	2 KM
	Hulimavu 1	650	5 KM			
Friday	Bokkahalli 1	1196	10 KM	Hadinaru	3469	10 KM
	BokkaHalli 2	712	8 KM			
Saturday	CAMP (Out of project site)					

Schedule for Kasna

	Name of the morning site	Name of the afternoon site
Monday	Chachula,Bhatta	Kanarsa
	Bhatta	
Tuesday	Bilaspur	Dalelgarh,Hatewa
		Hatewa
Wednesday	Kherli	Maicha,Kasna
		Kasna
Thursday	Wailana	Alipura
Friday	Deota	Astauli

Schedule for Sriperumbudur

Day of the week	Timing	Site Name
Monday	9:30 am to 1:00 pm	Kunnam
	1:45 pm to 3:00pm	Sirumangulu
Tuesday	9:30 am to 10:30 pm	Santhavelu
	11:15 pm to 12:15 pm	Molachur
	12:45 pm to 1:30 pm	Sogandi
	2:30 pm to 4:00 pm	Susaipuram
	4:30 pm to 5:30 pm	Anthoniapuram
Wednesday	09:30 am to 12:15 pm	Achivakam
	12:45 pm to 1:30 pm	Suraimanikupam
	2:30 pm to 4:00 pm	Alapakam
	4:30 pm to 5:30 pm	Chinayachathiram
Thursday	9:30 am to 11:30 am	Nungambakkam
	11:45 am to 1:30 pm	Kammayarpalayam
	2:30 pm to 3:45 pm	Adhigathur
Friday	9:30 am to 1:00 pm	Echur
	2:00 pm to 3:30 pm	Tirumangalam

Schedule for Patancheru

	Name of the morning site	Name of the afternoon site
Monday		
	Shivanagar	Gollabasthi
	Rallakatwa	
	Vootla	
	St'Merry Old Age Home	
Tuesday		
	Bandlaguda	Ameenpoor
	Krishnareddypet	
	Sulthanpoor	
Wednesday		
	Indrakaran	GouthamNagar
	Rudraram	
Thursday		
	Bhanoor	Beeramguda
	Velimela	
Friday		
	Ishnapoor	Venkateshwara colony
	Muthangi	Shanthinagar colony



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Impact Assessment Report

**Participatory Water Resource
Development and Management
for Enhancing Livelihood**

Visakhapatnam, Andhra Pradesh

BHOMIK
SHAH

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Date: 2023.10.13 12:12:33
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Disclaimer

- This report has been prepared solely for the purpose set out in the Memorandum of Understanding (MoU) signed between Renalysis Consultants Pvt. Ltd. (CSRBOX) and Asian Paints Limited dated June 2023 to undertake the Impact Assessment of their “Water Resource Development Project” implemented in the financial year 2021-22.
- This impact assessment is pursuant to the Companies (Corporate Social Responsibility Policy) Amendment Rules 2021, notification dated 22nd January 2021.
- This report shall be disclosed to those authorized in its entirety only without removing the disclaimers.
- CSRBOX has not performed an audit and does not express an opinion or any other form of assurance.
- Further, comments in our report are not intended, nor should they be interpreted to be legal advice or opinion.
- This report contains an analysis by CSRBOX considering the publications available from secondary sources and inputs gathered through interactions with the leadership team of Asian Paints Limited, project beneficiaries, and various knowledge partners. While the information obtained from the public domain has not been varied for authenticity, CSRBOX has taken due care to obtain information from sources generally considered to be reliable.
- Specific to the Impact Assessment of the project, funded through Asian Paints Limited, CSRBOX has relied on data shared by the Asian Paints Limited’s team.

With Specific to Impact Assessment of “Participatory Water Resource Management Project for Enhancing Livelihood”

- CSRBOX has neither conducted an audit nor due diligence nor validated the financial statements and projections provided by Asian Paints Limited.
- Wherever information was not available in the public domain, suitable assumptions were made to extrapolate values for the same;
- CSRBOX must emphasize that the realization of the benefits/improvisations accruing out of the recommendations set out within this report (based on secondary sources) is dependent on the continuing validity of the assumptions on which it is based. The assumptions will need to be reviewed and revised to reflect such changes in business trends, regulatory requirements, or the direction of the business as further clarity emerges. CSRBOX accepts no responsibility for the realization of the projected benefits;
- The premise of an impact assessment is ‘the objectives’ of the project along with output and outcome indicators pre-set by the program design and implementation team. CSRBOX’s impact assessment framework was designed and executed in alignment with those objectives and indicators.

List of Abbreviations

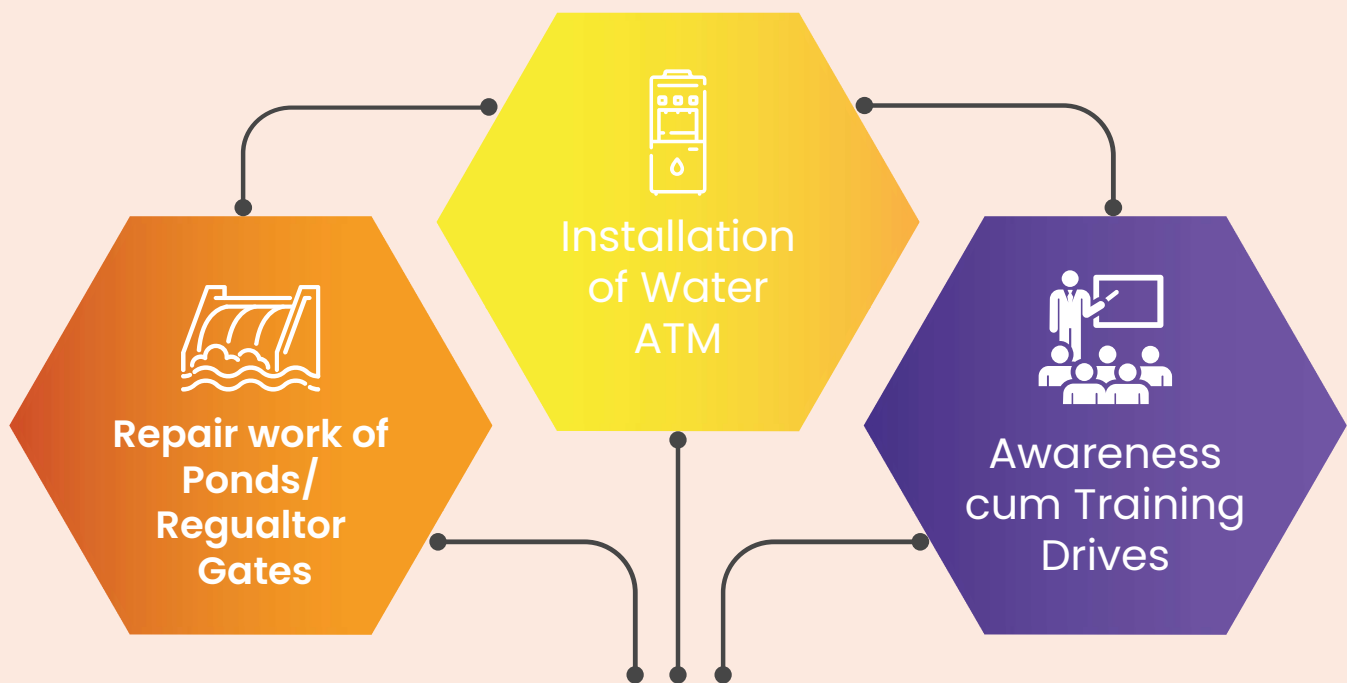
Abbreviation	Definition
APL	Asian Paints Limited
CSR	Corporate Social Responsibility
SDG	Sustainable Development Goals
ESG	Environmental, Social, and Corporate Governance
SEBI	Securities and Exchange Board of India
FGD	Focused Group Discussion
IDI	In-Depth Interviews
KII	Key Informant Interviews
ACF	Ambuja Cement Foundation
IGA	Income Generating Activities
EVP	Employee Volunteering Programs

Executive Summary



APL's social interventions have consistently made a significant and positive impact on society. Currently, numerous initiatives are underway to address water scarcity through water harvesting and the provision of drinking water facilities. APL had undertaken a project called "Participatory water resource management for enhancing livelihood".

The project aims to address the pressing issues of water scarcity for drinking and irrigation purposes in 11 villages across 5 Mandals of Vishakhapatnam district.



Major Interventions

Figure 1: Project overview

As per the IRECS framework¹, the summarised Impact findings are stated below:

Inclusiveness

- 62% responses from males, as they were primarily engaged in agriculture, and 48% responses from females, as they held decision-making power for household matters like choosing drinking water.
- Beneficiaries of the intervention varied widely in the age group of 17 to 65 years of age.
- Almost 35% of the beneficiaries did not have formal education.

62%
of the
responses
were from
male

2. Relevance

- 88% of the beneficiaries were earning below INR 1 Lakh per annum. The intervention was aimed at improving water availability for both irrigation and drinking purposes in the village, which in turn would not only enhance income from agriculture but also enhances savings from reduced medical expenditure
- 68% of the beneficiaries depend on agriculture as their primary source of income
- 69% of the farmers in the villages were marginal farmers having less than 1 acres of farmland
- 33% of the households have more than 5 family members, which increases the need of an enhanced source of income
- Only 30% of the farmers could grow crops during the Rabi season, and 11% could grow crops during Zaid season before the intervention
- 78% of the community members practised animal husbandry thus indicating that there was a need rejuvenate sources of water
- 88% of respondents experience medical leave of up to 5 days due to waterborne diseases

78%
of community
members
practised
animal
husbandry

¹<https://csrbox.org/What-are-the-Essential-Components-of-the-CSR-Impact-Assessment-under-CSR-Compliance.php>

3. Expectations

- 85% of the farmers mentioned that the intervention has improved their agricultural crop yields
- 85% of the farmers mentioned that the intervention has improved irrigation prospects
- 92% of the farmers mentioned that the intervention has helped them in increasing their cultivable lands up to 1.5 acres
- 95% of the farmers mentioned that the intervention has helped them in irrigating their farmlands within 1.5 hrs, indicating improved irrigation efficiency
- Number of farmers irrigating Rabi season has increased from 30% to 45%, while it has increased from 11% to 20% for Zaid season
- 39% of farmers witnessed a crop production increase by more than 20% after the intervention
- 88% of the farmers mentioned that the intervention has helped them in procuring livestock.
- 96% of the cattle-owning farmers reported an increase in milk yields after the interventions.
- 48% of the cattle-owning farmers reported an increase in additional annual income up to INR 5,000 after the interventions.
- 93% of the respondents reported that they are benefitted from the Water ATM installations in their villages.
- 60% of the beneficiaries mentioned about the access to safe drinking water after the interventions.
- Illness caused by water borne diseases was reduced by 21%, i.e., from 48% before intervention to 27% post-intervention.
- Average annual savings on medical expenditure caused due to water borne diseases is decreased from INR 5,620 to INR 1,540 after the Water ATM installations.
- On every investment of INR 1, a return of INR 12.2 was generated for Rejuvenation of Water Retention Structures program & INR 3.7 was generated for Water ATM program

**Investment of
INR 1, return of 3.7**
was generated for
Water ATM
Program

**Investment of
INR 1, return of 12.2**
was generated for
Rejuvenation of
Water Retention
Structure Program

4. Convergence

- Community members were thoroughly engaged during the ideation phase of the project. Moreover, the identification of locations for interventions was also performed with consultation from community members.
- Ambuja Cement Foundation was the implementing partner for the projects.
- Water User Groups were formed to take care of the operation and maintenance of the Water ATMs.

5. Service Delivery

- The successful execution of projects before the monsoon season was made possible through the timely allocation of funds, effective cooperation with government partners who played a crucial role in securing approvals from different government levels within the required timeframe, and active engagement of the local community.

Impact of the Intervention

Table 1: Comparison between pre & post intervention of treatment villages

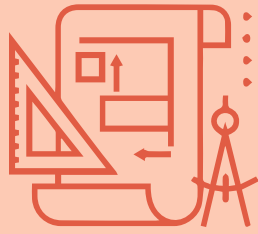
Factors for comparison	Prior to intervention (n=200)	Post-intervention (n=200)
Farmers practicing farming during Rabi season	30%	45%
Farmers practicing farming during Zaid season	11%	20%
Farmers irrigating their farmlands within 1.5 hours	68%	98%
Average no. of livestock owned by households	5.2	5.5
Average annual family income of households	INR 1,03,000	INR 1,48,355
Average annual expenditure on drinking water	INR 2,340	INR 1,300
Average annual medical expenditure (water borne diseases)	INR 5,620	INR 1,540

³ Livestock includes bull, buffalo and cows.

Table 2: Comparison between control and treatment villages

Factors for comparison	Control villages (n=108)	Treatment villages (n=200)
Farmers practicing farming during Rabi season	23%	45%
Farmers practicing farming during Zaid season	4%	20%
Farmers irrigating their farmlands within 1.5 hours	58%	98%
Average no. of livestock owned by households	5.0	5.5
Average annual family income of households	INR 1,04,000	INR 1,48,355
Average annual expenditure on drinking water	INR 2,420	INR 1,300
Average annual medical expenditure (water borne diseases)	INR 5,700	INR 1,540





Chapter 1.

Project Background and Overview

1.1 CSR Initiatives of Asian Paints Limited

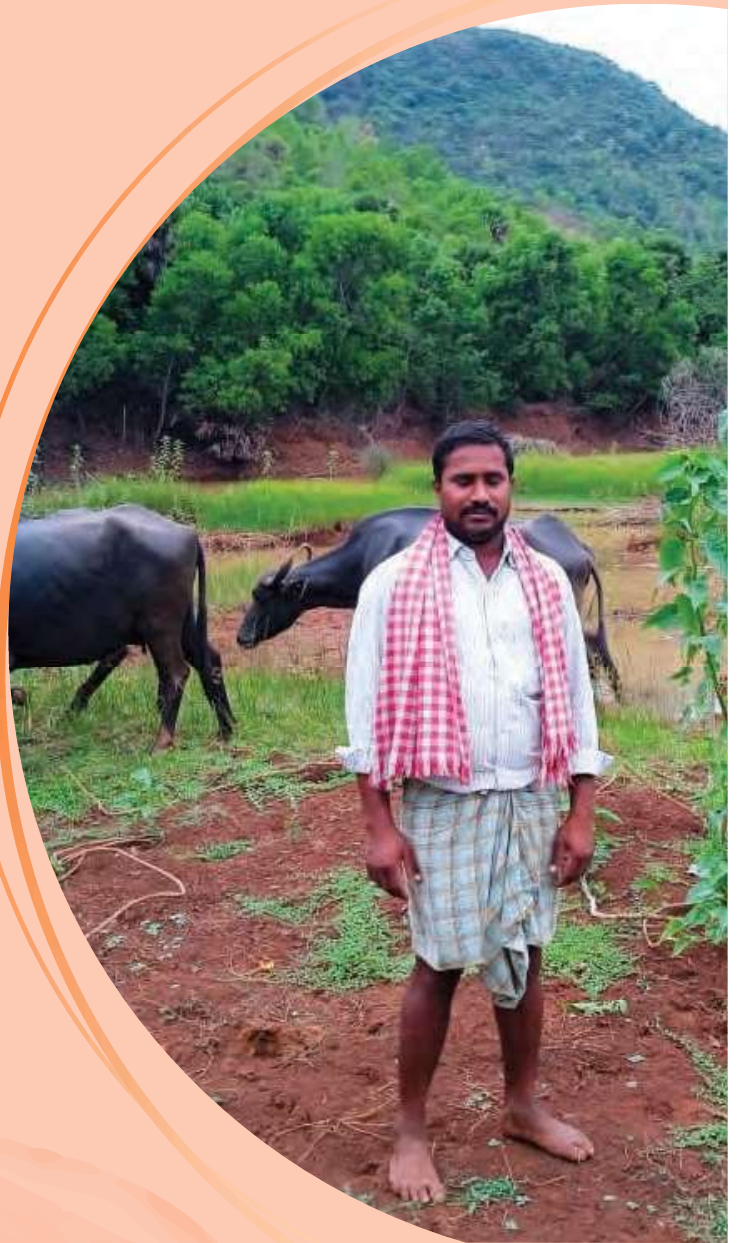
1.2 About the Programme

1.3 Relevance of the Intervention

1.4 Alignment with CSR Policy

1.5 Alignment with ESG Principles

1.6 Alignment with SDGs



This section provides an overview of the funding organization, the programme cardinals and the detailed interventions.

1.1 CSR Initiatives of Asian Paints Limited

Standing true to their Charter, to bring joy, and happiness to people's lives, the CSR vision of Asian Paints Limited (APL) is based on embedded tenets of trust, fairness, and care to maximise efforts.²

Health & Hygiene

APL aspires to deliver primary health care support through diagnosis and treatments to the communities. Interventions include promoting preventive healthcare, building awareness about hygiene, sanitation, maternal & child health care, setting up medical infrastructure, instrumenting clean drinking water habits, etc.



Disaster Management

As a responsible company, APL focuses towards mitigating the effects of the crisis created by natural disasters, pandemic or likewise. APL has partnered with the Government on various instances to provide support and aid. APL has also worked with different partners for distribution of essentials among communities during the time of crisis.

Enhancing Vocational Skills

APL provides specialized and skill-based training to painters, carpenters, plumbers, etc., to enhance their skills, empower them, provide opportunities to secure better employment and improve their livelihood.



Water

Water being a valuable and scarce resource that one shares with their surrounding communities, APL has identified water conservation and management as a key area of intervention.

²<https://www.asianpaints.com/content/dam/asianpaints/website/secondary-navigation/about-us/corporate-citizenship/Corporate%20Social%20Responsibility%20Policy.pdf>

1.2 About the Program

In a collaborative effort between Asian Paints Limited and Ambuja Cement Foundation, a CSR initiative has been launched to address the pressing issues arising from declining groundwater levels affecting irrigation and the poor quality of drinking water. The program, titled "Participatory Water Resource Management Project for Enhancing Livelihood," has a comprehensive set of objectives, which are as follows:



Figure 3: Overview of major program components

- To increase additional water storage capacity and recharge by reviving the traditional water bodies and constructing water structures.
- To increase availability and access to clean/safe drinking water in the project villages through water filtration/distribution systems.
- To create awareness, education among the community on judicious utilisation of water resources and collective actions.

Through these initiatives, the program strives to address water scarcity challenges, improve livelihoods, promote sustainable water resource management and provides access to clean and safe drinking water facilities in Vishakhapatnam district.

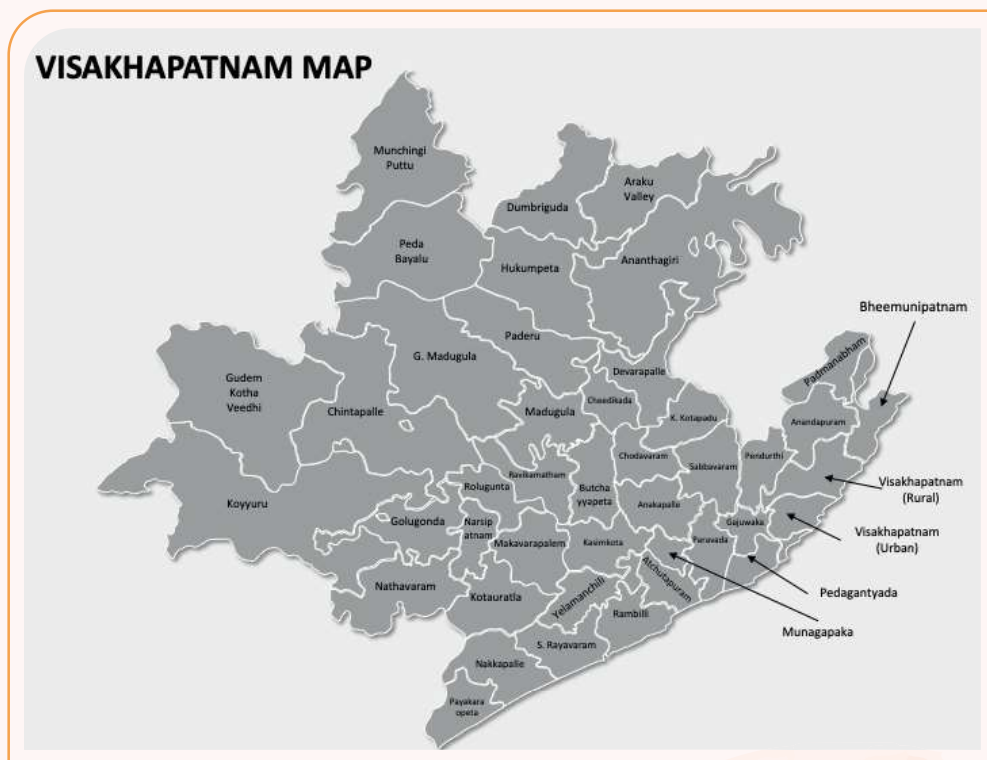


Figure 2: Map of Visakhapatnam

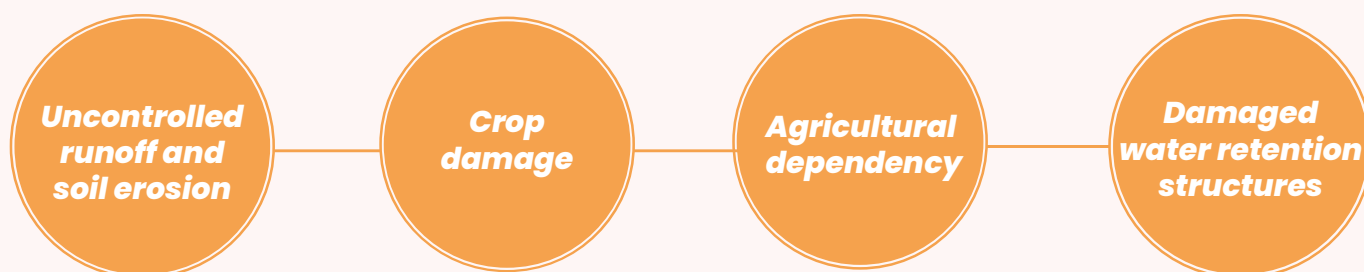
The detailed interventions of the project across the villages are mentioned below –

Table 3: Details of the interventions under the project

Type of Intervention	Village	Mandal	Households	Population
Water Retention Structures	Gokiwada	Rambilli	490	2668
	Panchdarla	Rambilli	795	3213
	Bayyavaram	Kasimkota	1962	7517
	Duppituru	Munagapaka	1448	5053
	Avakandam	Atchutapuram	1099	400
Drinking Water Facilities	Appnapalem	Atchutapuram	152	602
	Vadrapalli	Munagapaka	623	2338
	Dhrmavaram	Yelamanchalli	418	1790
	Mallavaram	Atchutapuram	179	650
	Appnapalem	Atchutapuram	152	602
	Cheemapalli	Atchutapuram	430	1790
	Gokiwada	Rambilli	490	2668
	Pedakalavapalli	Rambilli	517	1620

1.3 Relevance of the Intervention

The region surrounding the villages of Atchutapuram, Vijayawada, experiences heavy rainfall during the monsoon season. However, this abundance of water brings its own set of challenges. Uncontrollable runoff from the small hills in the area leads to severe soil erosion and extensive crop damage. A significant portion of the local population depends on agriculture as their primary livelihood, making these issues a matter of great concern. To exacerbate the situation, the existing water retention structures in the region have been damaged, exacerbating the problem and hampering sustainable water management.



1.4 Alignment with CSR Policy

The Schedule VII (Section 135) of the Companies ACT, 2013 specifies the list of activities that can be included by the company in its CSR policy. The below-mentioned table shows the alignments of the intervention with the approved activities by the Ministry of Corporate Affairs.

Table 4: Alignment with CSR Policy

Sub Section	Activity as per Schedule VII	Alignment
(ii)	Promoting education, including special education and employment enhancing vocation skills especially among children, women, elderly and differently abled and livelihood enhancement projects	Partially
(iv)	Ensuring environmental sustainability, ecological balance, protections of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining quality of soil, air and water including contribution to the Clean Ganga Fund set-up by the Central Government for rejuvenation of river Ganga	Completely

1.5 Alignment with ESG Principles

The program's intervention also aligns with the ESG Sustainability Report of the corporate. Particularly, concerning the Business Responsibility & Sustainability Reporting Format (BRSR) shared by the Securities & Exchange Board of India (SEBI), the program aligns with the principle mentioned below.



Principle 2

Businesses should provide goods and services in a manner that is sustainable and safe



Principle 4

Businesses should respect the interests of and be responsive to all its stakeholders



Principle 6


Businesses should respect and make efforts to protect and restore the environment

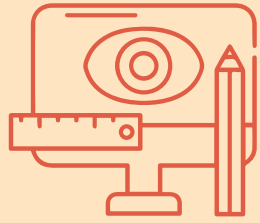
Table 5: Alignment with ESG Principles

1.6 Alignment with SDGs

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2016 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

Table 6: Alignment with SDGs

Sub Section	Activity as per Schedule VII	Alignment
	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 per day	Completely
	1.4 Ensure that all men and women, particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	Completely
	2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	Completely
	6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Completely
	6.6 Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.	Partially
	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	Partially



Chapter 2.

Design and Approach for Impact Assessment



2.1 Objectives of the Study

2.2 Evaluation Framework & Indicators

2.3 Methodology

2.4 IRECS Framework

2.5 Stakeholders Mapping

2.6 Sampling Approach

2.7 Theory of Change

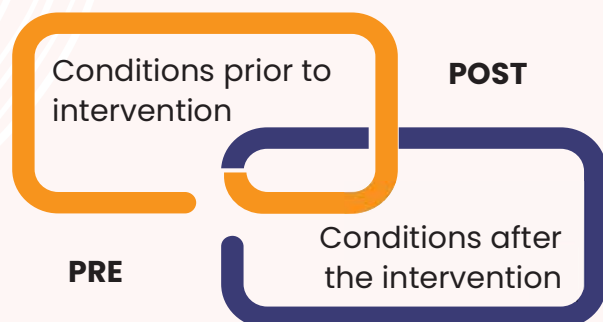
This section provides an overview of the objectives of the study, the adopted research methodology, and other details revolving around the study.

2.1 Objectives of the Study



2.2 Evaluation Framework & Indicators

Given the objectives of the study and the key areas of inquiry, the design of the evaluation focused on learning as the prime objective. In this section, CSRBOX presents the approach towards developing and executing a robust, dynamic, and result-oriented evaluation framework and design. The team would like to highlight that this is only a suggestive framework, and the detailed approach will be finalised in consultation with the client and program coordinators.



To measure the impact, a **pre-post program evaluation approach** was employed for the study. This approach is dependent on the recall capacity of the beneficiaries. Under this approach, the beneficiaries are enquired about conditions before the program intervention and after the program intervention.

The difference helps in understanding the contribution of the program in improving the intended condition of the beneficiary. This approach, at best, can comment on the contribution of the program in improving the living standards though may not be able to attribute the entire changes to the program. Other external factors, like government interventions, may also play a role in bringing positive changes along with the program. Hence, the contribution was assessed, but attribution may not be entirely assigned to the programme.

2.3 Methodology

For the assessment of the program, we employed a two-pronged approach to data collection and review that included secondary data sources and literature, as well as primary data obtained through quantitative and qualitative methods of data collection. The figure below illustrates the study approach used in data collection and review. The secondary study involved a review of annual reports, monitoring reports, and other studies and research by renowned organisations available in the public domain for drawing insights into the situation of the area.

The **primary study** comprised qualitative and quantitative approaches to data collection and analysis. The qualitative aspects involved in-depth interviews (IDIs) with the youth trainees/ trainees, centre in-charges, trainers and other institute-associated stakeholders.

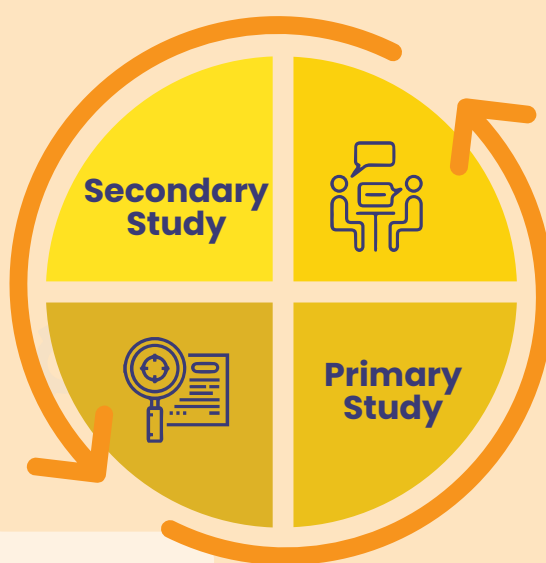


In addition to primary data collection, the consultants studied various **project documents** like Project Proposal, Project log-frame (Logical Framework Analysis), Baseline and Project cost and other available documents, Project implementation timelines, Communication and M&E reports, documentation products and other relevant reports/literature related to the projects.

The consultants also studied project implementation-related documents, specifying details of activities carried out, processes undertaken, no. of beneficiaries reached, and details of spent & unspent budgets under different budgetary heads.

Study Report

Review of annual reports, publications by Ministries, other relevant government reports +
Program reports



Quantitative/Qualitative Study

Quantitative Survey
IDIs, KIIs, FGDs



2.4 IRECS Framework

To determine the inclusiveness, relevance, appropriateness, coherence, effectiveness, impact potential, and efficiency of the program, the evaluation used the IRECS Framework. Using the logic model and the criteria of the IRECS framework, the evaluation assessed the APL team's contribution to the results, while keeping in mind the multiplicity of factors that might have affected the overall outcome.

The social impact assessment hinged on the following pillars:

01. Inclusiveness

Extent to which communities equitably access the benefits of assets created and services delivered

Extent to which project is geared to respond to the 'felt' needs of the communities.

02. Relevance

03. Expectations

Extent of intended or unintended positive (benefits), socio-economic, and cultural changes occurred for beneficiaries

Judging the degree of convergence with government/ other partners; the degree of stakeholder buy-in achieved

04. Convergence

05. Service Delivery

Extent to which cost-efficient and time-efficient methods and processes were used to achieve results

2.5 Stakeholders Mapping

Primary Stakeholders	Mode of Data Collection
Beneficiaries of the program	Physical Survey

Secondary Stakeholders	Mode of Data Collection
Self Help Groups (SHGs)	FGDs
PRI Members	In-Depth Interviews
District Irrigation Officials	In-Depth Interview
APL Team	Key Informant Interview
Ambuja Cement Foundation (ACF)	Key Informant Interview

2.6 Sampling Approach

Geographic Sampling

	Universe	Sample	Rationale
Treatment Villages	11	6	50% of the geographic universe
Control Villages*	Infinite	3	50% of the number of treatment villages

*The villages which weren't part of the intervention

Quantitative Sampling

A stratified random sampling approach was used for the Impact Assessment study. For the calculation of sample size, 95% Confidence Level and 7.5% margin of error was considered. The samples for the control group were selected from villages that do not have any intervention from the APL project.



Stakeholders	Name of Village	Mode of Data Collection	Universe	Sample Size	Rational
Farmers (Treatment Villages)	Dupituru	Survey	Infinite	20	95% CL, 7.5% MoE ³
	Mallavaram			30	
	Yellamchalli			30	
	Pandcharla			30	
	Avankandam			30	
	Gokiwada			60	
	Total			200	

Stakeholders	Name of Village	Mode of Data Collection	Universe	Sample Size	Rational
Farmers (Control Villages)	Yellavaram	Survey	Infinite	33	25% of the sample size of treatment
	Mulakothuru			33	
	Kothuru			42	
	Total			108	

³ Confidence level – Indicates probability with which estimation of the location of a statistical parameter in a sample survey is also true for the population; Margin of error – range of values above and below the actual results from a survey

Qualitative Sampling

The different stakeholders involved in the project or related to the intervention villages were interviewed for qualitative data.



Stakeholders (in treatment villages)	Qualitative tool	No. of samples for qualitative study
PRI Members	IDIs	5
Government Officials	KIIs	3
Ambuja Cement Foundation	KIIs	3
Self Help Groups	FGD	4

Soil Sampling

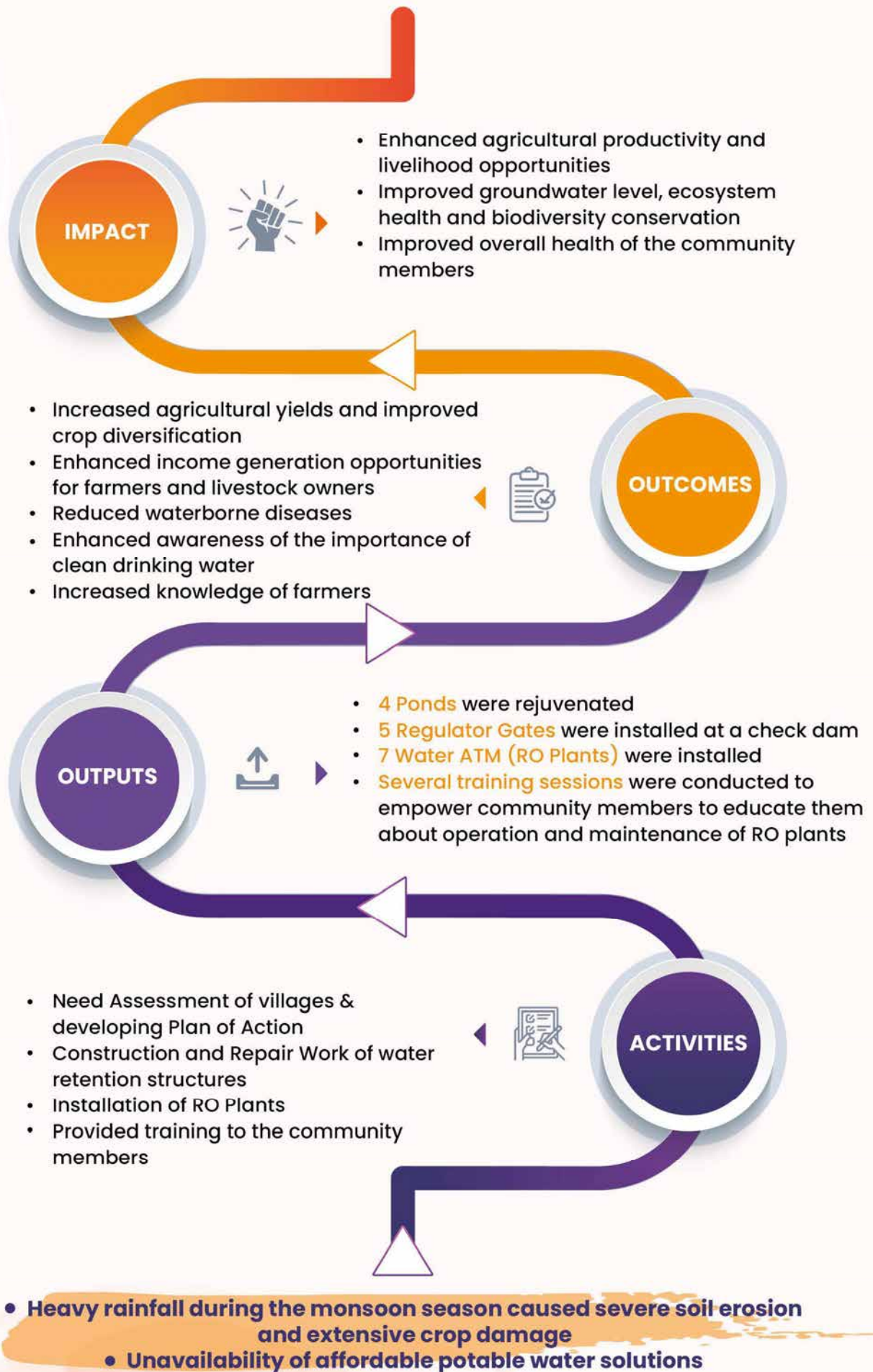
The impact findings derived from the soil tests will be a baseline for future assessments. For this, a comprehensive study was conducted, which involved collecting and analysing 5 soil samples. These samples were carefully selected to represent different areas and conditions. The soil samples underwent a thorough assessment to determine the presence and levels of various micro and macro nutrients critical for plant growth. Parameters such as Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, Zinc, and Sulphur content were analysed. Other important characteristics of the soil, including its pH level, Electrical Conductivity (EC), and organic content, were also examined.

Drinking Water Sampling

To assess the quality of RO water in the villages, a comparative study was conducted using 6 water samples. These samples were collected from 2 different sources: 3 from RO plants and 3 from Government tap connections. The collection of the samples is specifically from intervention villages. This comparative analysis of water samples will help assess the quality and suitability of the RO water in the villages and contribute to informed decision-making regarding water supply and treatment strategies.



2.7. Theory of Change





Chapter 3.

Finding of the Impact Assessment Study

3.1 Inclusiveness of the Program

3.2 Relevance of the Program

3.3 Expectations from the Program

3.4 Convergence

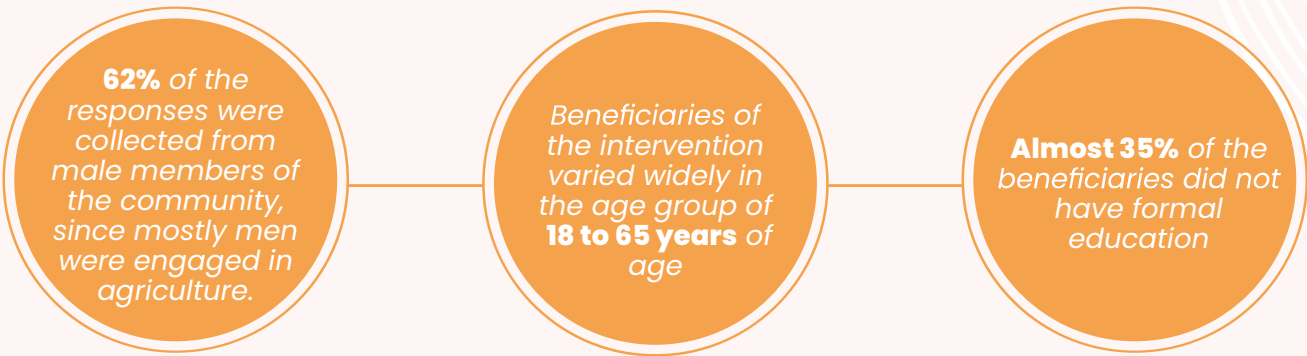
3.5 Service Delivery

3.6 Social Return on Investment



The following section of the report indicates the key findings and insights drawn from the impact assessment study, based on the IRECS framework’s standard parameters as outlined. The insights have been drawn adopting a 360-degree approach to data collection by gathering data through quantitative and qualitative methods from multiple stakeholders involved in the programme.

3.1 Inclusiveness of the Program



The inclusiveness of the program assesses the degree to which all members of the communities have equal access to the intervention's benefits, regardless of factors such as age, gender, education level, and more.

Gender distribution (n=200)

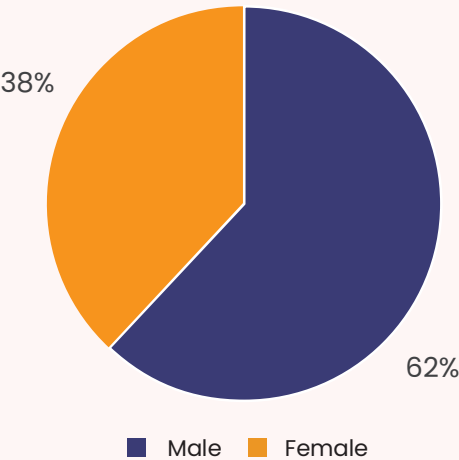


Figure 4 : Gender distribution

Age group distribution (Age in Years), (n=200)

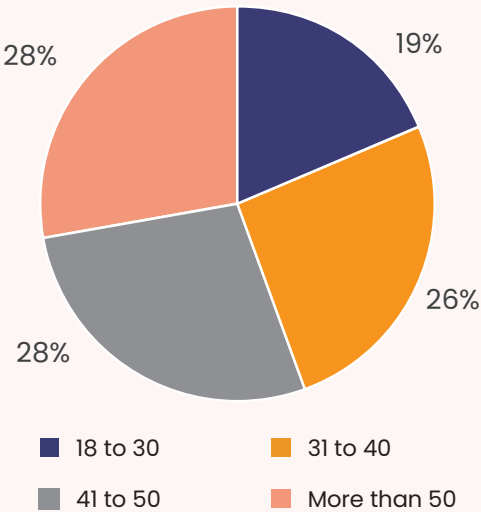


Figure 5: Age group distribution

Throughout the data collection process, the team engaged with community members residing in the targeted villages. **Almost 62% of the data was collected from male members**, reflecting the prevalence of male engagement in farming activities within the villages. Conversely, **around 39% of the data was collected from females**, as they were predominantly occupied with household chores directly associated with accessing safe drinking water. This gender distribution highlights the differing roles and responsibilities within the community pertaining to water-related activities and agricultural livelihoods.

Most beneficiaries (54%) fall within the age range of 30 to 50 years, with the highest proportion (28%) being between 40 to 50 years old. Beneficiaries above 50 also make up 28% of the sample, highlighting the inclusion of older individuals who can contribute insights based on their life experiences and long-term perspectives.

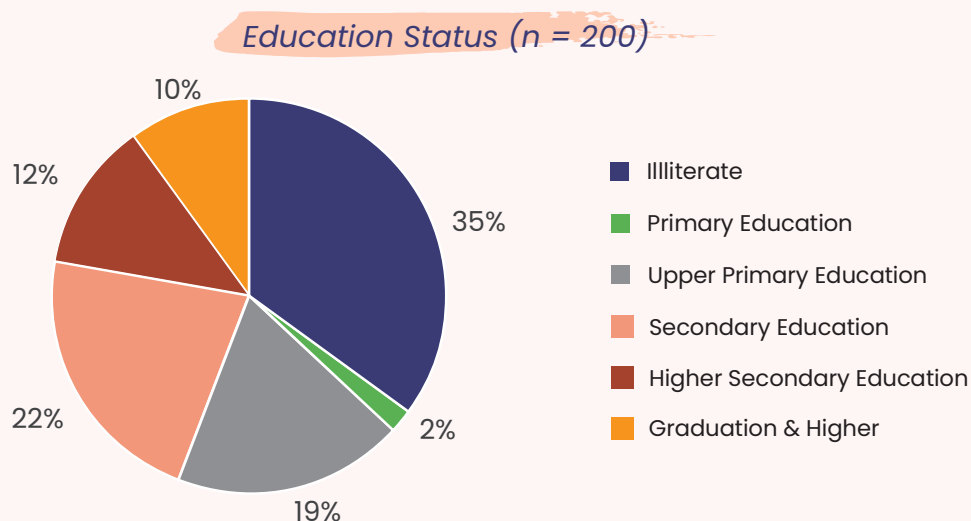


Figure 6: Education status

The educational background of the beneficiaries provides valuable insights into the sample. **The majority of beneficiaries (35%) fall into the illiterate category**. While only a small percentage have primary education (2%), a significant portion have attained upper primary (19%) and secondary education (22%). Additionally, a notable number have completed higher secondary education (12%), and **10% of the beneficiaries have pursued graduation or higher education**. This diverse educational background signifies the potential for varied perspectives and knowledge levels among the respondents, contributing to a comprehensive analysis of the data.

3.2 Relevance of the programme

The relevance of the program is assessed based on its alignment with the perceived needs of the communities.

In the intervention areas of Achutapuram, Munagapaka, Kasimkpota, Rambilli, and Yellamanchalli Mandals in Vishakhapatnam district, the availability of water for both agricultural and livelihood purposes is a major concern. Despite receiving sufficient rainfall during the rainy season, the groundwater levels have been declining in these areas. Since a significant portion of the population is engaged in agriculture, this decline in groundwater has significantly impacted their livelihoods.

Major Issues Associated with the Interventions includes :

- Lack of maintenance & repairs has incapacitated the existing water conservation structures
- Poor quality of drinking water has negatively impacted population's Health

The scenario before to intervention showed damaged and inactive ponds and regulator gates that had become dysfunctional and required repair work. As a result, the lack of available water for their farmlands was a serious setback during Rabi and Zaid seasons, when water levels in the sources decreased dramatically. Since water is used for irrigation as well as for livestock, its scarcity restricted farmers' livelihoods. Instances where farmers had to either forgo one or two agricultural seasons owing to a shortage of irrigation water or travel long distances to feed and bathe their livestock.

53% of the beneficiaries were earning below INR 1 lakh.

68% of the beneficiaries depend on agriculture as their primary source of income

78% of the beneficiaries practiced animal husbandry

Majority (53%) of the beneficiaries earns below INR 1,00,000. Additionally, a significant portion (35%) have an income ranging from INR 1,00,000 to 2,00,000. This distribution reflects a diverse range of income levels within the sample, enabling a comprehensive analysis of perspectives from different socioeconomic backgrounds.

The majority of farmers (69%) own less than 1 acre of land, indicating a significant presence of small landholders. A smaller proportion (19%) own land ranging from 1 to 2 acres, while only 7% own land between 2 to 3 acres. A mere 2% of farmers possess more than 4 acres. This distribution showcases the predominance of small landholdings within the sample, which has implications for agricultural practices, livelihoods, and resource allocation. The majority of villagers (68%) were farmers or farm labourers, indicating a significant representation of the agricultural sector

Average annual income (INR in thousand), (n=200)

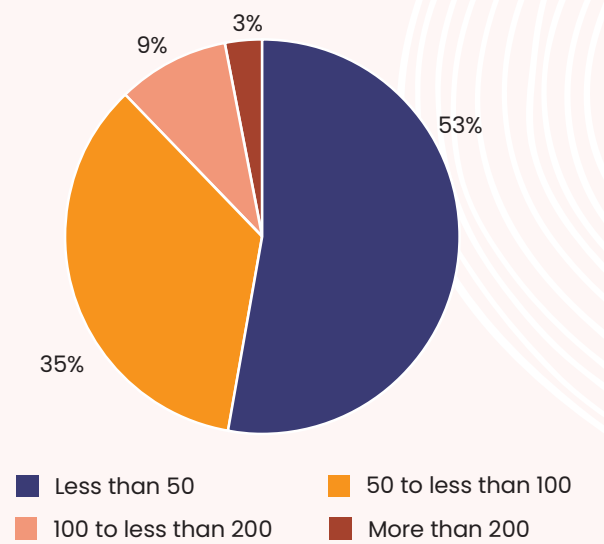


Figure 7: Average annual income before the intervention

Average landholding (Area in Acres), (n=200)

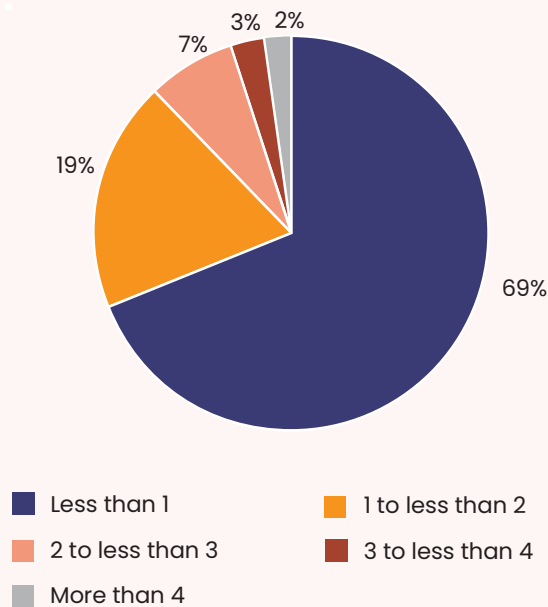


Figure 8: Average landholding

Primary occupation (n=200)

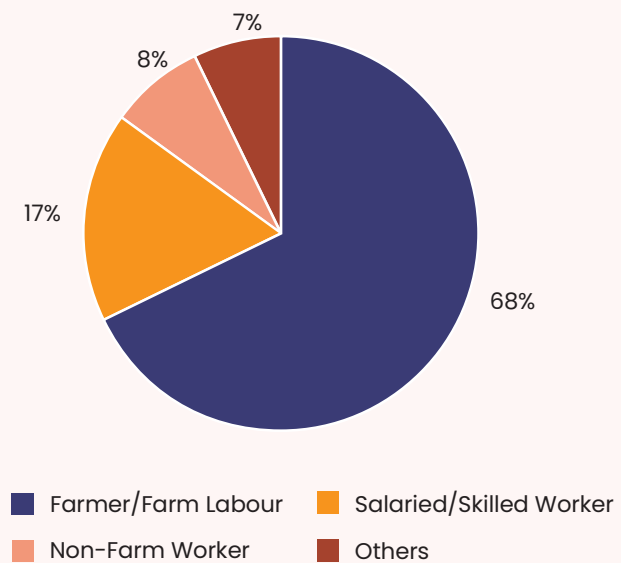


Figure 9: Primary occupation

However, a notable portion (17%) consists of salaried employees or skilled labourers, reflecting a diverse range of occupations beyond agriculture. This distribution highlights the significance of the agricultural sector in the sample, while also acknowledging the diversity of occupations and livelihoods among respondents.

*Average family size
(n = 200)*

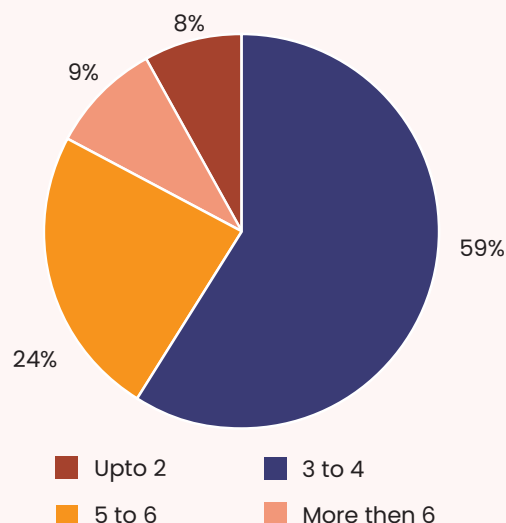


Figure 10 : Average family size

Number of working members (n=200)

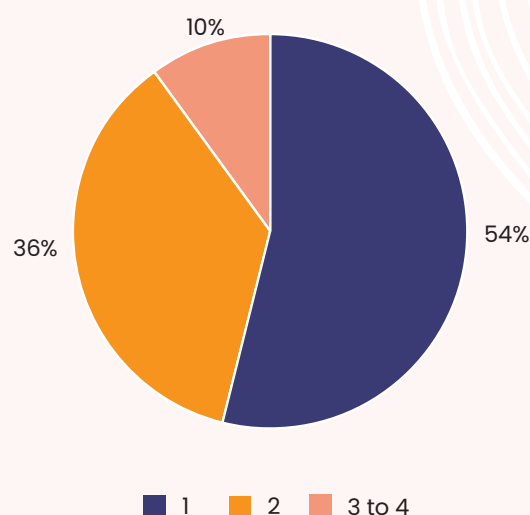


Figure 11 : Number of working members

Majority (59%) have family sizes ranging from 3 to 4 members, representing the most common household structure. Moreover, a significant portion (24%) have family sizes of 5 to 6 members, indicating larger households or a larger number of people who are dependent on the income generated from agriculture.

The majority of families (54%) have a single earning member, indicating a significant presence of households where one person is primarily responsible for generating income.

Whereas, a considerable proportion (36%) have two earning members. And, a smaller percentage (10%) of families have three to four earning members. This distribution reflects the diversity of earning arrangements within families, with single and dual earning households being the most common.

Cropping season before intervention (n = 110)

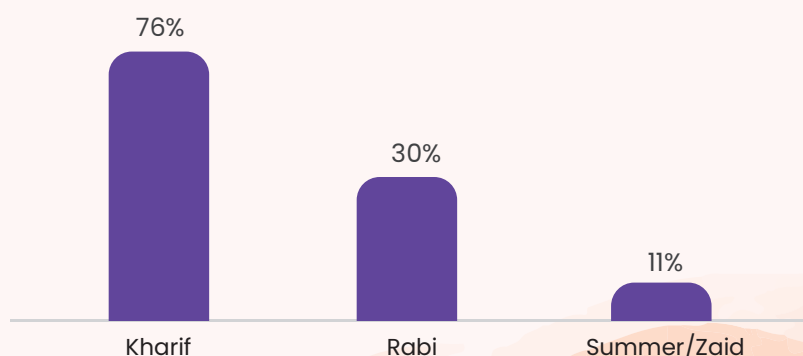


Figure 12: Overview of cropping season before intervention

Due to a scarcity of available water before the intervention, the major cropping season was confined to the Kharif season alone. Majority of respondents (76%) engage in the Kharif season, indicating a significant focus on crops that are sown in the monsoon season. A smaller proportion (30%) participate in the Rabi season, whereas only 11% of respondents are involved in the Summer/Zaid season. However, water scarcity during the Rabi and Zaid seasons reduced the productivity of farmed areas. And, forced majority of the farmers to skip their cropping seasons which ultimately affect their family income.

Sources of irrigation (n=110)

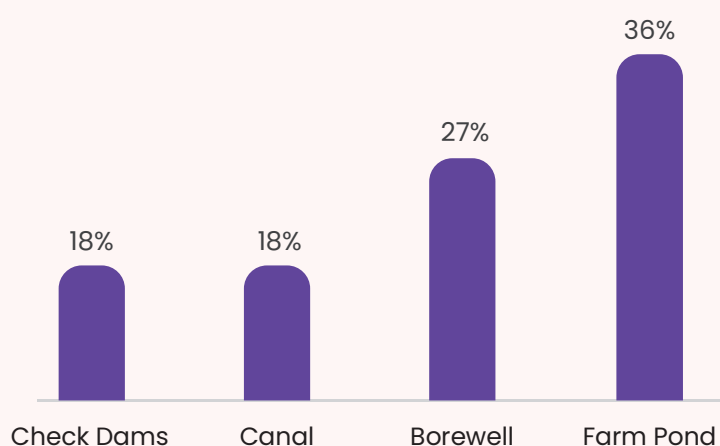


Figure 13: Sources of irrigation before intervention

The sources of irrigation water before the interventions showed that the majority (36%) of the respondents relied on farm ponds as their primary source of irrigation, indicating the prevalence of water storage and utilisation practices. Additionally, bore wells account for a significant portion (27%) of irrigation sources, highlighting the existence of higher extraction of groundwater before the intervention.

The ownership of livestock among respondents provides important insights into the respondents. Out of the total respondents, a majority (78%) indicate that they own livestock, highlighting the significance of animal husbandry within the community. Among those who own livestock, the majority (84%) own up to 5 animals, suggesting a prevalence of small-scale livestock rearing. A significant proportion (15%) own 5 to 10 animals, while only 1% own 10 to 15 animals. This distribution signifies the predominance of smaller livestock holdings, which has implications for livelihoods, income generation, and resource management.

Livestock ownership (n=86)

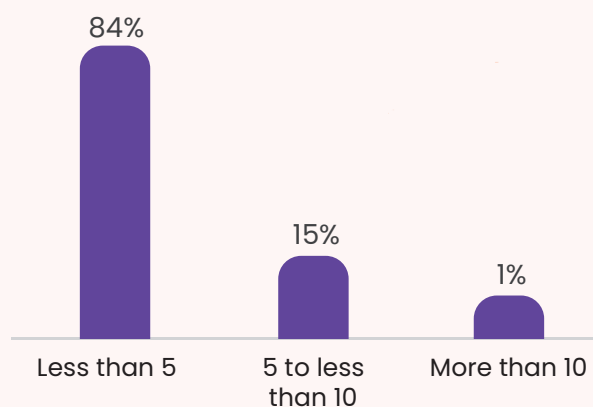


Figure 14: Livestock owned before intervention

The distance travelled to fetch drinking and bathing water for livestock reflects that the majority (55%) of respondents had to travel less than 100 meters to access water sources for their animals, indicating relatively convenient access. But, **around 15% of the respondents had to cover distances ranging from 500 meters to 1 kilometre**, indicating a more substantial effort to obtain water for their livestock.

However, before the intervention, poor drinking water has led to an increase in water-borne diseases in the villages. This has resulted in higher medical expenses for families and decreased workforce productivity due to illness and absenteeism. This situation is exacerbated because a significant portion of the population belongs to marginalized communities and cannot afford to purchase RO water from distant locations.

Average annual medical expenditure (INR in Thousand), (n=43)

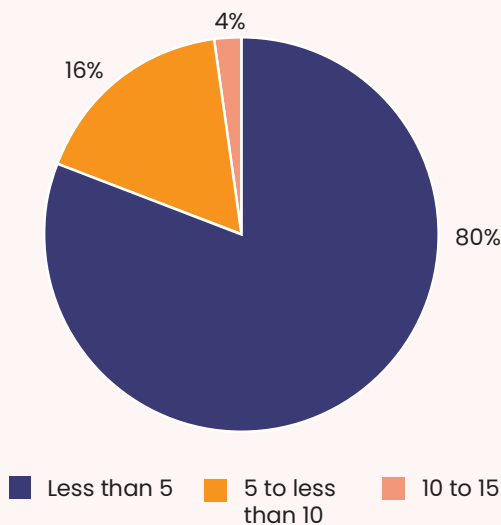


Figure 15: Average annual medical expenditure before intervention

Annual pattern of absenteeism (n=43)

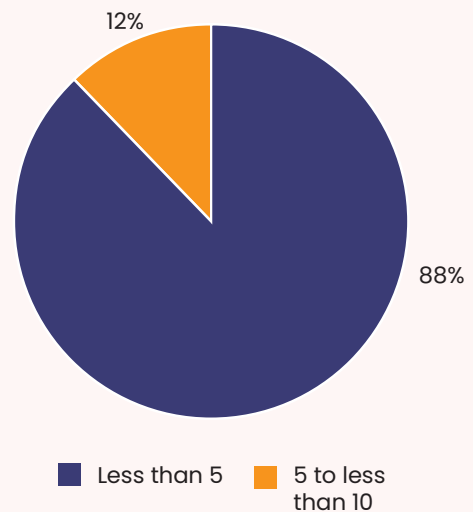
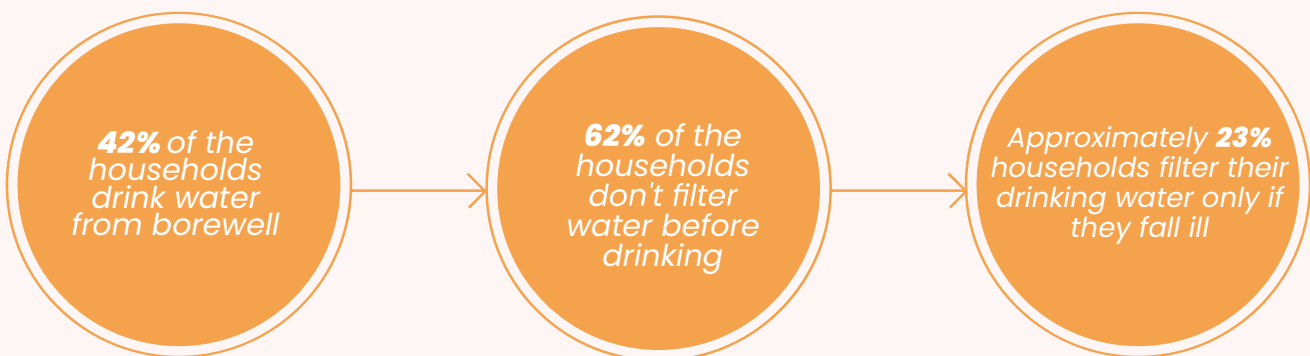


Figure 16: Pattern of absenteeism before intervention

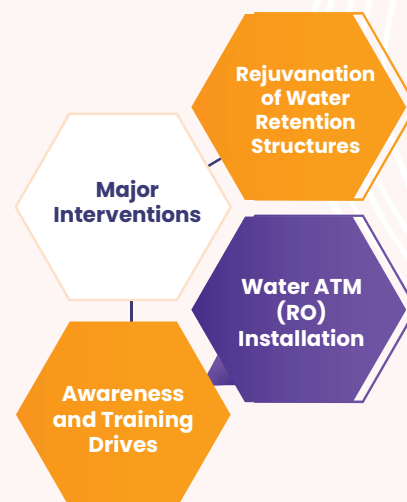


According to the survey, **81% of the household spend up to INR 5,000 per year on medical expenses due to water-borne diseases**. On the other hand, **around 88% of those who were unwell owing to water-borne diseases, missed up to 5 days of work every year**.

3.3 Expectations from the Programme

Expectations define the extent to which the beneficiaries experience the intended and unintended positive benefits, socio-economic changes and cultural changes. The insights drawn from the data collected from the survey are stated below.

A significant portion of the population in the region relies on agriculture as their primary source of livelihood. However, the inadequate availability of irrigation water during the post-monsoon season led to a decrease in farmers' income. Therefore, the primary objective of the intervention was to enhance irrigation possibilities and diversify the income streams of community members. The interventions also aimed to provide access to clean and safe drinking water at affordable prices to all community members.



Improvement in Livelihood activities

Since the primary livelihood activity followed by the beneficiaries was farming, an increase in the availability of water for farmlands was of utmost importance as an outcome of the programme. Moreover, respondents also mentioned having experienced an improvement in health and an increase in the productivity of livestock.

As the program primarily targeted individuals from the farming community, enhancing water availability for agricultural lands was of paramount significance as a program outcome.

Improvements observed after intervention (n=110)

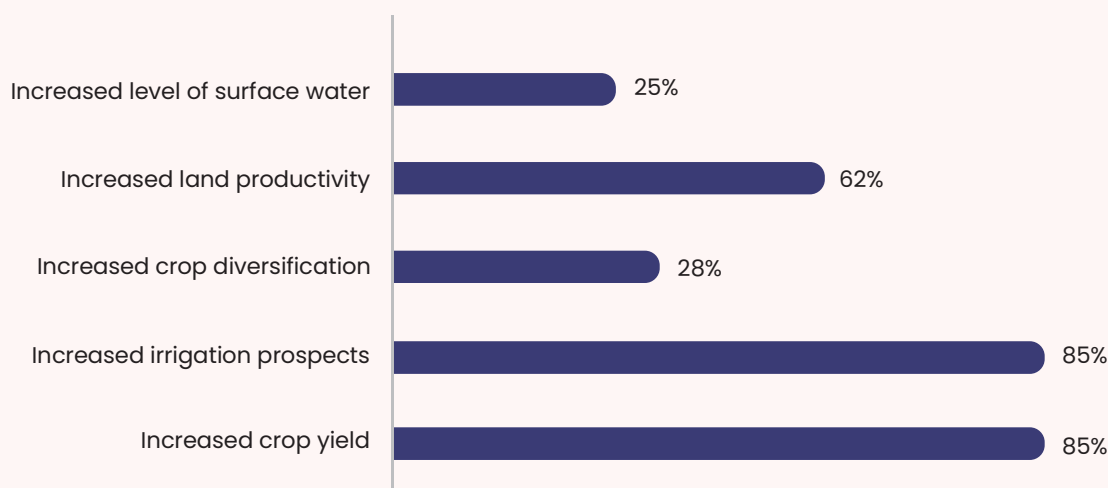


Figure 17: Improvements observed after intervention

The improvements observed after the intervention or revival of ponds highlight several positive outcomes. A significant majority of 85% reported increased crop yield, indicating improved agricultural productivity. Followed by better irrigation prospects observed by 85% of respondents, reflecting enhanced water availability. There was also a noticeable increase in crop diversification, with 28% of respondents. Furthermore, 25% of respondents reported increased surface water levels, which contributes to better water availability for agriculture and animal husbandry practices.

*Increase in cultivable land
(Area in Acres), (n=110)*

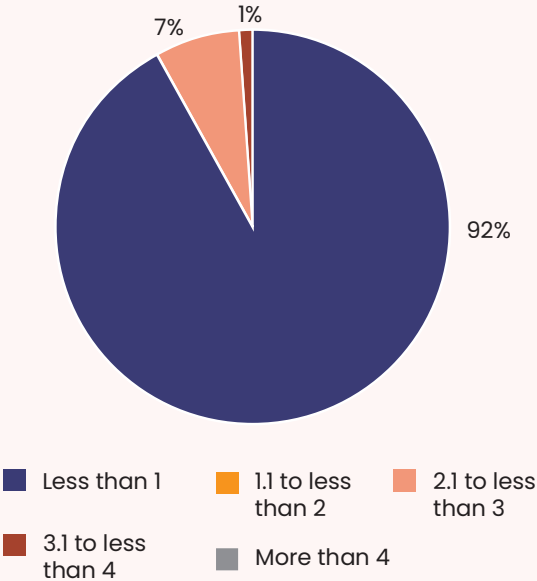


Figure 18: Increase in cultivable land

*Average increase in
production (n=110)*

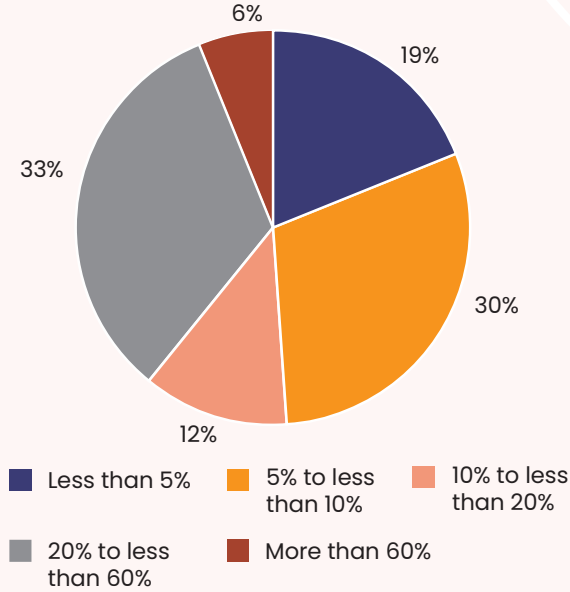


Figure 19: Increase in production

Among the respondents who witnessed an expansion in cultivable area following the revival of ponds, the majority (92%) reported an increase of up to 1 acre of land. This data highlights the extent to which land expansion occurred as a result of the pond revival initiative, with the majority experiencing relatively modest increases in cultivable land.

Among those who observed an increase in crop yields, that is 85% of the respondents, the majority (33%) reported a significant improvement up to 20% to 60% in their production. This indicates a substantial boost in yields, reflecting the positive influence of interventions on agricultural practices. Additionally, 30% of respondents reported a moderate increase in crop production ranging from 6% to 10%, while 12% experienced an increase of 10% to 20%. However, only 6% of respondents witnessed a remarkable surge in crop production exceeding 60%. This distribution signifies varying degrees of improvement in crop production, with a significant number of respondents observing substantial yield increases.

Time consumed for irrigation (Duration in Hours), (n=110)

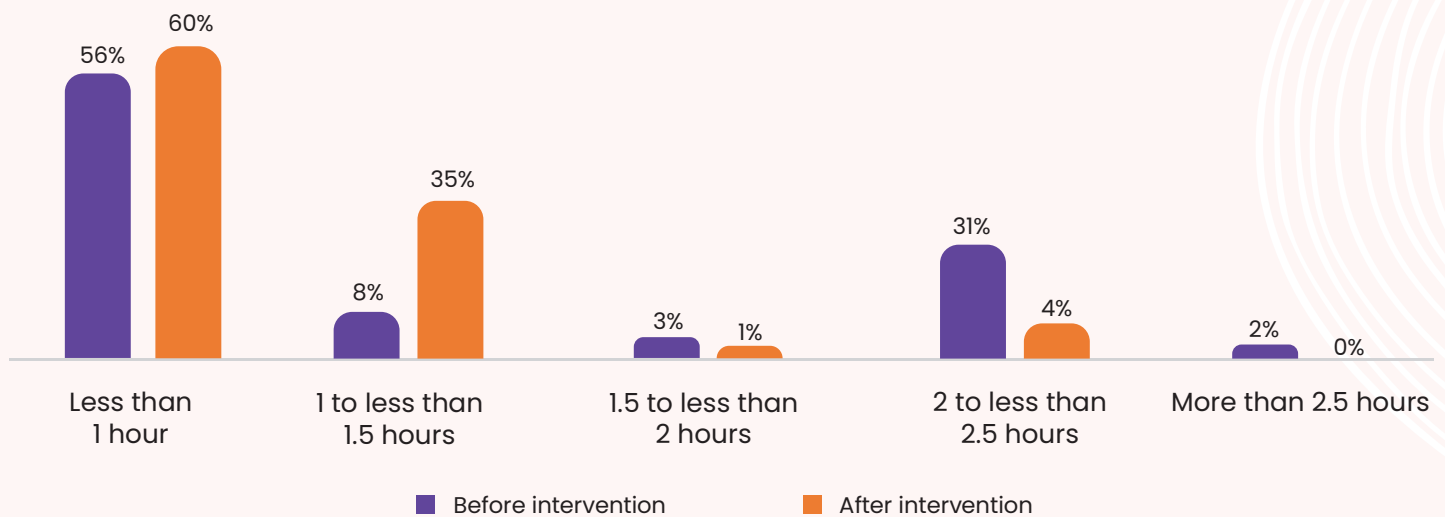


Figure 20: Time consumed for irrigating farmland

The analysis of the time consumed in irrigation before and after the revival of ponds provides valuable insights into the impact of this intervention on the efficiency of water utilization. Prior to the intervention, the **majority of respondents (56%) reported spending less than 1 hour on irrigation**, which indicates relatively efficient water management practices. However, after the revival of ponds, **this percentage increased slightly to 60%, suggesting a positive effect on irrigation time**. Notably, a significant change occurred as **almost 95% of the respondents were now able to irrigate their farmlands within 1.5 hours**. This implies a substantial reduction in the time required for irrigation tasks.



Changes in cropping pattern (n=110)

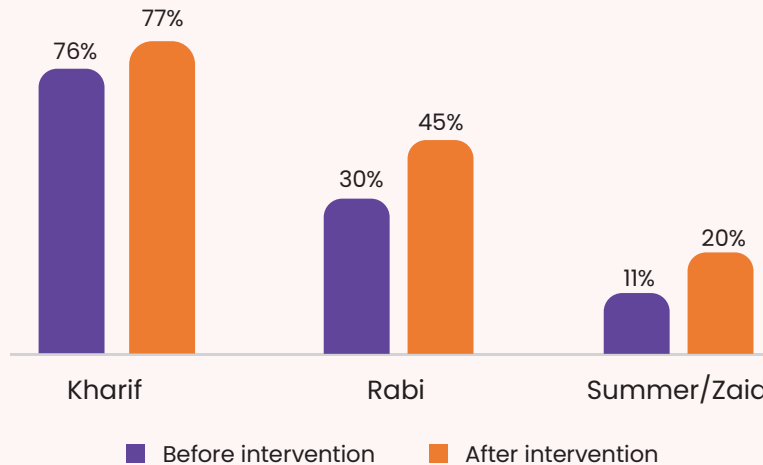


Figure 21: Changes in cropping pattern

The comparison analysis of cropping patterns before and after the intervention provides valuable insights into the changes in agricultural practices. Majority of farmers (76%) cultivated crops during the Kharif season before and after the intervention. Notably, the cultivation of Rabi crops, which are sown in the winter season, increased significantly from 30% before the intervention to 45% after the intervention. This suggests a greater emphasis on Rabi crops, potentially due to improved irrigation facilities and water availability from the rejuvenated ponds. The percentage of respondents engaged in Summer/Zaid crops, cultivated during the summer season, also increased from 11% to 20%. This demonstrates a diversification in cropping patterns, with farmers exploring different seasonal opportunities for agricultural production. Overall, the comparison analysis reveals a shift in cropping patterns towards a more balanced distribution between Kharif and Rabi crops, reflecting the positive impact of the intervention on agricultural practices and crop diversification.

Impact on irrigation practices (n=110)

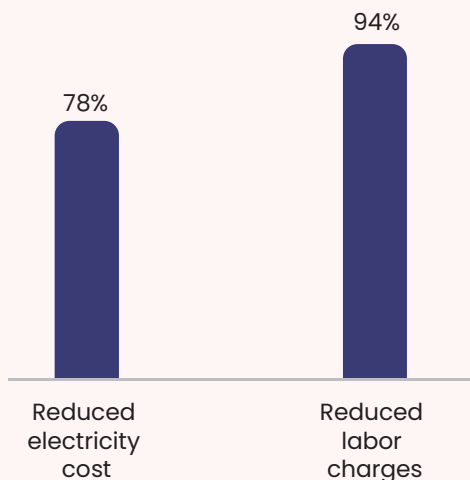


Figure 22: Impact on irrigation practices

Average annual savings on irrigation (INR in Thousand), (n=93)

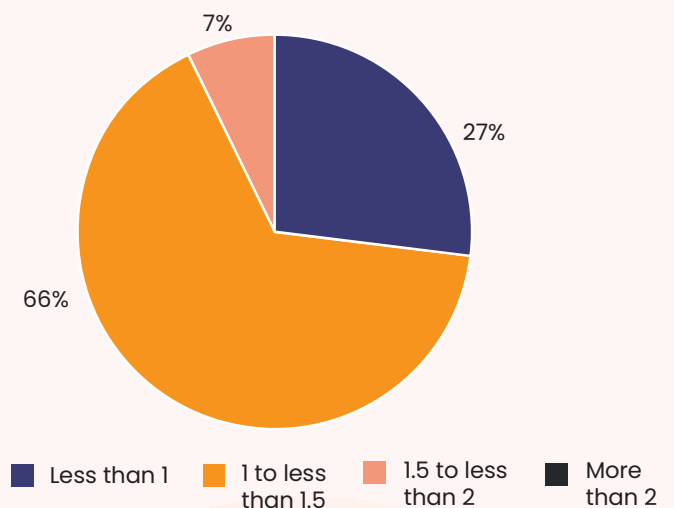


Figure 23: Average savings on irrigation

Amongst the majority (85%), who observed the impact of better irrigation prospects due to revival of ponds and regulator gates, **around 85% of the farmers experienced a reduction in irrigation costs**. This reduction in expenses is a crucial factor for improving the financial sustainability of agricultural practices. Furthermore, 94% of farmers mentioned a decrease in labour costs, and 78% reported a reduction in electricity costs, highlighting the increased efficiency of electric pumps for irrigation due to improved water availability.

The average savings on irrigation costs due to increased water availability resulting from the revival of ponds was experienced by respondents. The **majority (66%) reported savings ranging from INR 1,000 to 1,500 per annum, indicating a substantial reduction in expenses related to irrigation**. Additionally, 27% of respondents reported savings of up to INR 1,000 per season, reflecting a moderate decrease in irrigation costs. Whereas, only around 7% reported savings ranging from INR 1,500 to 2,000. This highlights the positive impact of increased water availability on reducing irrigation expenses, allowing farmers to allocate their financial resources more efficiently.

Procurement of Livestock After Intervention (n=86)

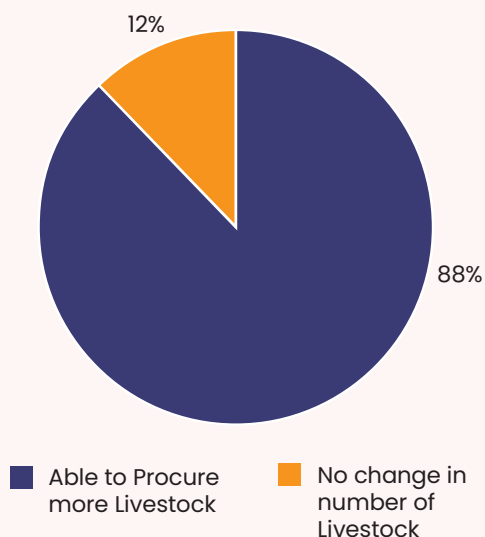


Figure 24: Procurement of livestock after intervention

Improvements in cattle herding practices (n=86)

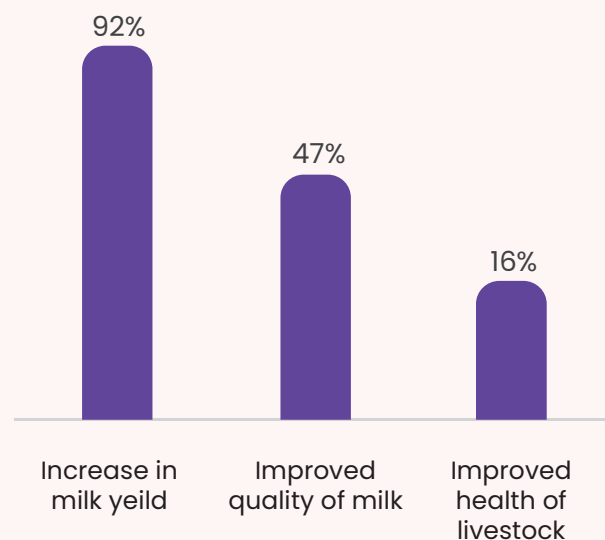


Figure 25: Improvement in cattle herding practices

Among the respondents who owned livestock, a significant majority of, **around 88% reported an increase in their livestock count** after the revival of ponds and regulator gates. These interventions facilitated more effective access to drinking and bathing water for their livestock, resulting in the observed growth. Conversely, a mere 12% of respondents change in their livestock numbers.

As indicated by the survey responses, the revival of water retention structures has significantly impacted cattle herding practices. **The majority of respondents, approximately 92%, reported an increase in milk yield after the intervention**. This suggests that the improved availability of water has positively influenced the productivity of dairy animals, leading to higher milk production. **Additionally, 47% of respondents noted an improvement in milk quality**, indicating that the water from the rejuvenated structures has contributed to enhanced milk properties.

Moreover, 10% of respondents reported better health among their livestock, suggesting that the availability of clean and adequate water has contributed to the overall well-being of the animals. A smaller percentage of respondents (6%) observed an increase in the birth rate of cattle and goats, indicating the positive reproductive impact of the improved water availability.

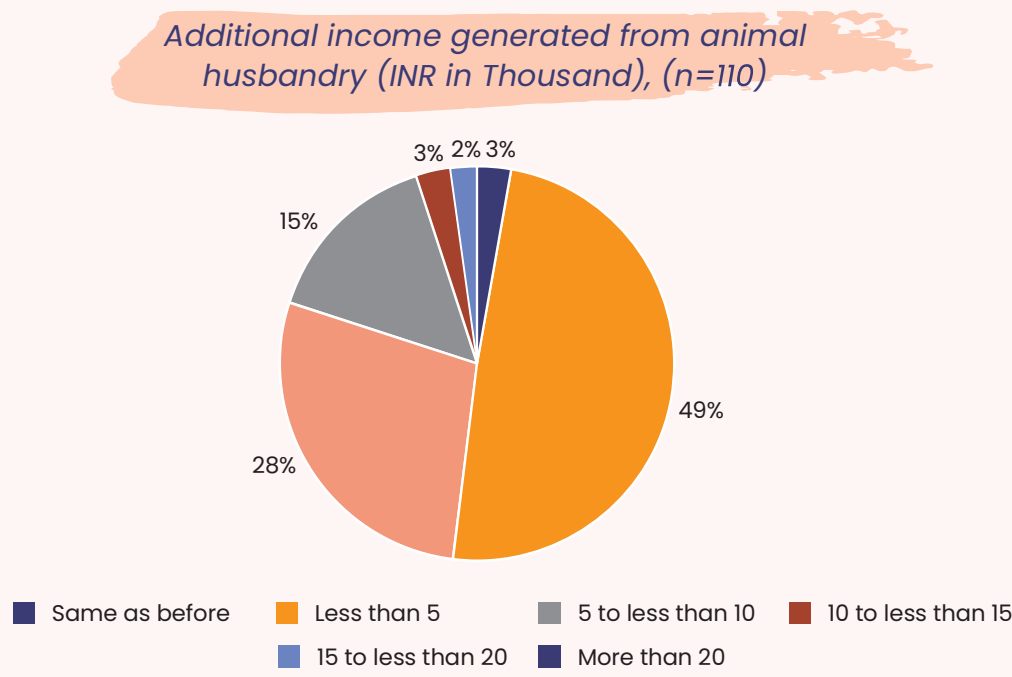


Figure 26: Additional income generated from animal husbandry practices

Nearly half of the respondents (49%) reported additional income ranging up to INR 5,000 annually, reflecting a moderate but significant financial boost. Additionally, 28% of respondents reported earning between INR 5,000 to 10,000 whereas, only around 20% reported earning more than INR 10,000 annually, signifying a notable financial impact.

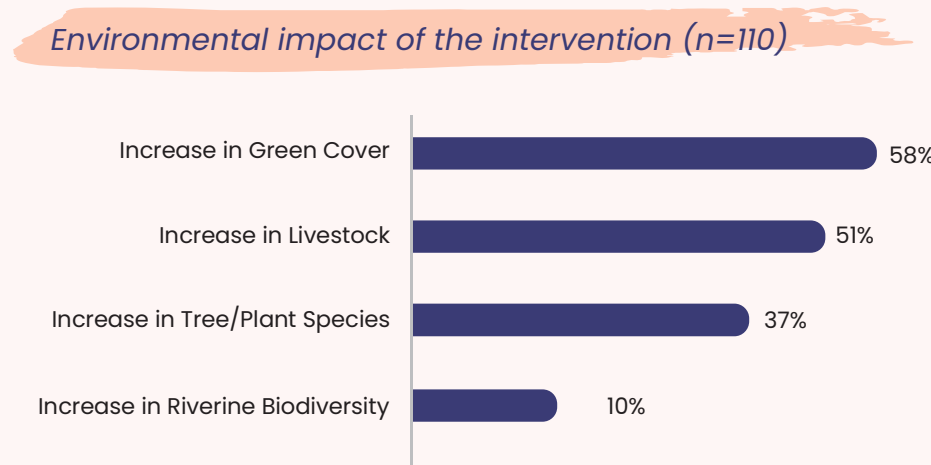


Figure 27: Environmental impact of the intervention

The interventions and improvements in livestock practices have proven to be instrumental in enhancing the economic well-being of the farming community.

According to the data, the intervention highlights several positive outcomes regarding the overserved and experienced biodiversity. Most respondents reported an increase in green cover (58%). Furthermore, there has been an **increase in livestock activity (51%) near the ponds followed by 37% increase in tree/plant species**. By promoting these activities, the project has contributed to the preservation and restoration of natural habitats.

Improvement in Drinking Water Facilities

The analysis of illness due to contaminated drinking water before and after the intervention provides significant insights into the impact of water quality improvements. Prior to the intervention, **48% of respondents reported falling ill, indicating a high prevalence of water borne diseases in the region**. However, after the intervention, this percentage significantly **decreased to 27%**, indicating a notable improvement in the health of the community members.

The significant decrease in illness rates highlights the importance of providing clean and safe drinking water to communities and the effectiveness of the intervention in achieving this goal.

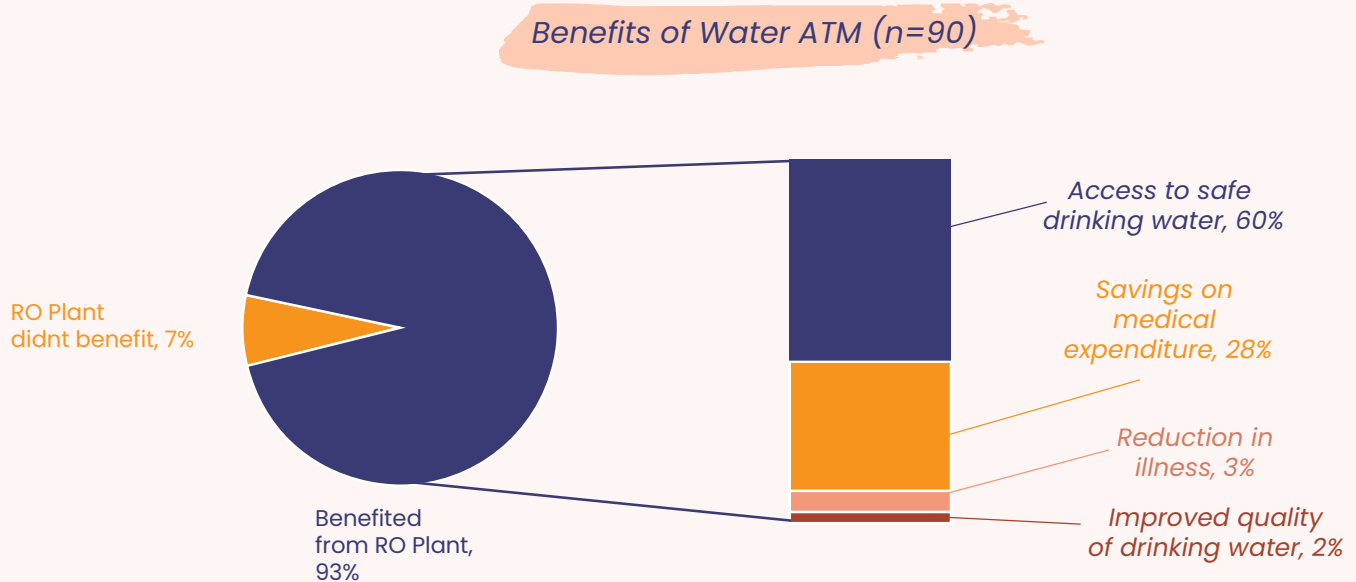


Figure 28: Benefits of Water ATM

The analysis of the benefits of RO water plants reveals that a significant majority, **93% of the total respondents, reported being benefitted from the intervention**. The primary benefit reported by respondents was access to safe drinking water, with 60% stating that they experienced this positive outcome. Additionally, 28% of respondents reported savings on medical expenditure, indicating that the availability of clean drinking water reduced the incidence of waterborne illnesses and associated healthcare costs. Only a small percentage of respondents, 7%, reported that the RO plant did not benefit them. Furthermore, 3% of respondents observed a reduction in illness, while 2% highlighted the improved quality of drinking water as an additional benefit. These findings demonstrate the significant positive impact of RO water plants in providing safe drinking water, reducing medical expenses, and improving overall well-being among the community members.

Table 7: Summarised Comparison of pre-and post-intervention by APL's programme

Factors for comparison	Before intervention (n=200)	After intervention (n=200)
Farmers practicing farming during Rabi season	30%	45%
Farmers practicing farming during Zaid season	11%	20%
Farmers irrigating their farmlands within 1.5 hours	68%	98%
Average no. of livestock owned by households	5.2	5.5
Average annual family income of households	INR 1,03,000	INR 1,48,355
Average annual expenditure on drinking water	INR 2,340	INR 1,300
Average annual medical expenditure (water borne diseases)	INR 5,620	INR 1,540

According to the impact findings, the intervention has led to a substantial increase in water availability in the villages, benefiting both farmlands and cattle. Additionally, the interventions have also positively affected the health of the community members. In terms of overall program impact, the beneficiaries have experienced a noteworthy improvement in their annual household income, attributed to enhanced agricultural practices and increased livestock activities.

Comparison between control and treatment villages

The following segment will explore the comparisons between different variables, specifically focusing on the before-after impact and the differences observed between the treatment and control groups.

To evaluate the specific impacts of the intervention, a comparative study was conducted during the impact assessment, involving surveys of individuals residing in villages where no intervention had taken place. This comparative analysis aimed to assess the differences and the distinct effects brought about by the intervention within similar geographical areas. Both the treatment and control villages were situated in close proximity to each other.

According to primary data, approximately 45% of farmers from treatment villages cultivate their crops during the Rabi season, nearly twice the number compared to the control village. Additionally, during the Zaid season, there is a significant improvement, with the number of farmers taking up crops being five times higher than the control group.

Comparative analysis of cropping pattern

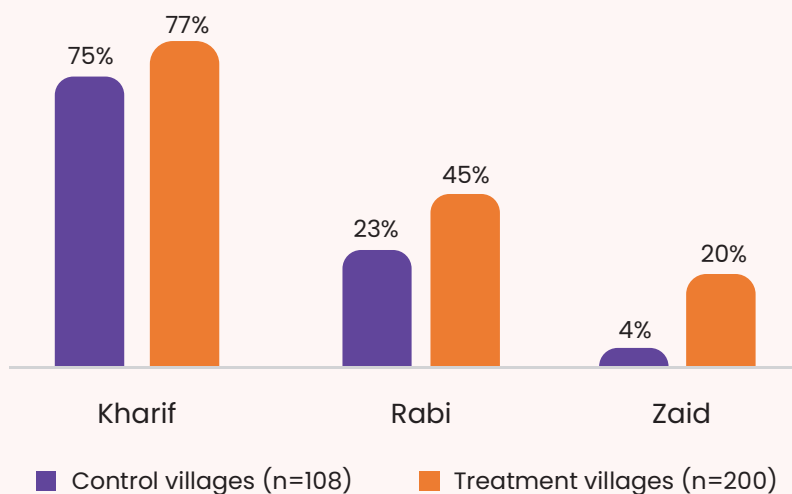


Figure 29: Comparative analysis of cropping pattern

Nearly 95% of the farmers from the treatment villages mentioned that they are able to irrigate their farmlands within 1.5 hours. Whereas, around 42% of the farmers from control villages mentioned that it takes more than 1.5 hours to irrigate their farm lands. This stark difference in irrigation time has not only saved opportunity cost for farmers in treatment villages, but also significantly contributed in reducing labour and electricity charges.

Comparative analysis of time consumed for irrigation (Duration in Hours.)

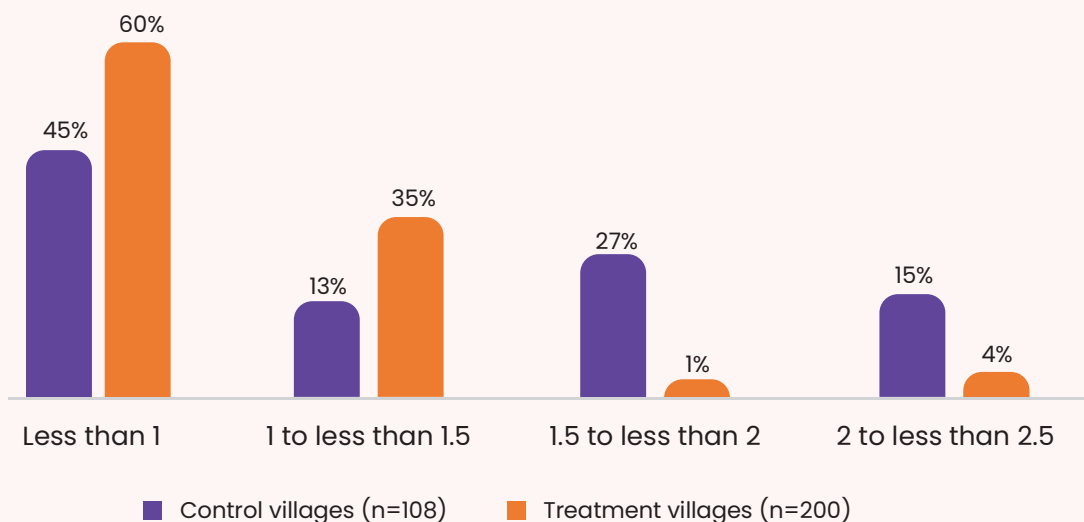


Figure 30: Comparative analysis of time consumed for irrigation

Cattle ownership has been steadily rising in the treatment villages. Community members reported increased confidence in purchasing livestock due to the abundant water availability for their cattle. Approximately 88% of herders in the treatment villages mentioned acquiring more livestock after the intervention. The chart below illustrates that nearly 17% of herders in the treatment villages now own more than 5 cattle, thanks to the year-round water supply improvement.

Comparative analysis of cattle ownership

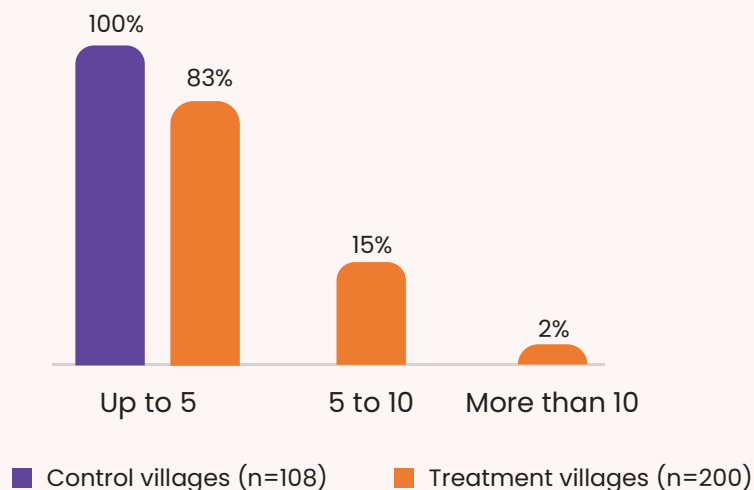


Figure 31: Comparative analysis of cattle ownership

Comparative analysis of annual expenditure on drinking water

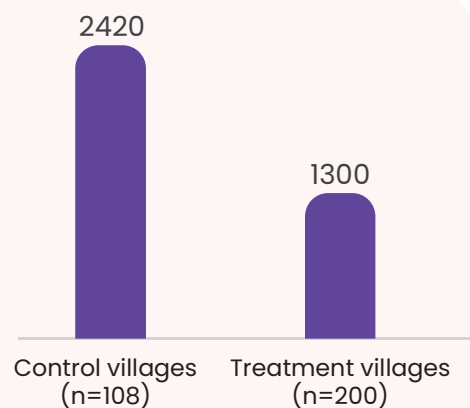


Figure 32: Comparative analysis of annual expenditure on drinking water



There is a significant difference in the expenditure on potable water. Medical expenses have notably reduced following the intervention. According to the primary study, the average annual medical expenses for residents in control villages, which lack access to RO Water facilities, amount to around INR 5,700 due to diseases caused by consumption of contaminated water, whereas it's just INR 1,540 for residents of treatment villages.

We can notice an improvement in household income of the community members as well. The annual income of the residents from control villages is around INR 1,04,000 whereas the annual income of residents from treatment villages is around INR 1,48,355.

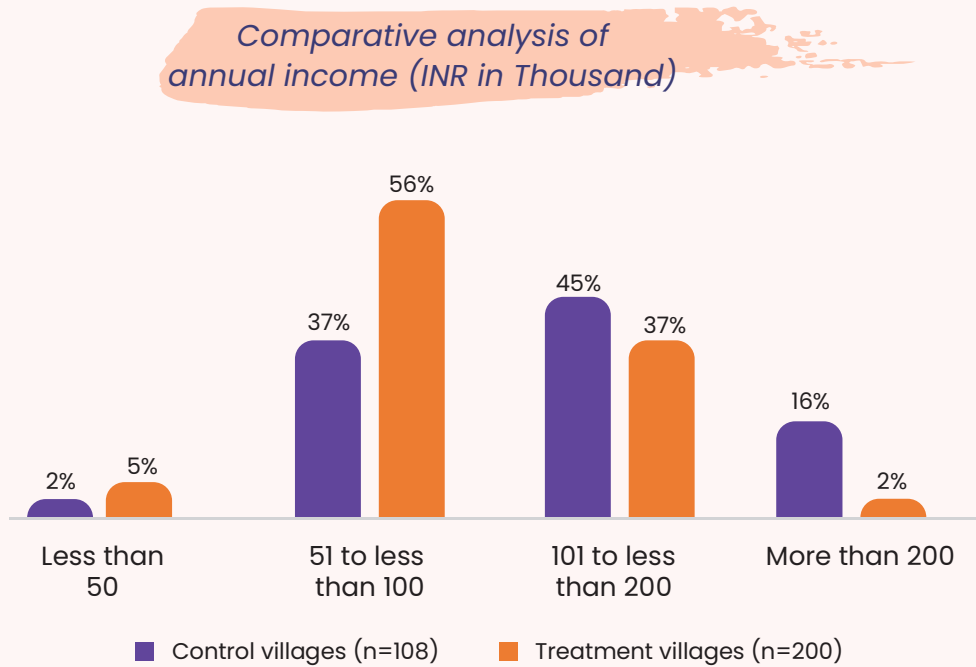


Figure 33: Comparative analysis of annual income

Table 8: Summarised Comparison of treatment & control villages

Factors for comparison	Control Villages (n=108)	Treatment Villages (n=200)
Farmers practicing farming during Rabi season	23%	45%
Farmers practicing farming during Zaid season	4%	20%
Farmers irrigating their farmlands within 1.5 hours	58%	98%
Average no. of livestock owned by households	5.0	5.5
Average annual family income of households	INR 1,04,000	INR 1,48,355
Average annual expenditure on drinking water	INR 2,420	INR 1,300
Average annual medical expenditure (water borne diseases)	INR 5,700	INR 1,540

Technical Analysis & Water Testing

- Upon analysing the results of tests conducted in three villages – Yellamanchalli, Gokiwada, and Mallavaram – comparing the quality of water from the RO system installed (treatment sample) and the government tap water (control sample). The tests measure two parameters: TDS (Total Dissolved Solids) and pH levels.
- In Yellamanchalli, the TDS level of the RO water is 38 PPM, indicating a significantly lower concentration of dissolved solids compared to the government tap water, which measures 318 PPM. Whereas, in Mallavaram, the TDS level of the RO water is 65 PPM, considerably lower than the government tap water, which shows a high TDS level of 969 PPM. Whereas, the pH level of the RO water is within the recommended range, but it slightly deviates for the government tap water, emphasizing the superior quality of the RO water.
- Overall, the lower TDS levels in the RO water suggest a reduced concentration of dissolved solids, which is preferable for consumption. However, the pH levels in some cases deviate slightly from the recommended range, indicating the need for further monitoring and adjustments to ensure optimal water quality for the residents.

Table 9: Analysis of water samples

Parameter	Villages	Control	Treatment
TDS (50-150 PPM)	Yellamanchalli	318	38
	Gokiwada	82	19
	Mallavaram	969	65
pH (6.5-8.5)	Yellamanchalli	7.6	6.5
	Gokiwada	6.9	5.7
	Mallavaram	5.9	6.8




Technical Analysis & Soil Testing

- The results obtained from the soil testing have not provided clear and definitive conclusions. It is important to note that significant changes in soil composition and properties, particularly in terms of chemical and organic composition, require a longer period of time to manifest.
- To fully understand the long-term effects of increased moisture level on soil composition, it is necessary to continue monitoring and evaluating the soil over an extended period. This will allow for a more comprehensive assessment of the chemical and organic alterations that may occur, which may take longer to manifest.
- However, the results of the soil test will act as a baseline report that will help in future assessment of the impacts of the interventions.

Table 10: Analysis of soil samples

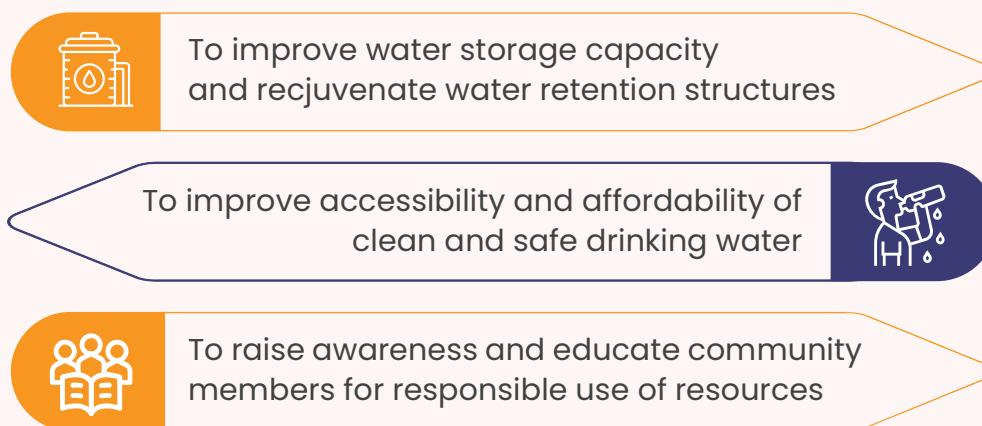
Sr No	Inspection Parameter	Unit	Adequate Value	Villages				
				Gokiwada	Pandcharla	Dupituru	Bayavaram	Avakandam
1	Against pH		6.5-7.5	6.36	6.92	5.3	5.97	6.78
2	Electrical Conductivity (EC)	dS/m	0-2.0	0.43	0.22	0.34	0.7	0.7
3	Organic Carbon	%	0.20 - 1.0	0.26	0.46	0.21	0.21	0.36
4	Available Nitrogen (N)	Kg/ha	<140 - >700	217	222	272	219	258
5	Available Phosphorus (P205)	Kg/ha	<7 - >35	31.8	38.2	39.8	12.84	31.3
6	Available Potassium (K20)	ppm	<100 - >300	138.5	254.8	212	343	123
7	Available Sulphur (S)	ppm	>10	3.23	23.89	6.88	26.1	28.22
8	Available Iron - (Fe)	ppm	>4.5	4.46	4.82	4.19	4.23	5.02
9	Available Copper - (Cu)	ppm	>0.2	0.92	1.23	0.9	0.98	0.91
10	Available Zinc - (Zn)	ppm	>0.6	1.08	0.95	1.16	1.1	1.05
11	Available Boron - (B)	ppm	>0.5	0.86	0.68	0.96	0.94	0.85
12	OM (Organic Matter)	%		0.45	0.83	0.36	0.36	0.62

3.4 Convergence

Sr. No	Name of Partner	Type of Partnership	Responsibilities
1	Ambuja Cement Foundation 	Implementing Partner	<ul style="list-style-type: none"> - Baseline Study - Capacity building of community members - Installation of RO Water Plants - Rejuvenation of water bodies

The successful implementation of the program required a strong convergence among various stakeholders. While Asian Paints Limited provided financial assistance for the project, Ambuja Cement Foundation acted as the implementing partner responsible for executing key project activities such as conducting the baseline study, implementing the projects, and conducting monitoring and evaluation studies.

The program consisted of three major components: participatory water management and the accessibility of safe drinking water at affordable prices.



To ensure the effectiveness of the water management structures, collaboration with the Panchayati Raj institutions was crucial for obtaining approval for pond construction. The involvement of the Irrigation Department was also necessary for approvals, permissions, and providing minimal technical guidance. Additionally, coordination with forest officers was required to obtain clearance for utilizing common lands.

For the drinking water component, the participation of Panchayati Raj institutions was crucial in providing site for Water ATM installation, while self-help groups (SHGs) played a vital role in the formation of RO committees. The convergence of these various stakeholders and agencies was essential for the successful implementation and sustainability of the project, ensuring the provision of safe drinking water and effective water management in the targeted communities.

3.5 Service Delivery

- This section evaluates the effectiveness of the project intervention in delivering efficient methods and services to achieve desired outcomes and impacts.
- The implementing partner joined hands with the Panchayati Raj Institutions in the intervention villages for letting people know about the interventions. Almost all the villagers mentioned that there were multiple awareness drives to educate them.
- The program also collaborated with community-led institutions which was a significant step in easing the entire process – facilitation of services, repair and maintenance of the current infrastructure and equipment. Moreover, this collaboration not only empowered the community members but also eased the operation and maintenance of the entire system.

The successful execution of projects before the monsoon season was made possible through the timely allocation of funds, effective cooperation with government partners who played a crucial role in securing approvals from different government levels within the required timeframe, and active engagement of the local community.

3.6 Social Return on Investment

Social Return on Investment helps us determine the values that are traditionally not reflected in financial statements, including social, economic, and environmental factors. This method helps quantify the value of the social impact of projects, programmes, and policies. SROI helps in evaluating the general progress of certain developments, showing both the financial and social impact the organization has. This method takes standard financial measures of economic return a step further by capturing the social and financial values.

For the current project by Asian Paints Limited, we have computed the value based on the actual outcomes of the programme. The data has been sourced from the field survey.

Social value generated from the programme on every investment of INR 1

Project	SROI
Rejuvenation of Water Retention Structures	12.2
Installation of WATER ATM (RO Water Plants)	3.7

Table 11: Rational for calculation – Water Retention Structures

Indicators	Rationale	Proxy Estimation	Source
Savings in terms of irrigating lands	Cost reduction in terms of reduced electricity & labour costs solved by increased water availability	Average reduction in irrigation cost	Field Survey
Average increase in income from Animal Husbandry	Increase in household income with increased productivity of livestock	Average household income increased post intervention	Field Survey
Average increase in income from Agriculture	Increase in household income from agriculture (increased in area under cultivation and number of cropping seasons).	Average household income increased post intervention	Field Survey

Table 12: Detailed calculations for Water Retention Structures

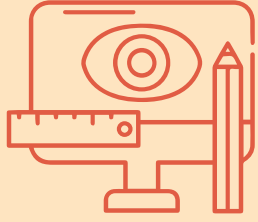
Social Return on Investment		
Year	FY 2022-2023	FY 2023-2024
Inflation Rate in India (IMF, 2023)	6.7%	4.9%
Discounted Rate Considered	5.8%	
Total Input Cost	INR 83,39,382	
Total Net Impact	INR 10,72,32,412	
Net Present Value (NPV)	INR 10,13,53,887	
SROI	12.2	

Table 13: Rational for calculation– Water ATMs

Indicators	Rationale	Proxy Estimation	Source
Savings in terms of medical expenditure	Average savings in medical expenditure (caused by water-borne diseases)	Change in average medical expenditure	Field Survey
Savings in terms of purchasing and processing potable water	Average cost savings in purchasing potable water	Change in expenditure pattern	Field Survey

Table 14: Detailed calculations for Water ATM

Social Return on Investment		
Year	FY 2022-2023	FY 2023-2024
Inflation Rate in India (IMF, 2023)	6.7%	4.9%
Discounted Rate Considered	5.8%	
Total Input Cost	INR 23,70,897	
Total Net Impact	INR 84,61,396	
Net Present Value (NPV)	INR 79,97,538	
SROI	3.37	



Chapter 4.

Brand Equity



4.1 Awareness
about the Program

4.2 Change in
Perception of the
Community

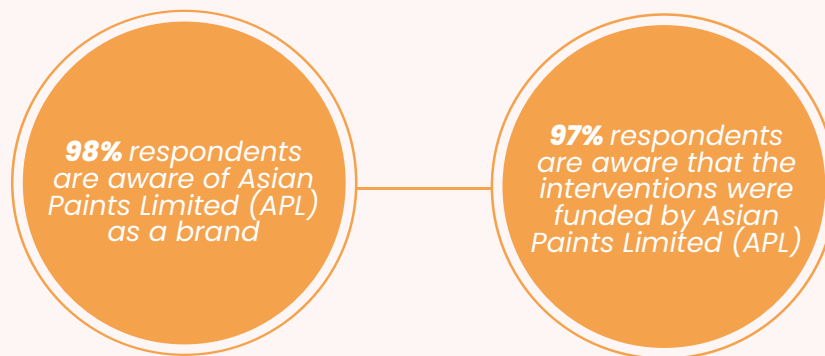
4.3 Rating the
Program

4.4 Employee
Volunteering
Programs

This Section will explore the Asian Paints Limited brand recognition and image in the treatment villages.

Asian Paints Limited, a renowned name in the paint industry, has consistently been involved in various initiatives and interventions aimed at social and environmental development. In recent years, the company has extended its reach to focus on water conservation and accessibility to safe drinking water in the Vishakhapatnam district. Through these interventions, Asian Paints has made a significant impact on the lives of thousands of people in the villages, earning the reputation of a trustworthy and reliable firm.

4.1 Awareness about the Program



4.2 Change in Perception of the Community

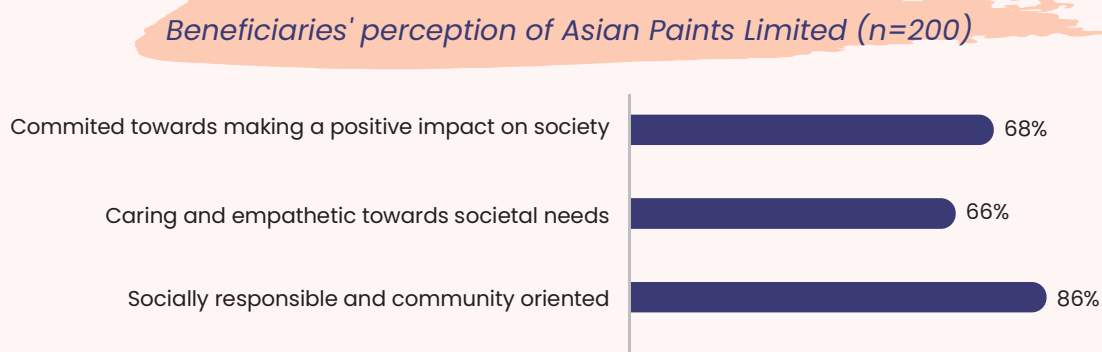


Figure 34: Beneficiaries' perception of Asian Paints Limited

The brand perception analysis reveals a highly positive image of Asian Paints in terms of their social responsibility and community-oriented approach. An overwhelming 86% of respondents perceive the company as socially responsible and community-oriented, indicating a strong belief in the company's commitment to making a positive impact on society. This perception is further reinforced 27% of the respondents describing the company as caring and empathetic towards societal needs. This positive brand perception reflects the trustworthiness, reliability, and transparency of Asian Paints in fulfilling their corporate social responsibility (CSR) efforts. Additionally, 99% of the beneficiaries stated that they will recommend Asian Paints for future follow-up works also. It also highlights the company's ability to establish strong connections with the communities it serves, positioning Asian Paints as a socially conscious and reliable brand.

4.3 Rating the Program

Rating the Water Rejuvenation Component (n=200)

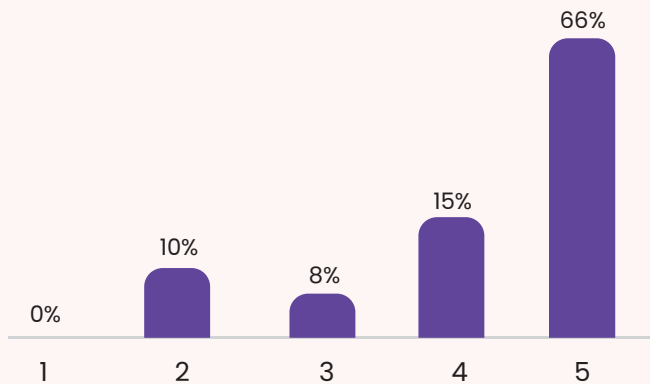


Figure 35: Rating the Water ATM Component

Rating the Water ATM Component (n=90)

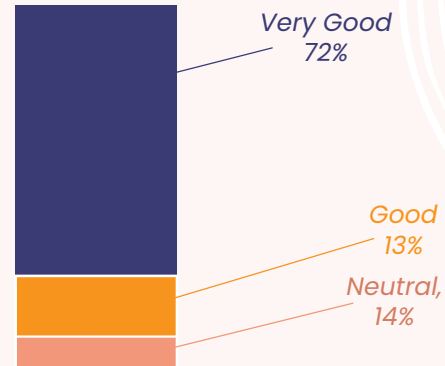


Figure 36: Rating the Water Rejuvenation Component

The ratings indicate the level of satisfaction and perception of the intervention's impact. According to the ratings, 66% of the respondents rated the pond intervention as 5, indicating a high level of satisfaction and effectiveness. This suggests that the majority of the beneficiaries found the intervention to be of good quality and impactful in improving water availability and livelihoods. Additionally, 15% of the respondents rated it as 4, indicating a positive perception of the intervention's effectiveness.

The overall quality and effectiveness of the RO plant intervention was also rated based on the distribution of responses from the survey participants. A significant majority, approximately 72%, rated the quality of the RO water plant as "very good." This suggests a high level of satisfaction and confidence in the water treatment process and the resulting water quality. Additionally, 13% of respondents rated the quality as "good," indicating a positive assessment but with a slightly lower level of satisfaction. Only a small proportion, 14%, expressed a neutral view. Overall, the overwhelmingly positive responses highlight the effectiveness of the RO water plant in delivering high-quality treated water, instilling confidence in the community about the safety and reliability of their drinking water source.



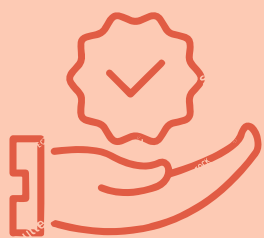
4.4 Employee Volunteering Programs

In conclusion, the intervention reveals positive outcomes in terms of community participation, gender inclusivity, and overall satisfaction. The project's emphasis on community involvement and the positive perception of its impacts further reinforce its effectiveness in meeting the needs of the beneficiaries.



Figure 37: Employee Volunteering Program





Chapter 5.

Recommendation to the Program

**5.1 Improving water
retention capacity**

**5.2 Diversification of
livelihoods**

**5.3 Improving access
to safe drinking water**

**5.4 Exploring
Collaborations**



The Impact Assessment study drew out the socio-economic indicators showcasing the positive impact of the programme as were stated by the beneficiaries. As per interactions with multiple stakeholders in the project, government officers from the agriculture department, and observations made during the field visit, the team presents its recommendations for the ongoing interventions the team recommends activities like:

5.1 Improving water retention capacity



Current Scenario

- As part of their CSR program, APL has rejuvenated several water retention structures in the villages. These structures are essential for ensuring a prolonged water supply for irrigation purposes. It was observed that sometimes sewage is disposed in these ponds, rendering it unsuitable for agricultural and cattle usage.

Recommendation

- APL can take proper action to repair any leaks in the pond to prevent water loss and ensure its prolonged retention of water
- The program can also consider implementing measures to prevent the mixing of drainage water with pond water, as this can adversely affect water quality. Proper sewage management can be installed in the villages. APL can also partner with PRIs to conduct awareness drives to improve sewage disposal in the villages.

5.2 Diversification of livelihoods



Current Scenario

- In the villages, following the successful revival of ponds, a common observation has been the farmers' limited understanding and utilization of the full potential of these water bodies due to a lack of knowledge and technical expertise. Consequently, they tend to adhere to traditional cropping patterns without exploring alternative possibilities. Furthermore, it has been noted that even after leasing a rejuvenated pond from the panchayat, some farmers still face challenges in implementing effective aquaculture practices due to their limited experience and expertise in this area.

Recommendation:

- The program can consider providing training to farmers near the water retention structures to educate them on efficient water utilization techniques and sustainable farming practices. This will maximize the benefits of the pond for agricultural practices.
- If the pond is designated or leased out for aquaculture, offer specialized training programs to individuals or groups interested in fish cultivation. This will enhance their knowledge and skills in managing aquaculture operations effectively.

5.3 Improving access to safe drinking water



Current Scenario

- Although APL's CSR project installed several Water ATM units in the villages, it was observed that these plants were not utilized to their fullest potential. Several factors contributed to this limitation. In some target villages, people were not willing to pay for resources they could receive for free from the government. On the other hand, residents preferred doorstep delivery and were even willing to pay a higher price in few villages. Furthermore, the timing of the Water ATM plants conflicted with the work schedules of individuals employed in nearby industries. These factors collectively hindered the optimal utilization of the Water ATM plants in the villages.

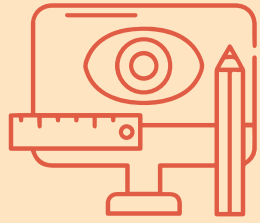
Recommendation:

- The program can conduct an effective baseline study to determine the affordability of the community members. This will help in setting appropriate pricing and ensuring that the Water ATM services are accessible to all sections of society.
- APL can adjust the schedule of Water ATM services based on the timings and availability of the community members, ensuring that water collection aligns with their schedule. This adjustment will improve the water accessibility, especially for areas with a significant number of residents are employed in nearby industries or Special Economic Zones (SEZs).
- The program can explore the possibility of expanding the functionality of the Water ATMs. This could include the provision of door step delivery to supply water directly to homes. APL can also consider installing water cooling systems to offer chilled water during hot seasons. These additional features can enhance the convenience and usability of the water ATM.

5.4 Exploring Collaborations



- The program can collaborate with Panchayati Raj Institutions (PRIs) or local governing bodies to establish a framework for the maintenance and upkeep of the pond and Water ATMs. This partnership will help ensure sustainable management and community involvement in the maintenance process.
- APL can also consider implementing beautification measures around the pond to enhance its aesthetic appeal and create a welcoming environment for the community. This can include landscaping, seating areas, or pathways to promote recreational use and community engagement.
- By implementing these recommendations, the water ATM intervention can address affordability concerns, ensure water taste satisfaction, accommodate specific timing needs, expand functionality, and foster collaboration for efficient operation and maintenance.



Chapter 6.

Impact Stories



6.1 Empowering Livelihoods through Pond Lease for Aquaculture

6.2 Empowering Livelihoods and Empowering Women Application

6.3 Empowering Agriculture and Livelihoods Cleansing Application

6.4 Empowering Women's Committee: The Impact of RO Plant Installation in Yellamchalli Village

6.5 Impact of Pond Rejuvenation on Migrant Workers

6.1 Empowering Livelihoods through Pond Lease for Aquaculture

Gangawar Raju is a 28-year-old male auto driver residing in a semi-pucca house with his family of six members in Dupituru village. Gangawar earns an annual income of 2 – 2.5 lakhs. He actively participated in the planning process of the pond repair work initiated by Asian Paints Limited. After observing the positive impact of the repair work on biodiversity, Gangawar was inspired to explore an entrepreneurial opportunity in aquaculture.

He partnered with his friend, P. Chinna, on a 50:50 basis and leased a pond from the local Panchayat for three years, from January 2023 to January 2026. To secure the lease, Gangawar paid the Panchayat an annual amount of 1.25 lakhs. With a vision for success, Gangawar and his partner planned to invest approximately 8 lakhs in his aquaculture venture over the next three years. This investment encompassed 6 lakhs for acquiring seedlings and 80 thousand for high-quality feeds. He decided to culture the local Telachapa fish species. He aimed to earn 30 lakhs over three years, equivalent to 10 lakhs yearly.

Through Asian Paints Limited's intervention, Gangawar embarked on an ambitious venture to improve his family's financial stability. Gangawar's determination and trust in Asian Paints Limited's initiatives propelled him. This case study highlights the power of community-driven interventions, entrepreneurship, and confidence in fostering sustainable livelihoods and economic growth.



Figure 38: Mr. Raju near his pond

6.2 Empowering Livelihoods and Empowering Women

This case study highlights the transformative impact of Asian Paints Limited's RO water plant installation project in Mallavaram Village. P. Sathavathi, a 40-year-old female, experienced life-changing benefits via the employment opportunities created after the establishment of RO water plant.

Living in Mallavaram Village, P. Sathavathi's family relied on her husband's work as an agricultural labourer and their small landholding for income. Sathavathi secured a job as a plant operator, earning 3000 rupees per month. She received basic training on the operation of the RO water plant, enabling her to carry out her responsibilities effectively. Her work hours at the plant are from 9:30 am to 5:30 pm. Sathavathi utilized her earnings to repay the loans she had taken from her SHG to support their agricultural activities. Moreover, she has also ventured into animal husbandry after the intervention to augment her family's income further.

Sathavathi acknowledges Asian Paints Limited as the only company that consistently supports the development of her village. The firm's commitment to social responsibility and reliability has gained her trust and admiration.



Figure 39 Ms. Sathavathi at the RO Water Plant, Mallavaram

6.3 Empowering Agriculture and Livelihoods

Hymavathi, a 34-year-old female farmer from Moolapeta Village, primarily relied on agriculture for her livelihood. She owns half an acre of land and primarily cultivated during Kharif season. The unavailability of water round the year limited her income and restricted her farming options.

However, after Asian Paints Limited repaired the regulator gates to address the water scarcity and irrigation issues, Hymavathi observed increased agricultural activity in her village. The restored gates conserved water for a longer duration, improving farm productivity and increase in groundwater, allowing Hymavathi and other farmers to extract water for an additional 1-2 hours, enhancing their irrigation capabilities and overall crop productivity. She is now able to expand her cropping pattern beyond paddy and sugarcane. She started growing vegetables, providing crop diversification and significantly boosting her income. After experiencing a boost in her income, she repaid her loan financed by SHG of 75000 rupees in an instalment of 4000 rupees/month.

The intervention undertaken by Asian Paints Limited has directly benefited farmers like Hymavathi, enabling them to overcome water scarcity challenges and improve their agricultural practices.



Figure 40 Ms Hymavathi at Moolapeta village

6.4 Empowering Women's Committee: The Impact of RO Plant Installation in Yellamchalli Village

This case study focuses on the RO Committee Members of Yellamchalli Village, eight devoted and motivated women from different Self-Help Groups (SHGs). These committee members manage the village's RO plant. Their main job is RO plant operation and scaling, discussing community health and hygiene issues, administering the plant, and addressing social issues and community support.

The committee employs a 3000 rupee-a-month PwD operator to run the RO plant. The committee has saved roughly 2000 rupees in a bank account in two months. Even though the factory can only process 65-70 water cans daily, the committee gives free water cans to the panchayat office, sports building, school and Anganwadi facilities. The committee manages the RO water plant and supports each other in financial need. Members of the committee expressed their desire to participate in skill training sessions. These trainings would enable them to enhance their capabilities and contribute more effectively to the economic and social development of their community.

The committee members recognize Asian Paints as the most reliable and trustworthy company that has contributed significantly to the overall development of their village. The installation of the RO plant has brought tangible benefits to their lives and has given them a platform to actively engage in community development.



Figure 41 Focused Group Discussion with RO committee members at Yellamchalli village

6.5 Impact of Pond Rejuvenation on Migrant Workers

This case study focuses on the migrant workers from Odisha who have found temporary residence in Dupituru Village. These 13 labourers, work in factories located in Special Economic Zones (SEZs) in the vicinity. Before the intervention by Asian Paints Limited, the area surrounding the village was a neglected forest land where locals would gather to engage in antisocial activities. However, the repair work of the pond under the intervention has brought about significant positive changes in the environment and the lives of the migrant labourers.

The migrant labourers have observed a remarkable transformation in the surroundings following the pond revival. Previously, the area was prone to littering and illicit behaviour, such as alcohol consumption. However, after the intervention, the occurrence of such actions has significantly reduced. The labourers have also witnessed microclimatic changes, including an increase in flowering plants and the pleasant sounds of birds in the morning. The temperature in the area has become cooler, allowing them to enjoy fresh air during the night. The revival of the pond has not only positively impacted the physical environment but has also fostered social interactions. The migrant labourers previously felt secluded, as there was limited interaction with the local villagers. However, after the intervention, the labourers and villagers have started to engage more frequently. The villagers regularly visit the pond, engaging in fishing activities, while children bathe and play in the area. This newfound sense of community interaction has helped alleviate the labourers' feelings of isolation and enhanced their overall well-being.

The migrant labourers have described an enhanced aesthetic vibe in the area due to the intervention. The rejuvenated pond and its surroundings have become visually appealing, creating a serene and pleasant environment. This transformation has contributed to an improved quality of life for the labourers during their stay in the village.



Figure 42 Focused Group Discussion with migrant workers at Dupituru village



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Impact Assessment Report

**Water Resource Development
Project for Asian Paints
Private Limited**
Khandala, Maharashtra

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Disclaimer

- This report has been prepared solely for the purpose set out in the Memorandum of Understanding (MoU) signed between Renalysis Consultants Pvt. Ltd. (CSRBOX) and Asian Paints Limited dated June 2023 to undertake the Impact Assessment of their “Water Resource Development Project” implemented in the financial year 2021-22.
- This impact assessment is pursuant to the Companies (Corporate Social Responsibility Policy) Amendment Rules 2021, notification dated 22nd January 2021.
- This report shall be disclosed to those authorized in its entirety only without removing the disclaimers.
- CSRBOX has not performed an audit and does not express an opinion or any other form of assurance.
- Further, comments in our report are not intended, nor should they be interpreted to be legal advice or opinion.
- This report contains an analysis by CSRBOX considering the publications available from secondary sources and inputs gathered through interactions with the leadership team of Asian Paints Limited, project beneficiaries, and various knowledge partners. While the information obtained from the public domain has not been varied for authenticity, CSRBOX has taken due care to obtain information from sources generally considered to be reliable.
- Specific to the Impact Assessment of the project, funded through Asian Paints Limited, CSRBOX has relied on data shared by the Asian Paints Limited’s team.

With Specific to Impact Assessment of “Water Resource Development Project”

- CSRBOX has neither conducted an audit nor due diligence nor validated the financial statements and projections provided by Asian Paints Limited.
- Wherever information was not available in the public domain, suitable assumptions were made to extrapolate values for the same;
- CSRBOX must emphasize that the realization of the benefits/improvisations accruing out of the recommendations set out within this report (based on secondary sources) is dependent on the continuing validity of the assumptions on which it is based. The assumptions will need to be reviewed and revised to reflect such changes in business trends, regulatory requirements, or the direction of the business as further clarity emerges. CSRBOX accepts no responsibility for the realization of the projected benefits;
- The premise of an impact assessment is ‘the objectives’ of the project along with output and outcome indicators pre-set by the program design and implementation team. CSRBOX’s impact assessment framework was designed and executed in alignment with those objectives and indicators.

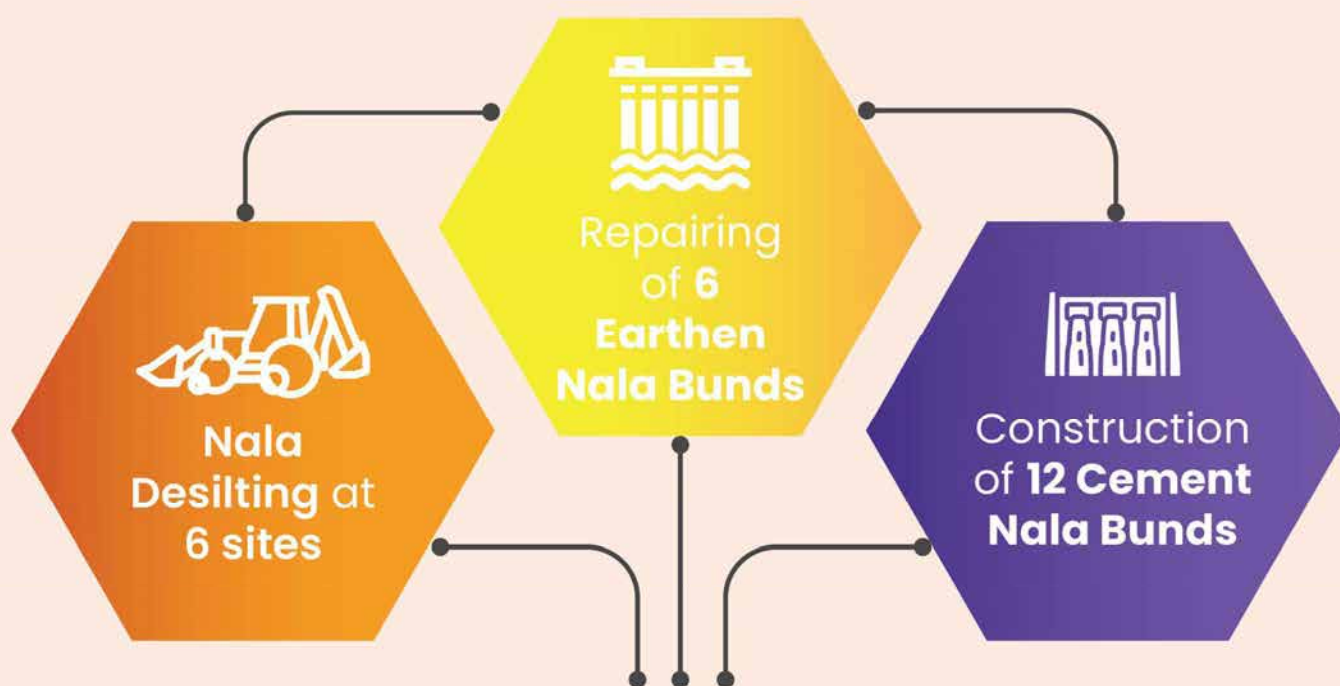
List of Abbreviations

Abbreviation	Definition
APL	Asian Paints Limited
CNB	Cement Nala Bund
ENB	Earthen Nala Bund
ND	Nala Desilting
TCM	Thousand Cubic Metres
LDPE	Low-Density Polyethylene

Executive Summary



Under its CSR initiatives, Asian Paints Limited in partnership with Vanarai constructed water conservation structures across 11 villages in the Khandala taluka of Satara district. The programme primarily included the following activities



Major Interventions

Figure 1: Project overview

As per the Inclusiveness, Relevance, Expectations, Convergence, and Service delivery (IRECS framework), the summarised Impact findings are stated below:

Inclusiveness

- 97% of the villagers were male, since most men in the intervention villages were engaged as sole earning members in the households.
- The programme was inclusive towards all farmers whether, Marginalized, Small and Medium or Large, irrespective of their land-holding size.
- Beneficiaries of the intervention varied widely in the age group of 17 to 65 years of age.
- Households belonged to SC, OBC, and General caste categories, signifying the inclusiveness of the programme irrespective of one's caste.
- The programme was also inclusive towards the farmers irrespective of their household income.

Beneficiaries of
the intervention

**17-65
years
of age**

97%
of the farmers
belonged to
Marginal
categories

2. Relevance

- 75% of the farmers were earning below INR 1 lakh per annum, hence the intervention was aimed at improving water availability in the village, which in turn would enhance their income.
- The Khandala taluka experiences drought for more than 20% duration of the year, which in turn is reflected in degraded quality of soil across the villages.
- 97% of the farmers in the village belonged to Marginal categories¹ in the villages, which left them vulnerable to drought and water scarcity before the intervention.
- 68% of the households have more than 5 family members, which increases the need for an enhanced source of income. Being dependent on soil, water and other natural resources for income, the intervention aimed at improving their quality, and hence enhancing income of the community members.
- Only 48% of the farmers could grow crops during the Rabi season, and less than 2% could grow crops during the Zaid season before the intervention.
- 71% of the households depended on wells across the villages to fetch water for household & irrigation usage, hence the relevance to rejuvenate groundwater.

¹Marginal Farmers are defined as the ones who possess less than 1 hectare (2.47 acres) of farmland

3. Expectations

- 98% of the villagers stated that water is now readily available in the village for household as well as agricultural usage.
- The duration of water scarcity has reduced from 73 days to 55 days throughout the year, after intervention.
- The percentage of farmers irrigating during Rabi season has increased from 48% to 75%, while it has increased from 2% to 29% for the Zaid season.
- Among the farmers who received silt, 77% of them have been able to increase their cultivable land by over 0.5 acres to 4 acres or more. The silt spread over the barren or uncultivable land has helped in increasing the cultivability of such land.
- 83% of the farmers now follow water conservation measures, while 76% of the farmers follow water management practices. Farmers have been using best practices like drip irrigation for farming, and rainwater harvesting to capture and conserve water.
- 98% of the farmers now practice crop diversification, and 54% of the farmers can grow cash crops. This has contributed significantly on increasing their income levels.
- The average household income has increase by INR 62,250 annually, after the intervention.
- The average number of livestock owned by households has increased from 3.1 to 4.3.
- 95% of the villagers have seen an improvement in their Material well-being² after the intervention, while 82% have seen improvement in their Personal well-being.
- More than 95% of the beneficiaries now travel less than 100m to fetch water, which was 50% before the intervention. This has reduced the drudgery for women and other household members to travel and fetch water for household usage.
- 88% of the villagers stated that they have seen an increased groundwater level, while over 70% stated that there has been improvement in flora, fauna and hence aesthetic beauty of the place.
- Over 82% of the farmers stated that they have experienced improvement in their crop yield and crop productivity.
- There has been a significant improvement in the concentration of macro-nutrients like Nitrogen, and Potassium in the soil quality where silt was applied in the treatment villages. This has enhanced the crop productivity for households who applied silt on their farmlands.

INR 4.78
social value
generated from
the program
on every
investment of
INR 1

² Purchase of power, income and standard of living

82%

of the
farmers
experienced
improvement
in crop yield

4. Convergence

- The Gram Panchayat along with the community members took part in identification of the locations where Nala bunds could be constructed.
- Vanarai acted as the implementing partner for carrying out all the activities.
- The **Block Agriculture Officer** of Khandala taluka **acknowledged APL's contribution** towards the betterment of the villages and expressed interest for **collaborative opportunities**.

5. Service Delivery

- 85% of the villagers came to know about the programme from the Gram Panchayat.
- Community Participation in need assessment of the project. Community ownership of water conservation majors.
- The farmers in a village mutually decided among themselves how much silt they would procure from the desilting process. The Gram Panchayat supervised the entire process.

Table 1 : Comparison between pre & post intervention of treatment villages

Factors for comparison	Prior to intervention (n=203)	Post-intervention (n=203)
No. of villagers who stated easy accessibility to water for household usage	69%	98%
Average duration of water scarcity	73 days	55 days
Farmers practicing farming during Rabi	48%	75%
Farmers practicing farming during Zaid season	2%	29%
Average land area available for cultivation	1.34 acre	2.8 acre
Less than 100m distance travelled by households for fetching water	50%	95%
Average no. of livestock ³ owned by households	3.1	4.3
Average annual family income of households	INR 97,600	INR 1,59,850

³ Livestock includes bull, buffalo and cows.

Table 2: Comparison between control and treatment villages

Factors for comparison	Control villages (n=63)	Treated villages (n=203)
Farmers able to grow crop during Rabi season	62%	75%
Villagers able to grow crop during Zaid season	19%	29%
Average land area available for cultivation	2.3 acre	2.8 acre
Less than 100m distance travelled to fetch water	81%	95%
Average no. of livestock ³ owned by households	3.7	4.3
Average duration of water scarcity faced in a year	69 days	55 days
Average annual electricity cost incurred to irrigate land	INR 26,856	INR 25,428
Average annual family income of households	INR 1,40,600	INR 1,59,850





Chapter 1.

Project Background and Overview

1.1 CSR Initiatives of Asian Paints Limited

1.2 About the Programme

1.3 Relevance of the Intervention

1.4 Alignment with CSR Policy

1.5 Alignment with ESG Principles

1.6 Alignment with SDGs

1.7 Challenges to the programme



This section provides an overview of the funding organization, the programme cardinals and the detailed interventions.

1.1 CSR Initiatives of Asian Paints Limited

Standing true to their Charter, to bring joy, and happiness to people's lives, the CSR vision of Asian Paints Limited (APL) is based on embedded tenets of trust, fairness, and care to maximise efforts.⁴

Health & Hygiene

APL aspires to deliver primary health care support through diagnosis and treatments to the communities. Interventions include promoting preventive healthcare, building awareness about hygiene, sanitation, maternal & child health care, setting up medical infrastructure, instrumenting clean drinking water habits, etc.



Disaster Management

As a responsible company, APL focuses towards mitigating the effects of the crisis created by natural disasters, pandemic or likewise. APL has partnered with the Government on various instances to provide support and aid. APL has also worked with different partners for distribution of essentials among communities during the time of crisis.

Enhancing Vocational Skills

APL provides specialized and skill-based training to painters, carpenters, plumbers, etc., to enhance their skills, empower them, provide opportunities to secure better employment and improve their livelihood.



Water

Water being a valuable and scarce resource that one shares with their surrounding communities, APL has identified water conservation and management as a key area of intervention.

⁴<https://www.asianpaints.com/content/dam/asianpaints/website/secondary-navigation/about-us/corporate-citizenship/Corporate%20Social%20Responsibility%20Policy.pdf>

Given the major aim of the current intervention was at creating water conservation structures, hence working towards better water management practices, some of the major initiatives of APL in water conservation practices are also stated below.

The initiatives in this thrust area include further:



a. Creating capacities in conserving water through significant investments in partnership with relevant stakeholders, with the objective of water conservation.

b. Educating farmers in looking at various Government schemes with the objective of water management.



c. Undertaking water replenishment projects in the communities surrounding our factories.



1.2 About the Program

APL has been working in collaboration with Vanarai since 2015, for making rural India drought-free and prosperous. Towards sustainable development for the villages, construction of water conservation structures in the Khandala taluka was initiated, and the project was implemented in the FY 2021-22.

The detailed interventions of the project across the villages are mentioned below:⁵



Table 3 : Detailed interventions across the villages

Sl. No.	Name of village	Name of Activity	Storage Capacity Created (Thousand cubic metres)
1	Harali	CNB	4.22
2		CNB	4.2
3		ENB Repair	5.51
4	Bori	CNB	10.5
5		Nala Desilting	17.79
6		Nala Desilting	15.27
7	Dhawadwadi	Nala Desilting	16.48
8		Nala Desilting	9.67
9	Pisalwadi	CNB	9.28
10	Guthale	Nala Desilting	14.41
11		CNB	13.54
12	Dhangarwadi	CNB	12.23
13	Limbachiwadi	ENB Repair	2.83
14		ENB Repair	5.55
15		CNB	15.22
16	Kanheri	ENB Repair	5.35
17		ENB Repair	6.78
18	Solashi	CNB	2.62
19		CNB	1.9
20		Repair Of ENB	5.34
21		Repair Of ENB	6.03
22	Shivajinagar	CNB	9.2
23		CNB	5.5
24	Asawali	CNB	18.14
Total			217.56

⁵As shared in the project report of Vanarai

1.3 Relevance of the Intervention

For decades, drought has severely affected thousands of villages across the country, with the villages of Maharashtra being severely affected. The crisis is majorly caused due to human interventions starting in-efficient water management and the rapid destruction of biodiversity.

The Satara district has been experiencing severe drought, farmers' suicide, and reduced farm produce. Having experienced drought for more than 20% duration of the year before the intervention, the Khandala taluka is categorized as a "drought area".⁶ The impact of the recent droughts has been diverse, with several villagers relying heavily on water tankers for irrigating their fields, incurring heavy costs throughout the cropping seasons.

The major reasons across the intervention villages which justify the need for the programme are mentioned below :

- Depletion of groundwater and poor water storage capacity of existing structures have restricted the farmers to cultivate crops during the Kharif season majorly
- Water scarcity during summer season (Zaid season) prevails for long
- Inadequate measures for water resource management

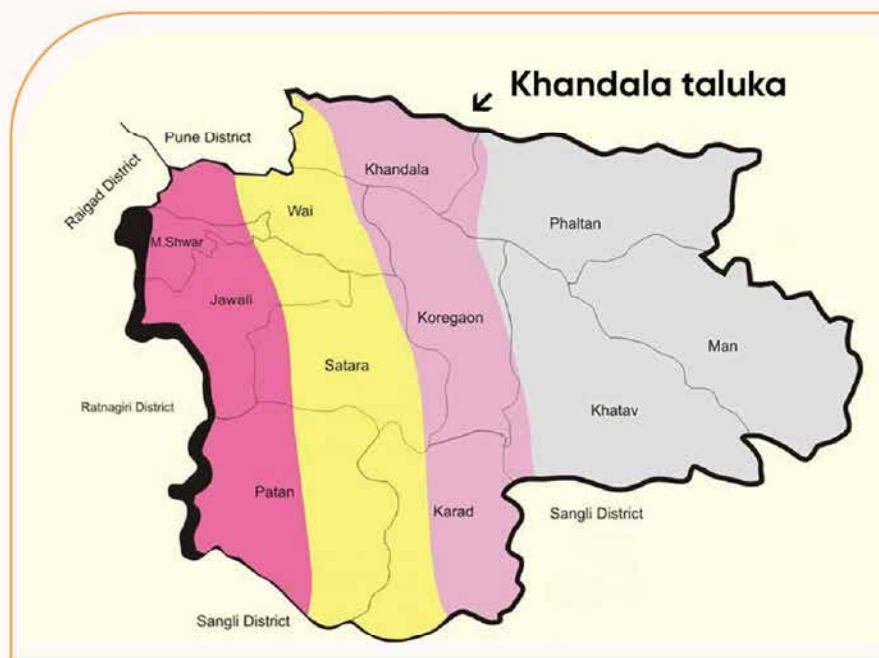
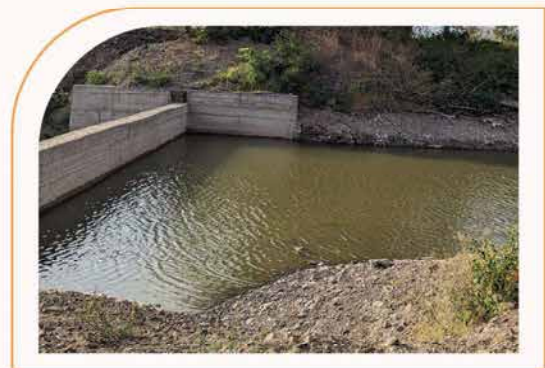


Figure 2 : Satara District, Maharashtra ⁷

⁶<https://agriinfo.in/drought-and-its-classification-405/#:~:text=Meteorological%20drought%3A&text=The%20IMP%20classified%20this%20drought,less%20than%20the%20normal%20rainfall.>

⁷<http://www.kvkarad.com/profile.html>

1.4 Alignment with CSR Policy

The Schedule VII (Section 135) of the Companies ACT, 2013 specifies the list of activities that can be included by the company in its CSR policy. The below-mentioned table shows the alignments of the intervention with the approved activities by the Ministry of Corporate Affairs.

Sub Section	Activity as per Schedule VII	Alignment
(ii)	Promoting education, including special education and employment enhancing vocation skills especially among children, women, elderly and differently abled and livelihood enhancement projects	Partially
(iv)	Ensuring environmental sustainability, ecological balance, protections of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining quality of soil, air and water including contribution to the Clean Ganga Fund set-up by the Central Government for rejuvenation of river Ganga	Completely

1.5 Alignment with ESG Principles

The program's intervention also aligns with the ESG Sustainability Report of the corporate. Particularly, concerning the Business Responsibility & Sustainability Reporting Format (BRSR) shared by the Securities & Exchange Board of India (SEBI), the program aligns with the principle mentioned below.



Principle 2

Businesses should provide goods and services in a manner that is sustainable and safe



Principle 4

Businesses should respect the interests of and be responsive to all its stakeholders



Principle 6

Businesses should respect and make efforts to protect and restore the environment

1.6 Alignment with SDGs

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2016 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

Sub Section	Activity as per Schedule VII	Alignment
	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 per day	Completely
	1.4 Ensure that all men and women, particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	Completely
	2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	Completely
	6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Completely
	6.6 Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.	Partially
	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	Partially

Challenges to the programme

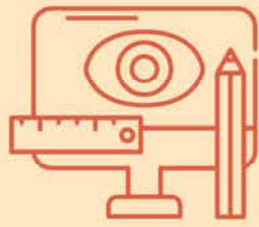
The major challenges faced by the implementing team during the execution of the project are stated below:

- Since the construction of Cement Nala Bunds was to be done on common land, it needed no objection from the farm land owner on whose land the construction would be done. In some villages, all farmers did not readily agree to give up their land for the construction of water conservation structures. This prevented the construction of CNBs at the appropriate locations, which could have brought better outcomes for the project.
- The villages nearer to the foothills of the Sahyadri range had mostly had rocky terrains⁸, which increased the challenges for implementing the programme.



Figure 3 : Geographical terrain of Dhawadwadi village

⁸Covered with rocks or consists of large rocks and has nothing growing on it



Chapter 2.

Design and Approach for Impact Assessment



2.1 Objectives of the Study

2.2 Evaluation Framework & Indicators

2.3 Methodology

2.4 IRECS Framework

2.5 Stakeholders Mapping

2.6 Sampling Approach

2.7 Limitations to the Study

2.8 Theory of Change

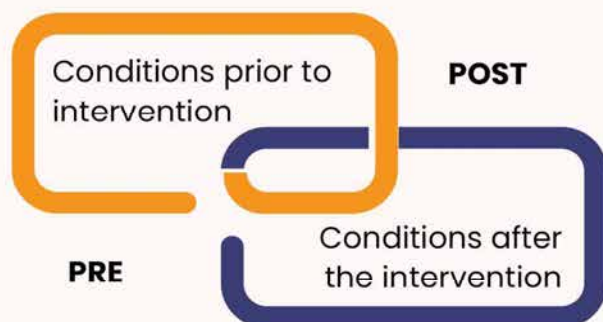
This section provides an overview of the objectives of the study, the adopted research methodology, and other details revolving around the study.

2.1 Objectives of the Study



2.2 Evaluation Framework & Indicators

Given the objectives of the study and the key areas of inquiry, the design of the evaluation focused on learning as the prime objective. In this section, CSRBOX presents the approach towards developing and executing a robust, dynamic, and result-oriented evaluation framework and design. The team would like to highlight that this is only a suggestive framework, and the detailed approach will be finalised in consultation with the client and program coordinators.



To measure the impact, a pre-post program evaluation approach was employed for the study. This approach is dependent on the recall capacity of the beneficiaries. Under this approach, the beneficiaries are enquired about conditions before the program intervention and after the program intervention.

The difference helps in understanding the contribution of the program in improving the intended condition of the beneficiary. This approach, at best, can comment on the contribution of the program in improving the living standards though may not be able to attribute the entire changes to the program. Other external factors, like government interventions, may also play a role in bringing positive changes along with the program. Hence, the contribution was assessed, but attribution may not be entirely assigned to the programme.

2.3 Methodology

For the assessment of the program, we employed a two-pronged approach to data collection and review that included secondary data sources and literature, as well as primary data obtained through quantitative and qualitative methods of data collection. The figure below illustrates the study approach used in data collection and review. The secondary study involved a review of annual reports, monitoring reports, and other studies and research by renowned organisations available in the public domain for drawing insights into the situation of the area.

The **primary study** comprised qualitative and quantitative approaches to data collection and analysis. The qualitative aspects involved in-depth interviews (IDIs) with the youth trainees/ trainees, centre in-charges, trainers and other institute-associated stakeholders.

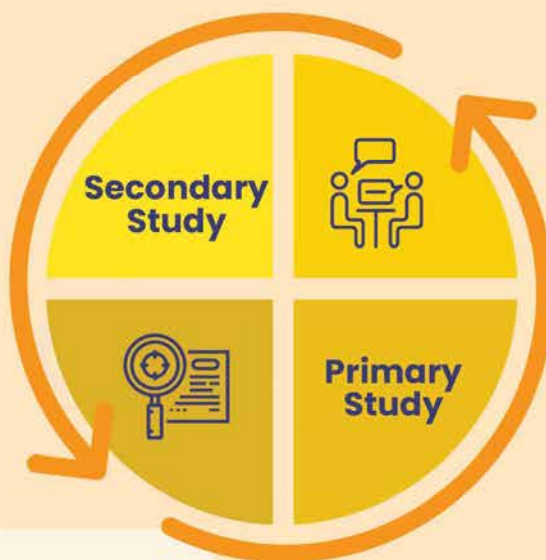


In addition to primary data collection, the consultants studied various **project documents** like Project Proposal, Project log-frame (Logical Framework Analysis), Baseline and Project cost and other available documents, Project implementation timelines, Communication and M&E reports, documentation products and other relevant reports/literature related to the projects.

The consultants also studied project implementation-related documents, specifying details of activities carried out, processes undertaken, no. of beneficiaries reached, and details of spent & unspent budgets under different budgetary heads.

Study Report

Review of annual reports, publications by Ministries, Secondary+ Research



Quantitative/ Qualitative Study

Quantitative Survey

IDIs, KIIs, FGDs



2.4 IRECS Framework

To determine the inclusiveness, relevance, appropriateness, coherence, effectiveness, impact potential, and efficiency of the program, the evaluation used the IRECS Framework. Using the logic model and the criteria of the IRECS framework, the evaluation assessed the APL team's contribution to the results, while keeping in mind the multiplicity of factors that might have affected the overall outcome.

The social impact assessment hinged on the following pillars:



2.5 Stakeholders Mapping

Primary Stakeholders	Mode of Data Collection
Beneficiaries of the program	Physical Survey

Secondary Stakeholders	Mode of Data Collection
Farmer Groups	FGDs
PRI Members	In-Depth Interview
Block Agricultural Officer	In-Depth Interview
APL Team	Key Informant Interview
Vanarai	Key Informant Interview

2.6 Sampling Approach

Geographic Sampling

	Universe	Sample	Rationale
Treatment Villages	11	6	50% of the number of treatment villages
Control Villages*	Infinite	3	N.A.

*The villages which weren't part of the intervention

Quantitative Sampling

A stratified random sampling approach was used for the Impact Assessment study. For the calculation of sample size, 95% Confidence Level and 7.5% margin of error was considered. The samples for the control group were selected from villages that do not have any intervention from the APL project.



Stakeholders	Name of Village	Mode of Data Collection	Universe	Sample Size	Rational
Farmers (Treatment Villages)	Bori	Survey	Infinite	42	95% CL, 7.5% MoE ⁹
	Dhawadwadi			32	
	Harali			29	
	Kanheri			37	
	Limbachiwadi			33	
	Shivajinagar			30	
	Total			203	

Stakeholders	Name of Village	Mode of Data Collection	Universe	Sample Size	Rational
Farmers (Control Villages)	Aahire	Survey	Infinite	25	30% of Sample size for treatment villages
	Mirjae			23	
	Shedgewadi			15	
	Total			63	

⁹ **Confidence level** – Indicates probability with which estimation of the location of a statistical parameter in a sample survey is also true for the population; **Margin of error** – range of values above and below the actual results from a survey

Qualitative Sampling

The different stakeholders involved in the project or related to the intervention villages were interviewed for qualitative data.



Stakeholders (in treatment villages)	Qualitative tool	No. of samples for qualitative study
PRI leaders	IDIs	3
Government Officials	KIIs	2
APL staff	KIIs	2
Farmers group	FGD	1

Soil Sampling

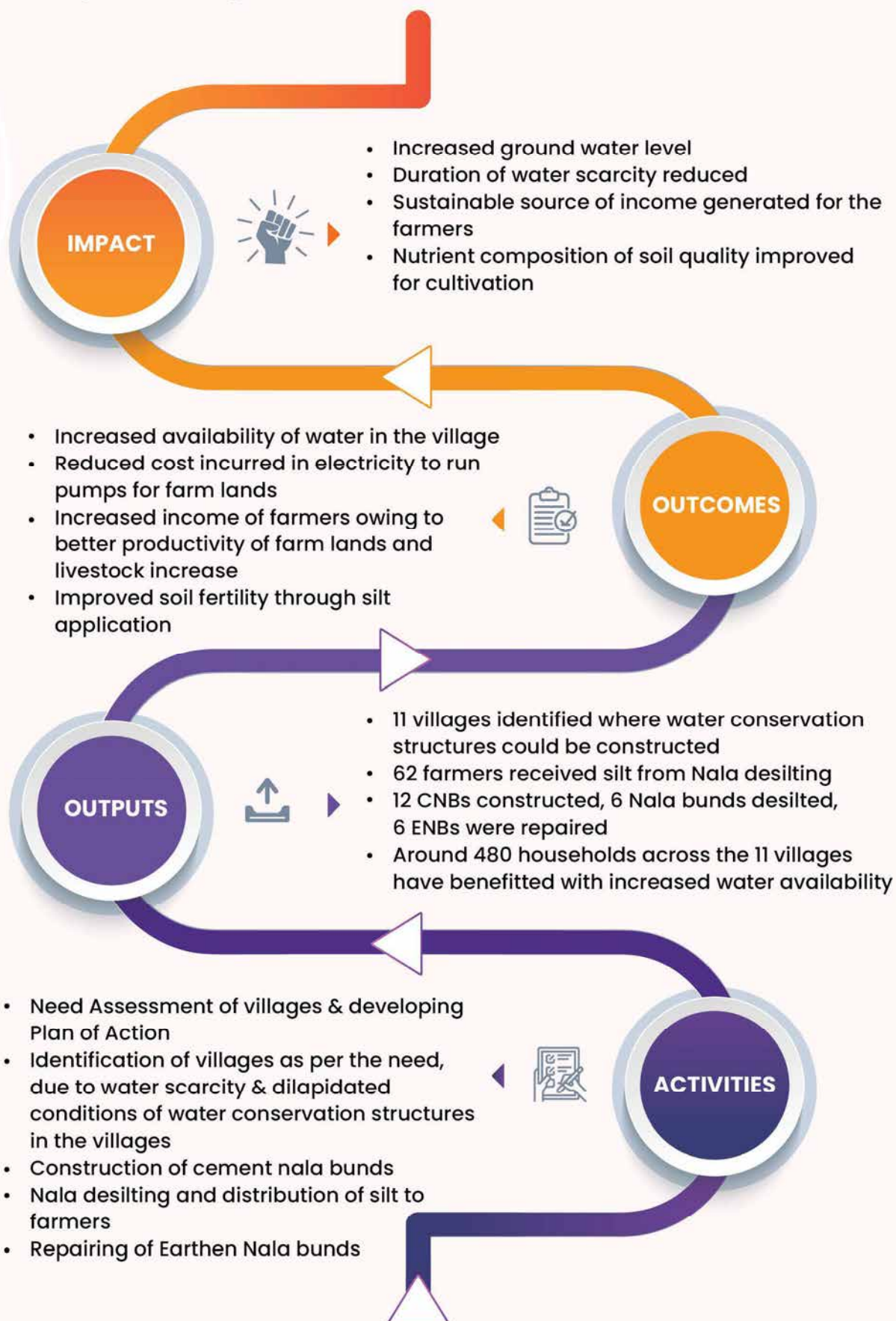
For conducting the Impact Assessment, **3 soil samples** were chosen from the treatment villages, while **2 soil samples** were chosen from the control villages. The soil sample tests have been assessed the micro and macro nutrients like Nitrogen, Phosphorous Potassium, calcium, magnesium, zinc, and sulphur content of the soil in its study.

2.7 Limitations to the Study

Though there weren't many hindrances faced by the team in conducting the study, the villagers in the control villages refused to interact with the team, given APL hadn't intervened in their village.



2.8. Theory of Change



Depletion of groundwater and poor storage capacity of Water Conservation Structures restricted the farmers to cultivate crops only during Kharif season



Chapter 3.

Finding of the Impact Assessment Study

3.1 Inclusiveness of the Program

3.2 Relevance of the Program

3.3 Expectations from the Program

3.4 Convergence

3.5 Service Delivery

3.6 Social Return on Investment



The following section of the report indicates the key findings and insights drawn from the impact assessment study, based on the IRECS framework's standard parameters as outlined. The insights have been drawn adopting a 360-degree approach to data collection by gathering data through quantitative and qualitative methods from multiple stakeholders involved in the programme.

3.1 Inclusiveness of the Program



The inclusiveness of the program measures the extent to which the communities could equitably access the benefits of the intervention, irrespective of their age, gender, income, etc.

As a part of the survey, the team had individual interactions with the residents in the villages who had benefitted from the intervention. Since a major focus of the intervention was aimed at improving access to water for the farmlands, the team interacted mostly with the beneficiaries primarily engaged in farming activities. A significant majority of the respondents were male, since it was found during the survey that mostly men in the village were engaged in farming activities

Gender distribution (n=203)

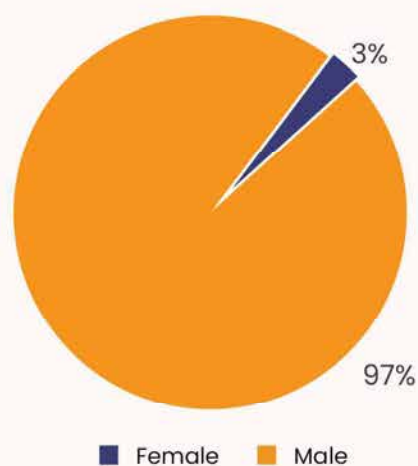


Figure 4 : Gender distribution

- The beneficiaries age group varied widely from the age of 17 to 65 years, among whom 69% were below 60 years of age, and were engaged mostly in farming activities. Thus, the availability of water for irrigation was necessary to enhance their livelihood source.

Age group (n = 203)

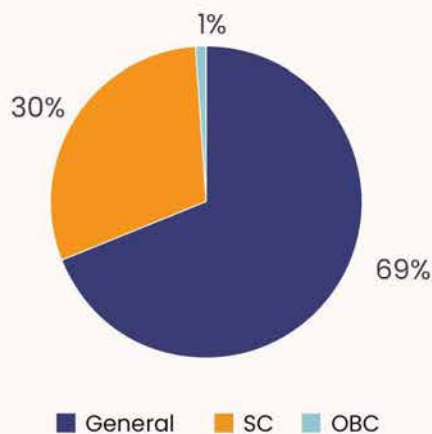


Figure 5 : Age group of villagers

The beneficiaries of the programme belonged to different caste categories, signifying the programme being inclusive towards the individuals irrespective of their caste category

Among the villagers, over 67% had completed their secondary or senior secondary education, while around 27% of the villagers had completed their primary schooling. Irrespective of their education level, people from all backgrounds were a part of the programme intervention and have benefitted from the same.

Caste Category (n = 203)

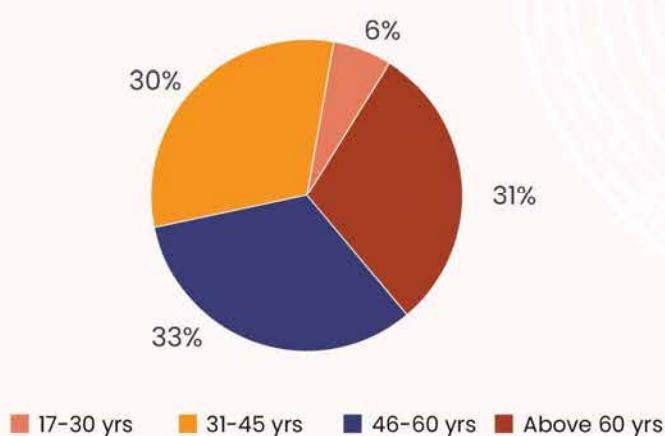


Figure 6 : Caste category of villagers

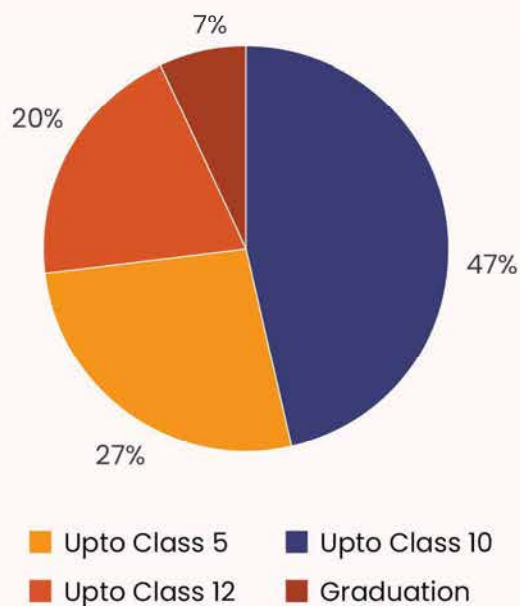
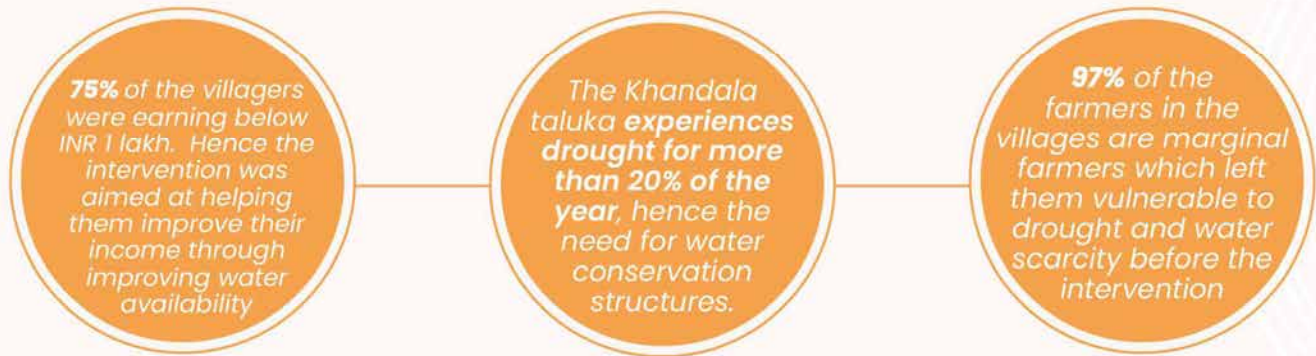


Figure 7 : Educational qualification of the villagers

The programme was inclusive towards all the villagers irrespective of their caste, age group or educational qualification, aiming at the betterment of the entire village and its communities.

3.2 Relevance of the programme



The relevance of the programme is determined by the extent to which the intervention inclines towards the 'felt' needs of the communities. While the areas of intervention receive an adequate amount of rainfall during the rainy season, the major problem rises in capturing and storing the water.



Reasons behind the need of the constructions

- Lack of maintenance & repairing had incapacitated the existing structures
- Inadequate number of nala bunds in comparison to increased population increased the need for further conservation structures

Khandala taluka of Satara district was **hit by famine and drought back in 1972**, when the government intervened to build water conservation structures and ponds. However, since then, **no further high-impact intervention has been done by government or any other agency.**

The scenario before the intervention showcased either an inadequate number of Nala bund constructions in the villages or Nala bunds which had been incapacitated and needed repairing for their functionality. Also, the **Khandala taluka experiences drought for more than 20% of the year, bringing in the need for water conservation.**

Most of the **households in the intervention villages are engaged in farming as their primary source of income.** Hence, the lack of availability of water for their farmlands during Rabi and Zaid seasons, was a major challenge.

Since the water for irrigation as well as household usage is sourced from a common supply, its shortage equally affected the daily routine of the households. Instances where the households had to either hire water tankers for irrigating their cropping lands or meet their daily chores incurred high costs. Hence the sources of water availability used before to the intervention were not sustainable in the long run.

As seen in Figure 8, 75% of the households had an annual earning of INR 1 lakh or below, signifying the need for intervention for these families. Increased water availability was aimed at better productivity for the farm lands, which could lead to increased income for the households, hence the relevance of the programme.

*Annual Income in INR, before the programme
(INR in thousand), (n = 203)*

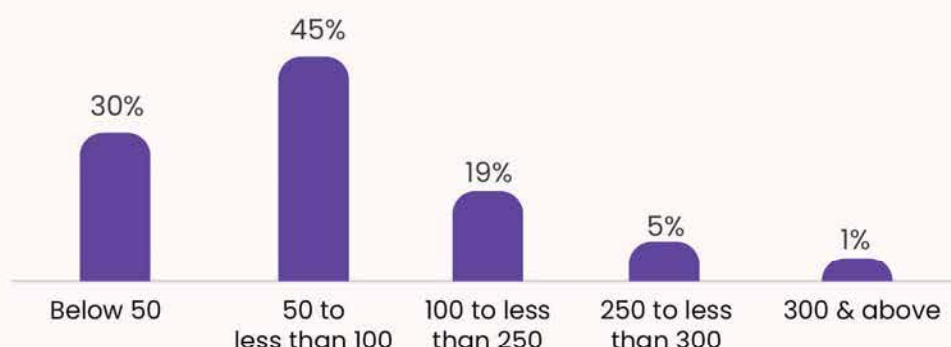


Figure 8 : Annual Income of families prior to the intervention

The survey findings indicate that while 66% of the families had a total land area of under 4 acres, less than 86% of the farmers had a cultivable land area of under 2 acres. As per their operational holdings, these beneficiary farmers can be classified as marginalized farmers¹⁰. The relevance of the programme holds importance in its implementation to increase the availability of water to farmlands, or support the households via the creation of an alternate source of income stimulated by the increased availability of water supply in the villages. Since farming is a primary source of income for over 96% of the beneficiary households, they are susceptible to high risk at lack of availability of water. This brings in the importance and relevance of the need for the intervention.

Primary occupation (n = 203)

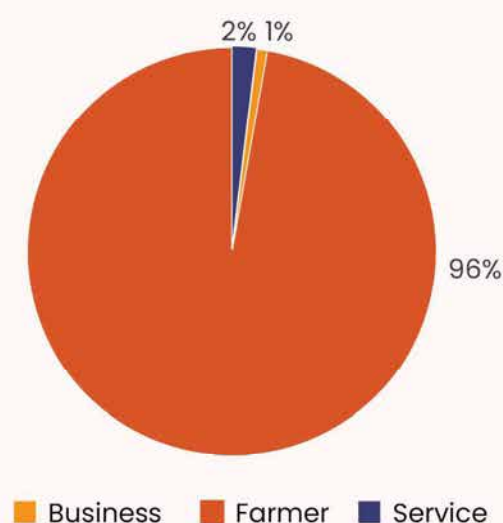


Figure 9 : Primary occupation

¹⁰ <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1562687>

The survey findings indicate that while 66% of the families had a total land area of under 4 acres, **less than 86% of the farmers had a cultivable land area of under 2 acres**. As per their operational holdings, these **beneficiary farmers can be classified as marginalized farmers**.

Total landholding area (n = 203)

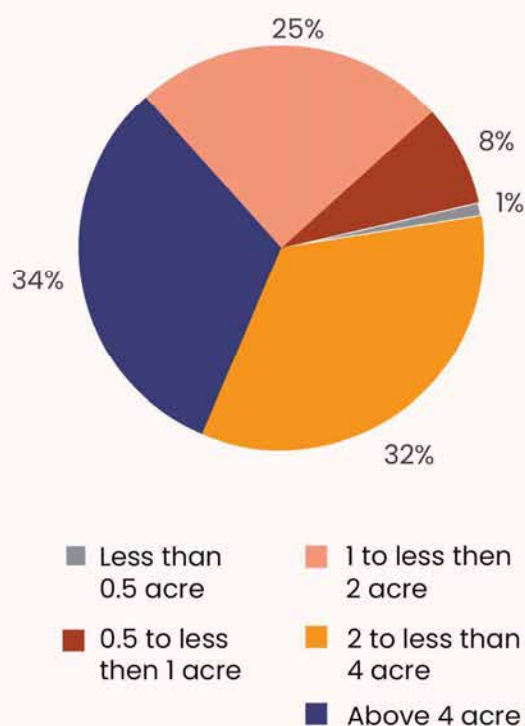


Figure 10 : Total landholding area

Cultivable land area before programme (n = 203)

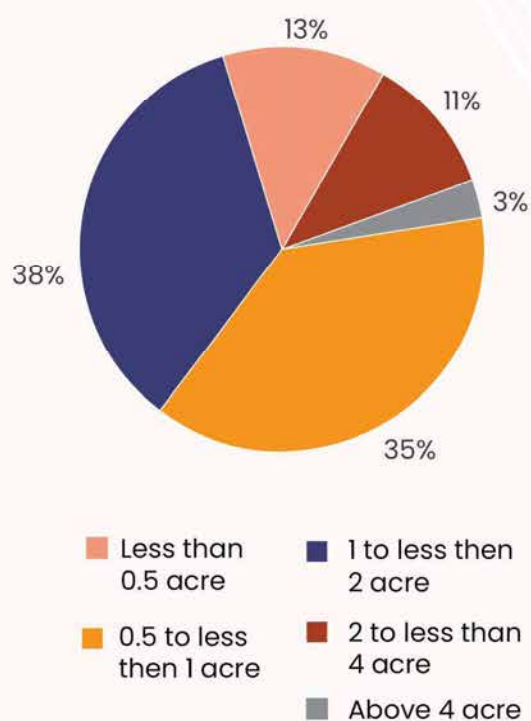


Figure 11 : Cultivable land area available before the intervention

My farm land mostly used to remain barren during December, January and February, due to lack of water. The wells dried up by the month of November, and left us no option to grow any crop during the Rabi season, unless I sourced water from outside sources, paying a hefty amount for it.

- Jainuddin Patel, farmer residing in Kanheri village

68% of the households have more than 5 family members increasing the need of the households to have a better income, which could be boosted by the intervention

Only 48% farmers could grow crops during Rabi season and less than 2% could grow during Zaid season, **limiting their production and hence income**

Over 71% of the households are dependent on well for water hence, the need of the intervention aimed at improving ground water level was relevant

The survey findings indicate that **over 68% of the families have more than 5 family members**. Given the less cultivable land area available with the farmers, and hence the lower family income of the families prior to the intervention, it was difficult to sustain a large family. Also, to meet their family's needs, **over 81% of the households had 2 or more than 2 working members**.

Family members (n = 203)

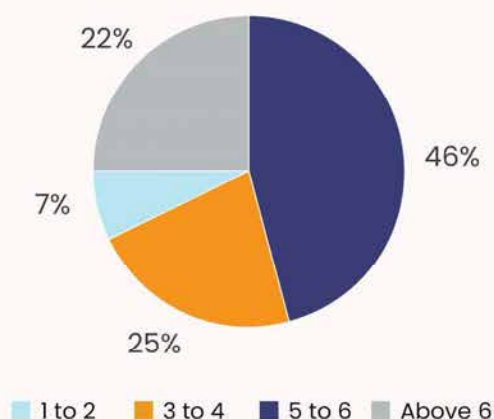


Figure 12 : No. of family members of the households

Age group (n = 203)

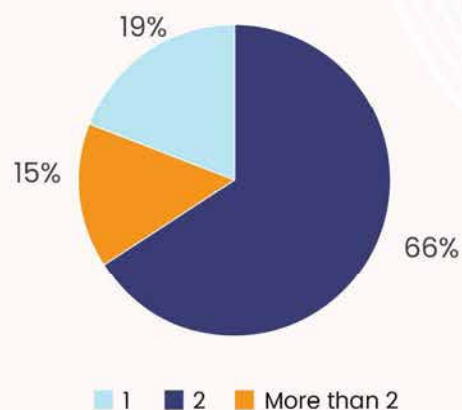


Figure 13 : No. of earning members in the households

Due to the lack of availability of water before the intervention, the primary cropping season was limited to the Kharif season only. **Less than half of the households were able to grow crops during the Rabi season**, and **around 2% could grow crops during the Zaid season**, before the intervention. The unavailability of water during the Rabi season and Zaid season limited the production capacity of the farming lands, and hence the household income of the farmers was affected.

Cropping season followed by beneficiaries before the intervention

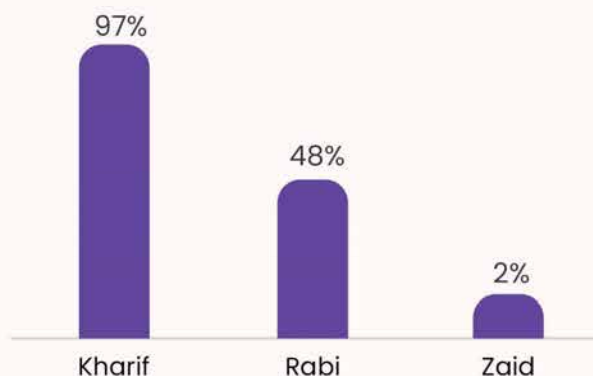


Figure 14 : Cropping season followed by beneficiaries before the intervention

Also, the survey findings indicate that over 71% of the households sourced their drinking water from well in the villages. Given the level and quantity of water in wells correlates to the ground water level, the relevance of the intervention to build water conservation structures for rejuvenating ground water levels hold importance. These wells were at a distance of at-most 500m from the house.

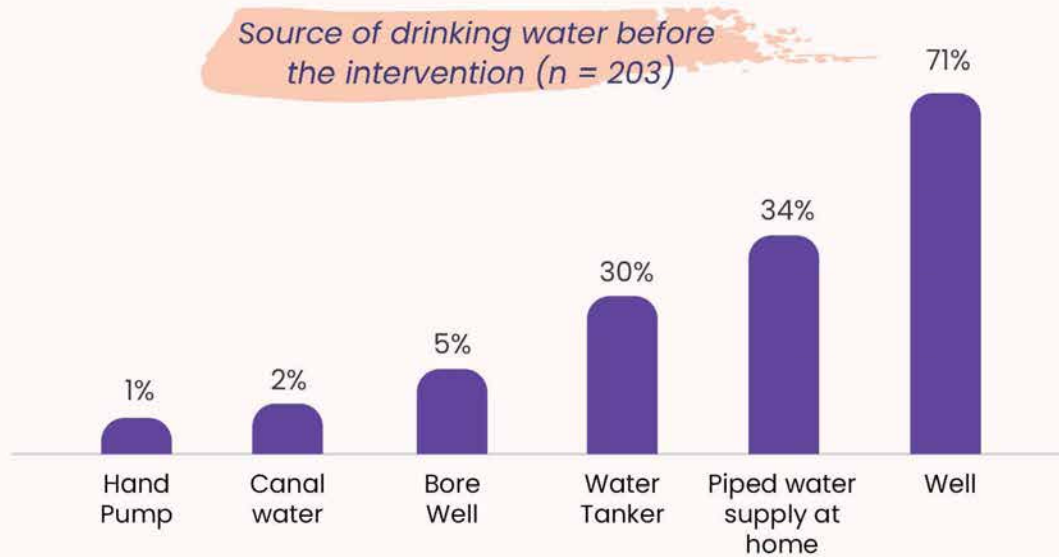


Figure 15 : Primary source of drinking water in villages prior to the intervention

The lower income of the marginalized farmers left them vulnerable to water scarcity. Also, lack of maintenance and inadequate nala bunds called for the need for the construction and repair of water conservation structures.



3.3 Expectations from the Programme

Expectations define the extent to which the intended and unintended positive benefits, socio-economic changes and cultural changes are experienced by the beneficiaries. The insights drawn from the data collected as a part of the survey are stated below.

The primary objective of the intervention was to construct cement Nala bunds and repair the damaged earthen Nala bunds in the intervention villages. This would primarily work towards storing of water in the catchment area, allowing water to percolate and increase water level in wells and bore wells. An increase in water level for the wells would help the enhancement of livelihood activities as well as increase the available water supply for household usage.

Improvement in livelihood activities



Since the primary livelihood activity followed by the beneficiaries was farming, an increase in the availability of water for farm lands were of utmost importance as an outcome of the programme.

98% of the villagers stated that water is now easily accessible for agricultural and household usage. The farmers mostly have wells or bore wells around their farm lands, which then pumps water to their farm lands. Since the intervention areas were spread across a wide range of 11 villages in the Khandala taluka, the graph below showcases that the availability of water has increased as stated by over 30% of the villagers.

Easy accessibility of water for household usage (n = 203)

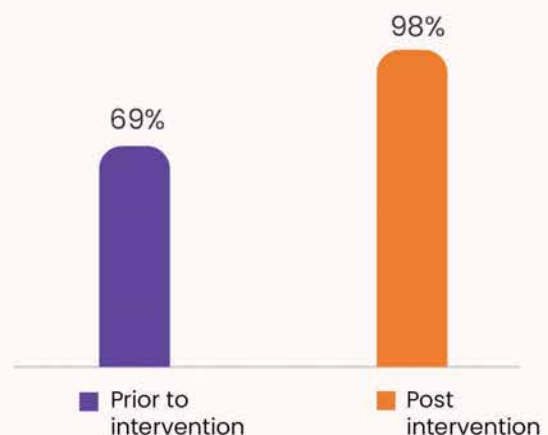


Figure 16 : Improvement in easy accessibility of water as stated by villagers

Water scarcity as stated by villagers (n = 203)

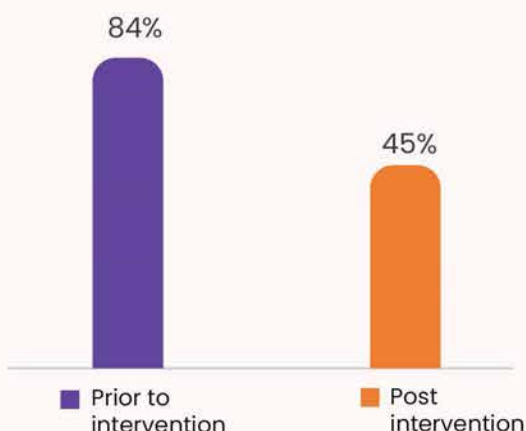


Figure 17: Instances of water scarcity as felt by villagers

Figure 18 shows the duration of water scarcity faced by villagers. During the survey, since 92 (out of 203) villagers stated facing water scarcity, the number of responses of duration of water scarcity post intervention has changed than prior to intervention.

The instances of water scarcity have significantly reduced in the intervention villages as stated by the villagers. While water scarcity was observed by over 83% of residents in the villages, **post-intervention, this number has significantly reduced to 45%.**

Duration of water scarcity in villages

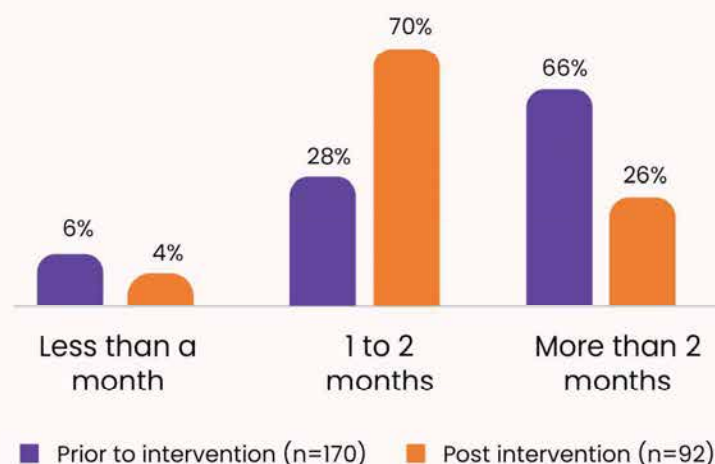


Figure 18 : Duration of water scarcity as observed in the villages



Figure 19 : Nala Bunds constructed across the intervention villages of Bori



Figure 20 : Nala Bunds constructed across the intervention villages of Dhawadwadi

Also, the survey findings indicate that prior to the intervention, more than 66% of the villagers faced water shortage and scarcity for more than 2 months. The number has significantly reduced to now more than **70% of villagers facing water shortage for less than 2 months.**

Also, as a result of the construction of water conservation structures, there have been cascading effects towards the prevention of soil erosion, as well as improvement in the water retention capacity of the soil. This indicates that the **Field capacity** of the soil has increased, and the goal for agricultural producers remains to maintain the field at or near capacity.

Table 4: Observed changes in soil quality as stated by the villagers (n = 203)

Observed Changes by the villagers	Percentage of respondents
Water retention capacity of soil improved	99%
Soil erosion prevention	98%



Figure 21 : Sugarcane, a water-intensive crop now being grown in Bori, an intervention village

As a part of the intervention, **desilting was done to increase the capacity of the existing nala bunds**. Silt promotes water retention and air circulation as well, thereby increasing the productivity of the farm lands. Since silty soil is more fertile than other types of soil, it is good for growing crops.



Around **30%** of the households stated that they received silt from the desilting process to utilise in their fields.



Quantity of silt received
(Quantity in quintals), (n = 60)

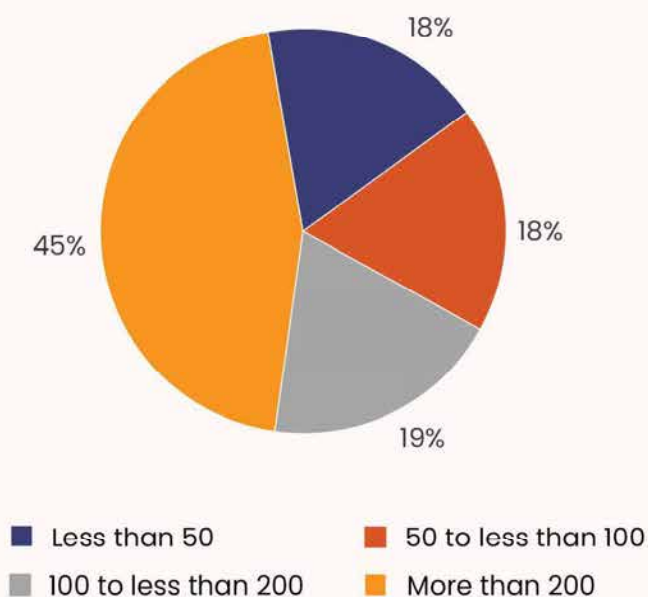


Figure 22 : Quantity of silt received by farmers

Increased cultivation area after applying silt (Area in acres), (n = 60)

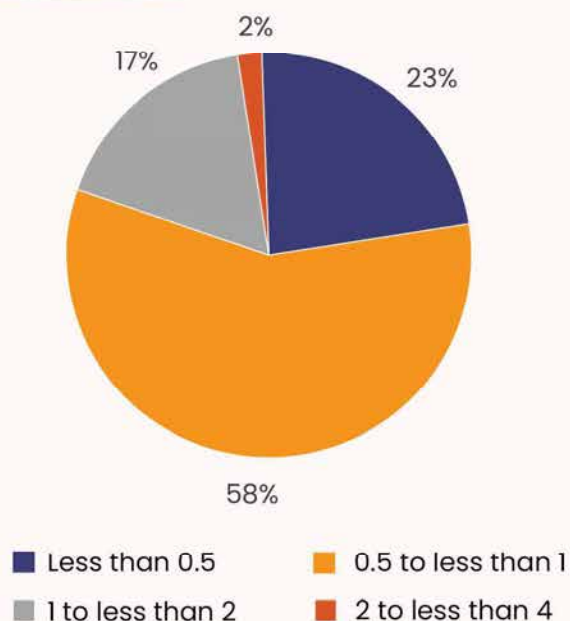


Figure 23 : Increase in cultivable land area after applying silt on land

Since, most of the farmers in the beneficiary villages were marginal farmers, 0.5 acres of increased land area for cultivation also helps in bringing additional source of income.

Along with the creation of water conservation structures, the intervention also aimed at spreading awareness on better water management practices, water conservation and sustainable agriculture practices.

- The survey findings indicate that over 78% of the households were made aware of these practices. Since the families have been involved in irrigation for generations, they are well aware of water management practices, owing to the water shortage problems having existed for long. Hence, the adoption of these practices is quite high among families as well.

Many family members of the households in these villages have shifted to urban cities for better education and service-oriented jobs. Owing to the same, their family members in the village engaged in farming activities have been able to adopt further sustainable practices in farming, such as the installation of solar cells for generating the electricity needed to pump water to farmlands, using drip irrigation for farming and such similar activities as well.



Figure 24 : Change in land cultivability after applying silt

The land area highlighted in yellow is of rocky terrain and not capable of growing crops. However, the area highlighted in orange is the outcome after applying silt which makes the land fertile.

Awareness & Best practices being followed by villagers (n = 203)

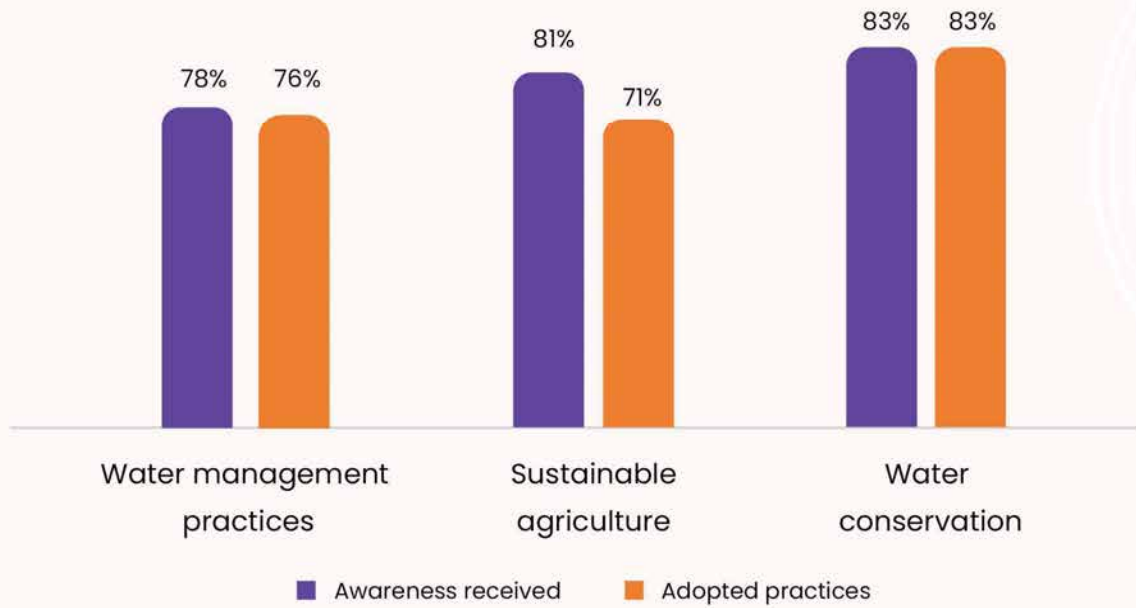


Figure 25 : Adoption of best practices by farmers



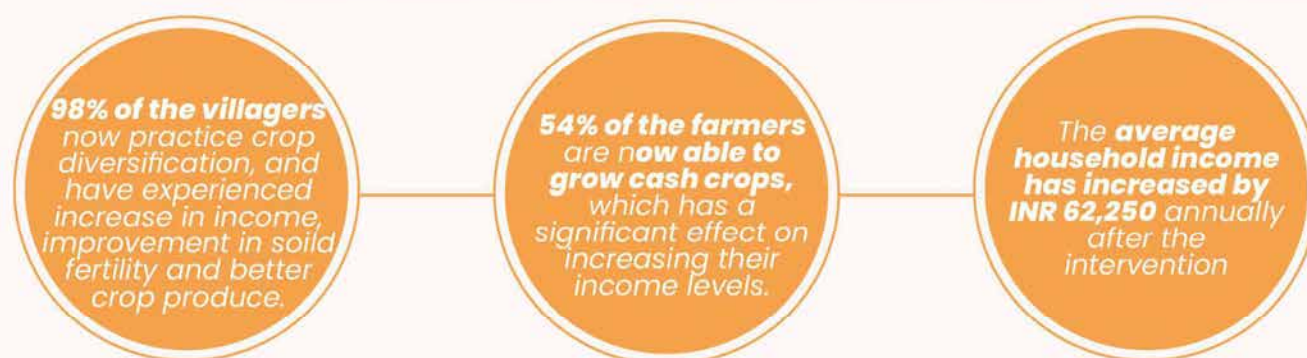
Figure 26 : Solar Powered farming (indicated in the image by red mark)

Along with other best practices, it was found during the survey that over **90% of the farmers practice crop-diversification now**. Crop diversification provides better conditions for food security and enables farmers to grow surplus products for sale at market and hence helps to obtain increased income to meet their family's needs.

98% of the villagers practicing crop diversification stated that they have seen an increased income, while other benefits **were improved soil fertility, increased savings, and better crop production**.

"For my primary produce I have been growing okra, which I sell in the market. The boundary lands of the okra farm fields were cultivable and empty, so I decided to grow beans on it. I have been growing beans as well as okra on the same farm land. While the okra is sold in the market, my family consumes the beans produced."

- Gosudh KondibaThorat, farmer residing in Bori village



Outcomes of crop diversification (n = 183)

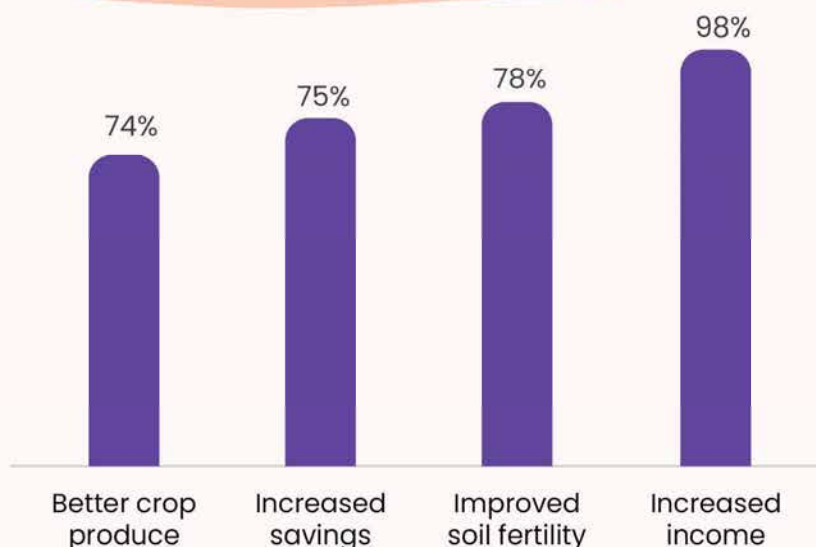
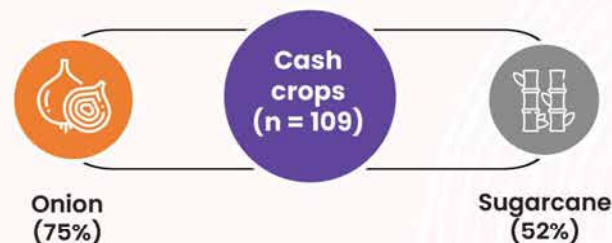


Figure 27: Outcomes of crop diversification

Along with crop diversification, with increased availability of water, the farmers have been able to grow cash crops like Onion and Sugarcane as well. Cash crops allow farmers to make more money while selling them in the market, and raise their standard of living. While **54% of the farmers have been able to grow cash crops now**, the majority of them can grow onions.



A major impact of the intervention has been its effect in increasing the duration of cropping season for the farmers. Over **75% of the farmers are now able to grow Rabi crops** as well during the season, which has been an effect of improved water availability during the winter season. Also, around **29% of the farmers are now able to grow crops during the Zaid season as well**

Seasonal variation in farmers' participation in cropping (n = 203)

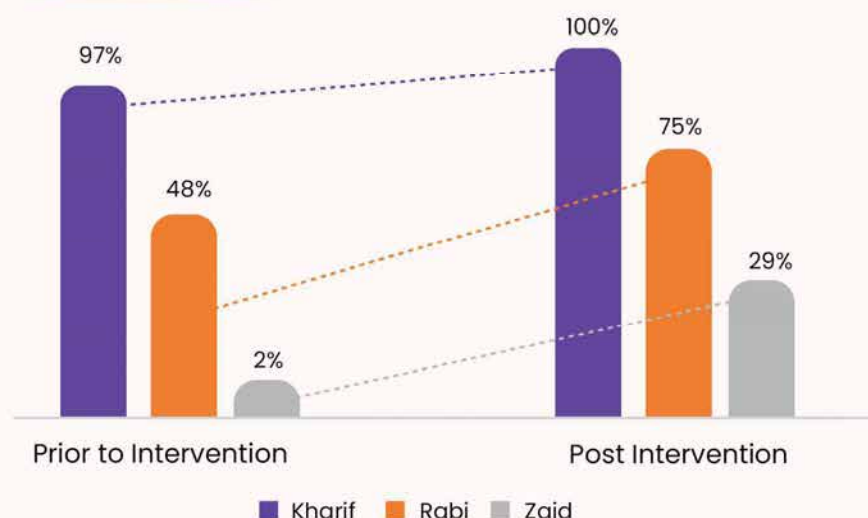


Figure 28: Improvement in farmers' cropping season post-intervention

Around 82% farmers stated that they had to procure water through hiring tankers or pumping their bore-well/well for prolonged duration. This incurred heavy costs during each cropping season. The farmers across the intervention villages have been able to **save INR 13,010 on an average per cropping season**. (As responded by 151 farmers across the 203 surveyed).

With the increased availability of water, there have been significant improvements in agricultural outputs as stated by the farmers.

Impact of the program on farming and related activities (n = 203)



Figure 29 : Impact of the programme on farming and related activities

- Among many other benefits, 97% of the farmers stated that the construction of the water conservation majors has helped increase the water supply to their farmlands. This has had a cascading effect on increased crop yield for 82% of the farmers, and increased crop productivity for 78% of the farmers.
- Increased and improved Agricultural productivity co-relates to increased income. The survey findings indicate that while there were only 26% of households who earned more than INR 1 lakhs per annum prior to the intervention, post-intervention this number has soared high to 54%. There has been an average increase in the household income of the families by INR 62,250 after the intervention.

*Annual family income of beneficiaries pre & post intervention
(INR in thousand), (n = 203)*

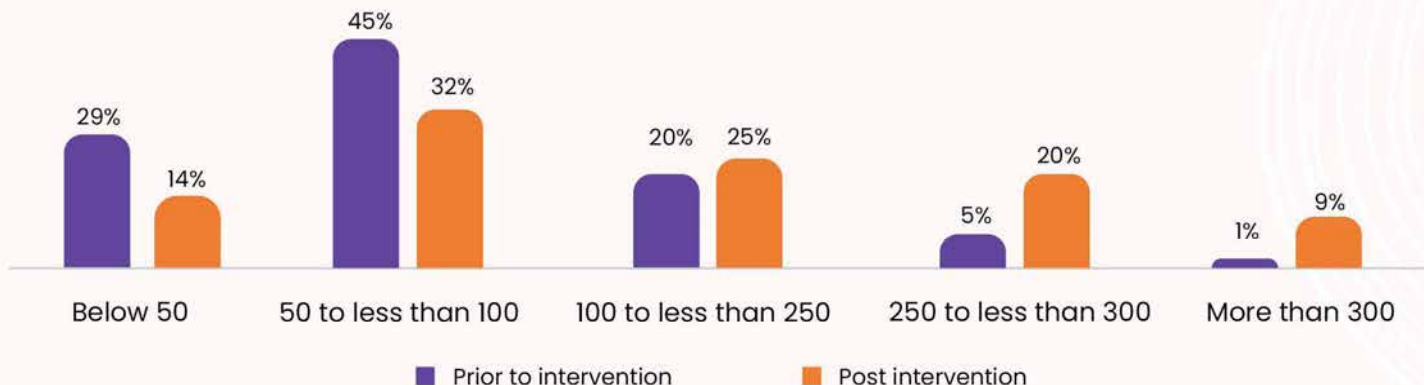


Figure 30 : Household income of beneficiaries prior to and post-intervention



Figure 31 : Custard apple and pomegranate orchards in the intervention villages

More than 75% of the farmers in the village now own livestock, which serves as an additional source of income for the farmers. The farmers stated that prior to the intervention, there was a limited number of livestock owned by the families, constrained by water scarcity in the village. However, with the increased availability of water now, farmers who weren't able to procure livestock earlier have now been able to procure livestock. The average no. of live-stock owned by the households has also increased. The average number of livestock owned by the families has increased from 3.1 to 4.3

Average livestock per household

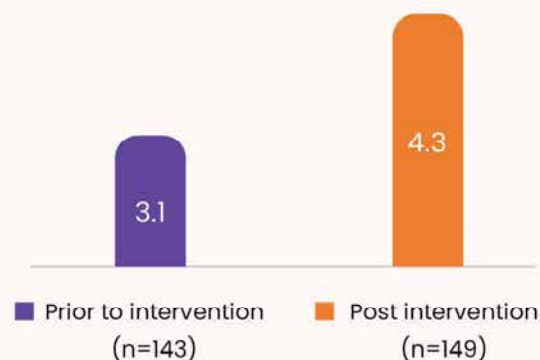


Figure 32 : Increased average livestock per household

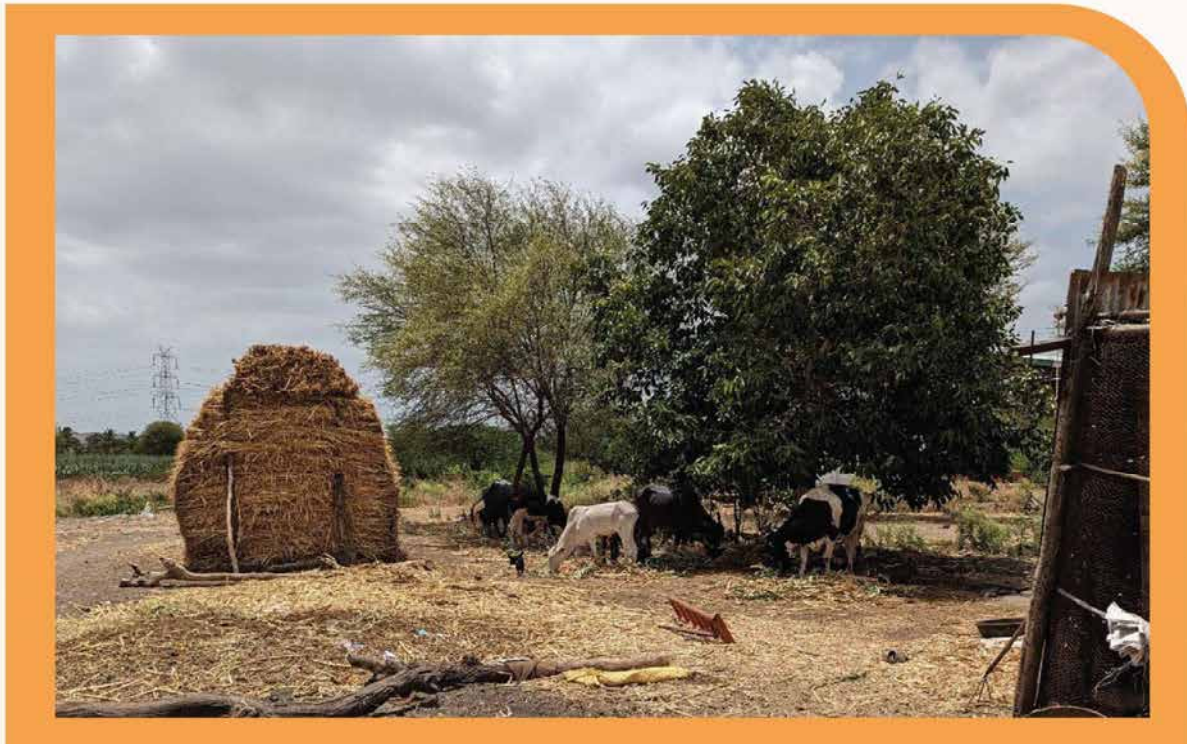
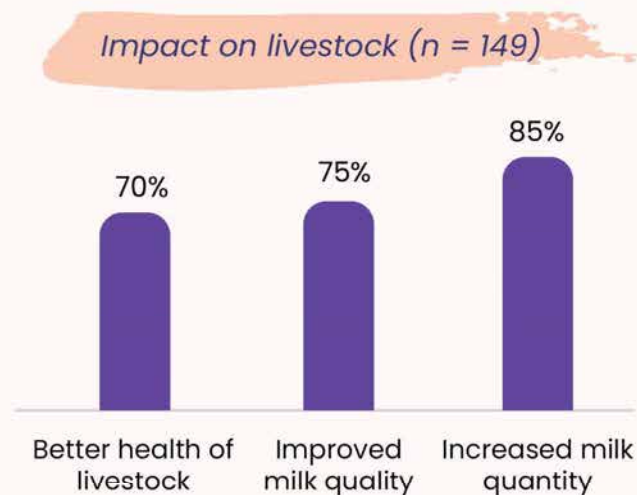


Figure 33 : Livestock in Harali village

The number of livestock a farmer can own is directly related to their available capital and availability of water much needed for the healthy growth of these livestock. Hence with the intervention, as water availability increased, the farmers could procure more livestock.



Also, increased water availability has had a great impact on the existing livestock as well. **85% of the farmers stated that they have observed increased milk quantity** from their livestock, while **70% of the farmers stated that their livestock now has improved health.**

Figure 34 : Impact of the intervention on livestock

With improved income and availability of water for households, the survey captured the overall improvement in the lifestyle of the beneficiaries.

96% of the villagers stated that they had seen an overall improvement in their Material well-being. While, 82% of the candidates stated that they had seen overall improvement in their Personal well-being. Owing to water being a natural resource, it's best management practices can come from improved Social Capital. Interaction among villagers has improved well, and over 81% of the villagers stated that they had seen an improvement in their social well-being.

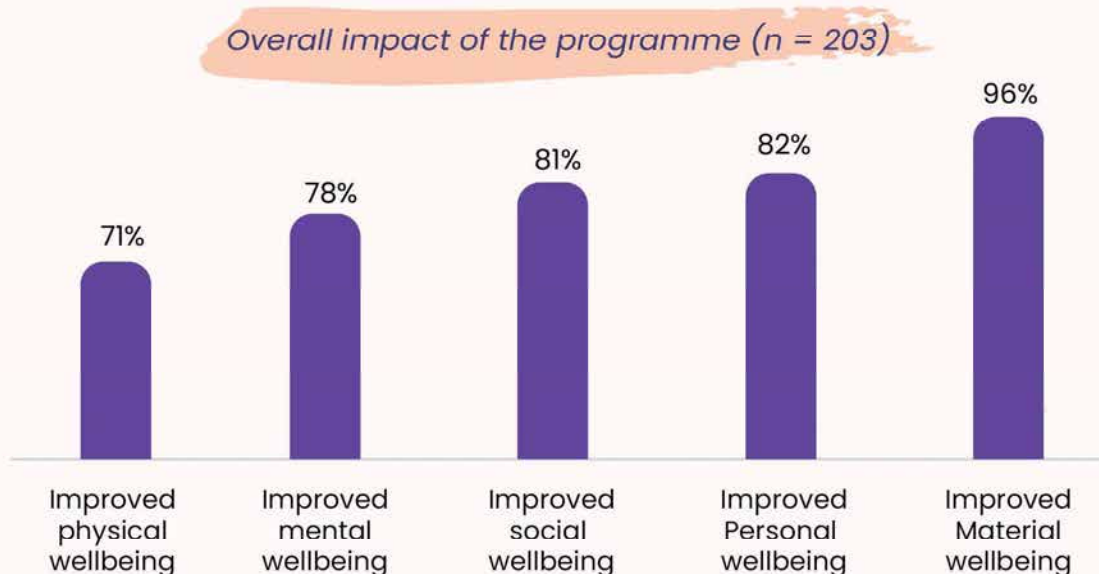


Figure 35 : Overall impact of the programme





Figure 36 : Interaction with farmers in Dhawadwadi village

Improvement in household water availability

The households in the intervention villages are dependent on a common source of water for irrigation as well as household usage. It was observed as common practice in the intervention villages that water is pumped from a community well to a high-rise water tank and distributed equally to the households through piped water supply in some of the villages. While at some of the villages where there was no piped water supply, households either had to travel to procure water from common water storage tanks or sourced water from their personal wells or bore-well.

Distance travelled to avail drinking water (n = 203)

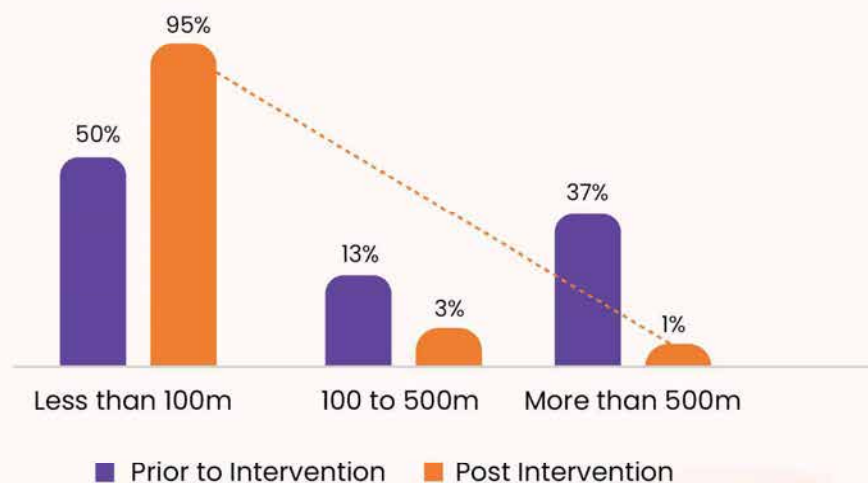


Figure 37 : Distance travelled by community members to avail drinking water

Though there over 50% families who had to travel a distance of over 100m to 500m or more to fetch drinking water, post-intervention with increased availability of water, the **drudgery faced by households to procure water has significantly reduced**. Now, more than **95% of the households either have piped water supply to their home or have to travel less than 100m to fetch water for household chores**. Women no longer have to travel longer distances for fetching water.

"Prior to the intervention water in the wells used to dry up in the month of April, and we had to wait until June for rains to fill up the same for daily consumption. However, with the increased availability of water, now water in the wells remain till late June, even if it hasn't rained"

- Aadik Dhaigude, resident of Bori village

Also, 17% of the families stated that they had to buy water from the market for daily chores prior to the intervention, which has reduced to now **less than 5% of families who buy water from the market** for daily chores.



Figure 38 : Water level in wells as observed in June'23, though it hasn't started raining yet

Water conservation efforts aim to regenerate damaged ecosystems, restore habitats and reduce the impact of human activity on wild animals. The availability of water is responsible for shaping the entire ecosystem of the village affecting the flora and fauna as well. With the human population multiplying and climate change affecting communities across the regions, water conservation is crucial.

- Around 71% of the farmers stated that there has been improvement in flora and fauna across the region, while 73% of the villagers stated that the aesthetic beauty of their village had improved.

"The villages like Harali, Limbachiwadi, being at higher altitude do not receive any support of canal water, hence the availability of water used to be less over there. APL's intervention has been crucial for creating water conservation structures and hence increasing the availability of water in these villages. We look forward to collaborative opportunities in the future as well."

– Gajnan Nanaware, Taluka Agriculture Officer,



Figure 39: Interaction with the Taluka Agriculture Officer of Khandala

The Impact findings indicate that water availability has increased significantly in the villages. This has helped with the increased water availability to farm lands, as well as for household usage. Relating to the overall impact of the programme, there has been significant improvement in the annual household income of the beneficiaries as well, through improved agricultural practices and increased livestock

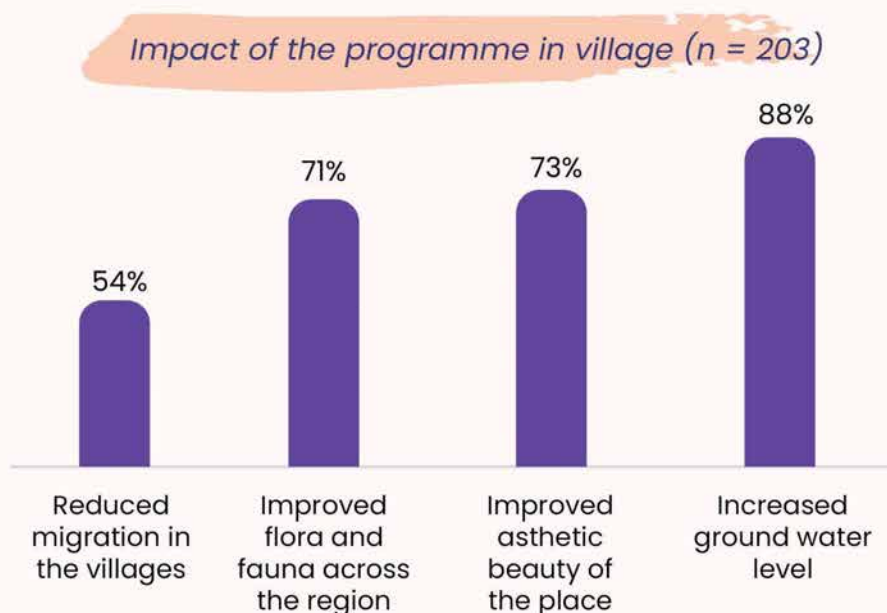


Figure 40 : Impact of the overall programme in village

Table 5 : Summarised Comparison of pre-and post-intervention by APL's programme

Factors for comparison	Prior to intervention (n=203)	Post intervention (n=203)
No. of villagers who stated water was easily accessible for household usage	69%	98%
Average duration of water scarcity in a year	73 days	55 days
Farmers practicing farming during Rabi season	48%	75%
Farmers practicing farming during Zaid season	2%	29%
Average land area available for cultivation	1.34 acre	2.8 acre
Less than 100m distance travelled by households for fetching water	50%	95%
Average no. of livestock owned by households	3.1	4.3
Average annual family income of households	INR 97,600	INR 1,59,850

Comparison between treatment and control villages

To check the exact attributes of the intervention, a comparison study was conducted during the impact assessment study via surveying people from villages where there was no intervention. This will help in assessing the differences and impact brought in by the intervention on similar geography. The treatment, as well as control villages, are all in the Khandala taluka of Satara district.

- In India, Kharif crops are sown with the onset of the first rains. Since most of the farmers are dependent on rain water for irrigating their lands, it was observed that at both the treatment and control villages, all the farmers were growing crops during the Kharif season. However, a major difference was observed in the farmers who could practice farming during Rabi and Zaid seasons.
- Since there is mostly no rainfall during the Rabi and Zaid seasons, the farmers have to depend on the water available in wells or through bore-wells for irrigating their lands. The construction of the water conservation structures increased the water availability during Rabi and Zaid seasons as well for the treatment villages. Figure 41. shows the difference in no. of farmers who can practice farming during different cropping seasons.

While in the treatment villages, people benefitted from the desilting process, in being able to utilise the silt to increase their cultivable land area, no such intervention was seen in the control village. Owing to the same the net cultivable land area in the treatment villages has increased due to the application of silt, in comparison to cultivable land area available in control villages.

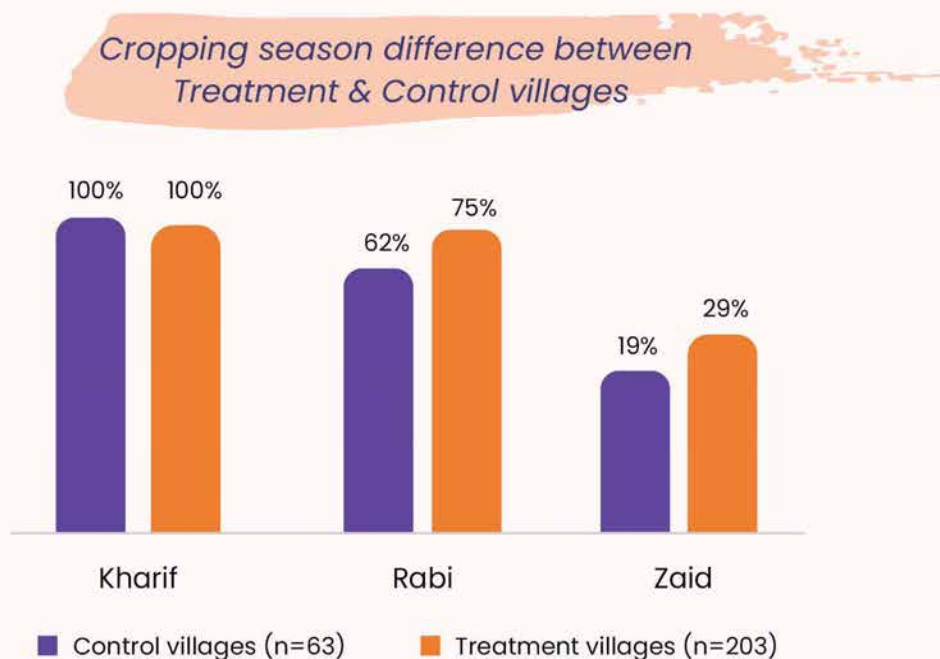


Figure 41: Difference in cropping seasons between treatment and control villages

While for the control villages, around 62% of the farmers have a cultivable land area of 1 to 2 acres or more, over 92% of the farmers in the treatment villages who received silt have a cultivable land area of 1 to 2 acres or more.

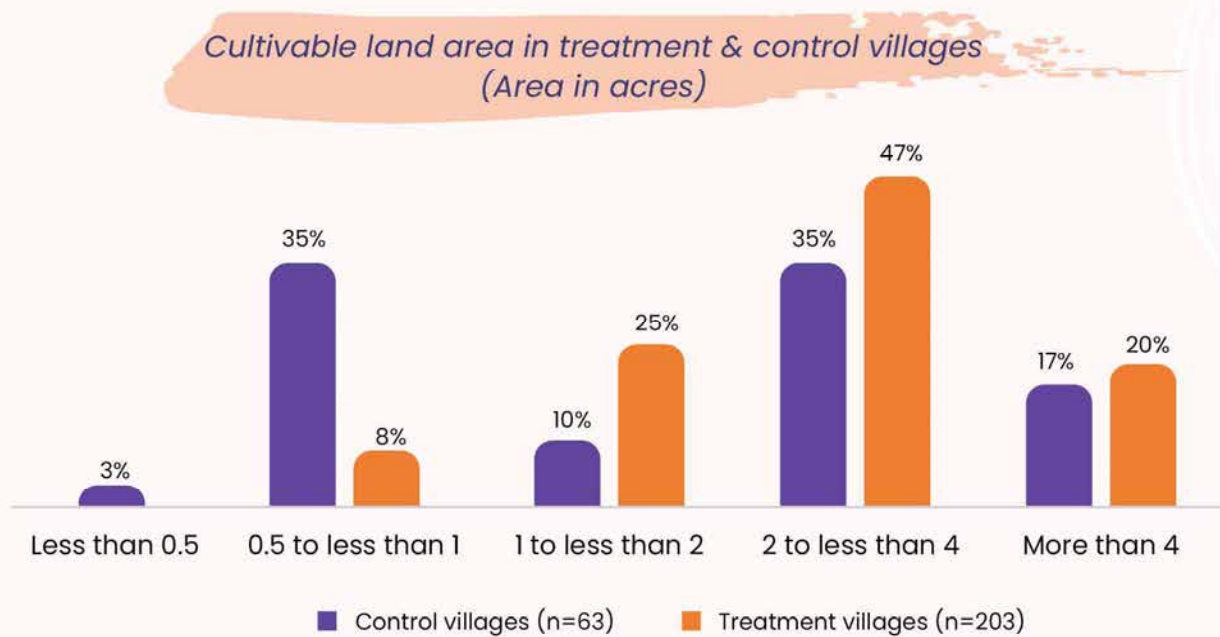


Figure 42 : Comparison of cultivable land area in treatment and control villages

The growth of cash crops is dependent on the availability of water. Around 61% of the farmers in the control villages could now grow onion as a cash crop. However, over 75% of farmers in the treatment villages stated that they could grow onion as a cash crop, owing to the availability of water.

The increased availability of water has also reduced the drudgery of households in the treatment villages. More than 95% of the households travel less than 100m to fetch water, while for the control village, 81% of the households can fetch water in less than 100m distance.

*Distance travelled to fetch water
(Distance in meters)*

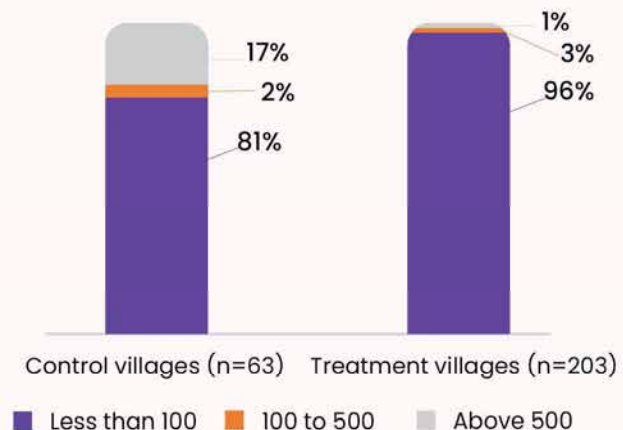


Figure 43 : Comparison of distance travelled by households to fetch water

Water scarcity faced by percentage of villagers

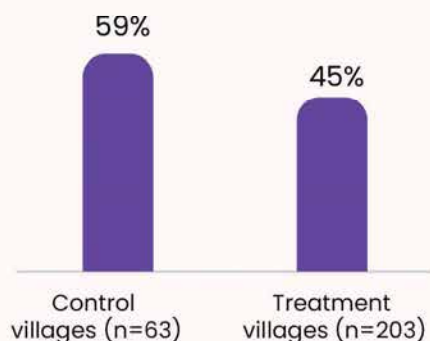


Figure 44 : Comparison of instances of water scarcity faced by villagers in treatment and control villages

While more than 54% of the villager's face instances of water scarcity for more than 2 months in the control villages, more than 74% of the villager's face water shortage for less than 2 months in the treatment villages now

Duration of water shortage faced by repondents

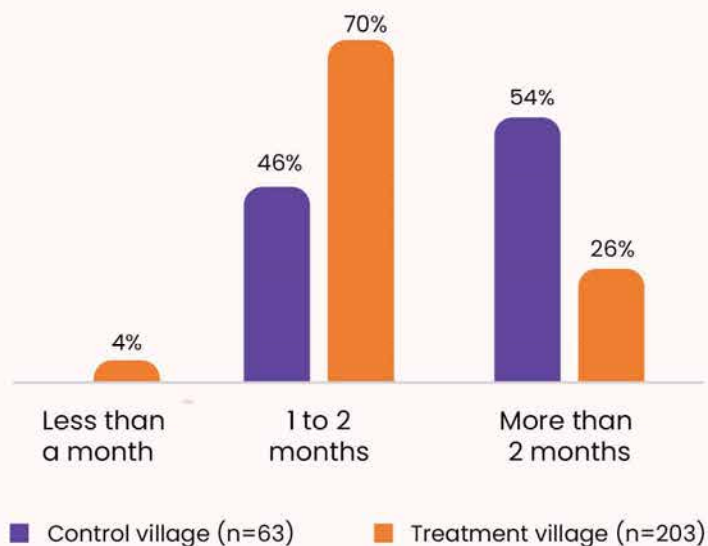


Figure 45 : Comparison of duration of water shortage faced by villagers

Average livestock count

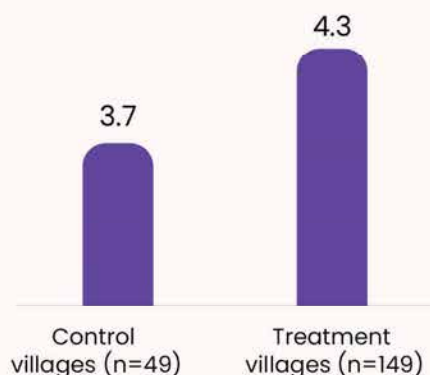


Figure 46 : Comparison of average livestock in control and treatment villages

Increased water availability also allowed the farmers to procure more livestock in the treatment villages. The average number of livestock owned by the farmers in the control villages is 3.7, however, it is higher at 4.3 in the treatment villages. Over 76% of the villagers in the control villages stated they couldn't procure more livestock due to water scarcity and water shortage problems.

The construction of the water conservation structures in the treatment villages has led to an increase in ground water level. Hence, the water level in the nearby wells or bore wells has increased as well. The farmers install a pump from the wells to their farmlands for irrigation purposes. **There has been a reduction in cost incurred by farmers while operating the pumps to irrigate their farmlands in the treatment villages as compared to the control villages.** This can be attributed to the **longer duration of the pump being operated in the control villages**, given the ground water is at a better level in the treatment villages. **The instances where the electricity cost showcased in Figure 47 are higher for treatment villages is owed to larger area under cultivation**

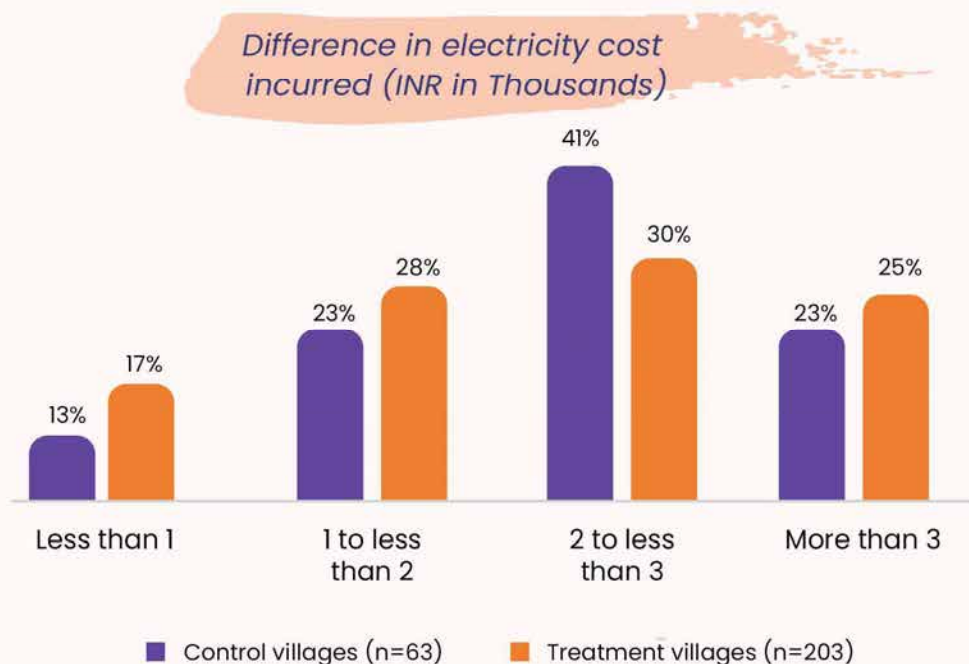


Figure 47 : Difference in electricity cost incurred by farmers in treatment and control villages

It is observed that while **64% of the villagers in the control village** had to incur over INR 2000 as **electricity expenses per month** for irrigating their lands, the **number for treatment villages was lower at 55% of the households.**

- The interventions in the treatment villages have helped the farmers avail better agricultural practices and breed better livestock. The survey findings indicate that there is a significant difference in income among the households in the treatment and control villages as is represented in Figure 48. **More than 54% of the families in the treatment villages** now earn above INR 1lakh per annum to INR 3 lakh and more. However, the same income group for the **control villages is limited to 44% of the villagers**

Comparison of income between treatment and control villages (INR in thousand)

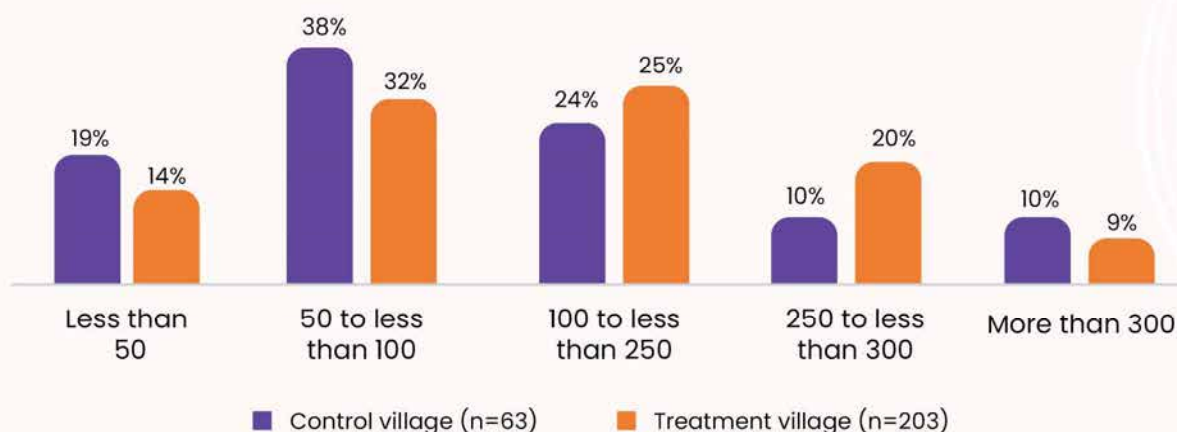


Figure 48 : Comparison of annual income in treatment and control villages

The below-mentioned table summarises the significant differences as was observed between the treated and controlled villages based on their socio-economic indicators, and current practices adopted.

Table 6 : Summarised Comparison of treatment & control villages

Factors for comparison	Control villages (n=63)	Treated villages (n=203)
Villagers able to grow crop during Rabi season	62%	75%
Villagers able to grow crop during Zaid season	19%	29%
Average land area available for cultivation	2.3 acre	2.8 acre
Less than 100m distance travelled by households for fetching water	81%	95%
Average no. of prevalent livestock owned by households	3.7	4.3
Average duration of water scarcity faced in a year	69 days	55 days
Average annual electricity cost incurred to irrigate land	INR 26,856	INR 25,428
Average annual family income of households	INR 1,40,600	INR 1,59,850



Figure 49 : Interacting with farmers in control villages



Figure 50 : CNB constructed in Shivajinagar village

Technical Analysis & Soil testing results

Inspection Parameter	Adequate Value	Treatment Village 1 (Dhawad-wadi plain terrain)	Treatment Village 2 (Harali – rocky terrain)	Treatment Village 3 (Bori – silt application land)	Control Village 1 (Plain terrain)	Control Village 2 (Plain terrain)
Against pH	6.5–7.5	7.8	7.8	7.7	7.7	7.4
Electrical Conductivity (EC)	0–2.0	0.25	0.25	0.28	0.26	0.32
Organic Curb	0.20 – 1.0	0.52	0.62	0.59	0.59	0.56
Available Nitrogen (N)	<140 – >700	323.6	345.1	359.5	351.4	332.5
Available Phosphorus (P205)	<7 – >35	15.99	12.86	15.8	14.8	15.85
Available Potassium (K20)	<100 – >300	237.4	129.9	161.2	98.56	174.7
Available Copper (Cu)	>0.2	0.56	3.94	0.77	9.96	3.78
Available Manganese (Mn)	>2	6.18	3.48	8.84	8.16	6.64
Available Zinc (Zn)	>0.6	0.2	0.13	0.2	0.25	0.08
Available iron – (Fe)	>4.5	1.97	1.18	2.3	0.2	1.99
Calcium carbonate	0–3	6.43	6.11	3.35	7.03	4.72

- The pH, Electrical conductivity, and Organic Curb content of the soil samples from treatment and control villages have insignificant differences.

Macro Nutrients:

- The **Nitrogen content** in the soil was found to be in **adequately medium quantity** in all the samples. However, the **soil sample in treatment villages had considerably higher content of Nitrogen**.
- The **Phosphorous content** in the soil samples was also found to be in **adequately medium content**. However, the **average quantity of phosphorous across the villages** was found to be **higher in the treatment villages**.
- The **Potassium content** in the soil samples was in adequate quantity in all the intervention villages, however was less than the required amount in one control village. The other control village however had adequate quantity of Potassium.

Micro Nutrients:

- The availability of copper in the soil level was **nominal for the intervention villages**, while it was **high for the control villages**.
- The amount of Manganese in the soil was found to be adequate for all the soil samples, but **highest for the one where silt was applied in the treatment village**.
- The **quantity of Zinc and Iron was found to be less than average required** in all the soil samples, whether in control or treatment villages.
- The **amount of Calcium Carbonate was adequately found in the soil sample where silt was applied**. For the rest of the soil samples, the amount of Calcium carbonate was found to be abruptly high.

It is observed that the soil sample where silt was applied, the test results meet the expectations. This is reflected through adequate amount of macro and micro nutrients as per the set benchmark. However, for the rocky terrain of treatment village, the test results were a bit far off the adequate values. Though it takes at least 5 to 10 years for significant changes in soil organic carbon to be noticeable by measuring instruments, the changes as observed in the soil test are quite promising for treatment villages.



Figure 51 : Collection of soil sample for testing

3.4 Convergence

The programme was solely funded by Asian Paints Limited, and was implemented by Vanarai.

Sr. No	Name of Partner	Type of Partnership	Responsibilities
1	Vanarai 	Implementing Partner	<ul style="list-style-type: none">- Baseline Study- Nala desilting- Construction of CNBs and repairing of ENBs

However, the Gram Panchayats along with Vanarai helped in conducting the need assessment and identifying the locations where the nala bunds could be constructed. The community members are an essential part of these Gram Panchayats and play a crucial role in the decision taken by them.

3.4 Service Delivery

This section defines the extent to which efficient methods and services were delivered as a part of the project intervention to achieve the results of outcomes and impacts.

- The implementing partner joined hands with the Gram Panchayat in the intervention villages for letting people know about the interventions. More than 85% of the villagers stated that they were made aware the intervention by the Gram Panchayat

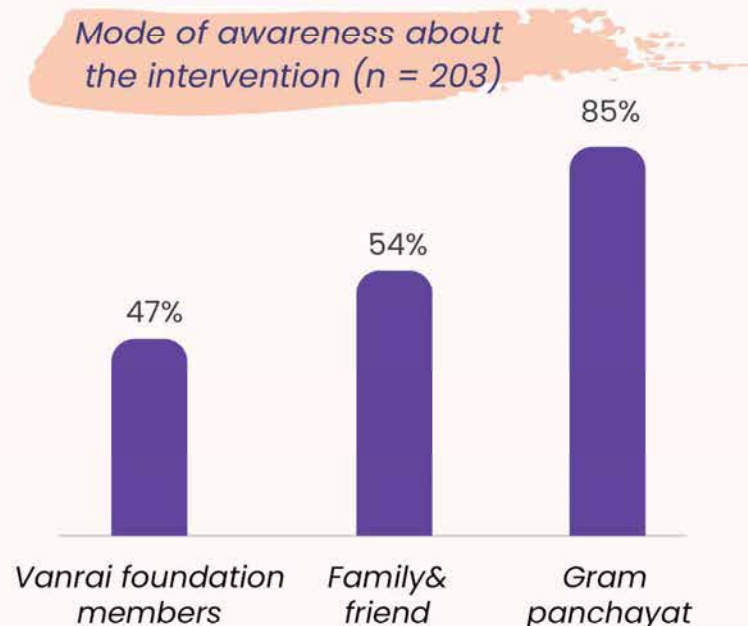


Figure 52 : Mode of awareness about the intervention

- While there weren't any Water User Groups in the villages, the survey findings indicate that there isn't further need to create any as well. The Gram Panchayat is responsible for settling disputes if they ever arise when utilising common natural resources.
- Also, the Gram Panchayat was responsible for the distribution of the silt to the farmers post-desilting process of the nala bunds. The desilting work for a nala bund was carried on for **prolonged 3 to 4 months during the intervention period**. The implementing partner was responsible for monitoring the entire **desilting process which went on for more than 12 hrs per day**.
- The farmers in the village had mutual understanding for the silt distribution process. The **quantity of silt distributed to a farmer was limited to the extent, such that every other farmer in the village capable of procuring silt was able to procure it**.



Figure 53 : Interaction with villagers in treatment villages

3.6 Social Return on Investment

Social Return on Investment helps us determine the values that are traditionally not reflected in financial statements, including social, economic, and environmental factors. This method helps quantify the value of the social impact of projects, programmes, and policies. SROI helps in evaluating the general progress of certain developments, showing both the financial and social impact the organization has. This method takes standard financial measures of economic return a step further by capturing the social and financial values.

For the current project by Asian Paints Limited, we have computed the value based on the actual outcomes of the programme. The data has been sourced from the field survey

INR 4.78 social value generated from the programme on every investment of INR 1.

Indication	Rationale	Proxy Estimation	Source
Silt distributed to farmers	The silt procured from nala desilting was distributed to the farmers at no-cost for better cultivability of lands	Average savings on silt procurement	Field Survey
Savings in terms of irrigating lands	Cost reduction in terms of renting water tankers, reduced electricity cost, and other related costs solved by increased water availability	Average cost reduction in irrigation of lands	Field Survey
Savings on buying water for household usage	Cost reduction on buying water for household usage annually due to increased availability of water	Average savings on purchasing water annually	Field Survey
Average increase in income for household	Increase in household income with increased crop productivity, increased number of livestock, etc.	Average household income increased post intervention	Field Survey

Social Return on Investment			
Year	FY 2022-2023	FY 2023-2024	FY 2024-2025
Inflation Rate in India (IMF, 2023)	6.7%	4.9%	4.4%
Discounted Rate Considered	5.33%		
Total Input Cost	INR 2,42,04,722		
Total Net Impact	INR 12,18,13,870		
Net Present Value (NPV)	INR 11,56,46,079.11		
SROI	4.78		





Chapter 4.

Brand Equity



4.1 Awareness
about the Program

4.2 Rating the
Program

4.3 Change in
Perception of the
Community

4.4 Employee
Volunteering
Programs

Brand Equity refers to a value premium that a company generates from a product or service through its name recognition. Organizations can enhance their brand value and reputation by providing service that is reliable, efficient, memorable, and of superior quality. Brand Reputation can have a significant impact on Brand Equity. Brand Equity comprises important components like how the consumers perceive the brand and the negative and positive effects resulting in value for the brand and the company as a whole. In this study, we have determined the brand equity of Asian Paints Limited, as stated by the villagers in the intervention villages.

4.1 Awareness about the Program

All the villagers were aware of Asian Paints Limited as a brand. 99% of the villagers were aware that the interventions for the construction of nala bunds, repairing of nala bunds and desilting of the existing nalas were done under the CSR initiatives of Asian Paints Limited. Awareness of interventions which are done for the betterment of the community generally tend to create a positive impression of the brand among the beneficiaries



4.2 Rating the Program

81% of the villagers rated the activities under the intervention as 5 on a scale of 1 to 5 (5 being the highest). This showcases that the majority of the villagers in the village were satisfied with the activities performed under the CSR initiatives of Asian Paints Limited.

Villagers' rating on the programme's effects {out of 5} (n = 203)

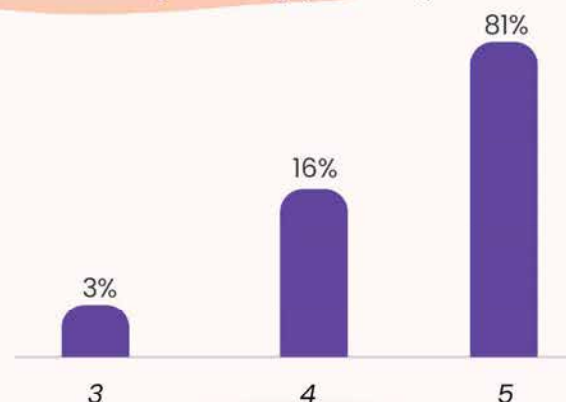


Figure 54: Rating the CSR interventions by villagers on programme's effectiveness

4.3 Change in Perception of the Community

There has been a significant change in the perception of the villagers of Asian Paints Limited as a brand. While prior to the intervention around 75% of the villagers perceived Asian Paints Limited as a brand to be efficient and reliable, the remaining 25% had doubts regarding their initiatives and motivations. However, post-intervention the perception of the villagers has improved, and **now all of them consider Asian Paints Limited as a brand to be efficient and reliable**

All the villagers who took part in the survey from control villages, were aware of APL as a brand

Perception of APL as efficient & reliable (n = 203)

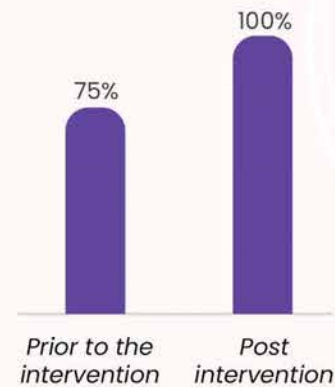


Figure 55 : Perception of beneficiaries about Asian Paints Limited as a brand

4.4 Employee Volunteering Programs

Also, apart from the current intervention, **97% of the villagers stated that employees of Asian Paints Limited visited the villages as a part of their Employee Voluntary Programme**. Employee Voluntary Programmes can help a brand create significance in the life of the communities, through long-term engagements. Also, this allows the employees to interact directly with the villagers and empathize with their problems and find suggestive solutions to mitigate them.

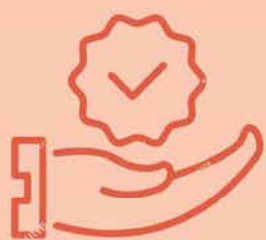
- 99% of the villagers in the intervention villages stated that their basic problems were being addressed by Asian Paints Limited.



Figure 56 : Major initiatives under EVP programme

The survey findings help us indicate that Asian Paints Limited as a brand has created a positive perception among the beneficiaries of the intervention villages. The desirability of Asian Paints Limited as a brand in the intervention villages is high.





Chapter 5.

Recommendation to the Program

5.1 Construction of
bunds

5.2 Desilting

5.3 Branding



The Impact Assessment study drew out the socio-economic indicators showcasing the positive impact of the programme as stated by the beneficiaries. As per interactions with multiple stakeholders in the project, government officers from the agriculture department, and observations made during the field visit, the team presents its recommendations for the ongoing interventions.

5.1 Construction of bunds



Current Scenario

- Given the high amount of water received by the nala bunds from rain water gushing downhill, the earthen nala bunds are carried away with the flow of water.
- A channel was created from the sideways of the earthen nala bunds to allow excess water to pass. This was aimed at keeping the earthen nala bund undamaged. However, the channel created a large passage for the entire water in the basin to flow downstream



In the above-shown figure, the highlighted area in yellow represents the basin, while the white highlighted area shows the channel created for the water to flow out.

Recommendation

- Installing an LDPE sheet while creating the elevation for earthen nala bunds can increase the longevity of the construction.
- A channel was created from the sideways of the earthen nala bunds to allow excess water to pass. This was aimed at keeping the earthen nala bund undamaged. However, the channel created a large passage for the entire water in the basin to flow downstream
- The dimensions of the channel should be evaluated in a way such that the flow of water downstream is restricted to a certain volume per hour.
- This will help ensure the water in the basin is stored longer for at least 2 to 3 months, allowing proper percolation of water and rejuvenation of ground water.



Figure 57 : LDPE sheet being installed over Earthen Nala Bunds

5.2 Desilting



Current Scenario

- Nala desilting or construction of bunds done after May or June when the monsoon already onsets, has no immediate effects in the current year.

Recommendation:

- The construction work should maintain a timeline which allows the construction of bunds to be completed before the onset of Monsoon. This will allow the bunds to capture rainwater during the current years

5.3 Branding



Current Scenario

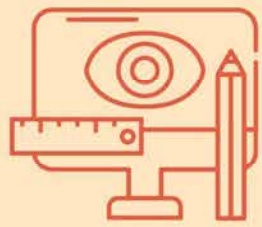
- Our survey findings indicate that not all the construction sites had branding bill board or foundation stone adjacent to or near the construction and repair work.

Recommendation:

- Installing a foundation stone or signboard adjacent to the construction sites can help in increasing brand awareness and outreach of Asian Paints Limited.
- Also, the signboards signify and differentiate the constructions of APL from government interventions or other institutions and organizations.

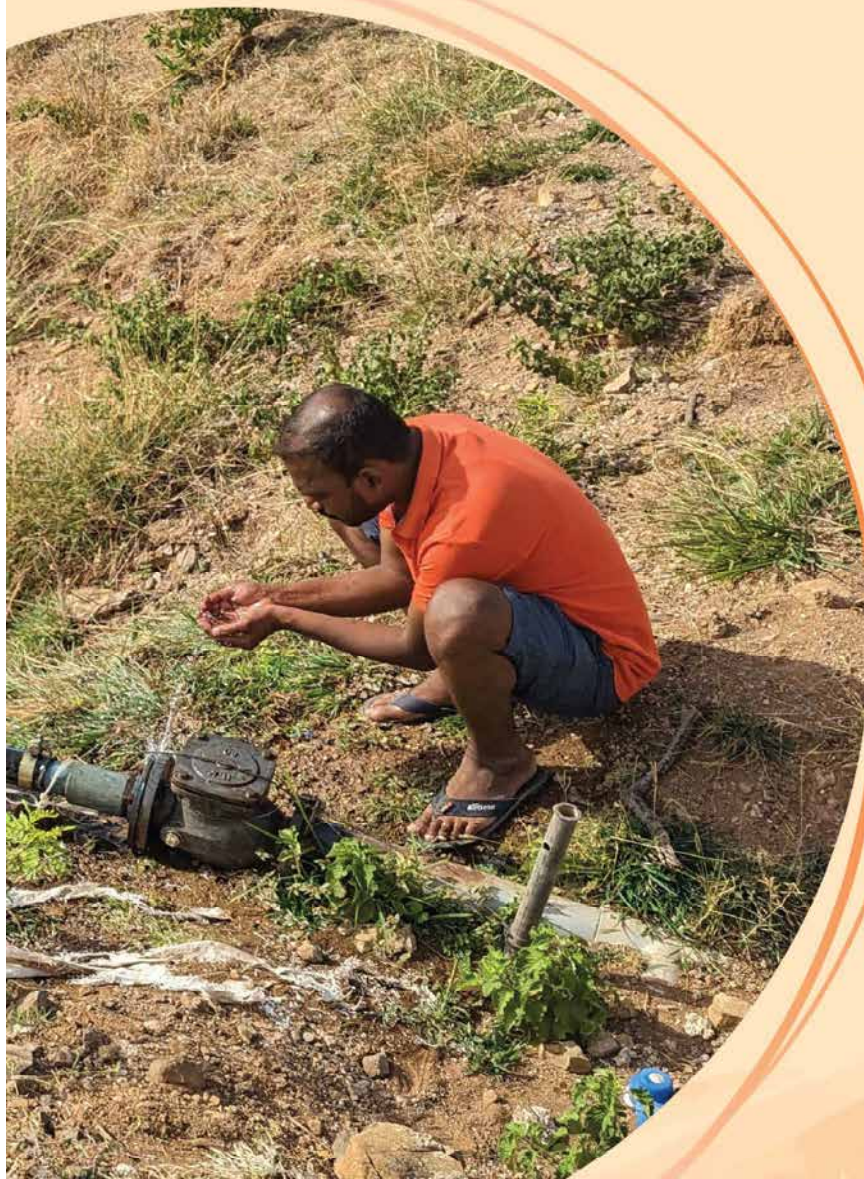


Figure 58 : Foundation Stone of the construction laid at Limbachiwadi village



Chapter 6.

Impact Stories



**6.1 Increasing Crop
Diversification
through Silt
Utilization**

**6.2 Fostering
uncultivated land
and crop production
through silt**

**6.3 Diversifying
Saplings Cultivation
through Water
Reservoir**

**6.4 Enhancing
Farmland
Productivity
through Crop**

**6.5 Upgrading
Agricultural
Produce through
Cement Nala Bund**

6.1 Increasing Crop Diversification through Silt Utilization

Gorakh Khandiva Dhorat is a resident of the Bori village in the Khandala taluka of Satara district. Aged 63, Gorakh had a net cultivable area of 2 acres before the intervention, in which he mostly grew Bajra and Jowar. Though he had over 4 acres of land holding, only 0.75 acres of the same was cultivable prior to the intervention. His annual earnings varied in the range of INR 1.5 lakh to 1.75 lakhs.

However, after the desilting process, he was distributed silt from the site and increased his cultivable area by 0.25 acres, and currently has 1 acre of total cultivable land area. The area on which he has spread the silt was earlier uncultivable given its rocky terrain. After applying the silt, he waited for a year to let the soil settle down, and has now sown okra in the newly added land area.

The harvest from the farmlands came in after a month of sowing. He was able to sell the produce in the market, and now easily is able to cultivate 30–40 kgs of okra on every alternate day. He expects to reap around 500 kgs of okra from the farm land before the onset of the monsoon. Given the demand for okra increases in June among school-going children to be packed for lunch, he opted to grow the same. Post-intervention, his annual earnings have scaled above INR 3 lakhs, and his costs incurred in irrigating the field has reduced by INR 15,000 annually.

Adopting crop diversification practice, he also grows 'Gawar' (beans) on the boundary lands of his okra farm, but the same is consumed solely by his family. He has also been able to grow crops like Jowar and millets during the Rabi season now with the increased availability of water



Figure 59 : Gorakh in his farmlands, okra cultivation

6.2 Fostering uncultivated land and crop production through silt Application

Bhagwan Tatya Dhaigude is a 37-year-old farmer from the Bori village in Khandala taluka of Satara district. Supporting a family of 5, Bhagwan was primarily engaged in kitchen farming before the intervention, where the produce was mostly consumed by his family. His annual earnings were below INR 1,00,000 before the intervention, which made it difficult for him to support his family. Though he had total land holding of 4 acres, only 1.25 acres of it was cultivable. For commercial purposes, he was dependent on growing wheat, jowar, maize and millets seasonally.

He received over 200 quintals of silt, which he spread over his barren uncultivable land to increase his net cultivable land area by 1 acre. He has sown sugarcane in the newly built cultivable area. Though the reaping season of sugarcane hasn't come yet, he expects to sell the produce in the markets of Satara and Kolhapur, which are the sugar industry belts of Maharashtra. As per his peer-conversations, he expects an increased annual income of INR 1lakh to 1.5 lakhs per annum from this initiative. Also, with increased availability of water now, he no longer needs to run water pump for longer hours, or rent out water tankers for cultivating his field. He has been able to save over INR 50,000 annually in irrigating his fields.



Figure 60 : Bhagwan Tatya standing adjacent to his sugarcane cultivation

6.3 Diversifying Saplings Cultivation through Water Reservoir Cleansing

Abhijeet Choupley owns a nursery by the name of Samarth. Though the nursery was set up jointly by him and his brother 4 years back, they used to face water scarcity issues from February to May, when there was no rainfall in the village, preventing them from growing samplings during 4 prolonged months. This restricted his income and opportunity to grow.

Though there is a water reservoir near his nursery which was built back in 1975 during drought and famine in Maharashtra, it remained uncleaned for a long. With the intervention, the implementing agency through its desilting process cleaned the reservoir, which helped increase the water capacity of the same. Abhijeet can procure water from the same reservoir now without any hindrances for his nursery.

With the increased availability of water, he is now able to grow saplings during the peak summer months as well. He has been able to get contracts from the local Kishore Vigyan Kendra, and organizations like BAIF. Also, he was able to procure silt from the desilting process and has been able to use the same for growing the saplings.

Abhijeet grows a wide variety of plants, fruit trees and exotic species of plants as well. He also supplies plant saplings to industries in the Maharashtra Industrial Development Corporation zone, for their gardens. His business now generates annual earnings of over INR 4 to 4.5 lakhs, and he praises the contribution of APL for the success of his business

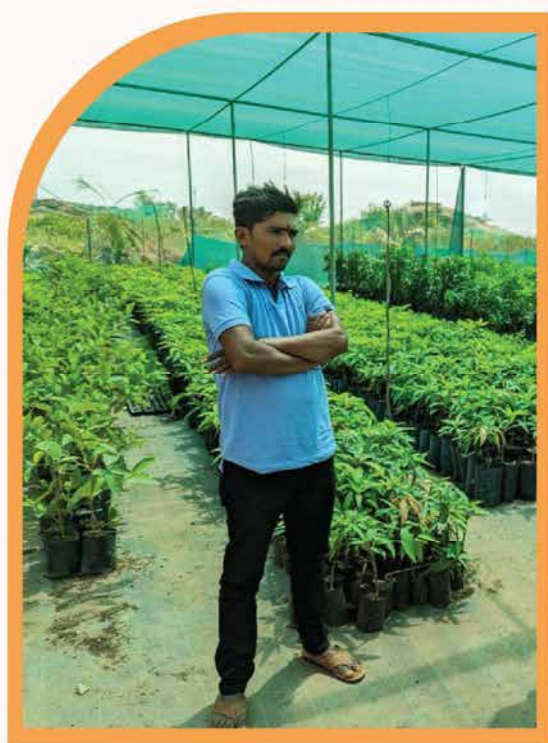


Figure 61 : Abhijeet and his nursery

6.4 Diversifying Saplings Cultivation through Water Reservoir Cleansing

Namdeo Bhosale's family have been residents of the Shivajinagar village of Khandala taluka for over 4 generations now. Though Namdeo owned over 4 acres of land, he could only cultivate 2.3 acres of it. The remaining land being barren and rocky was uncultivable. He was solely dependent on Jowar and Bajra for his annual earnings.

After the project intervention though, Namdeo received silt from the desilting sites and applied it on his barren and rocky land to increase his net cultivable area by 1.5 acres. After letting the soil settle down for 6 to 7 months, Namdeo decided to grow groundnut and sunflower on the new cultivable land. Though the crops haven't been reaped yet, he expects to earn a generous income from the produce grown in the new land area. He has connected with oil mills and expects to earn over INR 3 lakhs per annum now. He has also been growing cash crops like onion, which have helped increase his income.

Namdeo has also been practicing crop diversification, in which he has sowed custard apple saplings across the boundary of his new farm land. With increased availability of water now, he is confident to grow more crops once the first produce is reaped.



Figure 62 : Interaction with Namdeo in his farmlands

6.5 Upgrading Agricultural Produce through Cement Nala Bund Installation

Jitendra Dhondia Debe is a resident of the Limbachiwadi village of the Khandala taluka in Satara district. Prior to the intervention his agricultural produce was limited to Jowar and Bajra only. Also, most of his annual income was dependent solely on the Kharif season produce, since there was almost no water available during the Rabi and Zaid season.

Though he had land holding size over 5 acres, only 2.3 acres of the land was cultivable before the intervention. The village receives adequate amount of rainfall, but being in the foothills of the Sahyadri range, and at a higher altitude, most of the water flows downstream, he was not able to utilize the same.

Post-intervention, with the construction of the Cement Nala Bunds, the problem of checking the water has been resolved though by far. Post monsoon, water now easily stay for 5 to 6 months in the wells, rejuvenated by the constructed CNBs. This allows him and other farmers to grow crops during Rabi season as well. He received silt from the Nala desilting process and has increased his net cultivable area by 0.5 acres. Jitendra has diversified his farm produce to Jowar, Bajra, Groundnut, Moong, and basic vegetables for household usage as well. He has also grown fruit trees like mango and custard apple on the boundary of his irrigation land.

His annual earnings have increased from INR 1.25 lakhs per annum to over INR 2.75 lakhs per annum, and he expects to increase it further once the cash crops are reaped



Figure 63 : Jitendra standing atop his new cultivable land



CSRBOX & NGOBOX

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Bopal, Ahmedabad, Gujarat 380058



Impact Assessment Report

**Tank Based Agriculture
Resources Advancement by
Nurturing Community-Led Growth
Patancheru, Telangana**

BHOMIK SHAH

Digitally signed by BHOMIK
SHAH
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Disclaimer

- This report has been prepared solely for the purpose set out in the Memorandum of Understanding (MoU) signed between Renalysis Consultants Pvt. Ltd. (CSRBOX) and Asian Paints Limited dated June 2023 to undertake the Impact Assessment of their “Water Resource Development Project” implemented in the financial year 2021-22.
- This impact assessment is pursuant to the Companies (Corporate Social Responsibility Policy) Amendment Rules 2021, notification dated 22nd January 2021.
- This report shall be disclosed to those authorized in its entirety only without removing the disclaimers.
- CSRBOX has not performed an audit and does not express an opinion or any other form of assurance.
- Further, comments in our report are not intended, nor should they be interpreted to be legal advice or opinion.
- This report contains an analysis by CSRBOX considering the publications available from secondary sources and inputs gathered through interactions with the leadership team of Asian Paints Limited, project beneficiaries, and various knowledge partners. While the information obtained from the public domain has not been varied for authenticity, CSRBOX has taken due care to obtain information from sources generally considered to be reliable.
- Specific to the Impact Assessment of the project, funded through Asian Paints Limited, CSRBOX has relied on data shared by the Asian Paints Limited’s team.

With Specific to Impact Assessment of “Tank Based Agriculture Resources Advancement by Nurturing Community-led Growth”

- CSRBOX has neither conducted an audit nor due diligence nor validated the financial statements and projections provided by Asian Paints Limited.
- Wherever information was not available in the public domain, suitable assumptions were made to extrapolate values for the same;
- CSRBOX must emphasize that the realization of the benefits/improvisations accruing out of the recommendations set out within this report (based on secondary sources) is dependent on the continuing validity of the assumptions on which it is based. The assumptions will need to be reviewed and revised to reflect such changes in business trends, regulatory requirements, or the direction of the business as further clarity emerges. CSRBOX accepts no responsibility for the realization of the projected benefits;
- The premise of an impact assessment is ‘the objectives’ of the project along with output and outcome indicators pre-set by the program design and implementation team. CSRBOX’s impact assessment framework was designed and executed in alignment with those objectives and indicators.

List of Abbreviations

Abbreviation	Definition
APL	Asian Paints Limited
CSR	Corporate Social Responsibility
SDG	Sustainable Development Goals
ESG	Environmental, Social, and Corporate Governance
SEBI	Securities and Exchange Board of India
FGD	Focused Group Discussion
IDI	In-Depth Interviews
KII	Key Informant Interviews
AFG	Agriculture Finance Groups
IGA	Income Generating Activities
EVP	Employee Volunteering Programs

Executive Summary



APL's social interventions have been continuing to make a positive contribution to society, focusing on water conservation and health & hygiene. APL had undertaken a project called "Tank-Based Agriculture Resources Advancement by Nurturing Community-Led Growth".

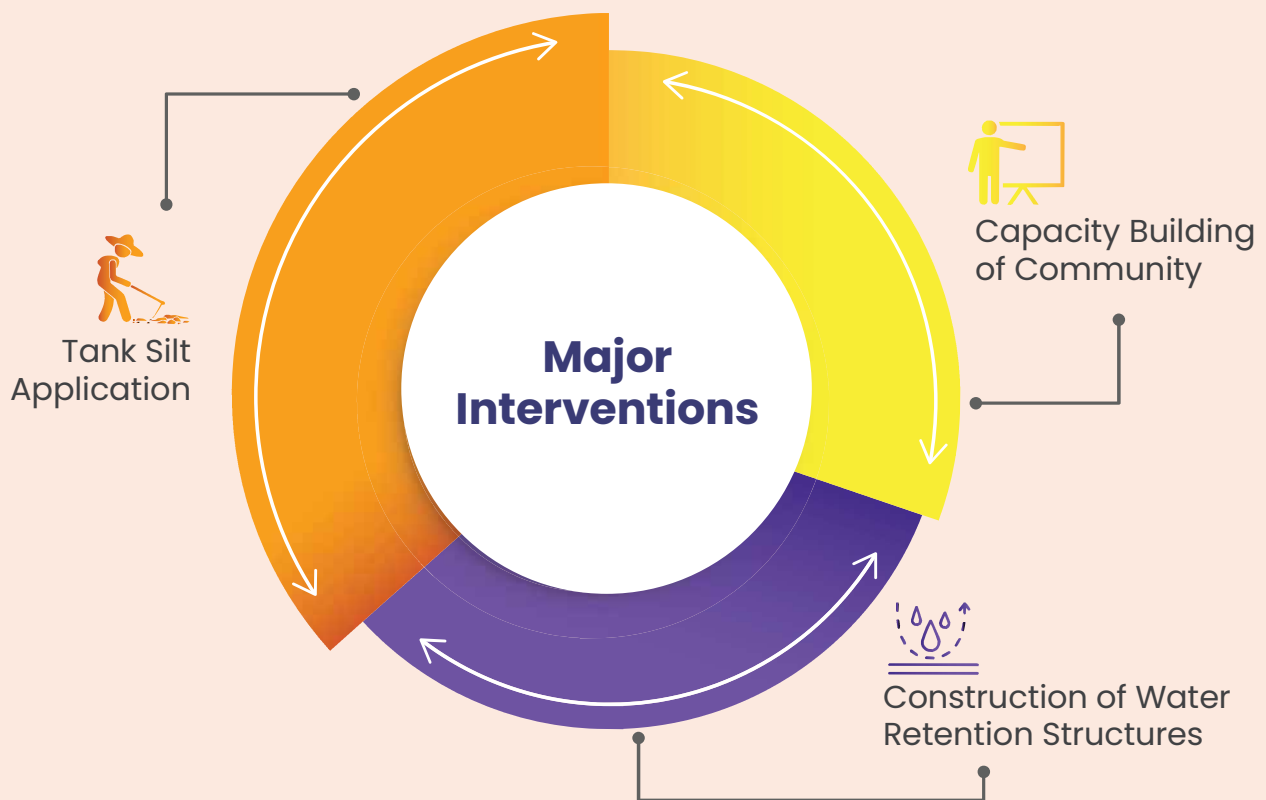


Figure 1: Project overview

As per the IRECS framework¹, the summarised Impact findings are stated below:

Inclusiveness

- 84% of the responses were collected from male members of the society, since mostly men were engaged in agricultural activities. Moreover, men were also encouraged to be part of AFGs (Agriculture Finance Groups)
- Beneficiaries of the intervention varied widely in the age group of 17 to 65 years of age
- Almost 39% of the beneficiaries did not have formal education

84%
of the
responses
were from
male

2. Relevance

- 80% of the beneficiaries were earning below INR 1 Lakh per annum. The intervention was aimed at improving water availability in the village, which in turn would enhance income from agriculture.
- 96% of the beneficiaries depend on agriculture as their primary source of income.
- 69% of the farmers in the villages were marginal farmers which left them vulnerable to drought and water scarcity before the intervention.
- 47% of the households have more than 5 family members, which increases the need of an enhanced source of income.
- Only 22% of the farmers could grow crops during the Rabi season, and less than 2% could grow crops during Zaid season before the intervention.
- 18% of the community members practised animal husbandry thus indicating that there was a need to diversify the sources of income
- 97% of the community members mentioned that they faced challenges while availing credit

96%
of the
beneficiaries
depend on
agriculture

¹<https://csrbox.org/What-are-the-Essential-Components-of-the-CSR-Impact-Assessment-under-CSR-Compliance.php>

3. Expectations

- 99% of the farmers mentioned that the intervention has improved irrigation prospects.
- Number of farmers irrigating Rabi season has increased from 22% to 61%, while it has increased from 2% to 4% for Zaid season.
- Average time taken to irrigate their farm lands has decreased from 1.5 hours to 1 hour
- Post intervention, the average area under cultivation has increased by almost 60% (from 2.2 acres per farmer to 3.5 acres per farmer)
- Approximately 98% of the farmers have experienced a saving in irrigation cost
- Average household income has increased by INR 51,451 after the intervention.
- Average number of livestock owned by the families has increased by 28% (from 5.3 cattle before intervention to 6.8 post-intervention)
- Almost 83% of the beneficiaries have invested the credit availed from AFGs in IGAs (Income Generating Activities)
- 98% of the community members have seen an improvement in their material well-being² after the intervention, while 87% have seen improvement in their personal well-being³.

INR 6.7
social value
generated from
the program
on every
investment of
INR 1

99%

of the
farmers have
experienced
improved
irrigation
prospects

4. Convergence

- Vayalagams and Agriculture Finance Groups (AFGs) were formed in the villages. These community-led institutions were responsible for the identification of beneficiaries and implementation of the projects.
- DHAN Foundation acted as the implementing partner for the projects.

5. Service Delivery

- The successful execution of projects before the monsoon season was made possible through the timely allocation of funds, effective cooperation with government partners who played a crucial role in securing approvals from different government levels within the required timeframe, and active engagement of the local community.

²Material well-being: Financial satisfaction, financial stress, feelings of financial security, subjective economic well-being, satisfaction with standard of living, and satisfaction with material possessions. (Sirgy, M.J. The Psychology of Material Well-Being. *Applied Research Quality Life* 13, 273–301 (2018). <https://doi.org/10.1007/s11482-017-9590-z>)

³Physical well-being: Physical & mental health, happiness, emotional & psychological welfare (Kuruvilla, M., & George, I. (2020). *Handbook of Research on new dimensions of gender mainstreaming and women empowerment*. IGI Global, Information Science Reference)

Impact of the Intervention

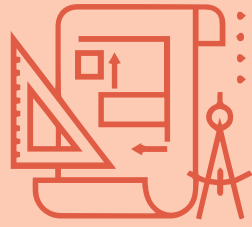
Table 1: Comparative analysis (pre and post-intervention)

Factors for comparison	Prior to intervention (n=283)	Post-intervention (n=283)
Farmers practicing farming during Kharif season	99%	99%
Farmers practicing farming during Rabi season	22%	61%
Farmers practicing farming during Zaid season	2%	4%
Average time to irrigate land	1.5 hours	1 hour
Average no. of livestock owned by households	5.3	6.8
Average land area available for cultivation	2.2 acres	3.5 acres
Average annual family income of households	INR 94,000	INR 1,45,451

Table 2: Comparative analysis (control & treated villages)

Factors for comparison	Control villages (n=100)	Treated villages (n=283)
Farmers able to grow crop during Rabi season	0%	61%
Farmers able to grow crop during Zaid season	0%	4%
Average time taken to irrigate their land	1.6 hours	1 hour
Average no. of livestock owned by households	3.2	6.8
Average annual income of households	INR 69,800	INR 1,45,451





Chapter 1.

Project Background and Overview

1.1 CSR Initiatives of Asian Paints Limited

1.2 About the Program

1.3 Relevance of the Intervention

1.4 Alignment with CSR Policy

1.5 Alignment with ESG Principles

1.6 Alignment with SDGs



This section provides an overview of the funding organization, the program cardinals and the detailed interventions.

1.1 CSR Initiatives of Asian Paints Limited

Standing true to their Charter, to bring joy, and happiness to people's lives, the CSR vision of Asian Paints Limited (APL) is based on embedded tenets of trust, fairness, and care to maximise efforts.⁴

Health & Hygiene

APL aspires to deliver primary health care support through diagnosis and treatments to the communities. Interventions include promoting preventive healthcare, building awareness about hygiene, sanitation, maternal & child health care, setting up medical infrastructure, instrumenting clean drinking water habits, etc.



Disaster Management

As a responsible company, APL focuses towards mitigating the effects of the crisis created by natural disasters, pandemic or likewise. APL has partnered with the Government on various instances to provide support and aid. APL has also worked with different partners for distribution of essentials among communities during the time of crisis.

Enhancing Vocational Skills

APL provides specialized and skill-based training to painters, carpenters, plumbers, etc., to enhance their skills, empower them, provide opportunities to secure better employment and improve their livelihood.



Water

Water being a valuable and scarce resource that one shares with their surrounding communities, APL has identified water conservation and management as a key area of intervention.

⁴<https://www.asianpaints.com/content/dam/asianpaints/website/secondary-navigation/about-us/corporate-citizenship/Corporate%20Social%20Responsibility%20Policy.pdf>

The initiatives in this thrust area include further:



a. Creating capacities in conserving water through significant investments in partnership with relevant stakeholders, with the objective of water conservation.

b. Educating farmers in looking at various Government schemes with the objective of water management.



c. Undertaking water replenishment projects in the communities surrounding our factories.

The approach also includes providing support and infrastructure at each stage of water conservation, water preservation, water recharge and waste-water treatment.



1.2 About the Program

In collaboration, Asian Paints Limited and DHAN Foundation have launched a large-scale water conservation program called "TARANG" in Sangareddy district, addressing the pressing issue of water scarcity in the region. The program, titled "Tank Based Agriculture Resources Advancement by Nurturing Community-led Growth," aims to achieve several key objectives:

- Livelihood enhancement through integrated water resource management
- Sustaining community-led natural resource management
- Construction of water retention structures which aim to ensure water security, harvest rainwater, and enhance food production



Through these initiatives, the **TARANG program** strives to address water scarcity challenges, improve livelihoods, and promote sustainable water resource management in Sangareddy district.

Figure 2 Map of Sangareddy District

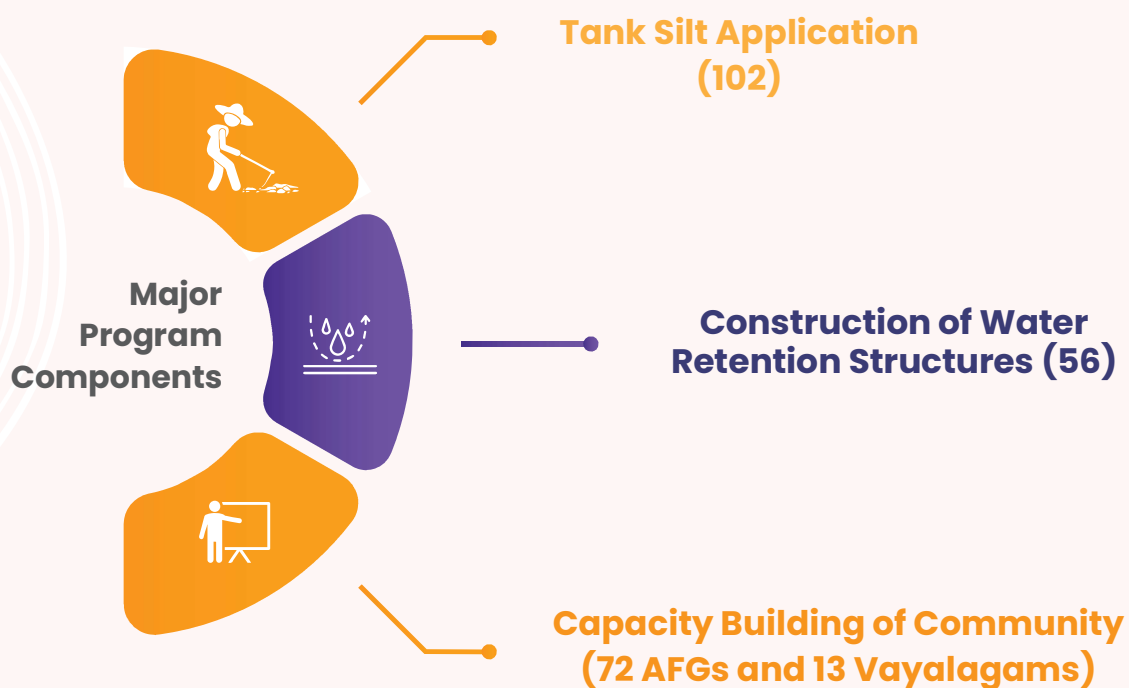


Figure 3 Overview of major program components

The detailed interventions of the project across the villages are mentioned below:

Table 3: Details of Community-led Institutions

Sl. No.	Name of village	Number of Community-led Institutions established	
		Vayalagam	Agriculture Finance Groups (AFGs)
1	Brahmanaguda	3	16
2	Chintakunta	1	4
3	Govindarajpally	1	-
4	Lingapur	1	-
5	Madhura	1	6
6	Mansanpally	1	6
7	Naguldevpally	1	11
8	Ramsanpally	1	9
9	Sikindlapur	1	3
10	Tadamanoor	1	12
11	Tellarallathanda	1	5
Average Savings (INR)		23,450	

Table 4: Details of Water Retention Structures

Sl. No.	Name of village	Farm Ponds created	Mini Percolation Tanks created	Check Dams created	Sunken Ponds created	Ponds desilted
1	Brahmanaguda	2	1	-	-	1
2	Chintakunta	6	-	-	-	-
3	Govindarajpally	11	1	1	2	-
4	Lingapur	7	-	-	-	-
5	Madhura	1	3	-	-	-
6	Mansanpally	-	-	-	-	-
7	Naguldevpally	9	1	-	-	1
8	Ramsanpally	6	-	-	-	1
9	Sikindlapur	-	-	-	-	-
10	Tadamanoor	2	-	-	-	1
11	Tellarallathanda	1	-	2	-	-
Capacity of water body (Cubic Meters)		37,853	27,650	2,600	937	102 farmers impacted

1.3 Relevance of the intervention

- Telangana has a long history of experiencing erratic monsoon patterns. The state has also experienced severe water scarcity in the past that has resulted in crop failures and widespread economic distress.
- The presence of red soil in the region exacerbates the water scarcity challenges. Red soil has poor water retention capacity, leading to rapid water seepage and minimal water availability for prolonged periods.
- Due to the erratic rainfall pattern and the inability of ponds and lakes to hold water effectively, farmers face difficulties in cultivating crops year-round. This situation has compelled many farmers to resort to subsistence farming, relying heavily on the limited water available during the monsoon (Kharif) season. The lack of water retention and the reliance on seasonal rainfall restrict farming practices primarily to the Kharif season, leaving the Rabi and Zaid seasons largely underutilised for agriculture.

1.4 Alignment with CSR Policy

The Schedule VII (Section 135) of the Companies ACT, 2013 specifies the list of activities that can be included by the company in its CSR policy. The below-mentioned table shows the alignments of the intervention with the approved activities by the Ministry of Corporate Affairs.

Sub Section	Activity as per Schedule VII	Alignment
(ii)	Promoting education, including special education and employment enhancing vocation skills especially among children, women, elderly and differently abled and livelihood enhancement projects	Partially
(iv)	Ensuring environmental sustainability, ecological balance, protections of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining quality of soil, air and water including contribution to the Clean Ganga Fund set-up by the Central Government for rejuvenation of river Ganga	Completely

1.5 Alignment with ESG Principles

The program's intervention also aligns with the ESG Sustainability Report of the corporate. Particularly, concerning the Business Responsibility & Sustainability Reporting Format (BRSR) shared by the Securities & Exchange Board of India (SEBI), the program aligns with the principle mentioned below.

Principle 2



Businesses should provide goods and services in a manner that is sustainable and safe

Principle 4



Businesses should respect the interests of and be responsive to all its stakeholders





Principle 6

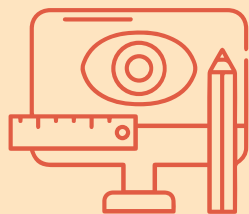


Businesses should respect and make efforts to protect and restore the environment

1.6 Alignment with SDGs

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2016 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

Sub Section	Activity as per Schedule VII	Alignment
	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 per day	Completely
	1.4 Ensure that all men and women, particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	Completely
	2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	Completely
	6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Completely
	6.6 Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.	Partially
	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	Partially



Chapter 2.

Design and Approach for Impact Assessment



2.1 Objectives of the Study

2.2 Evaluation Framework & Indicators

2.3 Methodology

2.4 IRECS Framework

2.5 Stakeholders Mapping

2.6 Sampling Approach

2.7 Theory of Change

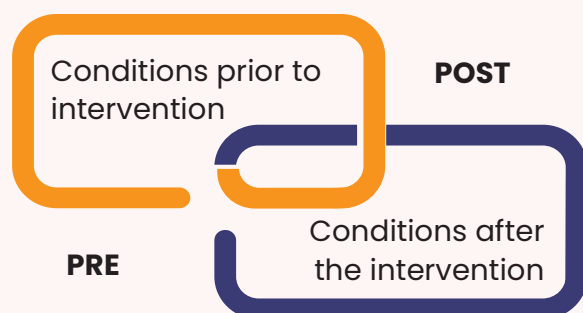
This section provides an overview of the objectives of the study, the adopted research methodology, and other details revolving around the study.

2.1 Objectives of the Study



2.2 Evaluation Framework & Indicators

Given the objectives of the study and the key areas of inquiry, the design of the evaluation focused on learning as the prime objective. In this section, CSRBOX presents the approach towards developing and executing a robust, dynamic, and result-oriented evaluation framework and design. The team would like to highlight that this is only a suggestive framework, and the detailed approach will be finalised in consultation with the client and program coordinators.



To measure the impact, a pre-post program evaluation approach was employed for the study. This approach is dependent on the recall capacity of the beneficiaries. Under this approach, the beneficiaries are enquired about conditions before the program intervention and after the program intervention.

The difference helps in understanding the contribution of the program in improving the intended condition of the beneficiary. This approach, at best, can comment on the contribution of the program in improving the living standards though may not be able to attribute the entire changes to the program. Other external factors, like government interventions, may also play a role in bringing positive changes along with the program. Hence, the contribution was assessed, but attribution may not be entirely assigned to the program.

2.3 Methodology

For the assessment of the program, we employed a two-pronged approach to data collection and review that included secondary data sources and literature, as well as primary data obtained through quantitative and qualitative methods of data collection. The figure below illustrates the study approach used in data collection and review. The secondary study involved a review of annual reports, monitoring reports, and other studies and research by renowned organisations available in the public domain for drawing insights into the situation of the area.

The **primary study** comprised qualitative and quantitative approaches to data collection and analysis. The qualitative aspects involved in-depth interviews (IDIs) with the youth trainees/ trainees, centre in-charges, trainers and other institute-associated stakeholders.



In addition to primary data collection, the consultants studied various **project documents** like Project Proposal, Project log-frame (Logical Framework Analysis), Baseline and Project cost and other available documents, Project implementation timelines, Communication and M&E reports, documentation products and other relevant reports/literature related to the projects.

The consultants also studied project implementation-related documents, specifying details of activities carried out, processes undertaken, no. of beneficiaries reached, and details of spent & unspent budgets under different budgetary heads.

Study Report

Review of annual reports, publications by Ministries, other relevant government reports

Program reports

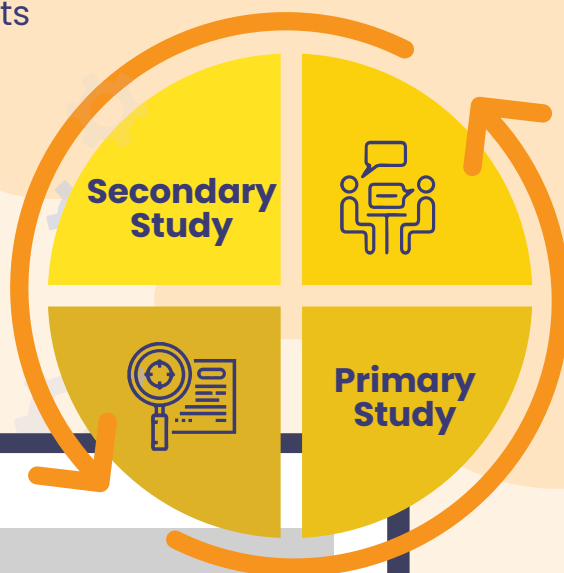
Quantitative/ Qualitative Study

Quantitative Survey

IDIs

KIIs

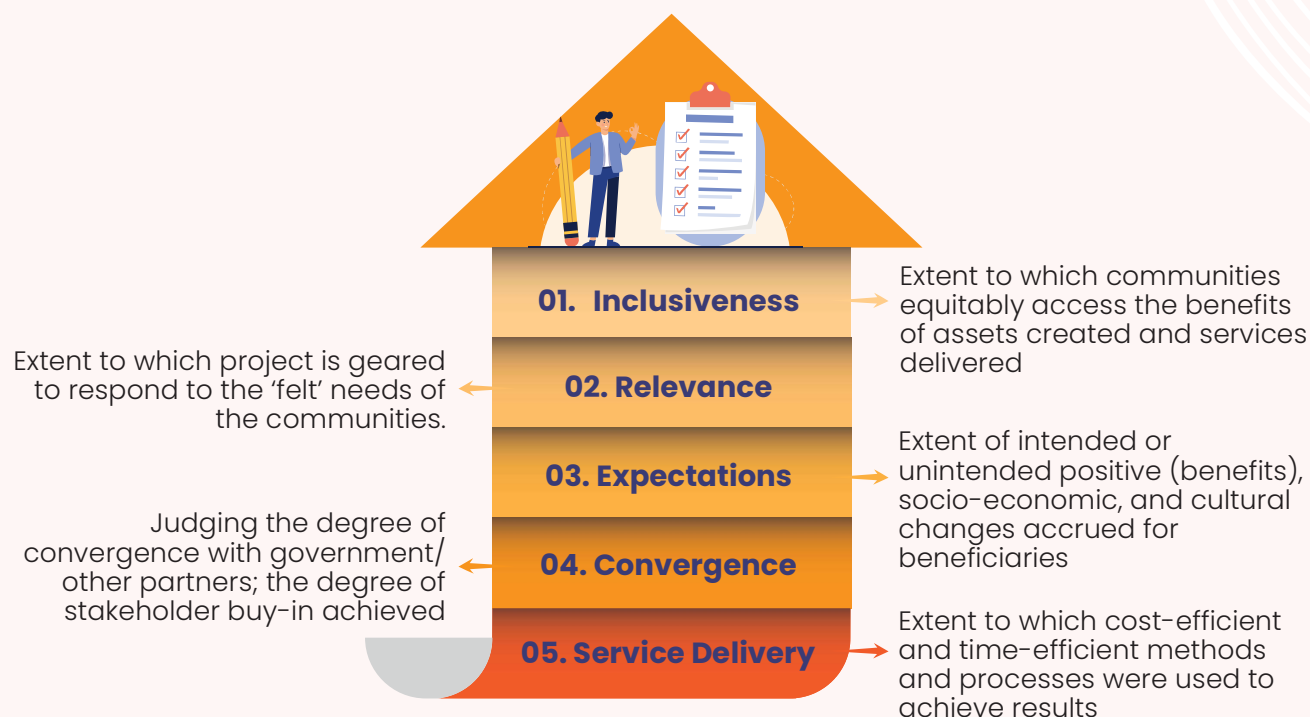
FGDs



2.4 IRECS Framework

To determine the inclusiveness, relevance, appropriateness, coherence, effectiveness, impact potential, and efficiency of the program, the evaluation used the IRECS Framework. Using the logic model and the criteria of the IRECS framework, the evaluation assessed the APL team's contribution to the results, while keeping in mind the multiplicity of factors that might have affected the overall outcome.

The social impact assessment hinged on the following pillars:



2.5 Stakeholders Mapping

Primary Stakeholders	Mode of Data Collection
Beneficiaries of the program	Physical Survey

Secondary Stakeholders	Mode of Data Collection
Agriculture Finance Groups (AFGs)	FGDs
PRI members	In-Depth Interviews
Krishi Vigyan Kendra Officials	In-Depth Interview
APL Team	Key Informant Interview
DHAN Foundation	Key Informant Interview

2.6 Sampling Approach

Geographic Sampling

	Universe	Sample	Rationale
Treatment Villages	26	6	25% of the geographic universe
Control Villages*	Infinite	3	50% of the number of treatment villages

*The villages which weren't part of the intervention

Quantitative Sampling

A stratified random sampling approach was used for the Impact Assessment study. For the calculation of sample size, 95% Confidence Level and 7.5% Margin of Error⁵ was considered. The samples for the control group were selected from villages that do not have any intervention from the APL project.



Stakeholders	Name of Village	Mode of Data Collection	Universe	Sample Size	Rational
Farmers (Treatment Villages)	Brahmanaguda	Survey	Infinite	57	95% CL, 7.5% MoE
	Govindarajpalli			14	
	Lingapur			44	
	Madhura			51	
	Naguldevpally			44	
	Tellarallathanda			42	
	Ramsanpally			31	
	Total			283	

Stakeholders	Name of Village	Mode of Data Collection	Universe	Sample Size	Rational
Farmers (Control Villages)	Aathmapur	Survey	Infinite	35	25% of the sample size of treatment group
	Devunigutathanda			29	
	Sikandarpur			36	
	Total			100	

⁵ Confidence level – Indicates probability with which estimation of the location of a statistical parameter in a sample survey is also true for the population; Margin of error – range of values above and below the actual results from a survey

Qualitative Sampling

The different stakeholders involved in the project or related to the intervention villages were interviewed for qualitative data.



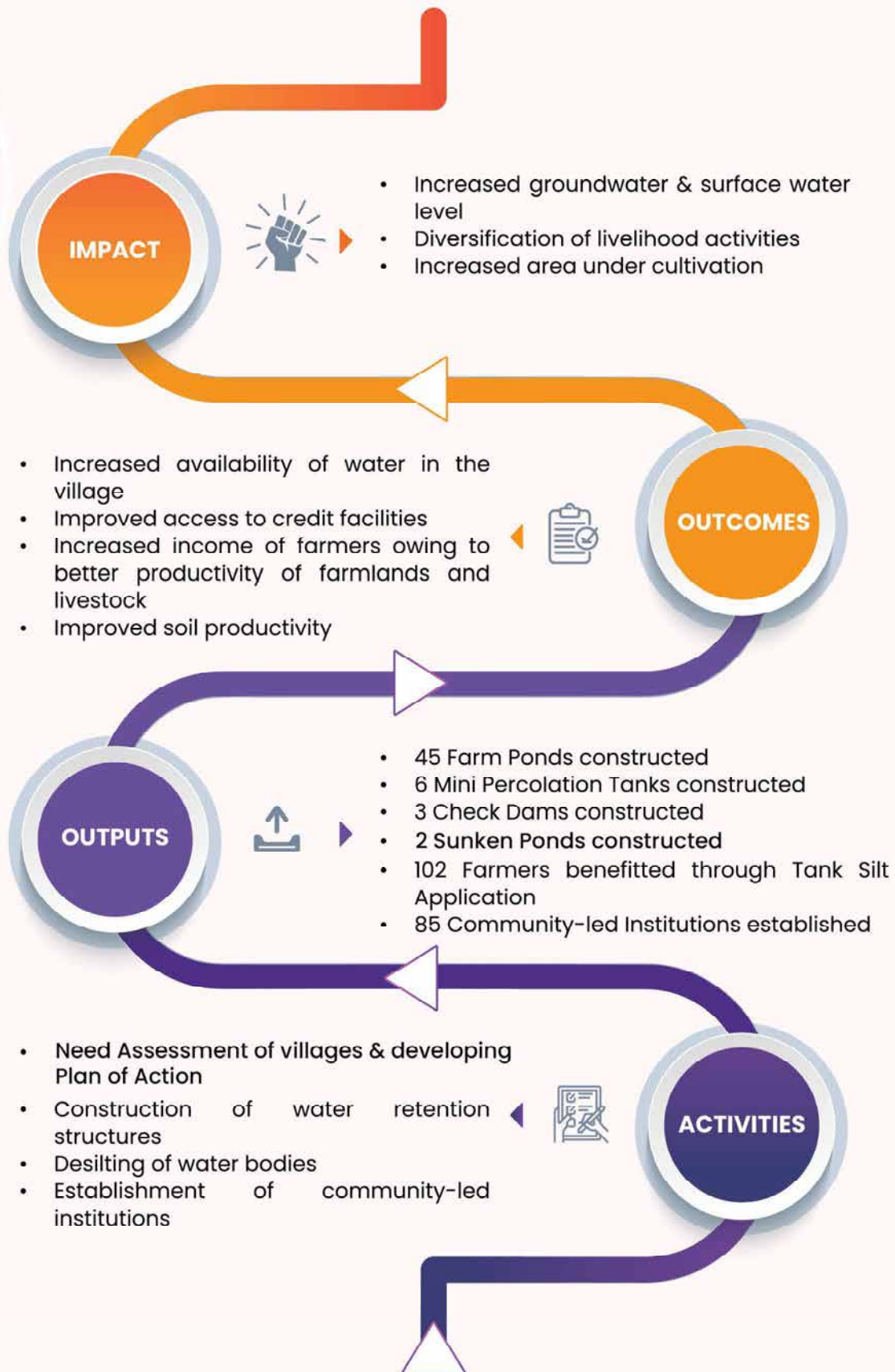
Stakeholders (in treatment villages)	Qualitative tool	No. of samples for qualitative study
PRI members	IDIs	6
Government Officials	KIIs	2
DHAN Foundation	KIIs	4
Agriculture Finance	FGD	3

Soil Sampling

To assess the effects of silt application on farmlands, a total of 10 soil samples were gathered. Among these, 5 samples were collected from farms that had undergone silt application in the previous year, while the remaining 5 samples were collected from farmlands without any silt application. Special care was taken to ensure that both sets of soil samples were obtained from comparable geographic locations, thus minimizing the influence of other factors on soil properties. The soil sample tests have been assessed the micro and macro nutrients like Nitrogen, Phosphorous Potassium, calcium, magnesium, zinc, and sulphur content of the soil in its study.



2.6. Theory of Change



Erratic rainfall patterns and the presence of red soil in the region posed challenges for agriculture and allied activities



Chapter 3.

Finding of the Impact Assessment Study

3.1 Inclusiveness of the Program

3.2 Relevance of the Program

3.3 Expectations from the Program

3.4 Convergence

3.5 Service Delivery

3.6 Social Return on Investment



The Schedule VII (Section 135) of the Companies ACT, 2013 specifies the list of activities that can be included by the company in its CSR policy. The below-mentioned table shows the alignments of the intervention with the approved activities by the Ministry of Corporate Affairs.

3.1 Inclusiveness of the Program

The inclusiveness of the program measures the extent to which the communities could equitably access the benefits of the intervention, irrespective of their age, gender, income, etc.



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Gender distribution (n=283)

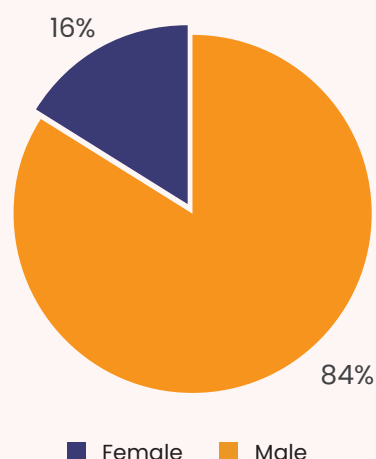


Figure 4 Gender distribution

Age group distribution (n=283)

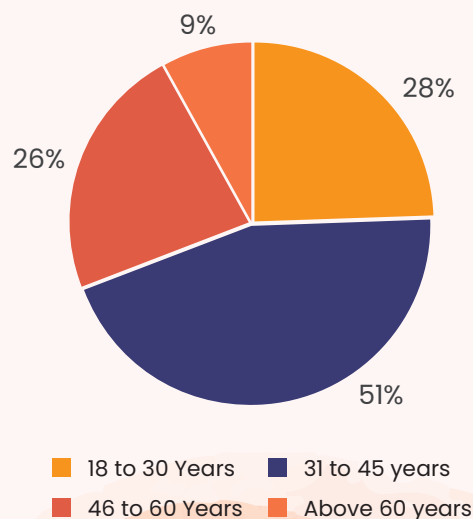


Figure 5 Age group distribution

Throughout the data collection process, the team engaged with community members residing in the targeted villages. Almost **84% of the surveys were collected from male members** of the community and around 16% from females. This distribution was influenced by the fact that male community members actively participated in agriculture and allied activities, making them well-suited to provide valuable insights into drawing a comparative analysis of water resource availability and usability prior to and post the intervention.

Around 51% of the beneficiaries were from the age group **31 to 45 years**. This age range typically represents the prime working years for individuals, where they have gained sufficient experience and knowledge in agricultural practices. They have likely acquired skills and expertise through years of hands-on experience, making them well-equipped to handle the demands of agricultural and allied activities.

Among the beneficiaries, **around 39% did not have any formal education**. Similarly, around 42% of the beneficiaries had completed matriculation.

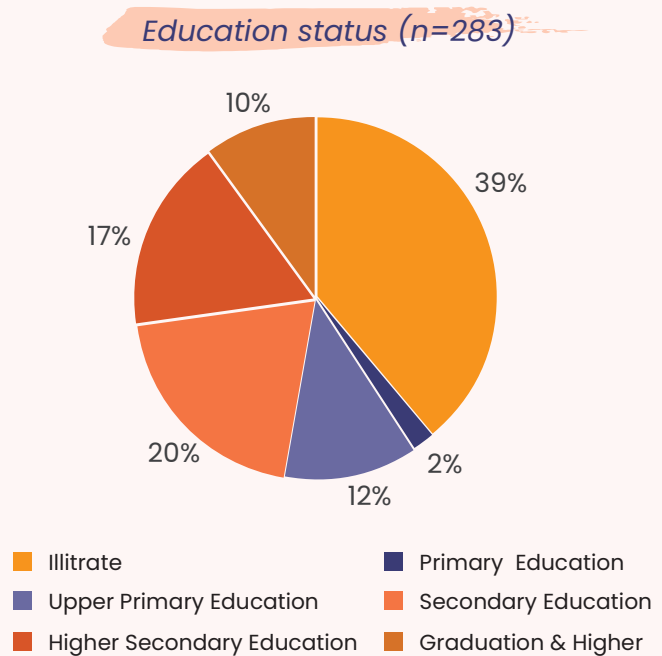
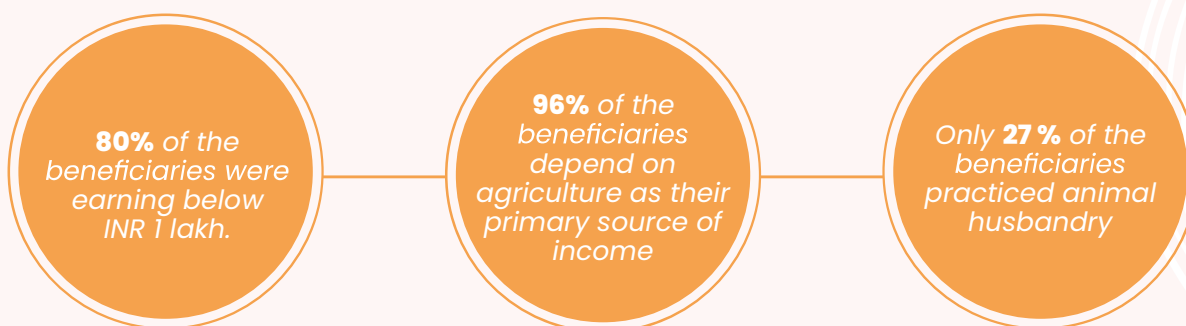


Figure 6 Education status



3.2 Relevance of the Program



The relevance of the program is determined by the extent to which the intervention inclines towards 'felt' needs of the communities.

The average annual rainfall of the district is 910 mm, which ranges from nil rainfall in December, January and February to 229 mm in July. July is the wettest month of the year⁶. The soil of the district is mainly red earth comprising loamy sands, sandy loams and sandy clay loams⁷. The regions where the intervention took place receive sufficient rainfall during the rainy season. However, the predominant challenge arises from the nature of the soil. Red soils, known for their characteristics such as high leaching, limited water retention capacity, inadequate nutrients, low organic matter (humus), and acidity, pose difficulties for crop cultivation.⁸

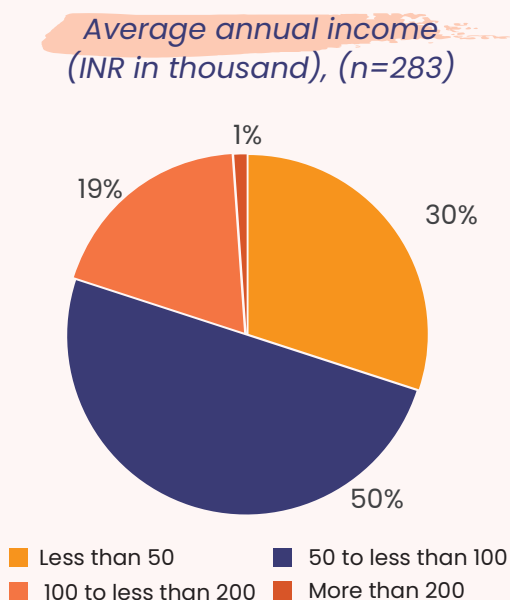


Figure 7 Average annual income

Around 80% of the respondent households had an annual earning of INR 1 lakh or less.

The objective of enhancing water availability was to improve the productivity of agriculture and allied activities. This improvement, in turn, could boost the income of these households. The program holds significant relevance by addressing the needs of the families and striving towards increased income generation. This is achieved through diversification of livelihood practices and enhanced productivity of their farmlands.

⁶http://cgwb.gov.in/District_Profile/Telangana/Medak.pdf

⁷<https://medak.telangana.gov.in/about-district/#:~:text=The%20soil%20of%20the%20district,is%20found%20in%20the%20district.>

⁸Baligar, V. C.; Fageria, N. K.; Eswaran, H.; Wilson, M. J.; He, Zhenli (2004), Wilson, M. J.; He, Zhenli; Yang, Xiaoe (eds.), "Nature and Properties of Red Soils of the World", The Red Soils of China: Their Nature, Management and Utilization, Dordrecht: Springer Netherlands, pp. 7-27, doi:10.1007/978-1-4020-2138-1_2, ISBN 978-90-481-6597-1

The survey findings indicate that while 89% of the households owned less than 4 acres of land. Around 49% of the respondent households stated that they had less than 2 acres of cultivable land. As per their operational holdings, these beneficiary farmers can be classified as marginalized farmers⁹.

Primary occupation (n=283)

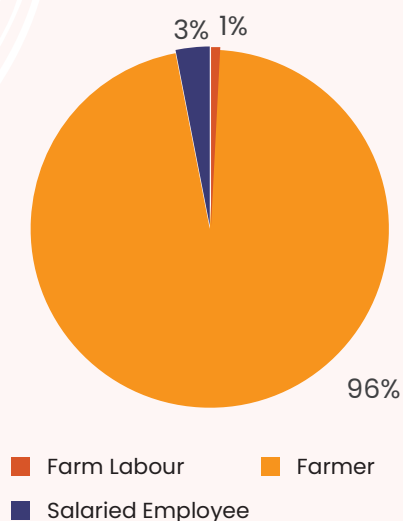


Figure 8 Primary income

Total landholding (Area in acres), (n=283)

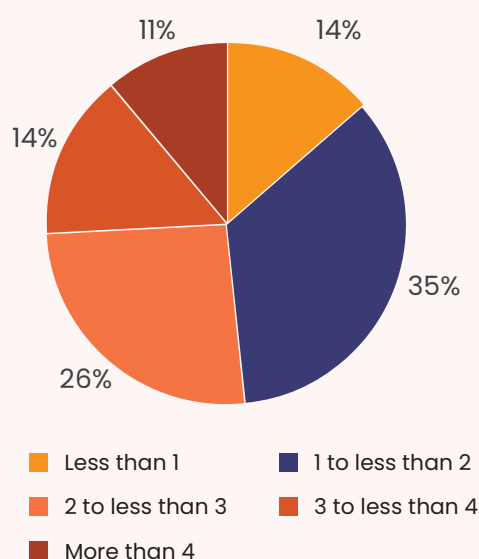


Figure 9 Total landholding

The prevalence of red soil in the region intensifies the situation due to its high porosity, which leads to significant water seepage. To address this issue, the intervention became crucial, especially considering that over 95% of the community members rely on farming as their primary means of livelihood. The objective of constructing water retention structures at both individual and community levels was to ensure the prolonged availability of water for irrigation purposes.

The survey data indicates that approximately 49% of the households had 3 to 4 members. This indicates that a significant number of Individuals depend on agriculture as a means to sustain their livelihood and meet their basic needs. Inadequate water supply can have a severe impact on this substantial population, affecting their livelihoods and overall well-being.

Average family size (n=283)

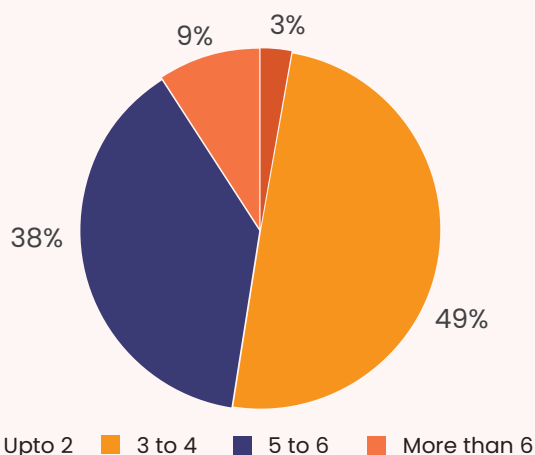
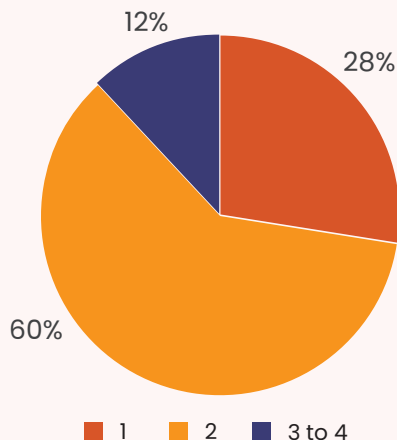


Figure 10 Average family size

⁹<https://pib.gov.in/Pressreleaseshare.aspx?PRID=1562687>

Number of working members (n=283)



It is commonly observed that households involved in agriculture tend to engage a larger number of family members due to the labour-intensive nature of farming in India. The survey data confirms this trend, with nearly **73% of the households** reporting that more than two members of their family are engaged in agricultural activities.

Figure 11 Number of working members

Almost all the farmers mentioned that they traditionally engaged in cultivating their lands during the Kharif Season. However, the region experienced severe water scarcity during the winter and summer seasons and hence the farmers could not cultivate their lands. Qualitative interactions with the villagers indicated that several members of the villages practised short-term circular migration to support their families.

Cropping season before intervention (n=283)

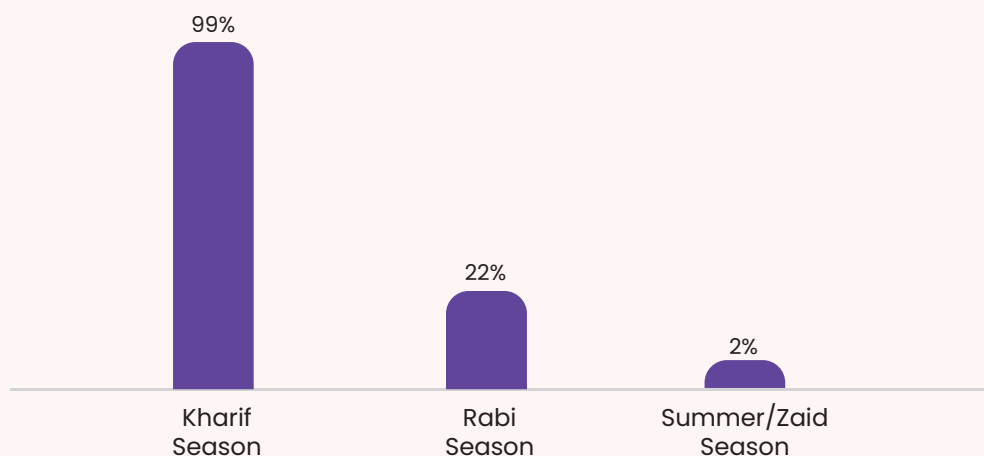
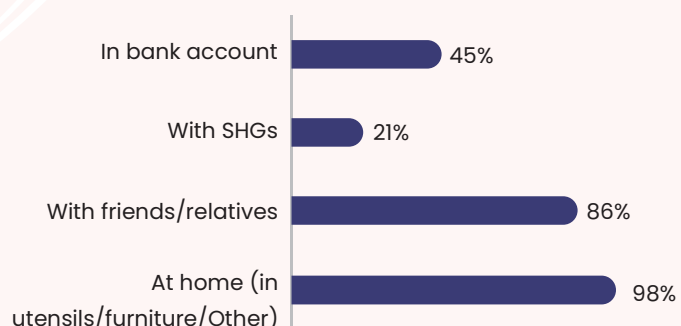


Figure 12 Cropping season before intervention

The survey findings indicate that prior to the intervention, **only about 18% of the villagers owned livestock**. Interactions with community members revealed that the practice of rearing livestock was not prevalent among the villagers due to water scarcity issues, which made it challenging to provide sufficient water for the animals. Additionally, herders heavily relied on tube wells and borewells for water supply, which had to meet both the irrigation needs of crops and the drinking and bathing requirements of cattle.

Community members further mentioned that practising mono cropping posed difficulties in providing consistent husk and feed for the livestock throughout the year. Limited income from mono-cropping was another constraint, as villagers lacked sufficient disposable income to invest in additional income-generating activities. These challenges indicate the need for interventions aimed at addressing water scarcity, diversifying livelihoods, and improving the financial stability of the community members.

Saving pattern before intervention (n=283)



Around 98% of the AFG members acknowledged their habit of saving money at home or entrusting it to friends and relatives. However, such practices not only deprive individuals of potential financial growth through interest earned in savings accounts but also expose them to risks of thefts and accidents. Despite all members having bank accounts, only 45% actively utilized their accounts for saving money.

Figure 13 Saving pattern before intervention

A significant majority of approximately 91% of the AFG members admitted to resorting to borrowing money from local moneylenders or landlords. Additionally, borrowing funds from friends and relatives was also a common practice within the village community. Borrowing money from informal sources has a few upsides like ready availability of loans, zero or minimal paperwork and varied degrees of collateral.

Credit pattern before intervention (n=283)

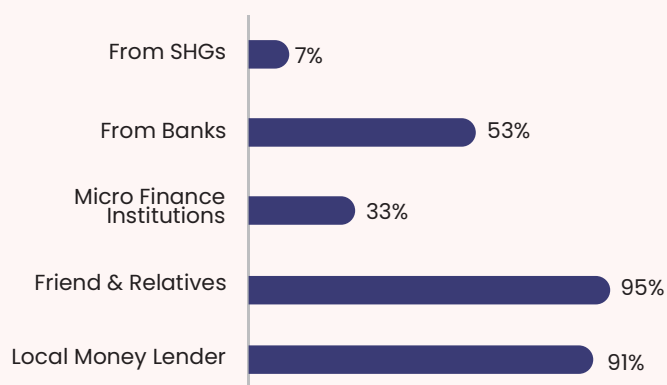


Figure 14 Credit pattern before intervention

However, it is important to note that relying heavily on informal borrowing channels can result in higher interest rates, limited financial flexibility, and potential strains on personal relationships. Beneficiaries mentioned that sometimes they are exploited by moneylenders and landlords. Moreover, high interest rates and lack of transparency in terms and conditions of the repayment was also a matter of concern for the majority of the beneficiaries.

Challenges faced while availing credit (n=283)

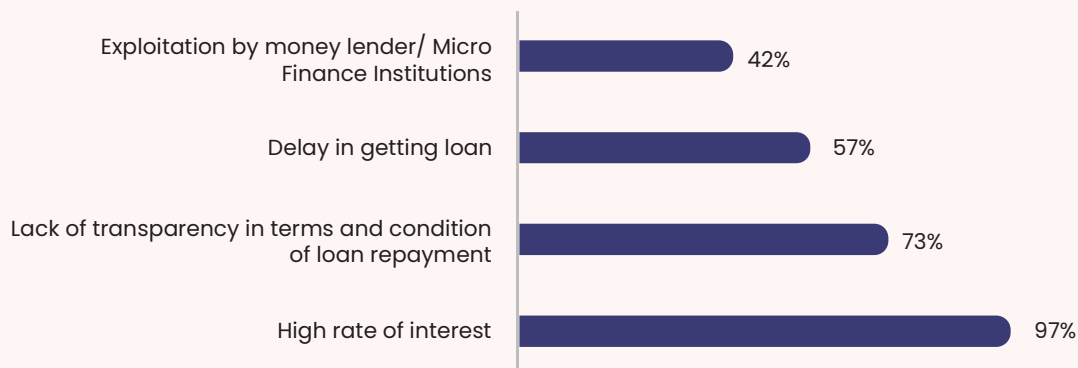


Figure 15 Challenges faced while availing credit

3.3 Expectations from the Program

Expectations define the extent to which the intended and unintended positive benefits, socio-economic changes and cultural changes are experienced by the beneficiaries. The insights drawn from the data collected as a part of the survey are stated below.

A significant portion of the population in the region relies on agriculture as their primary source of livelihood. However, due to the porous nature of the soil in the area, water availability was limited during the post-monsoon season, leading to a decrease in farmers' income. Therefore, the primary objective of the intervention was to enhance irrigation possibilities and boost soil productivity. Additionally, the interventions aimed to diversify the income streams of community members.

The intervention had three major components



Tank Silt Application



Capacity Building of community



Construction of Water Retention Structures

Improvement in Livelihood

Since the primary livelihood activity followed by the beneficiaries was farming, an increase in the availability of water for farmlands was of utmost importance as an outcome of the program. Moreover, herders also mentioned having experienced an improvement in health and an increase in the productivity of livestock.



Improvements observed after intervention (n=283)

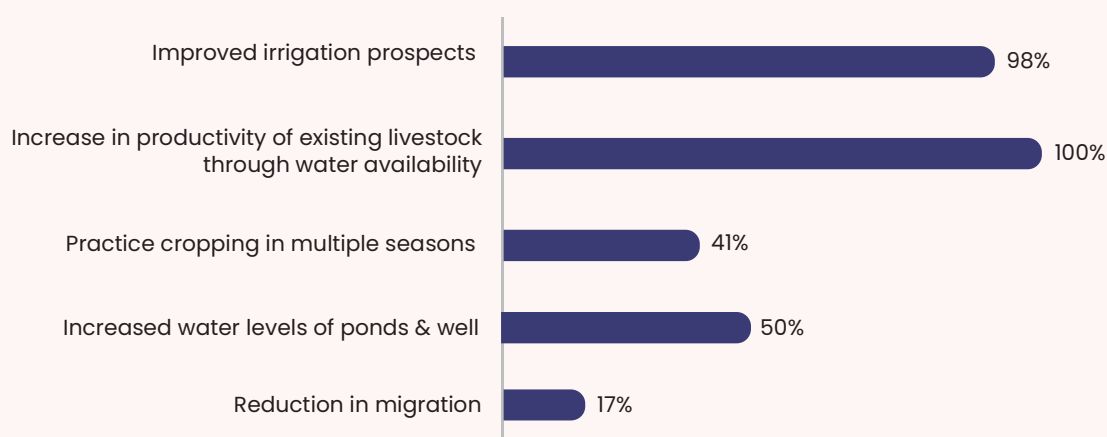
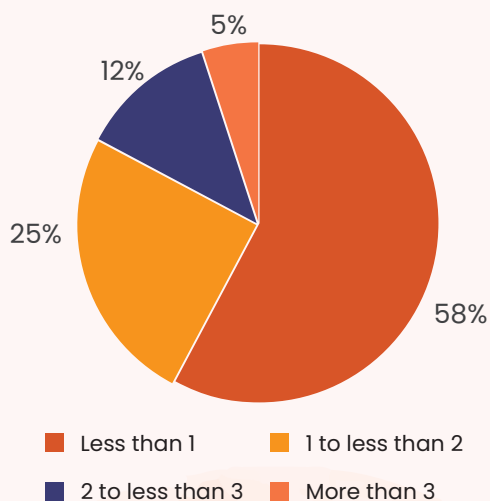


Figure 16 Improvements observed after intervention

Increase in cultivable land (Area in acres), (n=283)



The majority of farmers acknowledged significant enhancements in their irrigation prospects after the intervention. Additionally, more than 60% of farmers reported being able to engage in farming during the Rabi season, which was made possible by the intervention. Furthermore, approximately 80% of the farmers indicated experiencing improved productivity after the intervention. These findings underscore the positive impact of the intervention on irrigation, enabling farmers to cultivate during additional seasons, and boosting overall agricultural productivity.

Figure 17 Increase in cultivable land

Data indicates that majority of the farmers, **around 88%**, are able to irrigate their farmlands within an hour.

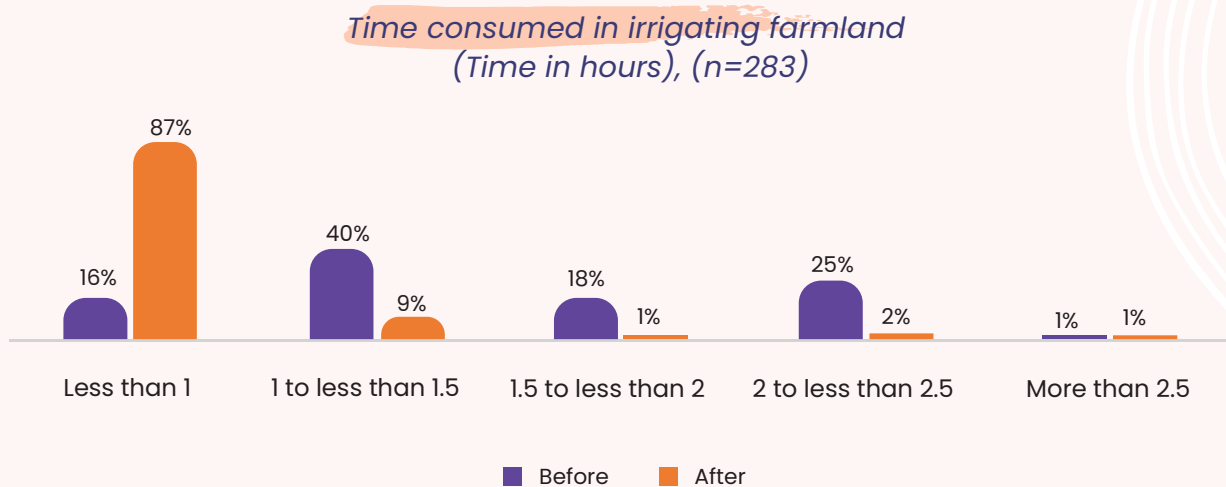


Figure 18 Time consumed in irrigation farmland

The intervention not only improved irrigation efficiency but also facilitated crop diversification, fostering a more sustainable and economically viable farming ecosystem. In addition to experiencing a reduction in irrigation time, farmers reported an expansion in the area under irrigation following the intervention. The majority of the farmers mentioned that they utilized the additional land under irrigation to cultivate paddy. Moreover, a significant portion of the farmers also stated that they currently practice subsistence farming of vegetables in the additional area under irrigation.

Timely irrigation played a crucial role in improving the grain size and quality of the crops.

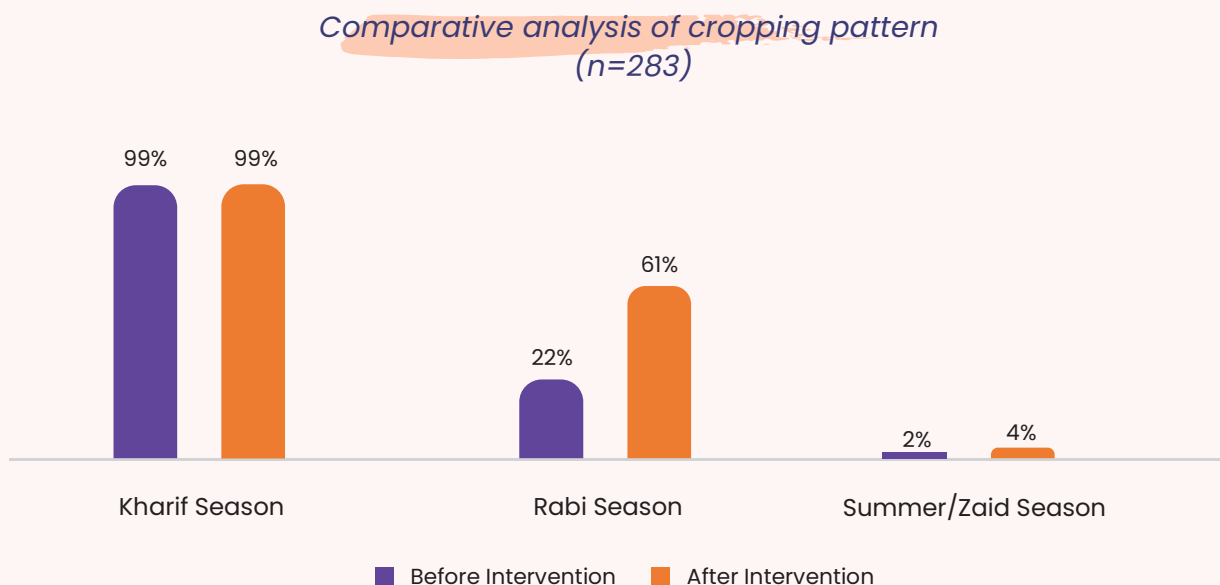


Figure 19 Comparative analysis of cropping pattern



Figure 20 Farm pond at Tellarallathanda village

Moreover, over 60% of the participants reported successfully cultivating a second crop during the Rabi season, predominantly focusing on paddy. This practice has proven to be highly beneficial, significantly enhancing the farmers' income. The intervention's impact on both production and income has been evident, demonstrating the positive outcomes of improved irrigation practices and crop diversification.

Impact on irrigation practices (n=283)

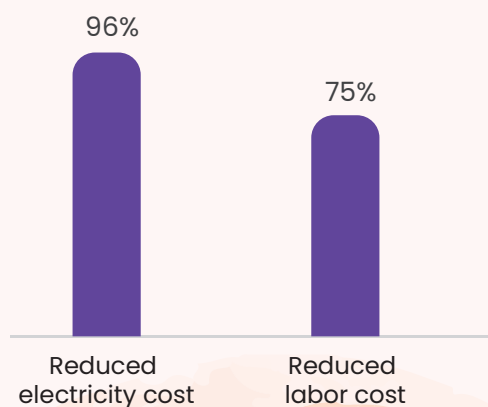


Figure 22 Impact on irrigation practices

Average increase in production (n=283)

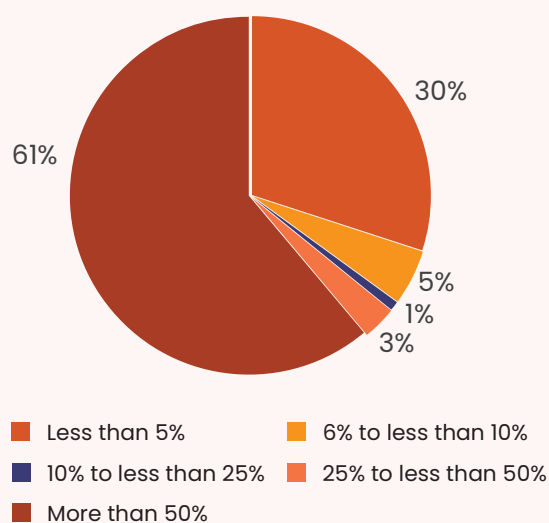


Figure 21 Average increase in production

In addition to driving income growth, the intervention has made a substantial impact on increasing farmers' savings. Farmers stated that since the intervention, irrigating their fields no longer consumes significant time, enabling them to handle the task themselves without the need for additional labourers. Consequently, they have seen a **significant reduction in labour costs**.

Furthermore, farmers highlighted that improved and consistent water flow from pumps has led to a notable decrease in electricity expenses. This consistent water supply has also resulted in a reduced frequency of breakdowns for tube wells and borewells. Overall, the intervention has successfully contributed to cost savings for farmers, positively affecting their financial well-being. On average, farmers mentioned saving approximately INR 1,148 per year due to the reduction in labour and electricity costs.

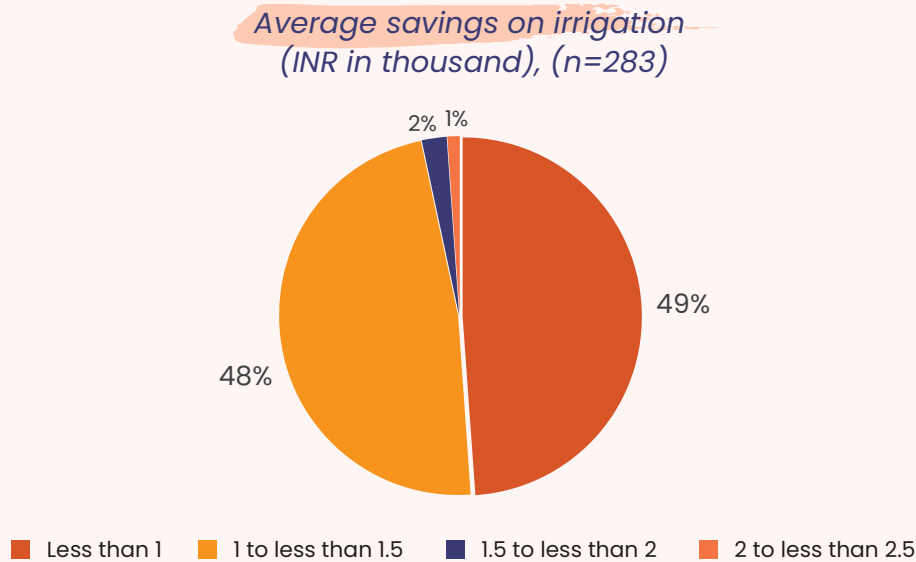


Figure 23 Average savings on irrigation

Tank Silt Application is another project that has significantly contributed to the improvement in the lives of the farmers. Silt has contributed to the fertility of soil in several ways, resulting in improvements in soil quality and productivity¹⁰. When silt is applied to soil, it provides the following benefits:



¹⁰Tiwari, Rakesh & Vr, Ramakrishna & K Murthy, Indu & Ravindranath, Nh. (2014). Irrigation tank silt application to croplands: Quantifying effect on soil quality and evaluation of nutrient substitution service. International Journal of Agricultural Science Research. 3. 1-10.

- **Nutrient Content:** Silt particles tend to have a higher concentration of nutrients compared to other soil particles like sand or clay. These nutrients, such as nitrogen, phosphorus, and potassium, can be released into the soil as silt particles break down over time. This increased nutrient content can support better plant growth and development.
- **Soil Structure:** Silt particles have intermediate sizes between sand and clay particles. When added to soil, silt can improve the soil's structure by filling in gaps between sand particles and improving the aggregation of clay particles. This enhanced soil structure promotes better aeration, root penetration, and nutrient uptake by plants.
- **Water Holding Capacity:** Silt particles have moderate water holding capacity, allowing them to retain moisture for longer periods. As a result, soils enriched with silt can provide a better reservoir of water for plants, particularly during dry periods. This increased water availability can support improved crop growth and reduce the risk of drought stress.
- **Organic Matter Retention:** Silt particles can bind and retain organic matter, such as decomposed plant and animal materials. This organic matter contributes to soil fertility by providing essential nutrients, improving soil structure, and supporting microbial activity.



Figure 24 Silt application in progress, Lingapur village

Quantity of silt received
(Quantity in quintals), (n=22)

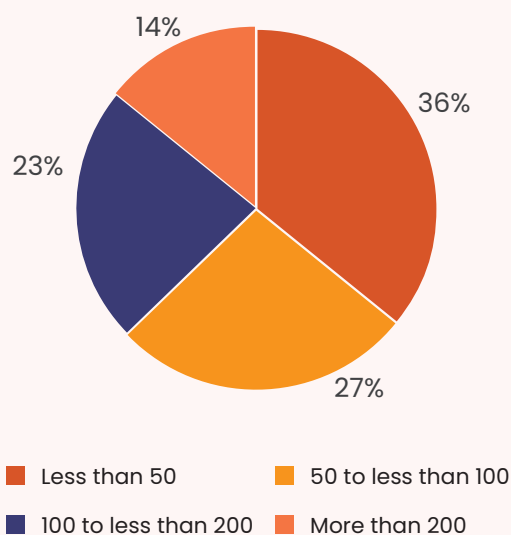


Figure 25 Quantity of silt received

Average increase in cultivable land
(Area in acres), (n=22)

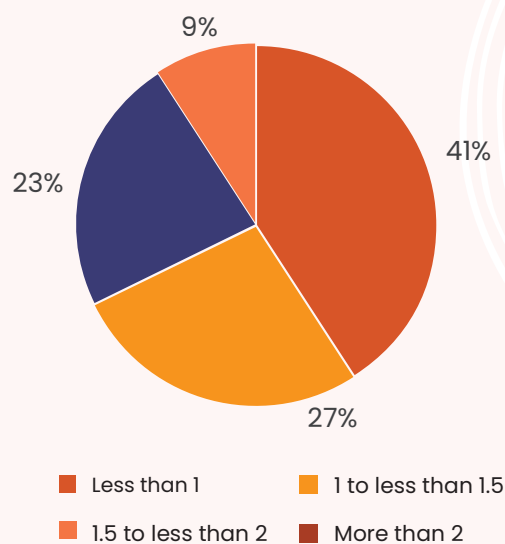


Figure 26 Average increase in cultivable land

Data indicates that more than 70% of the villagers practising animal husbandry mentioned that they have started the practice for the first time. The intervention has played a significant role in promoting animal husbandry practices among the community members.

Adoption of animal husbandry practices (n=51)

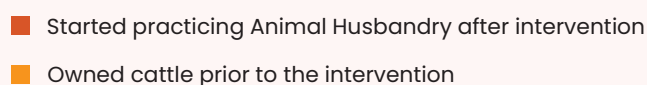
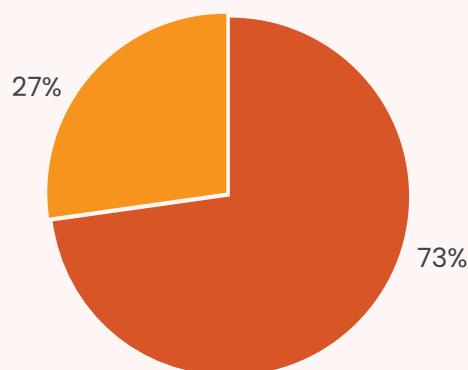


Figure 27 Adoption of animal husbandry practices

Average number of cattle owned
(n=51)

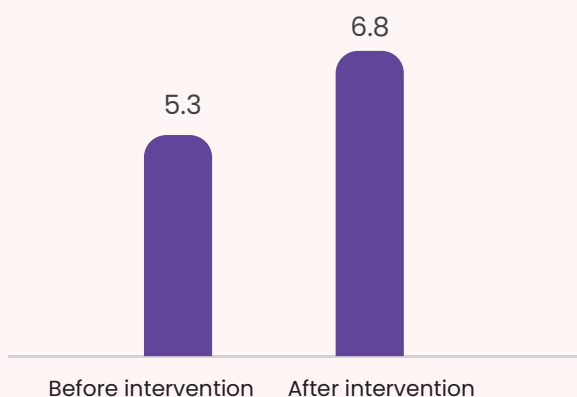


Figure 28 Average number of cattle owned

The herders mentioned that they had improved access to water after the intervention. The intervention not only helped by constructing several water retention structures but also established AFGs that could provide easier access to capital at lower interest rates.

The interventions have positively impacted cattle ownership in the region. Earlier the average number of cattle owned per farmer was 5.3 which has **increased by almost 28%**. On average, a cattle herder owns 6.8 cattle after the intervention.

The implementation of farm ponds and check dams has not only led to the rise in the water table but has also had a positive impact on improving the microclimate in the area. Cattle herders have expressed that they now have access to green fodder and grass for **approximately 8 months**, which has significantly improved the availability of feed for their livestock. Additionally, the villagers have started practising multiple crop cultivation within a year, ensuring an adequate supply of both fodder and water for the cattle. As a result, there has been a notable improvement in the health of cattle and an increase in the quality and quantity of milk produced. These factors have collectively contributed to the overall enhancement of the livestock and dairy sector in the region.

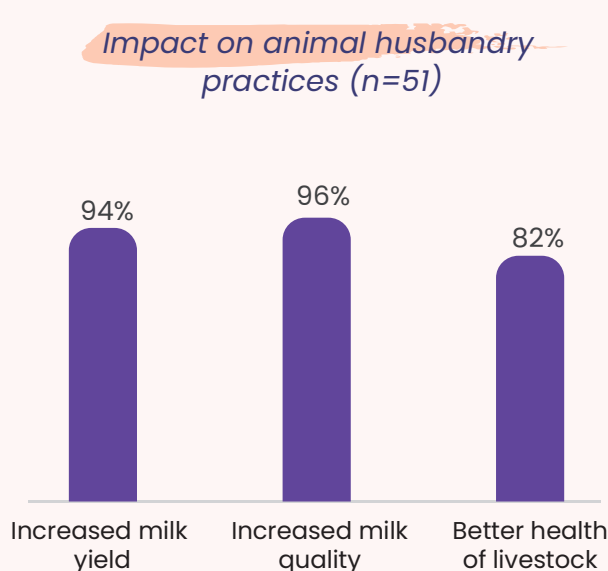


Figure 29 Improvement in animal husbandry practices

Additional income generated from animal husbandry practices (INR in thousand), (n=51)

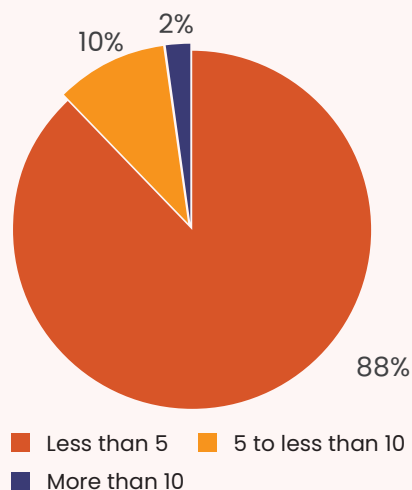


Figure 30 Additional income generated from animal husbandry practices

The introduction of animal husbandry practices in the village has been a recent development, with villagers acquiring cattle through loans obtained from AFGs. As they are still in the process of repaying these loans, cattle herders stated that a significant portion of their income from this activity is dedicated to loan repayment. However, after deducting the loan repayments and other associated expenses, on average, herders are able to earn approximately INR 5451 per year. This indicates the potential for income generation and the gradual financial stability that can be achieved through the practice of animal husbandry.



Figure 31 Drinking water facilities for cattle at Ramsanpalli Village

Asian Paints Limited, in association with DHAN Foundation, has set up several Community Based Organisations to empower the farmers. Agriculture Finance Group (AFG) is one such organisation which is a collective of 10 to 20 farmers that conduct regular meetings and savings. These savings are then utilized for inter-lending purposes. Several AFGs (Agricultural Farmer Groups) come together to form a Vayalagam. The members of Vayalagams meet periodically to discuss a variety of matters. Farmers who require the benefits of intervention, such as the construction of water retention structures like farm ponds, mini percolation tanks, sunken ponds, check dams, or the benefits of tank silt application, raise applications during the Vayalagam meetings. The members of the Vayalagam then decide whom to provide the benefits to. These decisions are made based on the ability of the applicant to contribute either 10% or 20% towards the project, depending on the type of benefits they have applied for. Additionally, beneficiaries are also prioritized based on their socio-economic conditions. The DHAN Foundation ensures that the benefits are provided to individuals who genuinely have a need for the intervention.

Surveys indicate that majority of the members have saved up to INR 10,000 in their AFGs. Around 15% of the members stated that they have saved between INR 10,000 to 15,000 in their respective AFGs.

The introduction of AFGs has presented individuals with a reliable platform to save money. These funds are securely deposited into bank accounts and can be withdrawn as needed, facilitating a shift away from informal savings practices at home or with relatives. As a result, approximately 75% of the AFG members indicated that they have successfully transitioned to saving through formal channels, promoting financial inclusion and fostering a culture of savings within the community.

*Amount of money saved in AFGs
(INR in thousand), (n=283)*

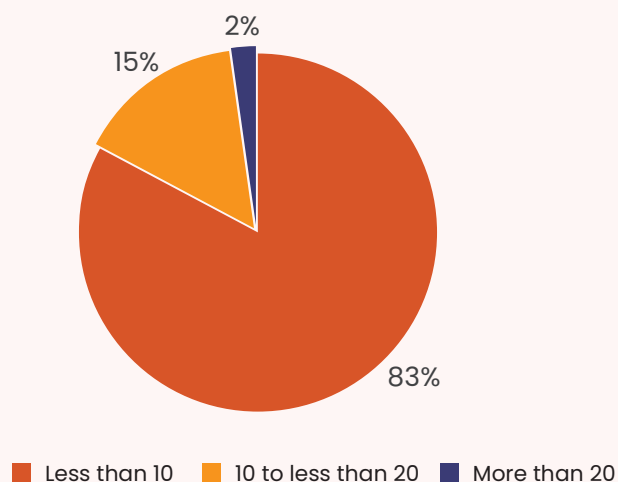
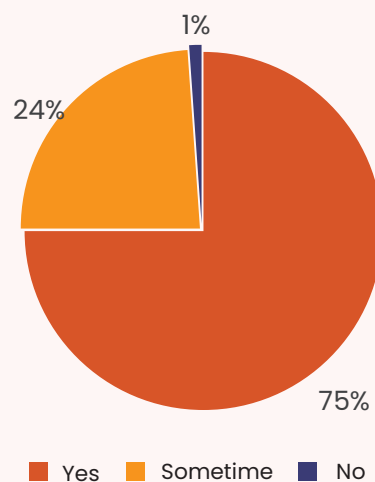


Figure 32 Amount of money saved in AFGs

*Proportion of beneficiaries that have
changed their saving habits
(n=283)*



*Figure 33 Proportion of beneficiaries that
have changed their saving pattern*

Surveys indicate that majority of the members have saved up to INR 10,000 in their AFGs. Around 15% of the members stated that they have saved between INR 10,000 to 15,000 in their respective AFGs.

Around 50% of the AFG members mentioned that they have availed loans up to INR 10,000 from their AFGs. The majority of the beneficiaries mentioned that they have utilized this loan amount or household supporting their household consumption. Similarly, the utilization of funds for social and family functions is a common practice among AFG members.

*Amount of credit availed from AFGs
(INR in thousand), (n=283)*

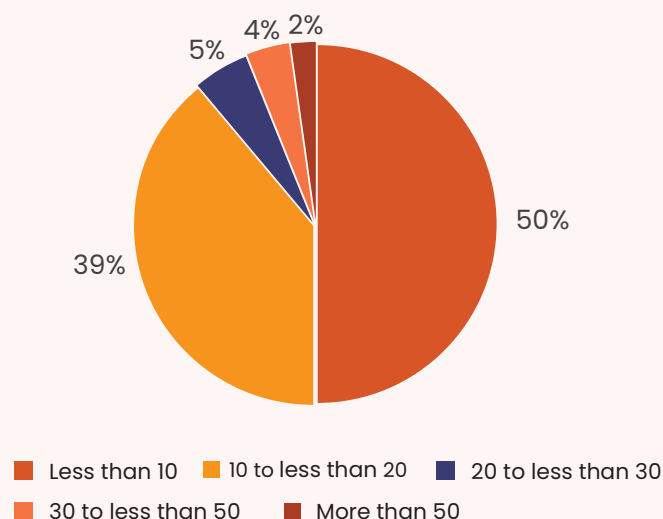


Figure 34 Amount of credit availed

Utilization of credit (n=283)

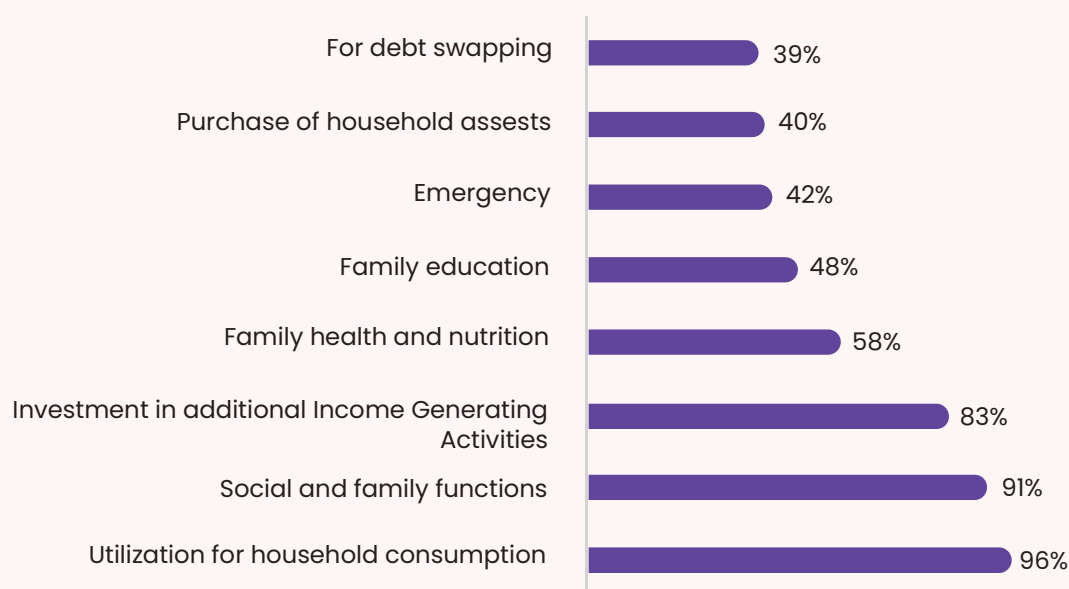
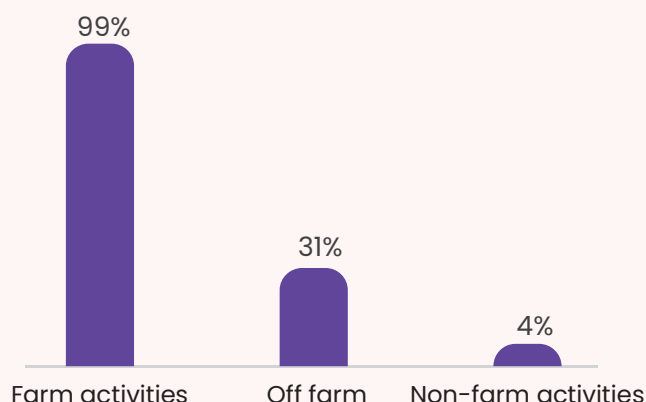


Figure 35 Utilization of credit

Approximately 83% of the AFG members reported utilizing the loan amount to invest in additional income-generating activities. The primary goal of the AFGs was to facilitate savings and provide easier access to loans from formal financial institutions. These activities aimed to mitigate the risk of falling into debt traps and promote diversification of livelihoods for the beneficiaries. Detailed discussions regarding interest rates, repayment terms, and conditions were conducted with the beneficiaries to bridge the information gap and maintain transparency throughout the entire process.

*Details of investment in income
Generating Activities (n=235)*



*Average increase in annual income
(INR in thousand), (n=235)*

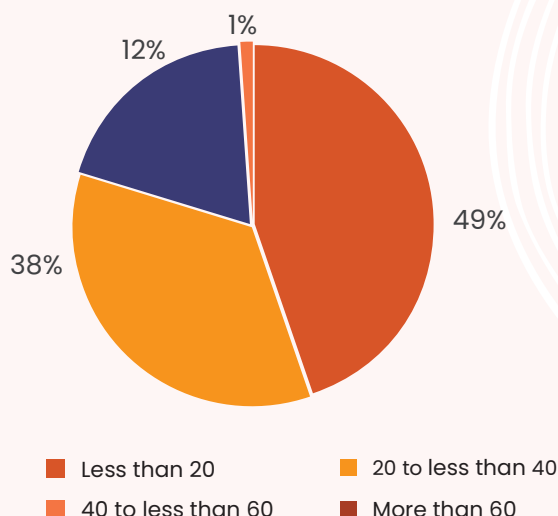


Figure 36 Details of investment in IGAs

Figure 37 Average increase in annual income

Nearly all the beneficiaries reported utilizing a portion or the entirety of the funds for farm-related activities. The funds were utilized for a diverse range of purposes, including acquiring higher-quality inputs, renting agricultural machinery and equipment, and supporting transportation, storage, and sale of harvested crops. Additionally, approximately one-third of the beneficiaries invested the loan in expanding off-farm activities. Notably, a significant portion of the funds was allocated towards purchasing new livestock, while some beneficiaries also directed investments towards upgrading and maintaining existing sheds and shelters.



Figure 38 Focused Group Discussion with Vayalagam members

Approximately 38% of the AFG members reported an increase in their annual income, ranging from around INR 20,000 to INR 40,000, following the intervention. The investments made in both farm and non-farm activities have played a crucial role in not only establishing additional sources of income but also enhancing the overall quality and quantity of output. These positive outcomes have contributed to the improved economic well-being of the beneficiaries.

Socio-economic impact of the program

A substantial portion of the beneficiaries have chosen to invest their increased income in acquiring assets, thereby improving their overall financial well-being. Additionally, a significant number of beneficiaries have prioritized enhancing their household's food consumption with the additional income generated. These outcomes demonstrate the positive impact of the intervention on both economic empowerment and improved living standards among the beneficiaries.

Utilization of additional income (n=283)

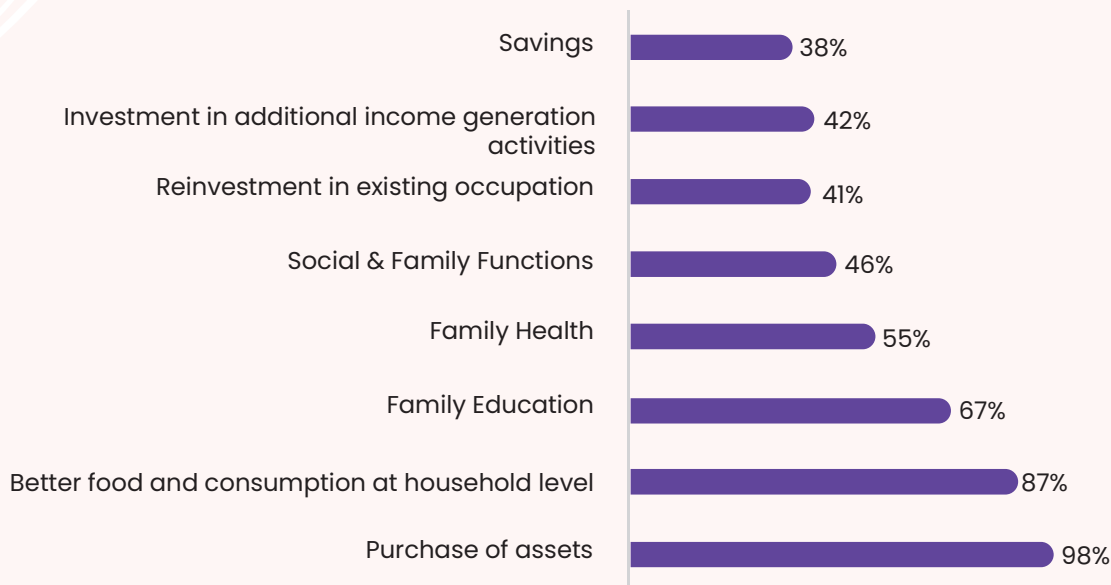


Figure 39 Utilization of additional income

The formation of AFGs has significantly improved the interpersonal relations among the community members. Furthermore, investments in asset acquisition, income diversification, and enhanced food quality at the household level have led to tangible improvements in the physical and material well-being of the beneficiaries. These positive changes reflect the holistic benefits of the intervention, encompassing social cohesion and enhanced living standards within the community.

Improvement in quality of life (n=283)

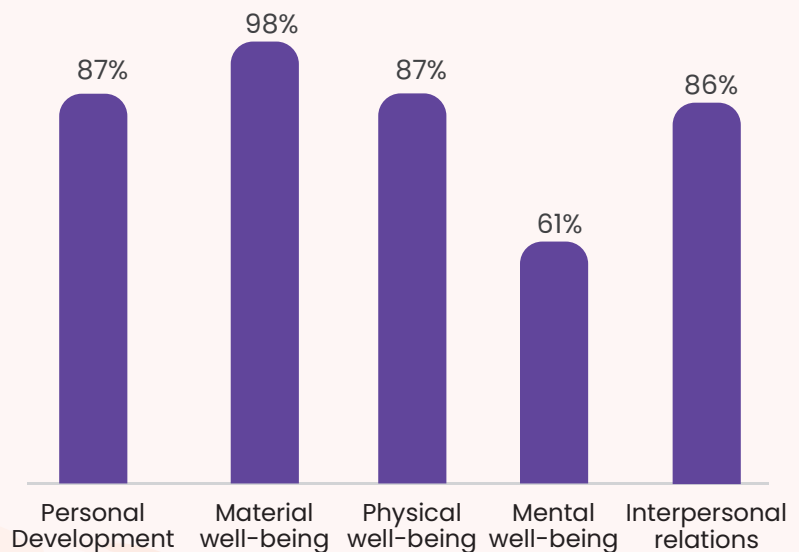


Figure 40 Improvement in quality of life

Summarised Comparison of before and post-intervention in the treatment villages

Table 5: Comparative analysis (per and post intervention)

Factors for comparison	Prior to intervention (n=283)	Post-intervention (n=283)
Farmers practicing farming during Kharif season	99%	99%
Farmers practicing farming during Rabi season	22%	61%
Farmers practicing farming during Zaid season	2%	4%
Average time to irrigate land	1.5 hours	1 hour
Average no. of livestock owned by households	5.3	6.8
Average land area available for cultivation	2.2 acres	3.5 acres
Average annual family income of households	INR 94,000	INR 1,45,451

According to the impact findings, the intervention has led to a substantial increase in water availability in the villages, benefiting both farmlands and cattle. Additionally, the intervention has positively influenced soil quality and facilitated greater access to formal sources of credit. In terms of overall program impact, the beneficiaries have experienced a noteworthy improvement in their annual household income, attributed to enhanced agricultural practices and increased livestock activities.



Figure 41 Water retention structure at Govindrajpalli village

Comparison between treatment and control villages

To evaluate the specific impacts of the intervention, a comparative study was conducted during the impact assessment, involving surveys of individuals residing in villages where no intervention had taken place. This comparative analysis aimed to assess the differences and the distinct effects brought about by the intervention within similar geographical areas. Both the treatment and control villages were situated in the district. The data collected revealed that nearly all farmers from control villages practised mono-cropping exclusively during the Kharif season.

No instances of cropping during the Rabi season or Zaid season were observed in the control villages. In contrast, a significant disparity was observed between the control and treatment villages, as approximately 61% of the beneficiaries in the treatment villages were able to cultivate their lands during the Rabi season, while approximately 4% of the beneficiaries cultivated their lands during the Zaid season. These findings highlight the notable positive impact of the intervention on crop diversification and the utilization of land for multiple seasons among the beneficiaries in the treatment villages.

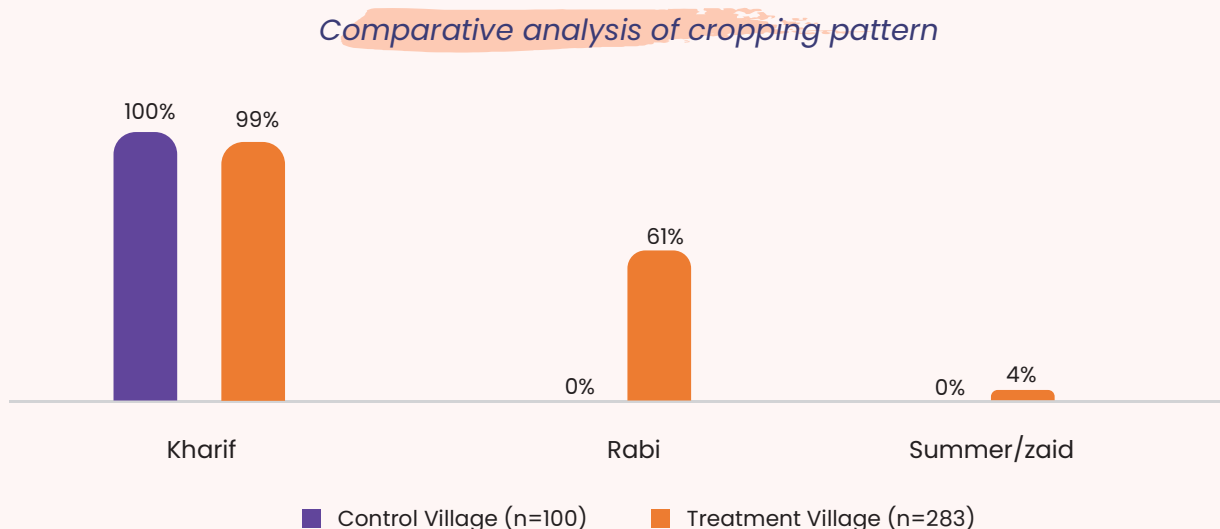


Figure 42 Comparative analysis of cropping pattern

In the treatment villages, a significant majority of farmers, approximately 87%, reported being able to irrigate their farmlands within an hour. However, in the control villages, it was observed that nearly 59% of farmers mentioned that it takes them 1 to 1.5 hours to irrigate their fields, while a substantial 34% stated that it takes them more than 2 hours. These findings demonstrate the significant impact of the interventions in the treatment villages, where the availability and accessibility of water for irrigation have been notably improved.

Comparative analysis of average irrigation time (Duration in hours)

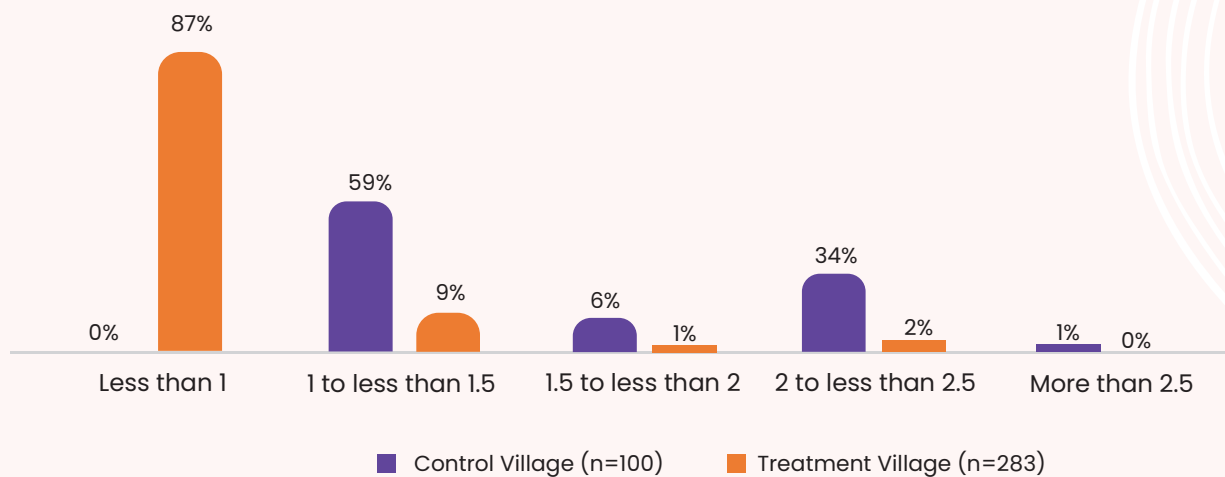


Figure 43 Comparative analysis of average irrigation time

The improved access to credit and the round the year access to water has been the major driving factor towards the adoption of animal husbandry practices in the treatment villages. It was observed that the average number of livestock owned in the treatment villages is 6.8 whereas it is just 3.2 in the control villages.

Comparative analysis of average number of livestock owned



Figure 44 Comparative analysis of average number of livestock owned

Agriculture remains the primary source of income for a majority of households, and the intervention has notably improved the availability of water for farming. As a result, nearly 61% of farmers in the treatment villages have been able to cultivate their lands even during the Rabi season. Consequently, a significant difference in average income is observed between residents of the control and treatment villages. While 99% of households from the control villages reported an annual income of less than 1.5 lakhs, over 53% of households in the treatment villages mentioned earning more than 1.5 lakhs per year. These findings underscore the substantial positive impact of the intervention on household incomes in the treatment villages.

Comparative analysis of average annual household income (INR in thousand)

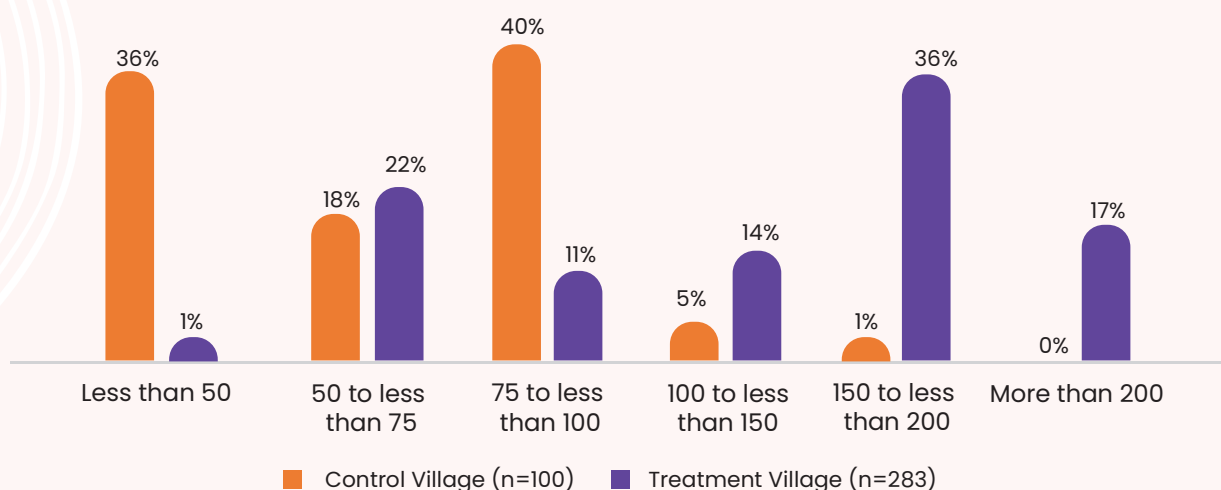


Figure 45 Comparative analysis of average income

The below mentioned tables summarises the significant differences as was observed between the treated and controlled villages on basis of their socio-economic indicators, and current practices adopted.

Table 6 Comparative analysis (control & treatment villages)

Factors for comparison	Control villages (n=100)	Treated villages (n=283)
Villagers able to grow crop during Rabi season	0%	61%
Villagers able to grow crop during Zaid season	0%	4%
Average time taken to irrigate their land	1.6 hours	1 hour
Average no. of livestock owned by households	3.2	6.8
Average annual income of households	INR 69,800	INR 1,45,451

Technical Analysis & Soil Testing

Table 7: Soil Composition analysis

Sl. No	Inspection Parameter	Unit	Adequate Value	Ramsempalli		Brahmanaguda		Madhura		Tellarallathanda		Naguldevulapalli	
				Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control
1	Against pH		6.5-7.5	7.18	7.28	6.46	6.45	8.1	4.41	7.39	7.34	8.25	5.24
2	Electrical Conductivity (Ec)	dS/m	0-2.0	0.35	0.15	0.34	0.37	0.44	0.32	0.35	0.29	0.31	0.1
3	Organic Carbon	%	0.20 - 1.0	0.29	0.3	0.2	0.21	0.33	0.2	0.53	0.38	0.31	0.26
4	Available Nitrogen (N)	Kg/ha	<140 - >700	204	269	229	234	140.3	195	231	224	232	233
5	Available Phosphorus (P205)	Kg/ha	<7 - >35	4	10.3	15.86	24.39	16.54	22.56	37.4	33.3	8.73	18.96
6	Available Potassium (K2O)	ppm	<100 - >300	317	330	301	238	101.6	102	319	199	262.6	263
7	Available Sulphur (S)	ppm	>10	28.58	3.33	3.26	32.4	26.8	28.71	3.27	3.29	3.12	10.47
8	Available Iron - (Fe)	ppm	>4.5	4.14	4.23	4.27	4.92	4.1	4.51	4.14	4.3	4.74	4.46
9	Available Copper - (Cu)	ppm	>0.2	0.95	0.95	0.98	0.95	0.87	0.87	0.96	0.99	0.88	0.99
10	Available Zinc - (Zn)	ppm	>0.6	1.2	1.15	1.02	1.16	0.17	1.36	1.11	1.14	1.31	1.12
11	Available Boron - (B)	ppm	>0.5	0.86	0.96	0.85	0.81	0.41	0.86	0.9	0.9	0.95	0.95
12	OM (Organic Matter)	%		0.5	0.52	0.34	0.36	0.57	0.34	0.91	0.66	0.53	0.45

The results obtained from the soil testing conducted after the silt application have not provided clear and definitive conclusions. It is important to note that significant changes in soil composition and properties, particularly in terms of chemical and organic composition, require a longer period of time to manifest¹². While there are some immediate observable changes, such as an increase in production, improved water retention capacity, and a decreased reliance on fertilizers, these are not indicative of the complete impact of silt application. The changes observed in the short term are primarily attributed to the physical properties of the soil and its immediate response to the added silt.


To fully understand the long-term effects of silt application on soil composition, it is necessary to continue monitoring and evaluating the soil over an extended period. This will allow for a more comprehensive assessment of the chemical and organic alterations that may occur as a result of the silt application, which may take longer to manifest. Secondary research supports the notion that changes in soil composition require continuous observation and analysis to capture the complete transformation and assess the effectiveness of the intervention.

¹²Osman Mohammed, Wani, S.P., Vineela, C and Murali, R. 2009. Quantification of Nutrients Recycled by Tank Silt and its Impact on Soil and Crop - A Pilot Study in Warangal District of Andhra Pradesh. Global Theme on Agroecosystems Report no. 52. Patancheru 502 324, Andhra Pradesh, India; International Crops Research Institute for Semi-Arid Tropics.

¹³Tiwari, Rakesh & Vr, Ramakrishna & K Murthy, Indu & Ravindranath, Nh. (2014). Irrigation tank silt application to croplands: Quantifying effect on soil quality and evaluation of nutrient substitution service. International Journal of Agricultural Science Research. 3. 1-10.

3.4 Convergence

The program was solely funded by Asian Paints Limited, and was implemented by DHAN Foundation.

Sl. No	Name of Partner	Type of Partnership	Responsibilities
1.	DHAN Foundation 	Implementing Partner	<ul style="list-style-type: none">• Baseline Study• Establishing CBOs (AGFs)• Implementing Tanks Silt Application• Constructing Water Retention Structures (Farm Ponds, Mini Percolation Tanks & Check Dams)

The village administration also played a crucial role in conducting need assessments & baseline studies. They also contributed significantly in spreading awareness about the programs and mobilizing the community members.

Vayalagams and Agriculture Finance Groups (AFGs) were formed in the villages. These community-led institutions were responsible for the identification of beneficiaries and implementation of the projects.

3.5 Service Delivery

This section defines the extent to which efficient methods and services were delivered as a part of the project intervention to achieve the results of outcomes and impacts.

The implementing partner joined hands with the Gram Panchayat in the intervention villages for letting people know about the interventions. Almost all the villagers mentioned that there were multiple awareness drives to educate them.

The establishment of community-led institutions was a significant step in easing the entire process – starting from identification of beneficiaries, documentation of the entire implementation process and settling disputes and disagreements.

The successful execution of projects before the monsoon season was made possible through the timely allocation of funds, effective cooperation with government partners who played a crucial role in securing approvals from different government levels within the required timeframe, and active engagement of the local community.

3.6 Social Return on Investment

Social Return on Investment helps us determine the values that are traditionally not reflected in financial statements, including social, economic, and environmental factors. This method helps quantify the value of the social impact of projects, programs, and policies. SROI helps in evaluating the general progress of certain developments, showing both the financial and social impact the organization has. This method takes standard financial measures of economic return a step further by capturing the social and financial values.

For the current project by Asian Paints Limited, we have computed the value based on the actual outcomes of the program. The data has been sourced from the field survey.

INR 6.7 social value generated from the program on every investment of INR 1.

Table 8: Rational for calculation – SROI

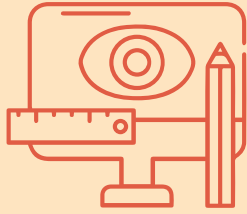
Indicators	Rationale	Proxy Estimation	Source
Savings in irrigation costs	Cost reduction in terms of reduced electricity and labour costs caused by increased availability of water	Average cost reduction in irrigation of lands	Field Survey
Average increase in income from Animal Husbandry	Increased household income from Animal Husbandry (Improved quality and quantity of milk)	Average savings on purchasing drinking water annually	Field Survey
Average increase in income from Agriculture	Increased household income from Agriculture (Increase in area under cultivation and number of cropping seasons)	Average household income increased post intervention	Field Survey
Average savings in procurement of Silt	Cost savings in procurement of silt	Average cost savings in procurement of silt	Field Survey

SROI Calculation

Table 9: Detailed calculations – SROI

Social Return on Investment		
Year	FY 2022–2023	FY 2023–2024
Inflation Rate in India (IMF, 2023)	6.7%	4.9%
Discounted Rate Considered	5.8%	
Total Input Cost	INR 68,21,318	
Total Net Impact	INR 4,85,89,096	
Net Present Value (NPV)	INR 4,59,25,422	
SROI	6.7	





Chapter 4.

Brand Equity



**4.1 Awareness
about the Program**

**4.2 Rating the
Program**

**4.3 Change in
Perception of the
Community**

**4.4 Employee
Volunteering
Programs**

Brand Equity refers to a value premium that a company generates from a product or service through its name recognition. Organizations can enhance their brand value and reputation by providing service that is reliable, efficient, memorable, and of superior quality. Brand Reputation can have a significant impact on Brand Equity.

Brand Equity comprises important components like how the consumers perceive the brand and the negative and positive effects resulting in value for the brand and the company as a whole. One of the most valuable assets a company can have is its brand. One main way to improve a brand's reputation is through consumer loyalty and experience. Similarly, in this study, we have determined brand equity of Asian Paints Ltd (APL).



Figure 46 Sign-board indicating the details of the activity (Farm Pond)

4.1 Awareness about the Program

All the villagers were aware of Asian Paints Limited as a brand. 99% of the villagers were aware of the interventions for, i.e., the construction of Farm Ponds, facilitation of Tank Silt Applications and, formation and capacity building of Agriculture Finance Groups (AFGs) under the CSR initiatives of Asian Paints Limited. This indicates that the work done by DHAN Foundation has been able to create brand value and, the team has been successful in communicating the same.

100% beneficiaries are aware of Asian Paints Limited (APL) as a brand

99% beneficiaries are aware that the interventions were funded by Asian Paints Limited (APL)

4.2 Rating the Program

Around 87% of the beneficiaries rated the activities under the intervention 4 or higher on a scale of 1 to 5 (5 being the highest). Satisfaction from the intervention indicates that the organisation has successfully addressed the problems of the community.

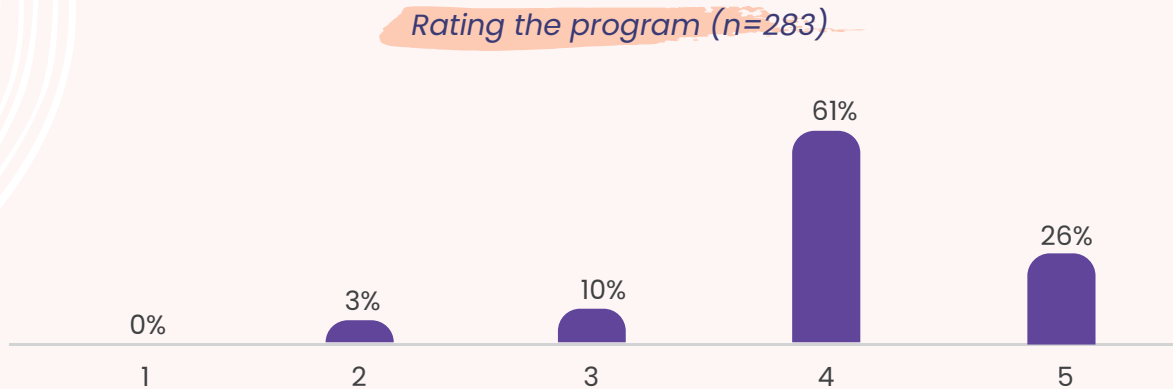
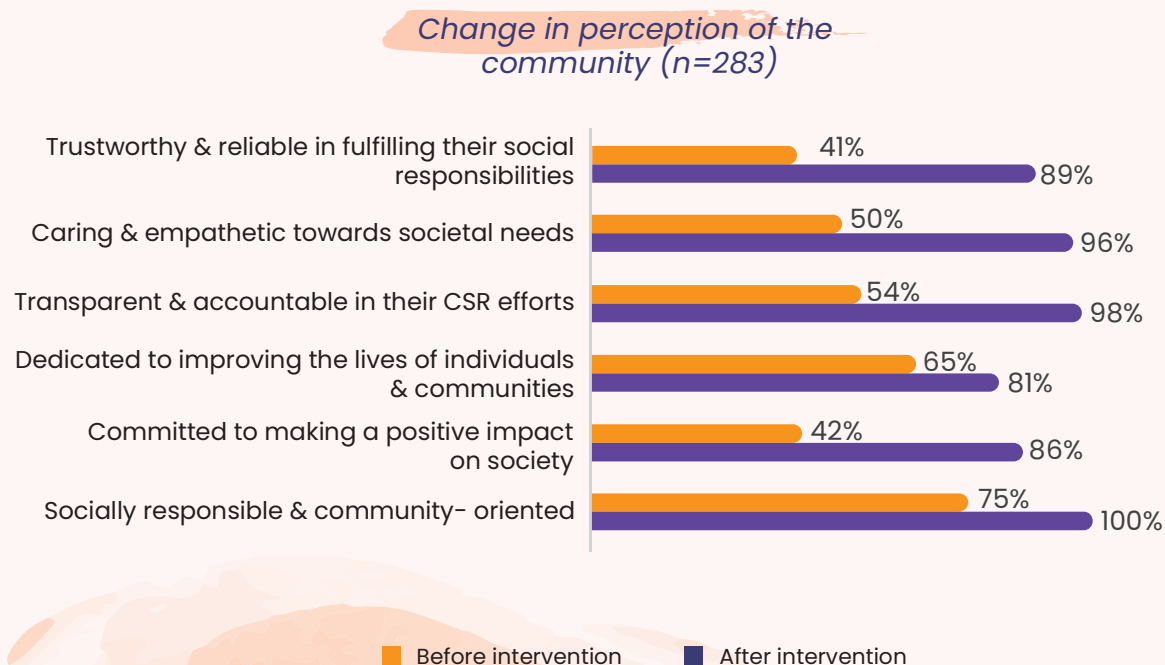


Figure 47 Rating the program

4.3 Change in Perception of the Community

The villagers' perception of Asian Paints Limited (APL) as a brand has undergone a significant transformation. Initially, a majority of community members held doubts about APL's capabilities in executing the project. However, following the interventions, the community members expressed their satisfaction and gratitude towards APL for the positive outcomes achieved. Furthermore, community members actively advocate for others to join the project, recognizing its potential to improve their quality of life and livelihoods. This shift in perception highlights the positive impact of APL's interventions on the community and their trust in the brand.



4.4 Employee Volunteering Programs

Also, apart from the current intervention, 92% of the villagers stated that employees of Asian Paints Limited visited the villages as a part of their Employee Voluntary Program. Employee Voluntary Programs can help a brand create significance in the life of the communities through long-term engagements. Also, this allows the employees to interact directly with the villagers and empathize with their problems and find suggestive solutions to mitigate them.

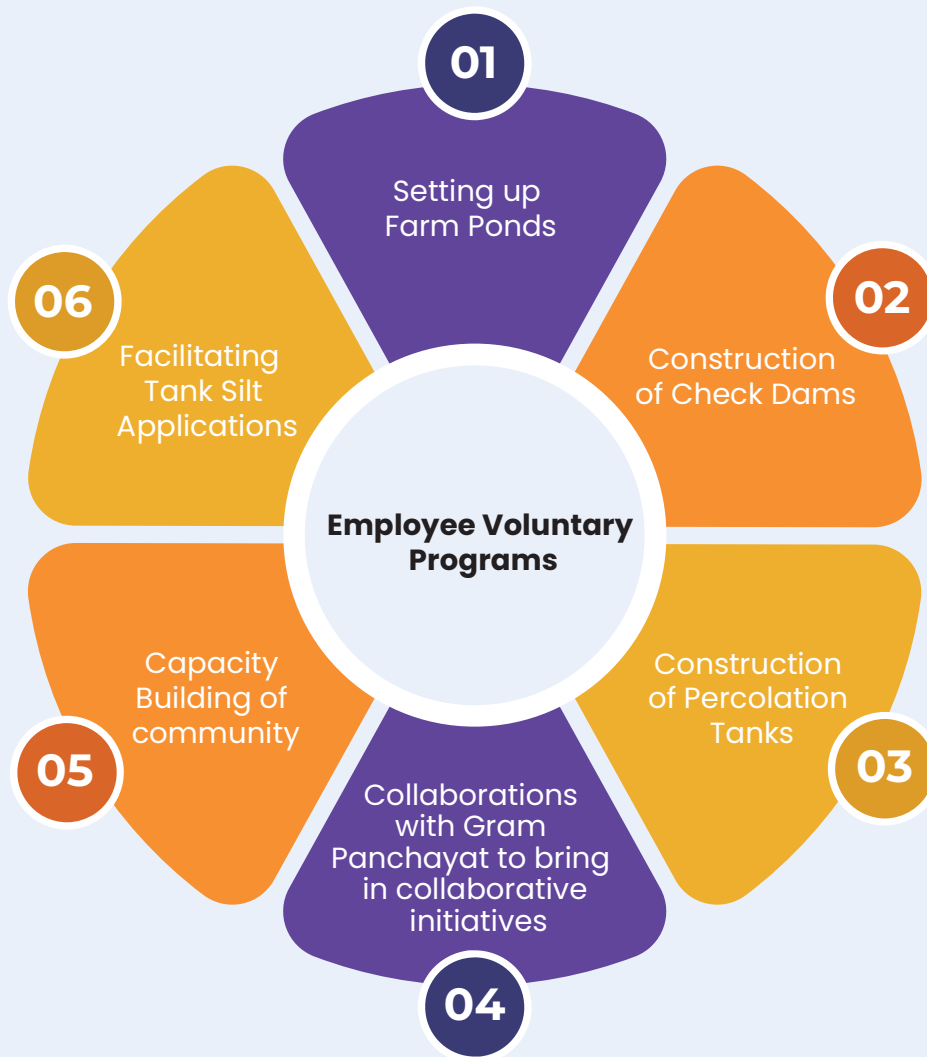
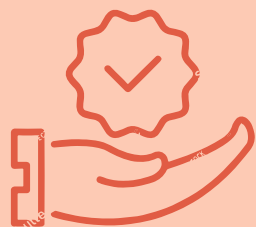


Figure 49 Employee Volunteering Programs

The survey findings indicate that Asian Paints Limited (APL) as a brand has created a positive perception among the beneficiaries of the intervention villages.



Chapter 5.

Recommendation to the Program

5.1 Diversification of Livelihoods

5.2 Improving Access to Credit

5.3 Improving Brand Recognition



The Impact Assessment study drew out the socio-economic indicators showcasing the positive impact of the program as stated by the beneficiaries. As per interactions with multiple stakeholders of the project, government officers from the agriculture department, and observations made during the field visit, the team presents its recommendations for the ongoing interventions.

5.1 Diversification of Livelihoods



Current Scenario

As part of their CSR program, APL has constructed numerous farm ponds and water retention structures in the villages. These structures play a vital role in securing a longer duration of water availability for irrigation purposes. While the farmers have been utilizing these farm ponds for irrigating their farmlands, it has been observed that there is still untapped potential and significant water wastage occurring within the pond system.

Recommendation

- The farm ponds have proven to be effective in retaining water for approximately 9 to 10 months, presenting an opportunity for farmers to explore fish culture as an additional income-generating activity. This practice can be easily managed by one or two individuals with minimal investment.
- Furthermore, the bund surrounding the pond, constructed using the fertile excavated soil, will provide an ideal area for cultivating vegetables and fruits. Its close proximity to the water source makes it suitable for productive agriculture.
- Implementing these practices will not only diversifies the farmers' income streams but also have a positive impact on the food consumption patterns within households. This improvement in financial status and enhanced access to nutritious food contribute to the overall well-being and health of the families.

5.2 Improving Access to Credit



Current Scenario

In the villages, DHAN Foundation has successfully established community-led institutions, with Agriculture Finance Groups (AFGs) serving as the foundational units of these institutions. AFGs play a crucial role by providing a platform for members to save money and engage in inter loaning activities. Additionally, DHAN Foundation has also allocated Revolving Funds (RF) to these AFGs, further supporting their financial capabilities and empowering the community members to meet their financial needs effectively.

Recommendation

- It has been observed that some of the AFGs have not received Revolving Funds (RF), which has limited their access to credit facilities. In the absence of RF, these AFGs heavily rely on the savings contributed by their members. However, as these AFGs are relatively new and have not accumulated significant savings, the members have expressed disappointment due to financial constraints.
- Furthermore, although these AFGs have bank accounts, they are currently not linked with the credit systems of banks. As a result, they are unable to access loans from formal financial institutions. Establishing a linkage between these AFGs and financial institutions would enable them to secure loans. This will further facilitate the diversification of their income streams and provide opportunities for further economic growth.

5.3 Improving Brand Recognition

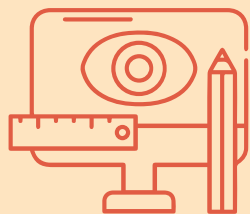


Current Scenario

- Despite APL and DHAN Foundation developing each farm pond with metal signboards with information about the project and beneficiaries, their logos were nowhere to be found.
- Upon engaging in discussions with the beneficiaries, it was revealed that the boards had initially displayed the logos of both APL & DHAN Foundation. However, these sign boards have been damaged over time.

Recommendation

APL can prioritize the improvement of signboards by ensuring they are well-maintained and prominently display the logos of both APL and DHAN Foundation. Additionally, APL can consider installing signboards and notice boards at the village square, serving as important communication tools. The signboards can provide information on the completed work to date, showcasing the impact of the interventions in the community. On the other hand, the notice boards can serve as a platform to inform villagers about the current agendas of AFG meetings, upcoming programs, and other significant announcements. This will not only enhance transparency but also help in spreading awareness and engaging the community in the ongoing and future initiatives of APL.



Chapter 6.

Impact Stories



**6.1 Enhancing
Farmland
Productivity through
Tank Silt Application
and Farm Pond
Construction**

**6.2 Diversifying
Farm Income
through Innovative
Farm Pond Utilization**

**6.3 Empowering
Rural Livelihoods:
Transforming
Agriculture through
Water Bodies and
Agriculture Finance
Groups**

**6.4 Transforming
Livelihoods: From
Daily Wage Labour to
Successful Poultry
Farmer**

6.1 Enhancing Farmland Productivity through Tank Silt Application and Farm Pond Construction

(A Case Study of T Ramulu in Ramsanpalli Village.)

T Ramulu, aged 50, resides in Ramsanpalli village. He acknowledged the significance of silt application from water reservoirs to enhance farmland productivity but was unable to practice it due to the high costs associated with extracting and transporting the silt.

During a Valyagam meeting, the Tank Silt Application project was introduced. Interested farmers were required to contribute 50% of the total expenses, while Asian Paints Ltd. would cover the remaining 50% as part of their CSR initiative. Mr. Ramulu eagerly participated in the project and paid INR 5500 for 30 trolleys of silt, which was then spread across his 3.5-acre farm.



Figure 50 Left – Silt applied farm,
Right – Regular farm

The silt application resulted in improved infiltration capacity and higher nutrient content in his farm's soil. The following table presents a comparison of his farm's annual income and expenses before and after the intervention

Type of crop	Area under cultivation (Acres)	Average production (Quintals/Acre)		Average price (INR/Quintal)	Average income (INR)		Increase in income (INR)
		Before intervention	After intervention		Before intervention	After intervention	
Paddy	3	30	35	2,000	1,80,000	2,10,000	30,000
Cotton	1	7	10	7,000	49,000	70,000	21,000
Ground nut/ Chilly	0.5	8	12	6,000	48,000	72,000	24,000
Total increase in income (INR)							75,000

Type of input	Quantity of input (Bags)		Average price (INR/Quintal)	Average expenditure (INR)		Net savings (INR)
	Before intervention	After intervention		Before intervention	After intervention	
Paddy	3	30	35	2,000	1,80,000	3,200
Cotton	1	7	10	7,000	49,000	6,000
Ground nut/ Chilly	0.5	8	12	6,000	48,000	3,400
Total savings (INR)						12,600

With the assistance of Asian Paints Ltd. (APL) and DHAN Foundation, Mr. Ramulu successfully constructed a farm pond. He expressed his gratitude towards APL for their valuable contribution to the community. The farm pond has proven to be instrumental in ensuring year-round water availability, enabling Mr. Ramulu to diversify his crops. The implementation of the farm pond has brought significant benefits to his farming practices and has contributed to his overall agricultural productivity and resilience.



Figure 51 Mr. Ramulu near his Farm Pond

6.2 Diversifying Farm Income through Innovative Farm Pond Utilization

(A Case Study of Sangam Anand Kumar in Ramsanpalli Village.)

Sangam Anand Kumar, a 50-year-old farmer from Ramsanpalli village, sought assistance from Asian Paints Ltd. (APL) to dig a farm pond. Under the agreement, he contributed 10% of the net expenditure while APL covered the remaining 90% as part of their CSR initiative.

Initially planning to use the pond for irrigation purposes, Mr. Kumar later recognized its potential for income diversification. Through online resources, he learned about fish farming and decided to implement it in his pond. Seeking further knowledge, he visited a fishery in the Nalgonda district to learn best practices. Subsequently, he purchased 1100 fingerlings of the Koraminu variety to start his fishery.

Realizing the potential profitability of the fishery, Mr. Kumar invested INR 12,000 in protective nets for the pond and INR 15,000 for a solar-powered fence to prevent interference from humans and livestock.

Particulars	Units	Average price per unit (INR)	Net price (INR)
Fingerlings	1100	20	22,000
Feed for fish	1000 Kgs	110	1,10,000
Protection nets	1100	20	12,000
Solar Fencing			15,000
Total investment (INR)			1,59,000

In addition to the fishery, Mr. Kumar cultivated various vegetables such as bitter gourd, okra, tomatoes, chili peppers, and bottle gourd around the pond. He noted that the land surrounding the pond had excellent fertility. Its richness in nutrients and moisture content, made it ideal for vegetable cultivation. To streamline watering, he installed a drip irrigation system. Selling the vegetables earned him approximately INR 15,000.

Particulars	Harvest period	Quantity (Kgs)	Average price (INR/Kg)	Net Income (INR)
Koraminu Fish	Jun-23	200	350	70,000
	Dec-23	350		1,22,500

In June 2023, Mr. Kumar sold around 2 quintals of fish, resulting in a net income of approximately INR 70,000 from the fishery. He expects to sell approximately 3.5 quintals of fish in the next cycle (December 2023), projecting a return of around INR 1.2 lakhs. Mr. Kumar's innovative approach and utilization of the farm pond have proven to be profitable and have diversified his income sources.



Figure 52 Mr. Kumar at his farm pond

6.3 Empowering Rural Livelihoods: Transforming Agriculture through Water Bodies and Agriculture Finance Groups

(A Case Study of Suvarna from Durga Bhavani BRPS.)

Suvarna, a 28-year-old member of Durga Bhavani BRPS, is part of a 12-member Accessible Financial Group (AFG) that convenes monthly to save INR 200 each. The AFG has facilitated easier access to formal credit sources for its members. Previously working as a daily wage labourer, Suvarna described the challenges faced by farmers in her village before Asian Paints Ltd. (APL) interventions to construct and revive water bodies. Mono-cropping was the norm due to water scarcity, limiting farming activities to once a year. As an individual heavily reliant on agriculture for employment, Suvarna struggled to find work during the Rabi season.

Following the intervention, Suvarna observed a significant increase in water availability for irrigation, enabling farmers to cultivate multiple crops throughout the year. Previously restricted to paddy during the Kharif season, farmers now engage in paddy and cotton cultivation during the Rabi season.

Additionally, the establishment of several AFGs in the village has provided farmers with access to credit facilities at lower interest rates, enabling income diversification through activities like animal husbandry and micro-enterprises. Suvarna expressed her gratitude to APL, emphasizing that job shortages are no longer a concern in the village. Previously, she struggled to secure employment for approximately four months (around 120 days), but post-intervention, she consistently finds abundant job opportunities throughout the year.

She availed a loan of INR 25,000 to purchase a water pump for field irrigation, crediting APL's interventions for making the entire setup possible. Without APL's presence, she believed that water availability would not have increased, obtaining low-interest credit for the water pump would have been difficult, and she would still be grappling with unemployment.

Suvarna mentioned achieving a total income of **INR 1 lakh after the intervention**, emphasizing the numerous intangible benefits resulting from APL's interventions.



Figure 53 Ms. Suvarna with her family

6.4 Transforming Livelihoods: From Daily Wage Labour to Successful Poultry Farmer

(A Case Study of Raju from Tellarallathanda Village.)

Raju, a 32-year-old poultry farmer from Tellarallathanda village and a member of Tellarallathanda Valyagam, used to work as a daily wage labourer at a nearby industry. However, his farmland, located at the foothills of a small hill, faced significant surface runoff during the rainy season, making cultivation challenging and damaging plants. Additionally, due to the higher elevation, borewells did not ensure a consistent year-round water supply. As a result, Raju was unable to practice agriculture and resorted to working as a daily wage labourer.



In collaboration with DHAN Foundation, Asian Paints Ltd. (APL) constructed a percolation tank at the foothills of the small hill. This percolation tank not only protects nearby farms from surface runoff but also enhances groundwater recharge rates.

Raju noted a significant rise in the water table following the construction of the percolation tank. Having no prior experience in agriculture, he decided to venture into poultry farming after the intervention.

Raju established a poultry farm measuring 152 X 28 meters, capable of accommodating 4000 chicks. He emphasized that the poultry farm requires approximately 2000 litres of water daily, a feat that would have been impossible before the intervention. However, thanks to the increased water table, he can now arrange this amount of water in just 30 minutes from the borewells. Raju has been able to earn approximately INR 25,000 per month, attributing his success to the interventions by APL. The rise in the water table and the subsequent establishment of the poultry farm have significantly improved his livelihood and income opportunities.



Figure 54 Mr. Raju's poultry farm



CSRBOX & NGOBOX

806-808, Shivalik Satyamev
Near Vakil Saheb Bridge, Bopal Rd,
Bopal, Ahmedabad, Gujarat 380058

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Impact Assessment of Water for Livelihood Project- Dediapada, Narmada District, Gujarat

Asian Paints Limited

KPMG Assurance and Consulting Services LLP

January 2024

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Strictly Private and Confidential

V. Ravi
General Manager
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India
15 March 2024

**Subject: Final-report for Impact assessment of Water Resource Development
Projects**


Dear Mr. V. Ravi,

We appreciate the opportunity to assist Asian Paints Limited in providing **Impact assessment of Water Resource Development Projects related services**.

Please find enclosed our final-report, which has been prepared in accordance with the scope and terms stated in our engagement letter dated 5th January 2024. With this deliverable, we have completed our obligations as stated in our engagement letter.

It has been our privilege to have this opportunity to work with you, and we look forward to continuing our relationship.

Yours sincerely

DocuSigned by:

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Full Signature _____

Name- Jignesh Thakkar

Director, ESG

KPMG Assurance and Consulting Services LLP

DISCLAIMER AND NOTICE TO READERS

This report has been prepared exclusively for Asian Paints Limited (APL) ("Client") in accordance with the terms of the Engagement letter/agreement between Client and KPMG Assurance and Consulting Services LLP ("KPMG" or "we") (collectively 'Contract'). The performance of KPMG's services and the report issued to the Client are based on and subject to the terms of the Contract.

KPMG does not accept or assume any liability, responsibility, or duty of care for any use of or reliance on this report by anyone, other than our client, to the extent agreed in the Agreement.

Impact assessment is limited to the projects allocated by Asian Paints Limited.

OECD-DAC and SROI frameworks have been used in preparing the report as detailed herein. No professional assurance standards ex. ISAE, SSAE etc. have been applied while preparing this report and accordingly the rigors applicable under such standards are not applicable for the scope covered by our report.

Procedures, analysis, and recommendations, if any, are advisory in nature basis the information collected from various sources both publicly and those provided by the client.

Our observations represent our understanding and interpretation of the facts based on reporting of beneficiaries and stakeholders.

Our report, by its very nature, may involve numerous assumptions, inherent risks, and uncertainties, both general and specific. The conclusions drawn shall be based on the information available with us at the time of preparing the report.

We have not performed an audit and shall not express an opinion or any other form of assurance. Further, comments in our report are not and shall not be intended, nor should they be interpreted to be legal advice or opinion. Client shall be fully and solely responsible for applying independent judgment, with respect to the findings included in the report, to make appropriate decisions in relation to future course of action, if any. We shall not take responsibility for the consequences resulting from decisions based on information included in the report.

While information obtained from the public domain or external sources has not been verified for authenticity, accuracy, or completeness, we have obtained information, as far as possible, from sources generally considered to be reliable. However, it must be noted that some of these websites/third party sources may

not be updated regularly. We assume no responsibility for the reliability and credibility of such information.

Our work shall be limited to the specific procedures described in this Engagement Letter and shall be based only on the information and analysis of the data obtained through interviews of beneficiaries supported under the programme, selected as sample respondents and discussions with Client's team and stakeholders of the programme. Accordingly, changes in circumstances or information available after the review could affect the findings outlined in our report.

In no circumstances shall we be liable, for any loss or damage, of whatsoever nature, arising from information material to our work being withheld or concealed from us or misrepresented to us by any person to whom we make information requests.

In accordance with its policy, KPMG advises that neither it nor any of its partner, director or employee undertakes any responsibility arising in any way whatsoever, to any person other than Client in respect of the matters dealt with in this report, including any errors or omissions therein, arising through negligence or otherwise, howsoever caused.

In connection with our report or any part thereof, KPMG does not owe duty of care (whether in contract or in tort or under statute or otherwise) to any person or party to whom the report is circulated to and KPMG shall not be liable to any party who uses or relies on this report. KPMG thus disclaims all responsibility or liability for any costs, damages, losses, liabilities, expenses incurred by such third party arising out of or in connection with the report or any part thereof.

By reading our report, the reader of the report shall be deemed to have accepted the terms mentioned hereinabove.

ABBREVIATIONS

AKRSP	Aga Khan Rural Support Programme
ANMs	Auxiliary Nurse Midwives
APL	Asian Paints Ltd
ARWR	Annual Renewable Water Resources
BCM	Billion Cubic Meters
CEEW	Council on Energy, Environment and Water
CSE	Center for Science Education
CSR	Corporate Social Responsibility
FAO	Food and Agriculture Organisation
FGD	Focus Group Discussion
HH	Households
INR	Indian Rupees
NCIWRD	National Commission on Integrated Water Resources Development
NPV	Net present value
O&M	Operations and Maintenance
OECD DAC	Organization for Economic Co-operation and Development Assistance Committee Development
PRA	Participatory Rural Appraisal
PRI	Panchayati Raj Institutions
RFP	Request For Proposal
ROI	Return on Investment
SDG	Sustainable Development Goals
SPOCs	Single Point of contact
SROI	Social Return on Investment
TDS	Total Dissolved Solids
WHS	Water Harvesting Structure
WRD	Water Resource Development

EXECUTIVE SUMMARY

The philosophy of transformation has been in DNA of Asian Paints Limited and reinventing the industry has been in its nature. The same philosophy of transforming lives has been driving the CSR efforts concentrating on holistic and sustainable development of the community. The company believes in fostering relationship of trusts with the communities around the vicinity of plants and people in the unorganized sector. Under the umbrella of inclusive development, the initiatives focus on sectors of health & hygiene, water conservation, skill development and disaster management.

According to UN World Water Development Report (2022), India is the largest groundwater user globally. Approximately 45% of total irrigation and 80% of domestic water needs are met by groundwater. The unsustainable extraction practices over decades have thus led to overexploitation and water scarcity. In such challenging landscape, water harvesting and conservation under the umbrella of watershed management became need of the hour. Asian Paints engaged in holistic approach through their program "Water for Livelihoods" in Dediapada block of Narmada district in Gujarat, which addresses not only water scarcity but also soil conservation and natural resource management for ensuring a sustainable and resilient water future for the country.

The main objectives of the impact study are to assess the impact of water stewardship activities with focus on the access and availability of surface and ground water, potable water, farmer's livelihood, land and agriculture practices, and governance. The study covered mix-methods approach consisting of quantitative and qualitative research methodology using primary and secondary data collection. The analysis of quantitative data was corroborated with anecdotal evidence from qualitative responses and observed through the lens of SROI framework and OECD-DAC framework. A total of 157 respondents from three villages were interacted for data collection in Narmada district of Gujarat, including farmers, community members, PRI members and Water User Association members.

More than half of the respondents were between 25-40 age group and have formal education till class eighth. The sample covered respondents from varied economic background (income ranging from 20 thousand to four lakhs), small to marginal farmers and primary source of income being agriculture.



RELEVANCE

Before intervention:

- 77% respondents indicated scarcity of water
- 40% respondents engaged only in Rain-fed cultivation
- Half of respondents indicated high TDS



COHERENCE

Directly converges with *Jal Shakti Abhiyan* and 'Catch the Rain' campaign of Ministry of Jal Shakti.

The program has direct contribution to below SDGs:



EFFECTIVENESS

100% respondents felt positive changes because of the water-related activities of the program.

All beneficiaries are aware of the Sustainable Agriculture Practices.



EFFICIENCY

The program was completed on schedule and within the proposed budget.

No duplication or overlap of activities was observed with any other program on-ground and corroborated by respondents



IMPACT – Water Access & Availability

98% respondents indicated increased accessibility and availability to water for over four months

90% respondents indicated moderate to high increase in water column in wells in all three seasons, especially summers

60% respondents accessed water for irrigation directly from WHS



IMPACT – Potable Water

100% respondents felt the good availability of potable water.

73% respondents indicated improved quality of drinking water (odour, salinity, TDS).

48% respondents indicated reduced prevalence of diseases due to quality potable water.

63% respondents indicated reduced expenses on drinking water due to intervention.



IMPACT - Agriculture

Respondents indicated –

Increased production by 2-3 times

Reduced cost of irrigation by more than half

73% reported overall reduced cost of cultivation

Increase in agriculture income from 30% to 300%

Increased productivity of Livestock with median increase in yield by 10 litres

Reduction in efforts and time for water collection



IMPACT - Biodiversity

100% respondents indicated observing increased green cover around the waterbodies

96% respondents indicated observing reemergence of the new species around waterbodies

92% respondents indicated increased availability of the fuelwood

SUSTAINABILITY



100% respondents were aware of the formation and role played by WUAs and shared that the operation & maintenance of WHS is effective.

88% respondents indicated attending training on water governance.

Separate funds for O&M of Water Harvesting Structures have been collected (ranging from INR 200-5000).

This report also estimates the impacts felt by the beneficiaries and wider community as a result of the APL programme, by valuing them in monetary terms. We have examined the social impact of the APL programme arising from its CSR project during the FY 2021-22. To achieve this, we have estimated the social return on investment (SROI) generated by the programme by comparing the financial costs of the programme to the monetary value of the impacts it creates among its stakeholders. Whilst many of the impacts arose during the period of analysis, impacts would also occur or continue the effect for some time in future. Thus, forecasting methods have been used.

We estimate that for every INR 1 spent by the water for livelihood programme, INR 2.32 in social value has been generated through a mixture of socio-economic wellbeing among the beneficiaries.

01

INTRODUCTION



INTRODUCTION

This chapter consists of an overview of the water stress in Indian context and Asian Paints Ltd.'s CSR efforts to address the issue. It provides an overview of the project, implementing partners, project geographies, scope, and purpose of the study.

1.1 BACKGROUND

Water stress and availability represent a formidable global challenge, with increasing demand, population growth, and climate change exacerbating the strain on water resources. CSE's State of India's Environment Report (2023) estimates that if the ongoing decline in global water availability persists, 87 out of 180 countries will face annual renewable water resources (ARWR) per capita falling below 1,700 cubic meters per year by 2050. India sustains around 17.74 percent of the world's population with only 4.5 percent of its freshwater resourcesⁱ. According to FAO's Aqua-stat reportsⁱⁱ (2015), India receives an average annual rainfall of 1,170 mm. This contributes to a total rainfall input of around 4,000 cubic kilometres of water as per the Planning Commission's Report of the Expert Group on Ground Water Management and Ownership (2007)ⁱⁱⁱ. The same report indicates that within this, 1,869 cubic kilometres constitute the average annual potential flow in rivers, while 432 cubic kilometres replenish the groundwater. India, despite being endowed with substantial water resources, faces a complex set of challenges related to water availability, quality, and distribution.

The depletion of groundwater levels, coupled with the pollution of surface water, presents a dual challenge. Groundwater, a critical resource for millions, is being extracted at a rate faster than natural replenishment, leading to a significant deficit. Simultaneously, about 70 percent of surface water resources in India are polluted, compromising the health of both humans and ecosystems. Wastewater from various sources, intensive agriculture, industrial activities, and untreated urban runoff contribute to this pollution, which contributes to the water-related morbidity in India. Arsenic and fluoride contamination in groundwater further exacerbate India's water quality issues. Certain regions, including parts of Assam, Bihar, Uttar Pradesh, Chhattisgarh, and West Bengal, grapple with arsenic levels above permissible limits. Fluoride contamination is prevalent in multiple states including the locations for this study (Gujarat, Karnataka, Uttar Pradesh, Haryana, and Tamil Nadu), necessitating urgent remediation efforts^{iv}.

Thus, with increasing population, rapid urbanisation, and climate change impacts, India's water resources are under immense pressure.

In this challenging water landscape, the importance of watershed management becomes apparent. Watershed management is not merely a focus on water projects but involves a holistic approach to land-

use practices, afforestation, and soil and water conservation. It is recognised as essential for sustainable water development, contributing not only to water conservation but also to self-reliance in terms of food and energy. Lack of adequate watershed management may lead to increased reservoir sedimentation, altered stream flow patterns, and a range of environmental and socio-economic consequences. In conclusion, the water issues in India necessitate urgent and comprehensive water resource management strategies, with a particular emphasis on watershed management. A holistic approach that addresses not only water scarcity but also soil conservation and natural resource management is crucial for ensuring a sustainable and resilient water future for the country.

1.2 ASIAN PAINTS LIMITED

Asian Paints, headquartered in Mumbai, is one of the largest and leading paint companies in India. Established in 1942, the company has expanded its presence globally and is recognised for its innovative and high-quality products. Asian Paints operates in various segments, including decorative coatings, industrial coatings, and automotive coatings. The company has a strong emphasis on research and development, leading to continuous product innovation. Asian Paints has introduced eco-friendly and sustainable paint options, aligning with global trends towards environmentally conscious choices.

Beyond business, Asian Paints actively engages in Corporate Social Responsibility (CSR) initiatives. Guided by its philosophy of trust, fairness and care the CSR interventions are envisioned to make a sustainable difference to the environment in which it operates including activities which shall allow it to leverage its strengths. The primary objective of their CSR activities is to enhance and empower marginalised communities by tackling crucial social, economic, and environmental issues. These efforts focus on healthcare, water conservation, and community development, reflecting the company's commitment to social and environmental sustainability. APL's CSR initiatives are in alignment with SDG Goals, namely Goal 1 (No Poverty), Goal 2 (Zero Hunger), Goal 3 (Good Health and Well-being), Goal 6 (Clean Water and Sanitation), Goal 8 (Decent work and economic growth), Goal 11 (Sustainable cities and communities) and Goal 17 (Partnership for the goals).

APL has been implementing several initiatives in the area of Water, Health and Hygiene, Skills Development, and Disaster Relief. The Water Stewardship Program, initiated by Asian Paints, seeks to contribute to increasing water availability in the ecosystems surrounding its plants, playing a crucial role in enhancing water security in these regions. The program encompasses a spectrum of initiatives, including pond cleaning, desilting, construction of check-dams, irrigation canal lining, and training farmers on micro-irrigation systems. Holistic approaches such as integrated pest and soil health management are integral to the program. The initiatives under the program are designed to fortify ecosystem services, enhancing water

supplementation for both indoor use and food production. The program significantly contributes to groundwater recharge, a critical aspect of sustainable water management.

1.3 ABOUT THE STUDY

To understand the impact created by its interventions implemented in FY 2021-11, Asian Paints Ltd. empanelled KPMG to facilitate impact assessment of its Water for Livelihood project. The objective of this study was to assess the impact of these water stewardship activities on the beneficiaries and stakeholders covered under the projects. The study aimed to understand the below immediate, medium, and longer-term impact of the interventions on the targeted beneficiaries:

Impact on Access & Availability of Surface & Ground Water	<ul style="list-style-type: none"> • To understand the impact on ground-water recharge based on well recharge data • To understand the duration of water availability post monsoon (in months) • To understand the impact of water accessibility, availability & livelihood of the farmers
Impact on Potable Water	<ul style="list-style-type: none"> • To assess impact on drinking water availability and quality due to rainwater water harvesting structures. • To assess impact on other areas like drudgery reduction, drop in health issues around the drinking water etc.
Impact on Agricultural Land & Practices	<ul style="list-style-type: none"> • To assess impact on season wise cropping pattern led by availability of water in the area. • To assess impact on soil health due to balance use of fertilizer because of adoption of recommendations of soil testing report and application of organic fertilizers • To assess impact on knowledge level of the farmers about improved agricultural practices.
Impact on Farmer's Livelihood	<ul style="list-style-type: none"> • To assess impact of water availability on crop production (yield/acre) • To assess impact of water availability on productivity of livestock animals • To assess impact on net return/acre per farmer. • To assess the impact on livelihood opportunities created through the programme.

Other Impact Areas Apart from Water Rejuvenation & Canal Lining

- To assess knowledge and adoption level of water efficient agricultural and risk mitigation farm practices.
- To assess level of ownership by the community in the asset created: Whether community-based institutions had been formed and taking care of maintenance aspects of the assets created under the project.

The duration considered for this study is financial year 2021-22.

1.4 ABOUT THE PROJECT

Asian Paints' Water Stewardship Programs signifies the company's dedication to sustainable practices and responsible corporate citizenship. By addressing the challenge of water scarcity through community partnerships and integrated initiatives, Asian Paints aims to make a positive impact on both its operations and the communities it serves.

Water for Livelihood project was initiated by Asian Paints in 2015-16 with aim to improve the quality of life in the Tribal community by implementing Integrated Development across 5,500 households and 11,000 hectares in the Dediapada Block of Narmada district. It also emphasises establishing institutional infrastructure for sustained development, covering five villages in Dediapada block and 2 villages in Bharuch district. The project has completed tasks such as constructing 17 check dams, deepening two ponds, and building 2 new ponds.

Objective of the project:

- To promote basic supplementary irrigation facilities by creating and strengthening water harvesting structures and increase water storage and availability.
- To encourage sustainable farming practices to increase household income of tribal farming community, in addition to benefiting the environment.

1.5 IMPLEMENTING PARTNER

Aga Khan Rural Support Programme (India) is a non-denominational, non-government development organization. AKRSP(I) works as a catalyst from 1985 for the betterment of rural communities by providing direct support to local communities. AKRSP(I) is active in over 3255 villages of Gujarat, Madhya Pradesh, Bihar, and Maharashtra. The backbone of AKRSP(I)'s work is to empower rural communities particularly underprivileged and women through collectivisation as well as promotion of individual micro-enterprises. Building self-reliant people's institutions for financial inclusion, livelihoods enhancement and improved rural governance is the heart of the organisation's approach.

APL has partnered with AKRSP(I), to implement its CSR projects in the Dediapada block of Narmada district, Gujarat. The partnership between APL and AKRSP focuses on promoting sustainable agriculture, enhancing livelihood opportunities, and managing natural resources. AKRSP is responsible for carrying out

the activities, ensuring that they are completed on time, within budget, and meet the expected outcomes whereas APL provides technical and financial support to achieve these objectives and create a sustainable and inclusive development model that benefits marginalised communities.

1.6 PROJECT GEOGRAPHIES



Gujarat faces a myriad of water challenges, with most of its geographical area falling under the arid to semi-arid climate category. Gujarat is one of India's highly industrialized state, rapid industrialisation, and population growth strain water resources in urban centres like Ahmedabad and Surat. The Narmada River, a lifeline for the state, is crucial for water supply, yet issues of equitable distribution persist. The state of Gujarat experiences drought every three or four years, with the frequency and severity of droughts also escalating over time, leading to a significant

shortage of drinking water^v. According to the Irrigation Commission, around 36 percent of the state's total area is drought prone and faces high water stress^{vi}.

Narmada district in Gujarat is one of the most impoverished districts in the state and is also one of the 112 aspiration districts in India^{vii}. It is located in the eastern part of Gujarat, with its headquarters in Rajpipla, and is a tribal dominated district. The district is bounded by the state of Maharashtra and shares its borders with Surat in the south, Vadodara in the north, and Bharuch in the west. According to Census 2011, the district has a population of 590,297^{viii}, and is primarily rural, with a significant portion of the population dependent on agriculture for their livelihood. The district's economy is largely agrarian with cotton and pigeon pea as the major crops^{ix}. Banana and cotton are the main horticultural crops in the district^x. Small and backward farmers account for over half (58.2 percent) of the land holdings with an average size of 2.5 hectares^{xi}. The district is working on water management initiatives to address the growing demand for water due to its agricultural activities. The Sardar Sarovar Project, Karajan Irrigation project, Kakadi Amba, and Chopadvav projects are a few of the significant irrigation projects in the district.^{xii} The district consists of

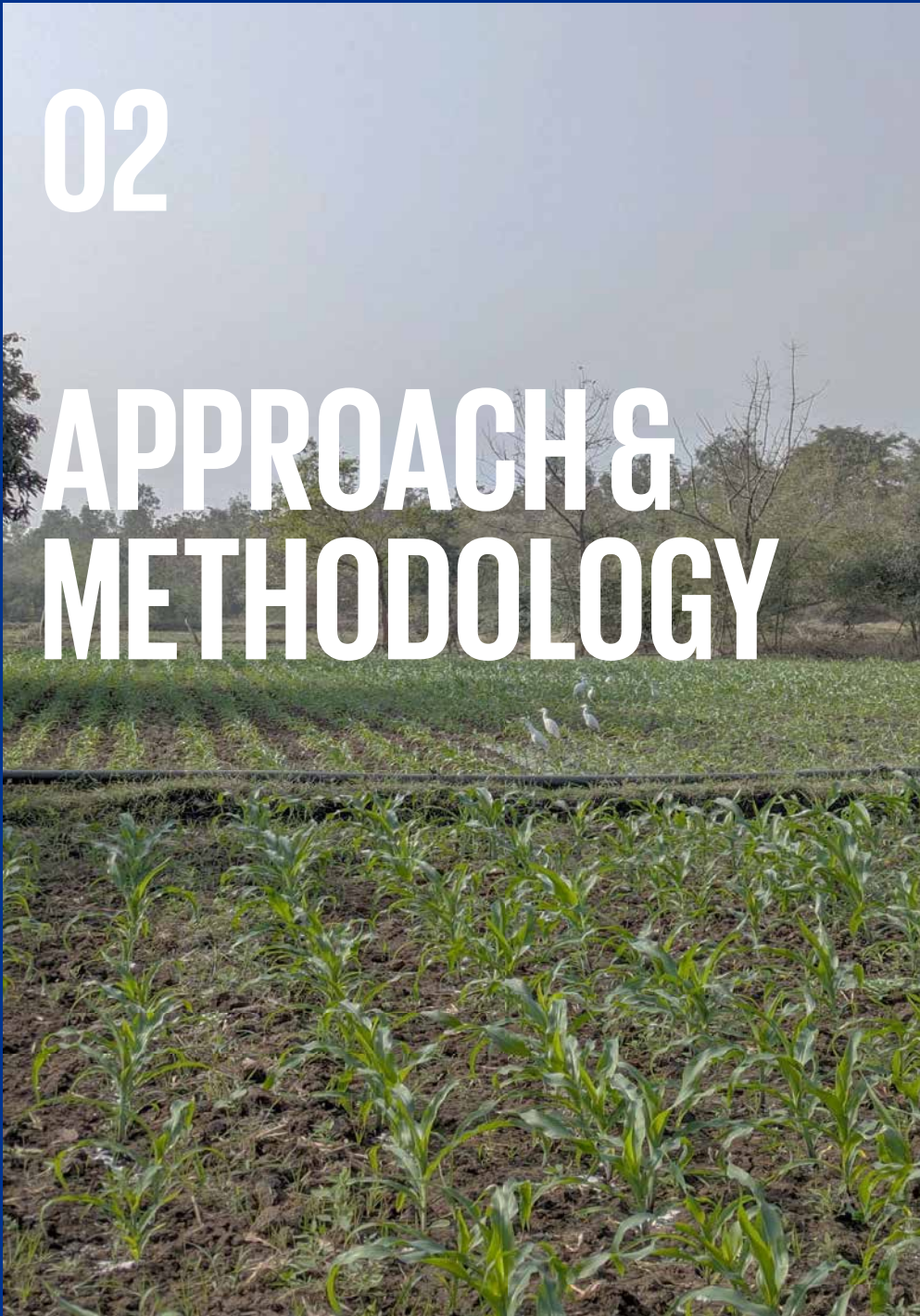


five talukas: Tilakwada, Garudeshwar, Nandod (including Rajpipla), Dediapada, and Sagbara. Through *Water for Livelihood* project, AKRSP has covered five villages of the Dediapada block in Narmada district.

Dediapada is a taluka in the Narmada district of Gujarat, India. The taluka is bounded by Zaghadia taluka, Sagbara taluka, Nandod taluka, Maharashtra state, and Mandavi taluka. The population of Dediapada taluka is 1,74,449 as per the 2011 Census of India, with 88,235 males and 86,214 females. The taluka is located in the forest range of Shoolpaneshwar Wildlife Sanctuary. Around 96.41 percent of Dediapada's population belongs to Scheduled Tribes (ST)^{xiii}, with Vasava and Tadvī forming the majority. Due to the undulating topography of Dediapada, the cultivation of crops and water storage prove challenging, compounded by the poor economic conditions of farmers and fragmented land holdings. On average, 9.62 percent of the cultivated area in Dediapada taluka (Dist. Narmada) is irrigated, while the remaining 90.38 percent is dependent on rain for agriculture^{xiv}.

02

APPROACH & METHODOLOGY



APPROACH AND METHODOLOGY

The chapter provides details on the research design and methodology adopted for the impact assessment. It includes description of the key activities, data collection methods, and sampling strategies, employed to ensure the reliability and validity of the findings.

2.1 OUR APPROACH

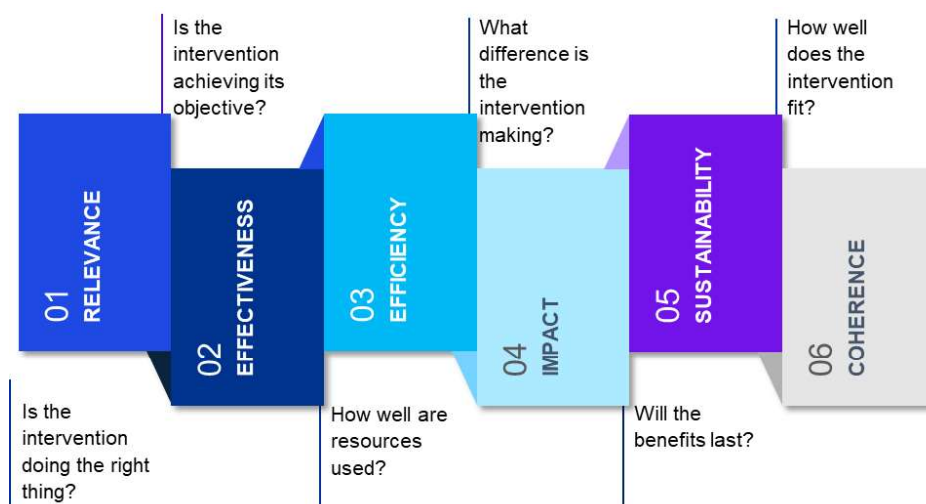
The study used the OECD DAC and SROI frameworks for designing the study and calculating social returns and impacts created due to APL's CSR projects on water stewardship. The former is widely used evaluation framework to assess the impact of social development programs, while SROI provides insights into project impact beyond traditional economic assessment tools.

This study adopted a four-phase structured methodology for evaluation as illustrated below. The adopted methodology ensured that OECD DAC evaluation criteria and SROI framework were followed throughout to effectively capture the impact of the program.

Phase I: Consulting and Scoping	Phase II: Research Design	Phase III: Data Collection	Phase IV: Analysis and Reporting
Kick-off meeting	Development of Impact Map	Development of field visit plan	Analysis of collected data using OECD DAC framework and estimating the SROI of the projects
Desk review of documents and reports related to the program	Mapping the stakeholders	Field visits and stakeholder interactions	Development of draft and final report
Determining scope of the study	Designing sampling strategy and data collection tools		Presentation to APL Team

2.1.1 OECD-DAC

The Organization for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) first laid out the evaluation criteria in the 1991. It is a framework that comprises of a set of criteria that aid in systemic assessment of on-going or completed development programs. This method helps to effectively assess various facets of the program and gain qualitative insights along with quantitative impact. The six evaluative criteria in accordance with the OECD-DAC evaluation framework are as follows:



These evaluation criteria have been defined below along with illustrative questions:

Evaluation Criteria	Illustrative Evaluation Questions	Cross-cutting Objectives
Relevance	<p>A measure of the extent to which the intervention objectives and design respond to beneficiaries, global, country, and partner/institution needs, policies, and priorities, and continue to do so if circumstances change.</p> <ul style="list-style-type: none"> ▪ To what extent are the objectives of the project still valid? ▪ Are the activities and outputs of the project consistent with the overall goal? ▪ Are the activities and outputs of the project consistent with the intended impacts and effects? 	<i>Commitments of the stakeholders are integrated into Project design and planning</i>

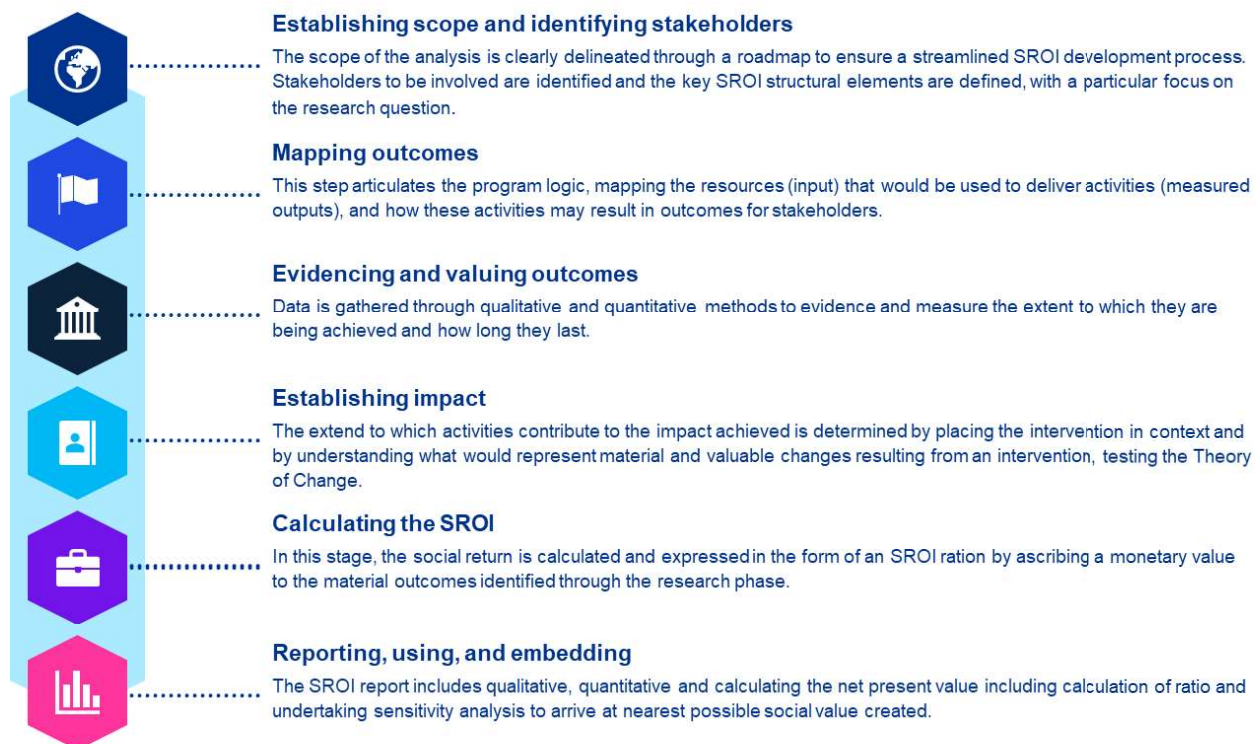
Evaluation Criteria	Illustrative Evaluation Questions	Cross-cutting Objectives
Effectiveness	<p>A measure of the extent to which the intervention achieved, or is expected to achieve, its objectives, and its results, including any differential results across groups.</p> <ul style="list-style-type: none"> ▪ To what extent were the objectives achieved / are likely to be achieved? ▪ What were the major factors influencing the achievement or non-achievement of the objectives? 	<i>Achieved cross-cutting objectives during project implementation</i>
Efficiency	<p>A measure of the extent to which the intervention delivers, or is likely to deliver, results in an economic and timely way.</p> <ul style="list-style-type: none"> ▪ Were activities cost-efficient? ▪ Were objectives achieved on time? ▪ Was the project implemented in the most efficient way compared to alternatives? 	<i>Resources are provided and efficiently used for participation of all stakeholders</i>
Impact	<p>A measure of the extent to which the intervention has generated or is expected to generate significant positive or negative, intended, or unintended, higher-level effects.</p> <ul style="list-style-type: none"> ▪ What has happened as a result of the project? ▪ What real difference has the activity made to the beneficiaries? How many people have been affected? 	<i>Achieved real and long-lasting positive changes in the lives of intended beneficiaries</i>
Sustainability	<p>A measure of the extent to which the net benefits of the intervention continue or are likely to continue.</p> <ul style="list-style-type: none"> ▪ To what extent did the benefits of a project continue after donor funding ceased? ▪ What were the major factors which influenced the achievement or non-achievement of sustainability of the project? ▪ What can be some of the innovative ways to make the project sustainable in the long run? 	<i>Likelihood that project achievements will continue after project</i>
Coherence	<p>A measure of the extent to which the intervention is compatible with other interventions in a country, sector, or institution.</p> <ul style="list-style-type: none"> ▪ Does the project address the synergies and interlinkages between the intervention and other interventions in the same organisation and in the same 	<i>The extent to which other interventions (particularly policies) support or undermine the</i>

Evaluation Criteria	Illustrative Evaluation Questions	Cross-cutting Objectives
	<p>sector/policy landscape? Does it weaken or enhance the impact of any current programs or policies?</p> <ul style="list-style-type: none"> ▪ Does the program lead to duplication of efforts? 	<i>intervention and vice versa.</i>

2.1.2 SOCIAL RETURN ON INVESTMENT (SROI)

Social Return on Investment (SROI) is a systematic method that endeavours to measure and incorporate value created because of investment – namely social, environmental, and economic value which is not fully reflected in conventional cost-benefit analyses. This method is used to monetise the social and environmental impact of the program and measure how much value has been created for each rupee invested/ spent on the program. The evaluative aspect of an SROI quantifies the value of the social impact of programs, and policies, and measures change in ways that are relevant to the people or organisations that experience or contribute to it. Through an SROI, organisations can evidence the social value their programs are achieving, gain deeper insight into what impact they are having for their stakeholders and can thus use this as an input for their company strategy. SROI is about value, rather than money. It can encompass the social value generated by an entire organisation or focus on just one specific aspect of the organisation's work.

SROI utilises the concept of “theory of change/ impact map” to describe the change creation by measuring social, environmental, and economic outcomes. It uses monetary values to represent the outcomes thus enabling calculation of ratio of benefits to costs to be calculated. SROI analysis includes case studies and qualitative, quantitative, and financial information thus helping organisations/ people to base their future decisions. The striking advantage of SROI study is that other impact assessment methodologies stop at identifying outcomes while SROI methodology goes beyond to value them and calculate the social value of impact. Steps of a SROI study are listed below –








Setting the Scope 	Identification of stakeholders including beneficiary group, finalising the scope- setting the boundary of what is going to be considered for evaluative SROI - stakeholders including beneficiaries, impacts, program period, etc.
Mapping Outcomes 	Creating impact map, identifying investments, and valuing inputs, identifying outcome sand indicators for monitoring / evidencing outcomes
Evidencing Outcomes 	Collecting and analysing outcome data and establishing how long the outcome will last
Establishing Impacts 	Identifying and valuing financial proxies, adjusting outcomes using deadweight, displacement, attribution and drop off, calculating the impact
Calculating SROI 	Programming the value of outcome into future based on the duration for which the impact will last, calculating the net present value including calculation of ratio and undertaking sensitivity analysis.

Figure 1 SROI framework

The process of calculation of SROI largely focuses on deadweight, displacement, attribution, and drop-off in association with any outcomes achieved. All these aspects are generally expressed as percentages and these percentages are applied to the financial proxy of each outcome to arrive at the total impact for the outcome. Therefore, we used a customised framework involving a combination of OECD-DAC and SROI to obtain a full picture of the impact created by APL.

2.2 DETAILED METHODOLOGY

The following section discusses the methodology being employed by KPMG in this impact assessment, which has been broken down into four phases.

PHASE I: CONSULTING AND SCOPING

Activity 1: Inception meeting

As a first step, the KPMG team set up a scoping and kick-off meeting with the APL team to discuss the proposed work plan detailing out the various tasks to be conducted along with stipulated timelines. KPMG team had developed a detailed project plan to drive the engagement.

Activity 2: Desk-review and internal stakeholder engagement

The team conducted desk review of documents and reports shared by the client such as program concept notes, annual reports, program progress/closure reports, etc. Additionally secondary research was conducted to develop an in-depth understanding of the project locations, interventions, etc. Discussions with APL team and implementing agencies were conducted to understand the project interventions' KPIs, map external stakeholders, and determine sampling strategy and size.

PHASE II: RESEARCH DESIGN

Activity 1: Development of Impact Map/Theory of Change

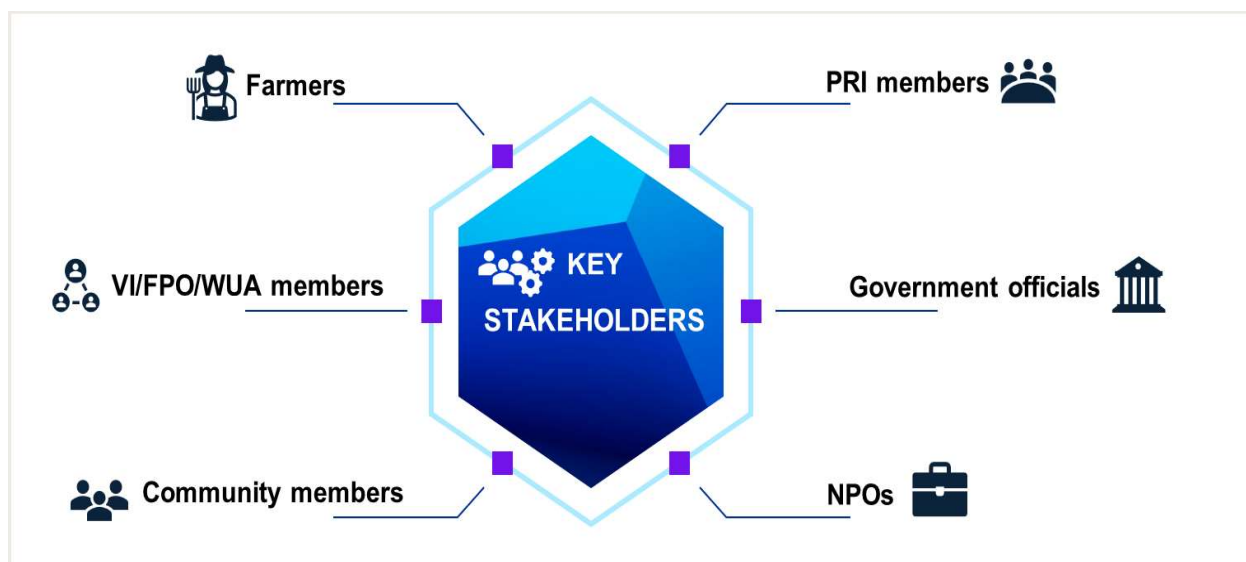
A theory of change-based impact map was developed to establish the outcome and impact parameters for the project. An impact map is defined as a logical chain/ framework giving an overview of how inputs (actions taken, or work performed) result into outputs (changes resulting from the interventions relevant to the outcomes), causing outcomes (likely or achieved short or medium-term effects arising out of the outputs of intervention) and impact (positive or negative, intended, or unintended, direct, or indirect effects created by the interventions).

Impact map for the Water for Livelihoods Project:

Stakeholder	Project Objectives	Inputs	Output	Outcome	Evidence Indicator
Farmers, Community members FPO/VI/WUA	<p>To promote basic supplementary irrigation facilities by creating and strengthening water harvesting structures and increase water storage and availability;</p> <p>To improve and stabilize surface soil to convert unirrigated land to irrigated land.</p> <p>To encourage sustainable farming practices to increase household income of tribal farming community, in addition to benefiting the environment.</p> <p>To organize and strengthen the village institutions around water harvesting and related livelihoods</p>	Construction and refurbishment of check dams, ponds and other WHS, Capacity building, Access to Finance, Time	Number of families reached out / availed benefits of check dams and other water harvesting structures	Increase in agricultural production	Changes in availability of cultivated land Changes in cropping pattern by farmers Changes in multi-seasonal cropping
				Access to secure livelihood	Changes in the input cost required for agriculture
				Creation of sustainable water supply	Changes in the irrigation fed agriculture, changes in the availability of water, reduced dependency on the other sources of water
				Creation of employment opportunities	Changes in the labour employment by the local population
			No. of families benefited from Group wells & Borewell	Access to potable water	Reduction in water borne diseases (Improvement in health), reduction of drudgery (time saved)
			No. of families benefited from agriculture interventions	Access to secure livelihood	Changes in the input cost required for agriculture, adoption of improved agriculture practices
			No. of village institutions benefited	Establishing community stewardship over the common water resources	Community led governance of its resources, effective operations, and maintenance of water structures
			Increase in water storage capacity	Improved biodiversity in the catchment area	Increase in biomass in command area, Improved bio-diversity – presence of bird and animal species, Improved soil health, Reduced soil pollution.

Activity 2: Stakeholder Mapping and Sampling strategy

Stakeholder mapping is the process of identifying all the stakeholders involved in a project and their roles and responsibilities on one map. The main benefit of a stakeholder map is to get a visual representation of all the people who can influence the project and how they are connected. Stakeholders who experience change, whether positive or negative because of the interventions carried out were considered for the study. Furthermore, their pertinence to the scope of the study and relevance to the overall analysis were assessed.



Sampling of stakeholders for engagement was done based on the materiality of the stakeholder and the extent of the impact on the stakeholder. Considering the overall outreach of the project as nearly 1151 beneficiaries, the statistically significant sampling has been derived using the method of 95 percent confidence level and five percent margin of error. Additionally, we have taken extra sample stakeholder in order to derive accurate social return on investment ratio. The stakeholder-wise mode of interaction has been detailed out below:

Stakeholder type	Universe	Sample	Actual coverage
Farmers			
Benefitted due to water intervention	57	57	40
Benefitted due to agriculture intervention	1094	100	37
VI/FPO/WUA members Community members	1151 (Included in the above)	-	85

Stakeholder	Reason for Inclusion	Data collection tool
Farmers who have been benefitted due to water harvesting related interventions	Since the farmers are the direct beneficiaries of this study hence it is important to include them to understand if the objectives of this program have been met.	Structured Questionnaire: were developed In-depth Interview: were also undertaken
Farmers who have been benefitted due to agriculture related interventions	Agriculture is a key intervention, Hence, it is critical to get their perspective of the beneficiaries	Structured Questionnaire: were developed for Teachers In-depth Interview: were also undertaken
Community members benefitted due to potable drinking water	The community members from the intervention area have been a key stakeholder and receiver of the impact hence, it is important to get their perspective.	Semi-structured Questionnaire: were developed for Teachers
WUA members	In order to understand the governance mechanism established over the water usage, these stakeholders are important	Structured Questionnaire: were developed In-depth Interview: were also undertaken
Stakeholders excluded from the study		
PRI Members and government officials	Excluded - Tertiary stakeholders not considered	Not applicable
Community members from periphery of intervention villages	Excluded - It was understood from the implementing team that due to no direct intervention, these stakeholders will remain outside the scope of the intervention	Not applicable

The study includes coverage of primary, secondary and tertiary beneficiaries. The primary beneficiaries covered as part of study are the farmers, who are direct intended beneficiaries. The family members of the farmers and community members are also included in the study, which constitute the secondary beneficiaries. As part of institutional interactions, PRI members and government officials were interacted with, which constitute tertiary stakeholders.

Activity 3: Development of Data Collection Tools

This study employed a mixed-methods approach, incorporating both quantitative and qualitative data collection and analysis techniques. In the initial phases, detailed desk review was conducted to examine current knowledge and identify gaps and areas for further exploration. After literature review and development of research design, survey instruments were developed based on the impact map to collect data (quantitative and qualitative) from a sample population, utilizing an offline method to gather information on participants' experiences, attitudes, and behaviours. Semi-structured interviews with key stakeholders, including experts, PRI members, government officials, community leaders, and practitioners, were also designed to gain an in-depth exploration of the research topic and insights into emerging trends and best practices. Developed data collection tools were aligned to the key program objectives, scope outlined in the RFP, along with additional questions to add valuable insights for the case study. Tools prepared include:

- Tools for individual interactions
- Tools for focus group discussions
- Tools for other key stakeholder interactions
- Development of a research and data collection plan

PHASE III: DATA COLLECTION

Activity 1: Development of field-visit plan

Stakeholder interactions were through mutual discussion with APL and project implementing partner-AKRSP. A detailed timeline was developed for the field visits. The implementing partner has facilitated support in scheduling interactions, mobilising the stakeholders and translator (if needed). Additionally, the team consulted with the implementing partner to identify any potential challenges or obstacles that may arise during the field visit, such as language barriers, cultural differences, or safety concerns. This ensured that the data collection teams had access to the necessary resources and support to conduct the study in an efficient and ethical manner.

Activity 2: Conducting field visits

The stakeholder consultations were conducted through individual interviews, focus group discussions, KIIs with other stakeholders. KPMG ensured inclusion of facilitators who possess previous experience in engaging with participants using their native/local languages. Training and sensitizing sessions were conducted for the data collection team to help them effectively communicate with the stakeholders. Team had conducted pre-testing/pilot testing of tools. The data collection process was monitored for completeness, accuracy, backcheck, and triangulation.

PHASE IV: ANALYSIS AND REPORTING

Activity 1: Data analysis and preliminary findings

During the data analysis, both qualitative and quantitative analysis were conducted on the data collected. To enhance accuracy and reliability, the findings from the quantitative data collected on the ground were triangulated to an extent. The collected information was thoroughly analysed on a location disaggregated basis, allowing for a detailed understanding of the specific areas involved. To calculate the social returns and impacts resulting from the program, the SROI framework and OECD-DAC framework were utilized. Additionally, a sensitivity analysis was conducted to examine the results of the ROI. The data and observations obtained during the primary data collection phase and document review were carefully analysed to inform report writing. The findings were further scrutinised basis the assurance standards for SROI assessments.

Activity 2: Development of report and presentation

A comprehensive and detailed report was created for Asian Paints Limited at the enterprise level encompassing the key observations, analysis, findings, and recommendations derived from the assessment. The report adhered to the guidelines provided by the OECD-DAC and SROI frameworks, ensuring accuracy and relevance. Before finalising the report, a draft version was shared with APL for discussion and their valuable inputs. After finalising, the report was presented to the leadership at APL. Furthermore, separate reports were prepared for each project, providing a breakdown of data and analysis. The data collected and the analysis have also been shared with APL.



03

ANALYSIS & FINDINGS



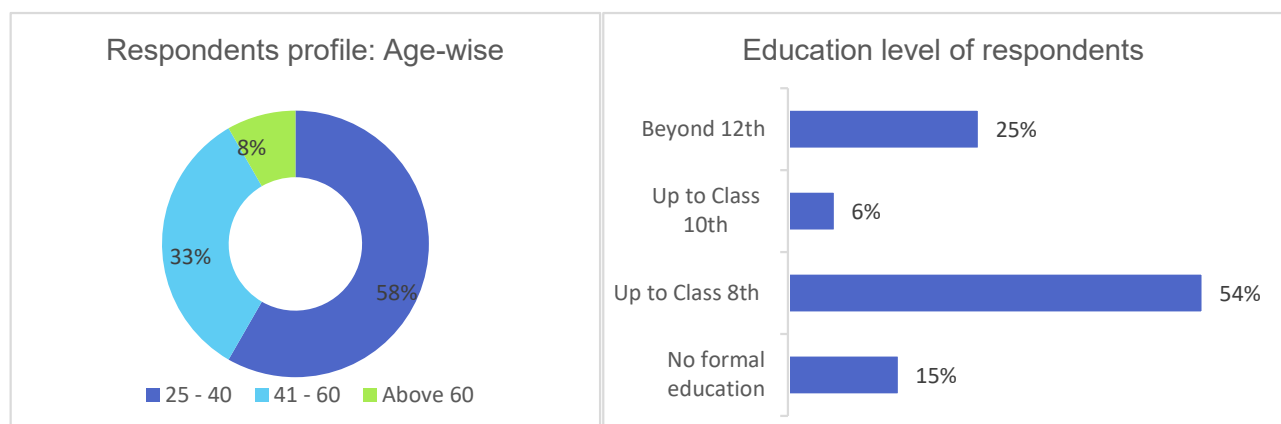


ANALYSIS AND FINDINGS

The section below highlights the findings and observations based on the interactions conducted with sampled beneficiaries of the Water for Livelihood program supported by Asian Paints Limited. across three villages of Anjavani, Kundiamba and Patdi of Dediapada block in Narmada district of Gujarat.

3.1 DEMOGRAPHY OF RESPONDENTS

The respondents interviewed were largely (58 percent) from the age group of 25-40 years, followed by 33 percent from 41-60 years age group and eight percent whose age is more than 60 years. In terms of education levels, majority (85 percent) of respondents had education levels up to 12th class whereas 15 percent had no formal education.



Support received under the project:

WHS	Agriculture interventions	Other Awareness interventions
83%	77%	94%

As provided in the above table respondents have received benefits from more than one intervention and it also highlights the inclusiveness of the sampling coverage.

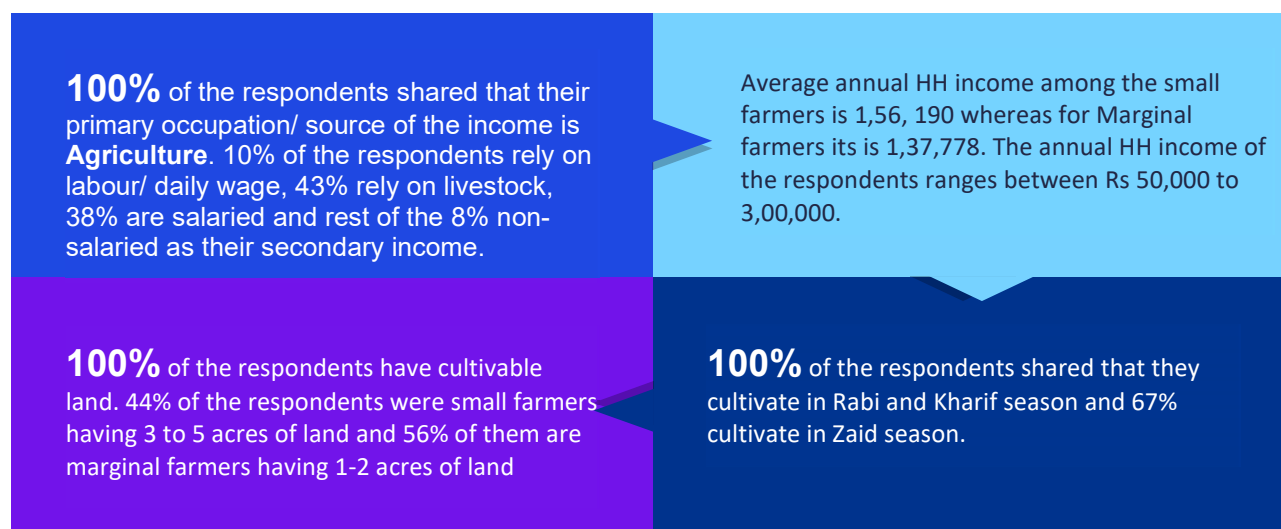


Table 1 Seasons of cultivation

Location	Kharif	Rabi	Zaid
Anjavani	44%	44%	41%
Kundiamba	19%	19%	19%
Patdi	38%	38%	41%
Grand Total	100%	100%	67%

All respondents indicated that they practice cultivation during both Kharif and Rabi seasons whereas 67 percent of the respondents indicated that that they cultivate during Zaid season as well. All the respondents indicated cultivating grains, followed by 92 percent for millets, 71 percent for pulses and fruits, and 52 percent cultivating vegetables.

Table 2 Crops cultivated by beneficiaries.

Location	Grains	Pulses	Millets	Vegetable	Fruits
Anjavani	44%	62%	48%	52%	41%
Kundiamba	19%	26%	14%	20%	9%
Patdi	38%	12%	39%	28%	50%

Basis the OECD-DAC framework the project impact has been analysed and presented as below:

3.2 EVALUATION CRITERIA: RELEVANCE

Relevance is a measure of the extent to which the intervention objectives and design respond to beneficiaries' needs, policies, and priorities, and continue to do so, if circumstances change.

Relevance assesses how well the programme connected with the aims and policies of the government in which it is being executed and to determine whether the programme is relevant to the needs of the beneficiaries.

3.2.1 Needs of the community

During the interview, the respondents were asked about the challenges they faced prior to this intervention. 77 percent respondent indicated that one of the challenges they faced before the intervention was scarcity of water for their agricultural use owing to decreasing groundwater levels. During group discussions with the beneficiaries, it was shared that unpredictable rainfall has been a major challenge especially, when 40 percent of the respondents were only dependent on rainfed agriculture. Around 35 percent of beneficiaries from Anjavani village shared that they did not have adequate access to water for agriculture before the intervention. During discussions with community members, it was discovered that water quality has been an issue in the region. 52 percent of respondents shared challenges with high TDS, while 33 percent stated the issue of unpleasant smell from drinking water.

The data collected from the beneficiaries on their water-related challenges before implementation of the program highlighted their poor conditions around water availability, thereby establishing the need for this program.

3.2.2 Alignment to Schedule VII of the Companies Act, 2013^{xv}

The programme has been designed to cater marginalised communities residing in the vicinity of Asian Paints Limited's area of operation in alignment with the provisions of Section 135 of the Companies Act (2013) and CSR Rules.

The actions undertaken as part of the programme fall into the following broad categories of the section:

- (i) eradicating hunger, poverty, and malnutrition, promoting health care including preventive health care and sanitation [including contribution to the Swachh Bharat Kosh set-up by the Central Government for the promotion of sanitation] and making available safe drinking water
- (iv) ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining quality of soil, air and water [including contribution to the Clean Ganga Fund set-up by the Central Government for rejuvenation of river Ganga].
- (x) rural development projects





3.3 EVALUATION CRITERIA: COHERENCE

Coherence refers to the alignment of the intervention with national priorities and other interventions in a country, sector, or institution. It measures the extent to which other interventions (particularly policies) support or undermine the intervention, and vice versa.

3.3.1 Alignment of the programme with National Priorities and Sustainable Development Goals

The Sustainable Development Goals (SDGs), commonly referred to as the global goals, were established by all United Nations members in 2015 with the aim of eradicating poverty, preserving the environment, and guaranteeing that everyone lives in peace and prosperity by 2030. India was a key contributor to the development of the SDGs and is dedicated to fulfilling them by 2030.

Due to the nature of the intervention, the programme has an impact on a wide range of SDG-related outcomes, as shown below:

SDG Goal	Targets	Relevance
<p>GOAL 1: No Poverty</p> 	<p>Target 1.4</p> <p>By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.</p>	<p>The project initiated a programme on Water Commons to improve the management and governance of land and water resources by strengthening community stewardship</p>
<p>GOAL 2: Zero Hunger</p> 	<p>Target 2.4</p> <p>By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.</p>	<p>The project activities target to strengthen rural livelihoods through agriculture productivity and better adaptive capacities.</p>
<p>GOAL 6: Clean Water and Sanitation</p> 	<p>Target 6.1</p> <p>By 2030, achieve universal and equitable access to safe and affordable drinking water for all.</p> <p>Target 6.4</p> <p>By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from waterscarcity.</p>	<p>The project activities included constructing/repairing water harvesting structures such as farm ponds and check dams in villages to improve access to water for the community members for drinking and irrigation purposes.</p>
<p>GOAL 15: Life on Land</p> 	<p>Target 15.1</p> <p>By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains, and drylands, in line with obligations under international agreements.</p> <p>Target 15.2</p>	<p>Project activities included promotion of agro-forestry and prevention of forest among the community members. Within WHS initiatives, water user groups were formed for operation and maintenance of</p>

	By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.	the infrastructures constructed and sustainability of the project.
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Water crisis threatens the health and development of communities across the world. Over the years, the government at centre and states has been making considerable efforts to address the issue of depleting groundwater. While the Ministry of Jal Shakti^{xvi} aims to devise policies and programs for better management of water in the country, the Government of India had launched the Jal Shakti Abhiyan in 2019^{xvii} with an aim to improve water availability including groundwater conditions in various water stressed blocks. Following that, the Government launched “catch the rain campaign” in 2021^{xviii} emphasising on creating rainwater harvesting structures. In this scenario, Asian Paints Limited. project on water for livelihood aligns with the national priorities of and the government’s efforts of rejuvenating water bodies to address the issue of depleting groundwater in the country.

3.3 EVALUATION CRITERIA: EFFECTIVENESS

Effectiveness is defined as an assessment of the factors influencing progress toward outcomes for each stakeholder as well as validation of the robustness of systems and processes.

It aids in ensuring that the implementation and monitoring processes are sturdy to achieve optimum social impact. The efficacy of the programme is established by examining how well the program’s activities were carried out as well as the effectiveness with which the program’s systems and processes were implemented.

Village level meetings were conducted in initial phase to develop a good rapport with the community members and institutional stakeholders. This helped the project team to get a glimpse of potential needs of the area. Feasibility checks were followed by defining scope of work and discussion with potential farmers. The project was implemented with support of village heads/ Gram Pradhan in the respective villages. Timelines and milestones for the project were also decided in consultation with village and panchayat members.

In all three villages, respondents felt that there have been positive impacts of water-related activities in their area. They claimed to have witnessed an increase in availability of surface water, increase in water columns in wells, improvement in soil-moisture regime, availability of potable drinking water for their families and livestock.

Table 3 Outcomes realised by beneficiaries

Location	Direct irrigation from WHS	Water availability in well due to GW recharge	Improved soil moisture	Potable drinking water	Water for livestock
Anjavani	46%	69%	48%	49%	54%
Kundiamba	17%	15%	18%	9%	23%
Patdi	37%	15%	34%	42%	23%

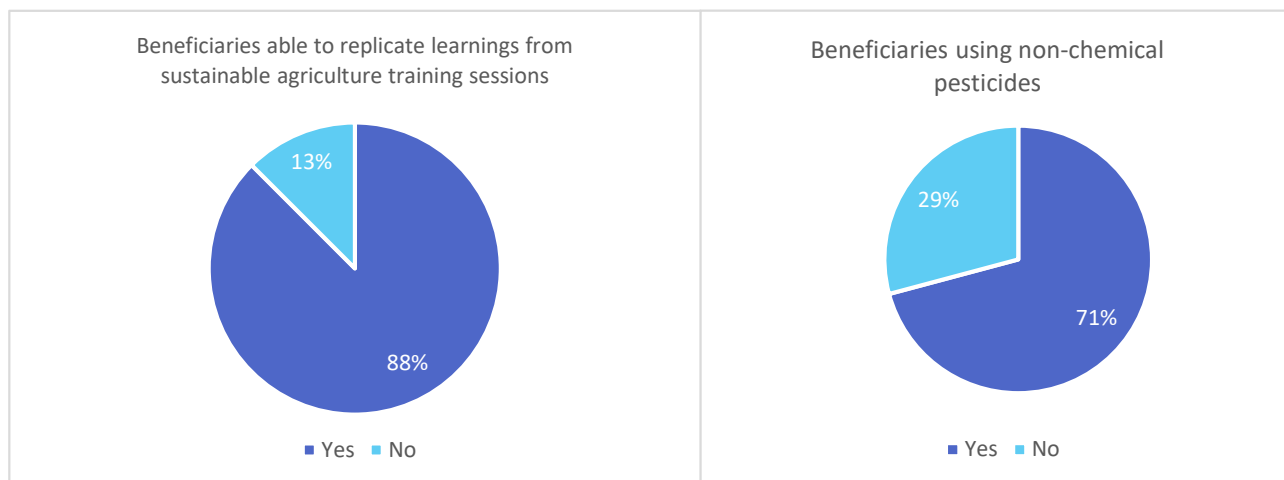
Through Water for Livelihood project, promotion of better irrigation methods and techniques through interventions such as, exposure visits and training programmes were undertaken with the communities, across the project locations. Farmers shared that they found such exercises very relevant to their livelihoods and adopted the suggested agricultural and irrigation techniques aiming at improving agriculture productivity. It was reported that during the interaction, all beneficiaries were aware of sustainable agricultural practices. They gave a positive rating on the effectiveness of the training sessions conducted on various topics such as integrated pest management, crop diversification, agroforestry, agro-horticulture, vermicomposting, and organic farming.

In all three villages respondents shared positive impact of agriculture interventions in their region. It was shared that they have experienced the effect of the intervention in terms of improved soil health, reduced input cost, increased awareness in agriculture practices, water potential, and increased production across the year. Below table showcase the outcome experienced by beneficiaries due to agriculture interventions: Programme focused on agriculture interventions included training, demonstration and capacity building activities, promotion of paddy cultivation through SRI, efficient use of water in irrigation, farm border plantation, mulching, non-pesticide management, and vegetable cultivation.

Table 4. Agriculture outcomes realised by beneficiaries

Location	Increased production	Water potential	Improved soil health	Increased awareness on agriculture practices	Reduced input cost
Anjavani	44%	23%	44%	44%	44%
Kundiamba	19%	13%	13%	19%	19%
Patdi	38%	38%	38%	38%	38%

Below charts indicate beneficiaries' response to the implementation of learnings from training sessions conducted by AKRSP. A substantial number of beneficiaries appreciated the support provided by the AKRSP team during the implementation on their farmland.



All the respondents from the villages of intervention area expressed that the water-related activities conducted has had an impact in their area.

3.4 EVALUATION CRITERIA: EFFICIENCY

The efficiency criterion seeks to determine whether the project was completed in a cost-effective and timely way. The purpose is to establish whether the inputs—funds, knowledge, time, etc. were effectively employed to create the intervention outcomes.

Duplication/ overlap of project activities: Duplication of effort arises when similar interventions are needlessly undertaken within the same community/ location due to poor knowledge management and inadequate coordination of projects, thereby resulting in fund and resource inefficiency. However, in this case, it was observed that the beneficiaries did not have access to any other similar programmes in the region during field observations and interaction with respondents.

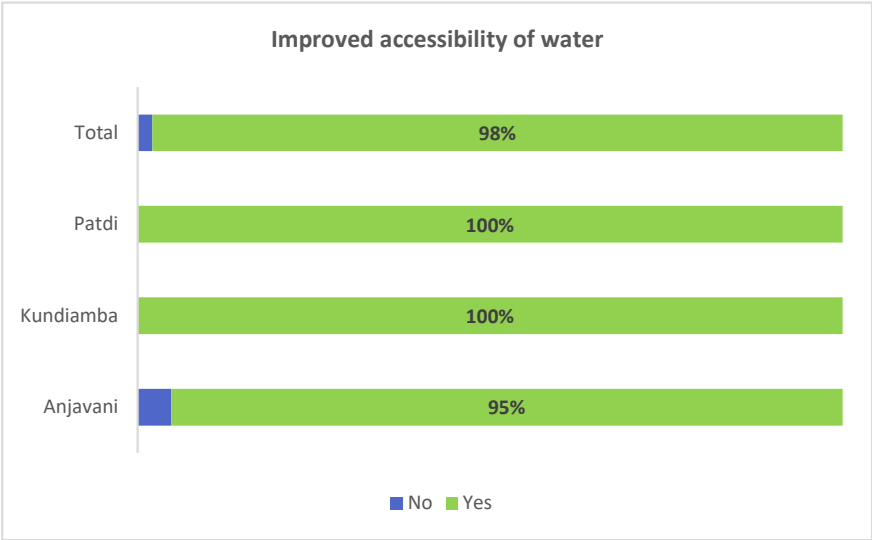
3.5 EVALUATION CRITERIA: IMPACT

The impact has been measured in terms of the proportion of respondents who reported having a significant change in their lives due to the initiation of the project. The goal of measuring the impact is to determine

the project's primary or secondary long-term impacts. This could be direct or indirect, intentional, or unintentional. The unintended consequences of an intervention can be favourable or harmful.

The program's socioeconomic impacts are discussed in the following paragraphs.

3.5.1 Impact on Access & Availability of Surface & Ground Water



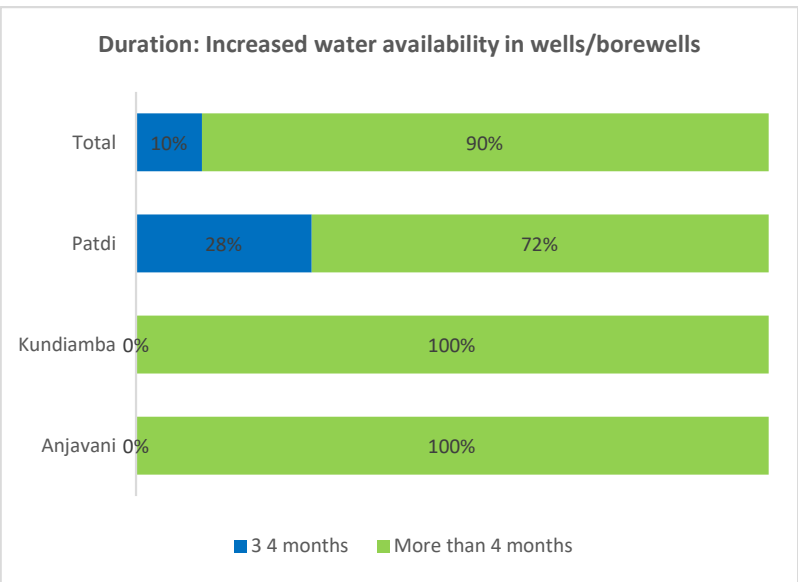
The project interventions were designed and implemented with an aim to make water more accessible to the villagers.

About 98 percent of the respondents from across three villages shared that they have experienced improved accessibility to water post the intervention. In Patdi and Kundiamba, all the

respondents reported positive impact on water accessibility, whereas about 95 percent of participants from Anjavani shared that there was improvement in their access to water.

All the respondents (100 percent) from across three villages reported that the project interventions resulted in increased water availability in their wells/borewells. About 90 percent of the respondents shared that there was an improvement in water availability/retention in wells/borewells for additional four months as compared to previous condition. The remaining 10 percent indicated that the duration as about 3-4 months.

All the respondents from Anjavani and Kundiamba villages reported increased availability for more than



four months, whereas around 72 percent from Patdi indicated the same.

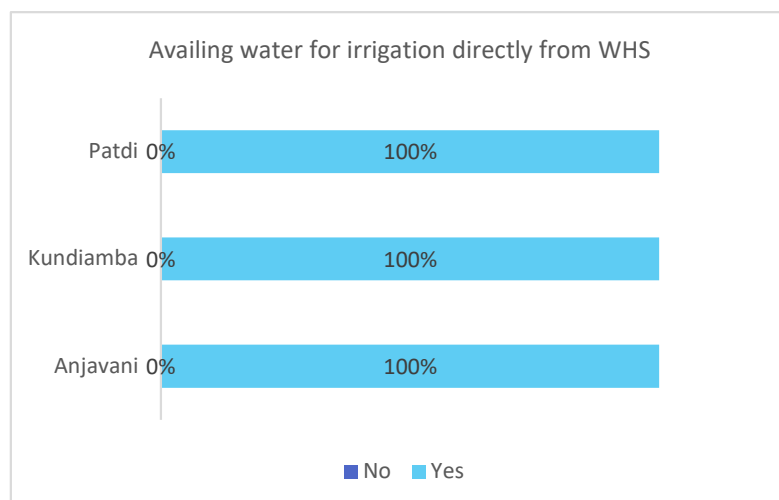
Table 5 Water levels in wells (Units in Feet)

Village	Pre-Intervention			Post-Intervention			Delta Change		
	Summer	Monsoon	Winter	Summer	Monsoon	Winter	Summer	Monsoon	Winter
Anjavani	242	28	53	64	20	36	178	8	17
Kundiamba	278	21	64	124	17	33	153	4	32
Patdi	275	36	73	109	13	37	166	23	37
Total	265	26	55	92	19	41	173	8	14

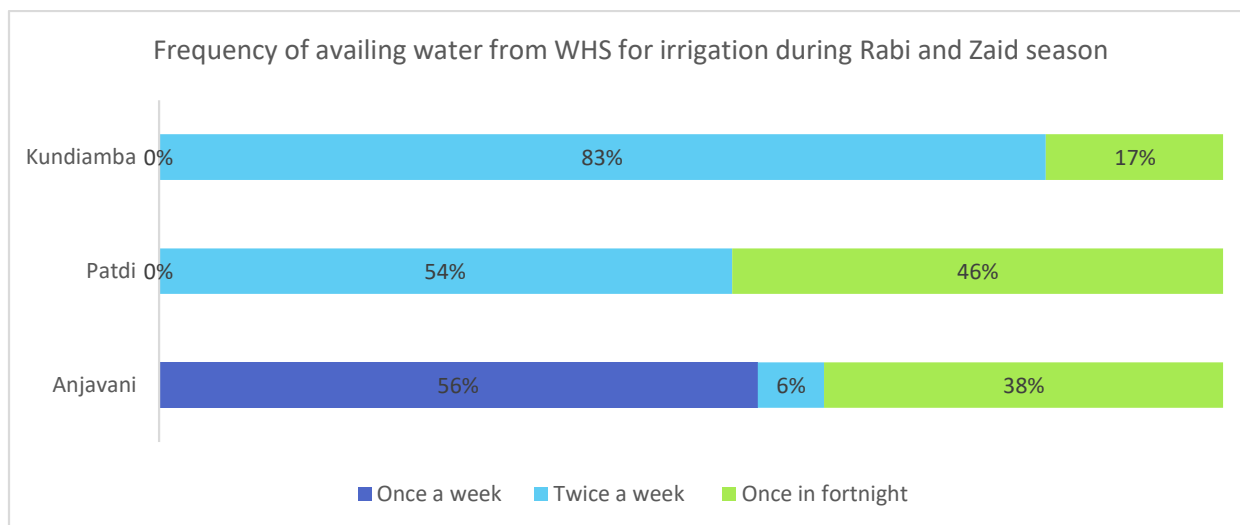
Increased availability of surface water

All respondents shared that there has been an increase in surface water availability due to construction/ renovation of water harvesting structures build in their area, whereas none of their counterparts in Kundiamba expressed the same. All the respondents from across three villages shared there has been increase in surface water availability for a duration of more than four months.

Around 60 percent of the respondents shared that they availed water directly from the water harvesting structures for irrigation purposes. In Anjavani and Patdi, about 76 percent and 72 percent, respectively shared that they directly accessed water from the structures to irrigate their fields.



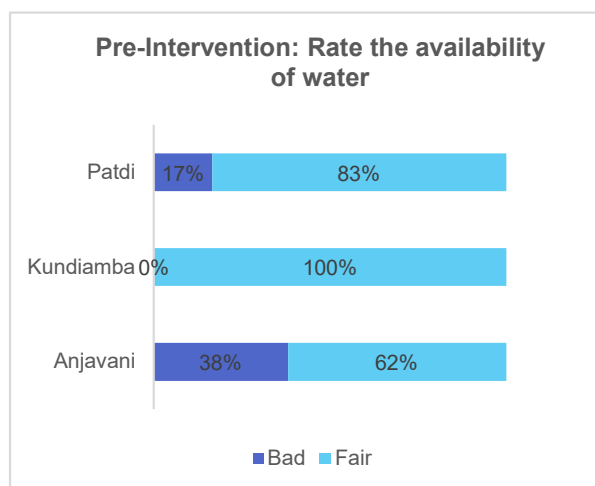
Out of the WHS beneficiaries who shared that they availed water directly from the water harvesting structures for irrigation purposes, most of them reported accessing water from the structure once in a fortnight. Similarly, majority of respondent avail water during Rabi and Zaid season from WHS twice in a week and once fortnightly, except at Anjavani (56 percent once in a week).



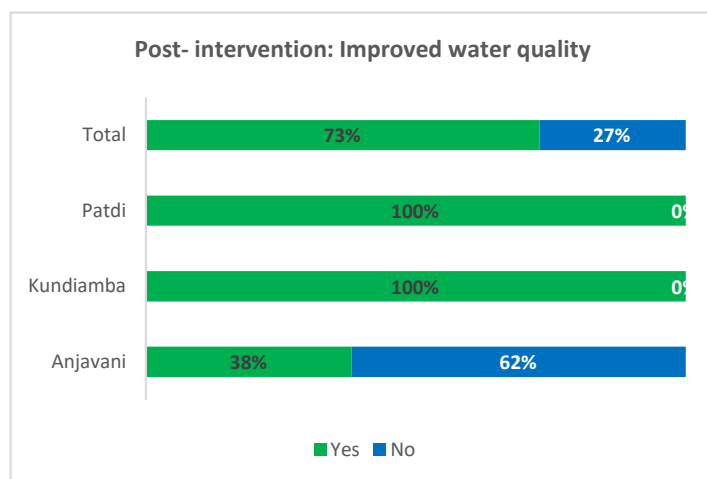
3.5.2 Impact on Potable Water

Availability of potable water

Around 23 percent of the respondents rated the availability of water prior to the intervention as 'bad' with about 77 percent of them rating it as 'fair'. None of the respondents rated the availability of water prior to the intervention as 'good'. Post-intervention, 100 percent of the respondents from across three villages rated the availability of water as 'good'. Additionally, all the respondents reported that there was an improvement in availability of water throughout the year. Thus, the project interventions helped increase the availability of potable/ drinking water for the beneficiaries.



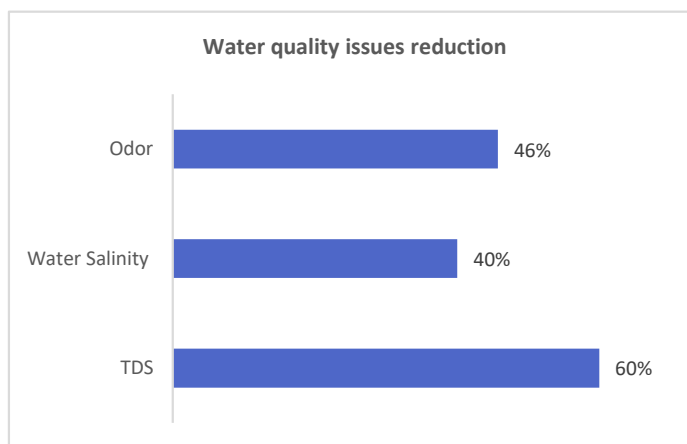
Quality of drinking water



Around 73 percent of the respondents across the three villages shared that there was an improvement in the quality of drinking water post project intervention. In the villages of Patdi and Kundiamba, all the respondents (100 percent) reported improvement in drinking water quality. In Anjavani, around 62 percent of the respondents shared that there has not been any change in the quality of drinking water.

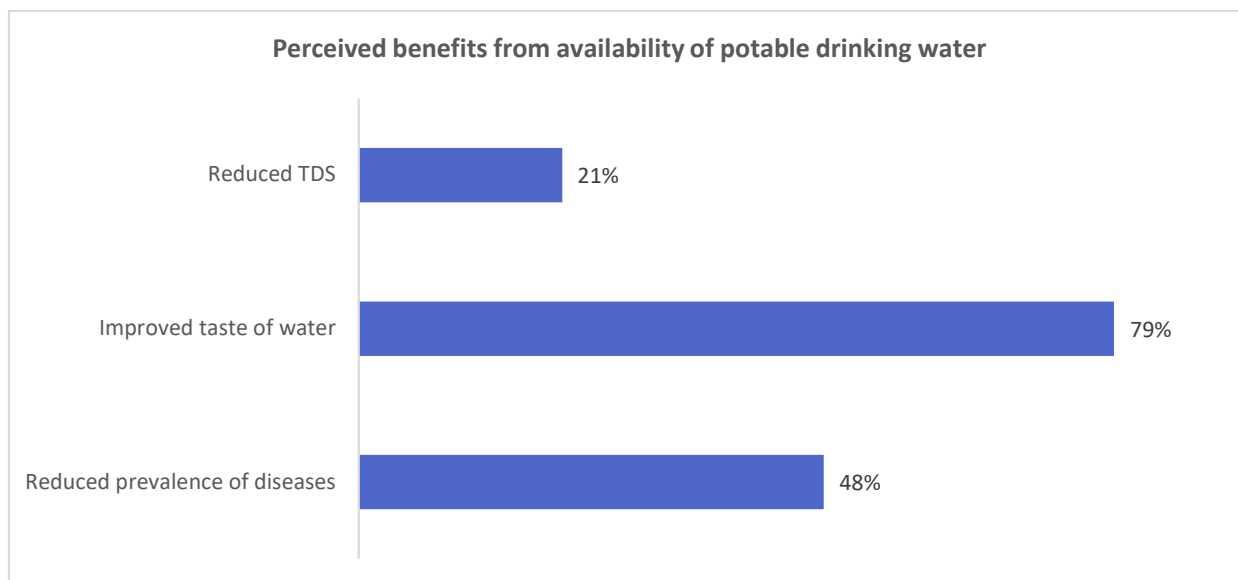
Respondents shared that the availability of potable drinking water has resulted in health benefits. In the village of Kundiamba, all the respondents shared that the availability of potable drinking water has brought in health benefits to the community. Out of 73 percent of the participants who reported positive health benefits, 79 percent in the taste of water. About 48 percent of the respondents shared that there was a reduction in the prevalence of diseases, and about 21 percent mentioned that the water had lesser quantity of TDS.

Around 73 percent of the respondents shared that the water quality has improved post project intervention. Out of respondents who reported improvement in water quality post intervention, around 60 percent shared that there has been a reduction in TDS, 46 percent reported decrement in unpleasant smell and about 40 percent indicated reduced water salinity.

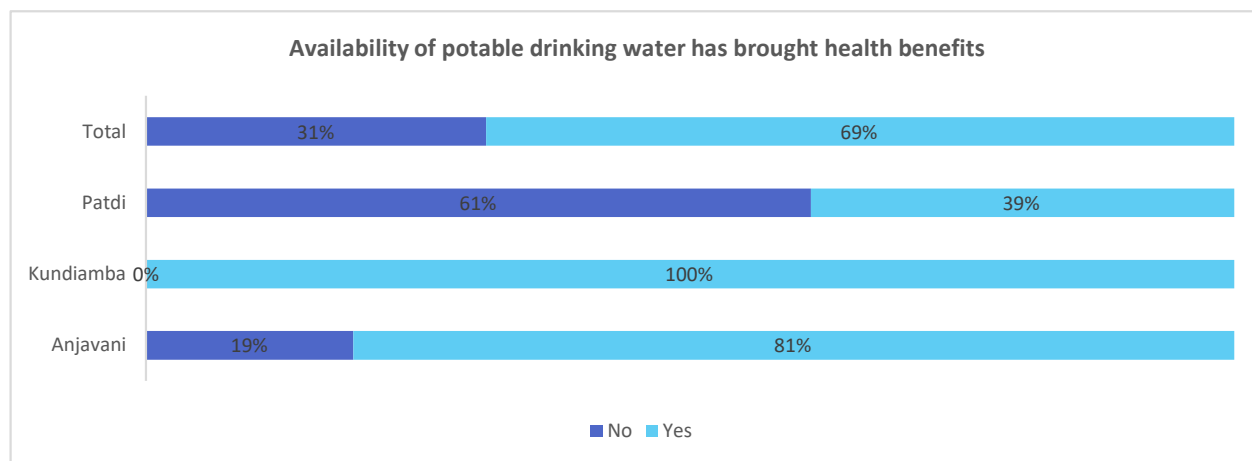


Out of the respondents who shared that there has been a reduction in in TDS levels, around

38 percent resided in Anjavani, 19 percent in Kundiamba and 43 percent resided in Patdi. 57 percent of those who reported reduction in water salinity resided in Anjavani whereas 43 percent belonged to Kundiamba. Similarly, about the improvement in water odour, around 50 percent resided in Anjavani and the remaining in Patdi.



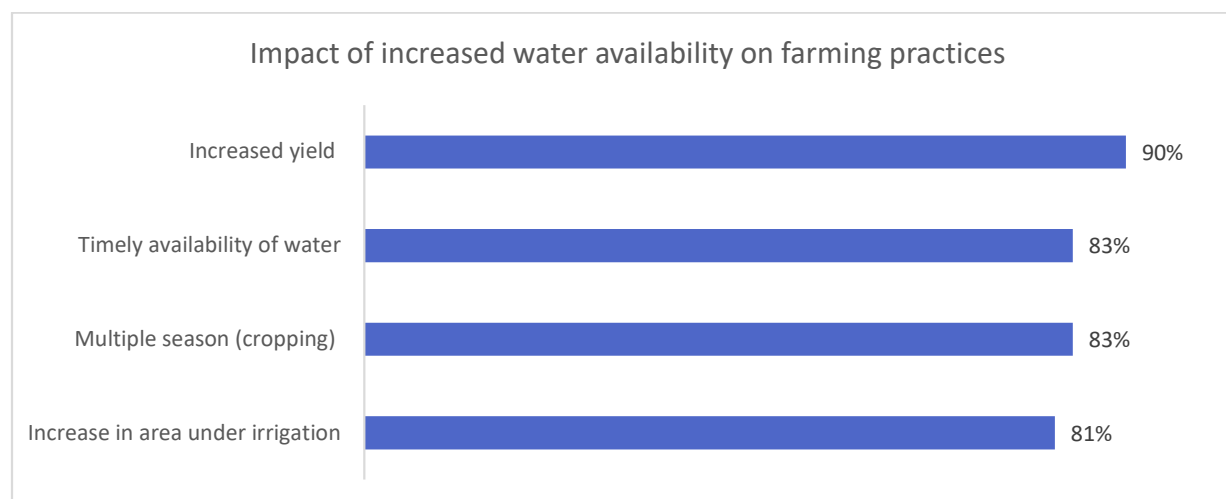
Out of the respondents who shared that there has been a reduction in prevalence of disease due to availability of potable drinking water, around 94 percent resided in Anjavani village and six percent resided in Patdi. Similarly, regarding the improvement in taste of water, around 50 percent resided in Anjavani, 35 percent in Kundiamba and 15 percent resided in Patdi. All the respondents from Anjanvani shared that there has been a reduction in TDS levels due to availability of potable drinking water.



About 63 percent of the respondents reported that there was a reduction in expenses on drinking water due to project interventions. All the respondents from Anjavani and Kundiamba village reported the same. Around eight percent of the respondents shared that the availability of potable drinking water resulted in reduction in health-related expenditures.

3.5.3 Impact on Agricultural Land and Practices

Impact of increased water availability on farming practices



Around 81 percent of the respondents shared that there has been an increase in the area under irrigation due availability of water. About 90 percent of the study participants reported an increase in yield and 83 percent of the respondents shared that there has been improved timely availability of water for irrigation and that they had engaged in farming over multiple seasons during the year.

3.5.4 Impact on Farmer's Livelihood

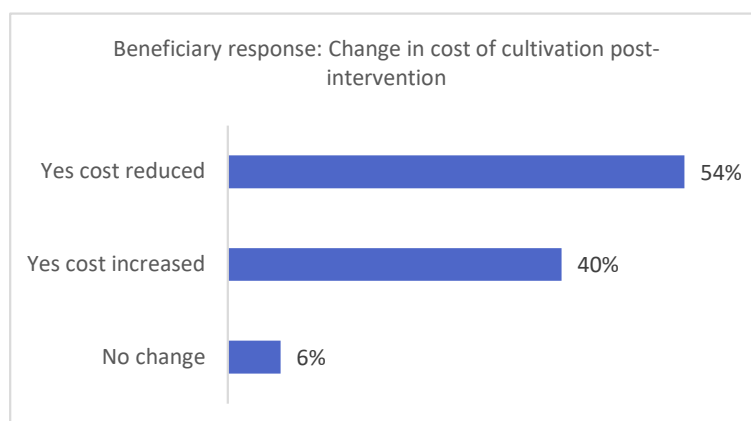
Increased production: The respondents stated that the paddy yield prior to intervention was 2.93, 2.17, and 0.33 quintal/acre in Kharif, Rabi and Zaid season which increased to 19.49, 14.87, and 7.23 quintal/acre respectively post intervention, amounting to a delta change of around 5 to 6 times. The highest increase (21.33) in yield was reported in Kharif season. During discussion community members shared that water resource harvesting activity has also been successful in improving water availability in the village, thereby enabling communities to undertake multiple cropping season; now communities also undertake cultivation during the Rabi and Zaid season.

Table 6- Paddy yield pre and post intervention (in quintal/acre)

Villages	Pre			Post		
	Kharif	Rabi	Zaid	Kharif	Rabi	Zaid
Anjavani	2.90	2.30	0	19.90	13.30	7.1
Kundiamba	3.67	2.2	1	25.00	21.30	10.3
Patdi	2.22	2	0	13.56	10.00	4.3
Average	2.93	2.17	0.33	19.49	14.87	7.23

Reduction in cost of cultivation:

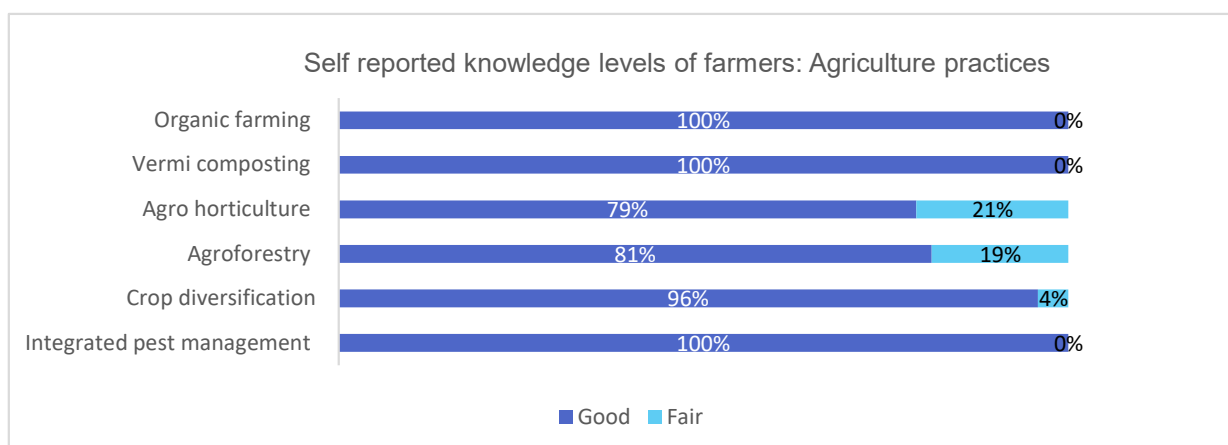
Respondents shared their experience of reduction in cost of cultivation. Around 54 percent respondents experienced reduction in the total cost of cultivation due to improved water availability, and adoption of agricultural techniques have helped in saving the costs incurred on fertilizers, pesticides while also increased the yields. 6 percent stated



that the cost of agriculture has remained unchanged. However, 40 percent are facing an increase in the overall cost of irrigation due to increasing costs of cultivation due to higher expenses on external inputs such as fertilizers and pesticides or hybrid varieties of seeds with the hope of getting higher yields.

Average cost of reduction in cultivation was estimated to be INR 3,271/- per beneficiary. The reduction ranges from INR 2,000 to 10,000/-. The average change experience by marginal farmers is INR 3,741 whereas, among small farmers the same is INR 2,667.

Improved knowledge, attitude, and practices: Significant amount of community members shared their experience of awareness sessions, capacity building workshops and demonstration they have attended. The training on organic farming, vermicomposting, horticulture, crop diversification and integrated pest management has improved their knowledge about agriculture practices. Most of the respondents shared satisfactory level of knowledge enhancement. Farmers shared that they found such exercises very relevant to their livelihoods and adopted the suggested agricultural and irrigation techniques aiming at improving agriculture productivity. Simultaneously, organic farming and vermi composting also helped in improving crop yields, agriculture productivity, water saving and reduction in the cost of cultivation.



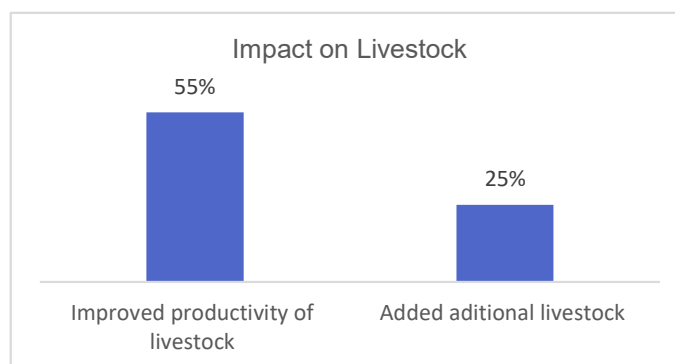
Impact on family income: As detailed out above, the targeted interventions (Water harvesting structures and improved agriculture practices) at demand and supply side have resulted in increase in yield from agriculture while reducing the cultivation costs which has further ensued an increase in household income for the respondents. Overall, the average family income from agricultural yield reported by respondents prior to intervention was INR 50,417 which has increased to INR 1,45,833 amounting to a delta change of INR 95,416. The village of Patdi reported the highest increase (INR 1,01,112) in HH income.

Table 7- Income/ household Pre and Post

Average increase in household income (Amount is INR)			
Villages	Pre	Post	Delta Change
Anjavani	78,810	1,77,619	98,809
Kundiamba	26,111	1,02,222	76,111
Patdi	29,444	1,30,556	1,01,112
Overall	50,417	1,45,833	95,416

Average annual HH income among the small farmers is INR 1,56,190 whereas for Marginal farmers, it is INR 1,37,778. The annual HH income of the respondents ranges between INR 50,000 to 3,00,000.

Impact on livestock: About 65 percent of the respondents were practicing livestock rearing. Of those, 55 percent of the respondents shared that there was an improvement in the productivity of their livestock owing to increased availability of water and thereby the fodder. Though most of the milk output was used for domestic consumption only. On average, there was an increase in yield of 4.28



Litres. Similarly, about 25 percent of the respondents reported that they have added additional livestock (one large ruminant) post project intervention due to improved availability of water.

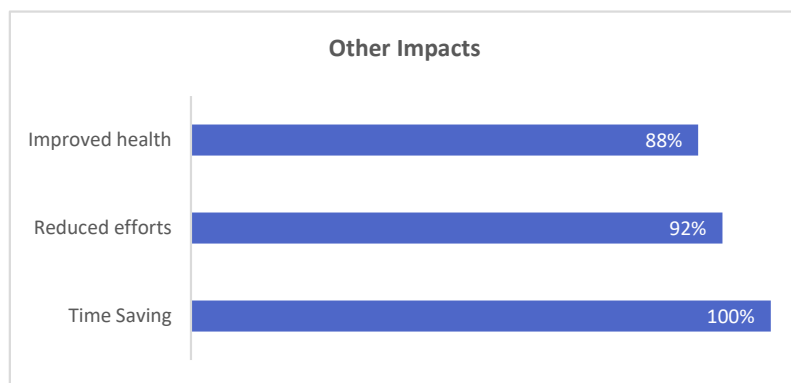
Overall, the respondents reported an average increase in income due to livestock of INR 2,027. Prior to intervention, average income from livestock was INR 409 which increased to INR 2,436. The highest increase in income of around INR 9,000 was reported from the village of Anjavani highlighting the positive impact on livestock-based livelihood activities for the respondents.

Table 8- Income from livestock rearing (per household/month)

Average increase in income from livestock rearing			
Village	Pre (INR)	Post (INR)	Delta Change (INR)
Anjavani	167	9,167	9,000

Patdi	694	1,411	717
Average	409	2,436	2,027

3.5.5 Other Impact Areas



The respondents also shared the impact of the project interventions on their health, time saved, and efforts. All respondents shared that there was an increase in the time saved. 92 percent of the respondents reported reduction in efforts while 88 percent indicated improvement in their health post-intervention.

Around 23 percent of the respondents had rated the availability of water prior to the intervention as 'bad' with about 77 percent of them rating it as 'fair'.

Health improvement reported due to reduced drudgery as fetching water from long distance may lead to musculoskeletal health problems. Due to the increased ease of availability of potable water reduces workloads especially among the women and adolescent girls. Additionally, it leads to saving time which can be utilised for other productive activities

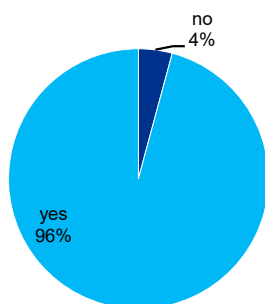
Furthermore, the increased consumption of milk and vegetables has added health benefits while saving the household expenditures.

Impact on biodiversity:

100% of the interviewed community members have observed increased citing of birds or wild animals

100% of the interviewed community members have evidenced increased vegetation around the check-dams/ waterbodies

Observed reemergence of migratory bird species around water bodies



All respondents from the community indicated that they have evidenced increase in vegetation around the waterbodies. 100 percent of the interviewed community members have observed increased citing of birds or wild animals. 96 percent of the interviewed community members have observed re-emergence of the new species around waterbodies. 92 percent of the interviewed community members have observed increased availability of the fuelwood, while remaining respondents reported no change. Though there is

increase in availability of the fuelwood, many community members shared that people from nearby villages cut the wood for fuel leading to decrement in vegetation.



3.6 EVALUATION CRITERIA: SUSTAINABILITY

Sustainability assesses how well the programme secures the long-term viability of its outcomes and influence. This evaluation criterion contains key elements concerning the likelihood of continuous long-term benefits and risk tolerance. To achieve sustainability, a governing framework, financial model, and operating system must be established.

100% of the community members rated their overall experience in the 'water for livelihood' project in bringing about positive change in your quality of life as good

100% of the Community members rated the support provided under the project as good

Governance of Water Harvesting Structures

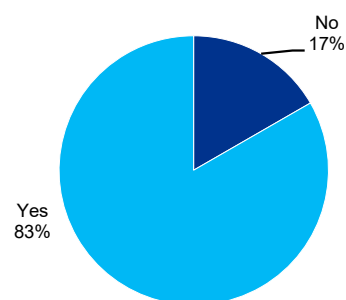
Water is common pool resource. These resources are not owned or used by a single individual but are shared among multiple actors. the role of local communities in the management of natural resources is undermined in the dominant discourses. Local communities who are the primary stakeholders of natural resources, in many instances, lack the institutional spaces to manage these resources as common property regimes.

The programme had an in-built exit strategy with sustainability at its core. The programme took the idea of empowering beneficiaries to take control of their natural resources through of formation of WUA. Community members has set up a governance mechanism through WUA committees for Operations & Maintenance of check walls, timely repair work of structures, if needed and community led enterprises for the long run sustainability of the project. Financing of the O&M work will be done by contribution from the WHS beneficiaries or through seeking support from government.

All respondents stated that the Water User Association (WUA) has been formed in their village.

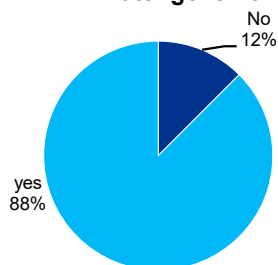
During discussions, it was understood that all respondents (100 percent) were aware of the formation and role played by WUAs. 83 percent of WHS beneficiaries reported that they or their family members are part of WUAs, indicating awareness of governance structure for WHS. Respondents from Ajanvani shared that a separate fund for O&M of the WHS has been set up and water tax of INR 200 to 500 annually depending on the land holding is being levied.

Involvement in the WUA/FPO/VI



Around 88 percent of the interviewed community members shared that they have attended training for water governance. The training has improved their knowledge about the water governance mechanism.

Training/ exposure visit on NRM/ water governance



About 98 percent of the respondents shared that there were norms established for the water usage of WHS. The community embers shared that they mutually decide on how much water to use and when to use. They use mobile engine once in week or once in 15 days to take out water from WHS and consume as required.

Community members shared that role of the WUAs can be sustained by building capacities of its members and encouraging frequent meetings with meaning full conversation on the water resources in the village.

As stated by the respondents, the project impact will be sustained through collective action from the community and the village institutions by establishing governance rules and practices such efficient usage of water from WHS, finding supplementary sources of water, limited usage of borewell water, timely maintenance of check dam, saving water and through using limited groundwater for domestic usage.

3.7 CASE STUDIES

Case study – 1: Transitioning beyond Rain-fed agriculture

Amarsingh bhai, aged 65 years, is a marginal farmer and a sole bread earner of the family of ten. Prior to the intervention, it used to be very difficult for him to feed such a huge family with a small piece of cultivable land wherein, he only used to cultivate crops during rainy season as that was no other source water for irrigation available to him for farming.

The agricultural produce was merely sufficient enough to meet his household consumption requirement. He also owned a cow for milk purpose which was also not sufficient to meet the needs and support his livelihood.

Lately with the availability of water due to APL intervention in his village, he has started cultivating across all three seasons. Furthermore, the agricultural yield has got increased which provides for his households needs and surplus is now sold in the market. Recently, he has purchased two additional cows as well from the additional income which has augmented an additional source of income for him. As stated by him, he sales 34-35 litres of milk daily which provides him a handsome return of INR 30,000-35,000 monthly by just selling milk.

Overall, he describes his experience as a very positive one and attributes the changes of increased farm production and milk production to APL intervention. Now according to him, his economic condition is stable and has resulted in improved lifestyle.



Case study – 2: Holistic intervention boosts income of a small farmer



Kanti bhai, is a 60-year-old small farmer. Before the intervention, he used to cultivate only a small piece of land due to unavailability of water for irrigation and therefore was losing a huge chunk of potential revenues from agriculture. As he recollects, previously, he only used to grow crops during Kharif and Rabi seasons. However, post-project implementation, he has been able to cultivate crops in all the three seasons. Expanding the cultivation to his entire piece of land enabled Kantibhai to harness his full potential and utilise available resources more efficiently. Additionally, he has adopted improved agriculture techniques like organic farming which has helped him to reduce his expenditure on cultivation. Together, the above has enhanced the sustainability of his agricultural practices.

Now, he cultivates Paddy during the rainy season and Vegetables and Maize during the subsequent seasons. With the integrated outcomes from water and agriculture interventions of APL, Kantibhai believed that the System of Rice Intensification (SRI) techniques, and enhanced soil quality has contributed to his remarkable increase in agriculture production which has surged from 2 to 10 Quintals/acre per season and thereby strengthening his quest towards securing livelihood.

Case study – 3: Water availability and Micro-irrigation aides in sustainable income

Jignesh bhai, aged 29 years, is a marginal farmer. He has a borewell which acts a main source of water for irrigation. Prior intervention, he says that the water level in his borewell was very deep and unreachable and hence the cultivation was limited to rainy season.

After the project implementation, the water level of borewell has increased significantly which has enabled him to take crops across all three seasons. He cultivates Paddy in the monsoon season followed by Maize and Green Gram.

With these positive changes, He has earned INR 62,000 in the previous financial year and looking forward improve his farming techniques in the future to improve his livelihood from optimum utilisation of the available resources.

Additionally, He has also planted 15 mango trees around the farm field which were provided under the intervention form APL.

Enhanced income has given Kalpesh bhai the opportunity to support other farmers with their financial needs. In the future, Kalpesh bhai is planning to cultivate vegetables along the regular crops as he installs the drip irrigation.



WAY FORWARD:

Water is a crucial resource and a critical input in nearly all processes of life. Adequate availability of water is important for agriculture and animal husbandry to increase the productivity. As has been mentioned in the introductory chapter, with groundwater being increasingly over-exploited, agriculture is becoming increasingly difficult to pursue; thus, contributing to rural distress and migration. The water resource development initiative aimed to improve the livelihoods of people living in rural areas. One of the objectives of the programme was to revive traditional institutional mechanisms related to water and enable them to function effectively in a water-stressed environment. This includes governing complex and scarce resources like groundwater. Some of the suggestive way forward is outlined below:

Scalability/ Replicability	<ul style="list-style-type: none">• An integrated programme to bring about a change by leveraging technology in agriculture to move it from subsistence to enterprise level cultivation can be aimed. the approach can be a mix of sustainable farming approaches (good agriculture practices, creating Agri-entrepreneurs, Input and Output aggregation for small farmer groups, establishing Hitech Farm Demonstrations, Organising Krishi Choupals for specific technical information dissemination), deployment of IoT solutions (installation of weather stations to measure real time in-situ dynamic climatic and edaphic factors; and pest traps) and by improving their access to information through technology use (Missed call facility, phone call consultations, Smart App notifications, WhatsApp groups, SMSs and the Agri-entrepreneur service to provide more personalized and one on one support to farmers.)• The program may expand the other set of watershed activities in the same geography. It could be around treating other drainage lines, fodder grass seeding, strengthening other rural livelihoods, decreasing anthropogenic pressure and others.• The program may adopt IWRM (Integrated Water Resources Management) at the river basin level. A river basin approach is a practical framework based on geographical and hydrological characteristics by addressing downstream and upstream basin-wide issues.
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	Enablers	<ul style="list-style-type: none"> Increased involvement and capacity building can be promoted to ensure greater participation from women in the program implementation, and decision-making. This could be achieved through enabling strong institutions, and participation in user groups with acceptance by PRI members. Improving the program delivery by training and orienting PRI members on the larger objectives, intended outcomes, and the process to be followed. Convergence opportunities with government and non-government institutions can be explored in order to scale and replicate the programme.
	Community participation	<ul style="list-style-type: none"> It is essential to explore and implement new and innovative methods for engaging communities. This will help in sharing knowledge among community members, making communities equal partners in the pursuit of water security. Community-participation is the to bringing about effective change in challenging common beliefs and guiding them towards recognising and addressing the water crisis in their community. For instance, the prevailing notion in many communities is that groundwater depletion is solely caused by low rainfall. However, interactive discussions can help the community understand that while rainfall may have become erratic, changes in agricultural practices over the years could also contribute to the fast-depleting groundwater.
	Establishing institutions for community led governance	<ul style="list-style-type: none"> To ensure the sustainability of the interventions, local governance mechanisms must be further strengthened. This could be achieved through enabling strong community institutions and their acceptance by PRI members. Community institutions may be formed at habitation level to ensure reaching out to the last mile. These institutions shall draft their byelaws and their capacity building can be done to make them self-reliant over a period of time.

Involvement of women in community institutions, program implementation and decision making in future course of action

- In order to establish water stewardship, community driven by-laws would ensure optimum utilisation of water from common resources by all stakeholders. To enable the same, activities like crop-water budgeting exercise shall be carried out at habitation level.
- It is advisable to allocate user rights and collection of user charges formally for usage of the benefits created under common property resources.

MEASURING THE SOCIAL RETURNS

As explained in Chapter 2, this report has used two evaluation frameworks which are OECD-DAC and SRoI. Generally, OECD-DAC helps in gaining a qualitative understanding of the impact. On the other hand, SRoI helps organizations in evaluating changes which are being created by measuring social, environmental, and economic outcomes and providing monetary values to represent them. SRoI also helps in understanding the total value generated for every rupee invested for interventions.

There are two types of SRoI:

- Evaluative, which is conducted retrospectively and based on actual outcomes that have already taken place.
- Forecast, which predicts how much social value will be created if the activities meet their intended outcome.

For this study, both evaluative as well as forecasting SRoI has been considered. SRoI primarily involves six stages which are as follows:

- Stage 1: Establishing Scope and identifying key stakeholders
- Stage 2: Mapping outcomes
- Stage 3: Evidencing outcomes and giving them a value
- Stage 4: Establishing impact
- Stage 5: Calculating the SRoI
- Stage 6: Reporting

Stage 1 and Stage 2 have been discussed in-depth in Chapter 2. Further stages have been elaborated in the ensuing sections.

4.1 Evidencing outcomes

After formulating the impact map, indicators to measure the outcomes were developed based on the evaluation team's interaction with beneficiaries of the interventions and other relevant stakeholders like PRI Members, implementation team members etc. Also, evidence of outcomes was collected using primary and secondary data.

Quantity of Change: The quantity of change for the impact map has been calculated by extrapolating the number of responses from the sample covered to the total population of the beneficiaries. Depending on the responses received during data collection, a proportionate percentage of total beneficiaries is calculated.

The below provides details about the evidence indicators for the outcomes and the quantity of change against each indicator.

Table 9- Quantities of change

Outcome description	Indicators and Sources	Quantity (scale)
Creation of sustainable water supply through increment in availability and accessibility of water	Increase in water harvesting capacity (Quantum of Water Potential created or Water Harvested in Cubic Metre)	322245.71
	Increased availability of water for irrigation - surface water from WHS (Number of farmers x Avg increase in Irrigated land)	42
	Increased availability of water in wells / borewells (number of farmers/community members x Avg increase in availability of water in months/days)	7
Increased agriculture production due to increment in availability of water	Increase in availability of Net Sown Area (in Ha) (Number of farmers x Avg increase per farmer)	46
	Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	51
	Reduction in Cost of Cultivation (Number of Farmers)	47
	Reduction in Cost of Irrigation (Number of farmers using Mobile Engines for irrigation x Avg hours of irrigation)	46
Increased agriculture production due to enhanced agriculture practice	Adoption of improved agriculture practices (Number of members indicating adoption of improved agriculture practices)	1013
Increased quality an accessibility to potable water leading to improved health of community members	Reduction in Drudgery for members of household (number of community members)	1151
	Reduction in water borne diseases (number of households x % respondents indicating improvement in health)	794
Increased access to water for animal husbandry activities	Increase in annual income due to availability of quality potable water for cattle and other animals (Number of households x % increase in milk yield)	691
Availability of increased labour opportunities locally (own or nearby villages) due to reduced migration	Reduction in migration (seasonal for labour work) (number of members reporting instances of reduced migration x days of work in WHS MGNREGA and/or agriculture)	57
Increased income due to fisheries due to increase in fish count in the water body	Increase in income from selling fish (Number of villages X Revenue reported by community members)	3
Community led governance of water resources at village level	Formation of water committees in villages and creation of bylaws for water management in village (Number of village water user groups formed)	57
Effective Operations and Management of water resources at village level	Efficient water management in village and repair-maintenance management (Number of water bodies created x Cost of manager)	57
Improved wellbeing for the beneficiaries and their family members	Improvement in Health seeking behaviour (Number of respondents reporting increased consumption of self-grown fruits and vegetables))	691
	Improved sensitization towards child's education (Number of respondents reporting increased spend on child's education)	576

Increased green cover due to access to water for extended period/ throughout the year due to WHS	Increased green cover canal/ river due to WHS construction for extended period/ throughout the year (in Metres)	323748.51
Improved soil health due to use of organic fertilizers and pesticides	Farmers spending less on chemical fertilizers and pesticides	800
Reduced soil pollution due to reduced chemical usage	Farmers using ploughing to dig lower layer of soil	800
Improved bio-diversity due to availability of water for extended period / throughout the year... (birds/animals from nearby area using the water during summer)	Community members enjoying view of more birds and animals with pleasant environment	1151

Duration of Outcome: Some outcomes will last through a beneficiary's life, while some will last only till the input activity persists.

For the purpose of this SRoI Analysis, outcomes realised due to intervention of infrastructure activities have been considered for a maximum of 5 years for the impacts whereas, for the intangible interventions such as training the duration of impact is restricted to 3 years. These considerations are based on the following assumptions:

- Water Resources Development intervention has long lasting effects, especially the rise in ground water and surface water level due to the construction of check dams, rejuvenation of existing ponds, etc. This increased duration is also reflected in the resulting economic and social impacts for the community.
- In case of interventions which involve components of training or are related to skill/knowledge training, the beneficiaries will need to upgrade knowledge required for their respective subject due to advancement in technology and rapidly evolving market economy and climatic situations.
- Based on nature of interventions and dynamics of the income generating activities, impact due to the contribution from beneficiaries and other stakeholders will outweigh the impacts due to contribution and support from APL.

Financial Proxy and Value of Financial Proxy: An SRoI analysis has used financial proxies in order to establish the value of identified outcomes. As a standard practice, prices are used as a proxy for value of services. Sometimes, the outcomes reported by stakeholders cannot be traded in a market or are intangible. Hence for such outcomes, the closest, comparable value has been identified for that service. Please refer [Table 12- Financial proxies](#) for outcome wise proxy details.

4.2 Establishing Impacts

In order to provide credibility to the analysis and prevent over-claiming, the SROI calculation has taken into consideration aspects like attribution, displacement, deadweight, and drop-off into account.

Establishing impact consists of an estimation on how much of the outcome would have happened anyway and what proportion of the outcome can be attributed to the activities that occur during the programme or project. Establishing impact is crucial, as it reduces the risk of over counting. Thus, an important part of SROI is 'measuring impact' by accounting for attribution, deadweight, displacement, and drop-off. The following section details how these were addressed:

Attribution: Attribution is the process of considering impact in exclusivity of any other intervention by other agencies.

There are two ways have been taken to arrive at Attribution. Beneficiaries have been asked to assign / attribute percentage against each stakeholder and against each change. Average of such attribution of beneficiaries helps to arrive at Attribution. In case of lack of sufficient data from beneficiaries, equity-based attribution was also considered.

Here the attribution was collected during data collection from individuals through questionnaire. The same was validated and moderated (if required) through attribution findings from FGDs of the respective interventions. List of stakeholders considered for attribution were as follows:

- Asian Paints Limited along with implementation partner
- Others- Self / Family/ Relatives, Community, Government officials from Agriculture, Animal Husbandry and Water Resources Development Sectors etc.

Deadweight: Deadweight is an estimation of social benefits that would have resulted anyway i.e., without the intervention.

Basis the respondents' assertions, the deadweight has been considered as **3%** and the reasons have been presented below:

- There are no other organisations working in the region on similar issues.
- The focused approach of APL implemented through the support like training, affordable inputs and grant support has led to the increase in agricultural productivity.

- Support provided by APL is aimed at efficient spending and creation of quality infrastructure and is participatory in nature.

Displacement: Displacement is positive impact on one stakeholder at the cost of a negative impact on another stakeholder.

In case of this SROI study, displacement was assumed as **Nil** percent for agriculture intervention considering no adverse or negative impact reported by any respondents. In case of other interventions, there are no major organisations, private or non-profit working in similar sections.

Drop-off and Duration: Drop-off is the portion of outcomes that are not sustained. The drop-off will vary depending on nature of project interventions and activities involved in it. Intervention wise drop-off along with reasons is given below:

- **Intangibles @33 percent:** Acquiring of new skill sets, multi-cropping and other inputs have strengthened the base of agriculture economy in the region. Farmers have also reported a significant rise in self-confidence. Due to these factors, the impact is assumed to last for 3 years.
- **Water Resources Development @20 percent:** Creation of quality infrastructure for water resources development results in long lasting effects. Communities have also observed a significant improvement in ground water and surface water levels. Thus, it is assumed that impacts of these interventions would last over a period of 5 years.

Double Counting: Due to the nature of the identified impacts, there is a potential for double counting when aggregating isolated impact values. An example is the overlap between agriculture productivity increase due to agriculture as well as water interventions. To resolve this, we excluded the first year of impact due to agriculture for the overlapping respondents.

For a detailed view, refer [Table 11- SROI Calculation](#)

Considering the above parameters, the impact of each outcome is calculated with the following formula:

4.3 Calculating Impact

Impact = Quantity of outcome * Financial Proxy Value * Attribution – Deadweight – Displacement – Drop-off for each year

SROI is a ratio of cumulative present value for each outcome against the total investment in the project
i.e., **SROI = Total NPV of social value / NPV of investment**

Total Input Value: The inputs from APL, beneficiaries and other stakeholders are considered for the SRoI calculation stage. The assumption being all the inputs have worked together to create the observed impact. Even absence of either one of the inputs from stakeholders other than APL will have not generated the impact observed as a part of the current study. Various inputs considered for this study included financial contribution from APL, beneficiaries and other stakeholders and the cost of time invested by beneficiaries as a part of training / exposure activities. The value of the financial inputs has been provided by the APL and the inputs of programme (other than financial inputs) have been valued in consultation with APL CSR team.

The below table represents the total cumulative investments from all the stakeholders towards the project from the time period 2021- 2022:

Table 10- Inputs calculation

Input Type	Input description	Total input value (INR)
Financial inputs	CSR Funding from APL	1,37,36,233
Time input	Time input from beneficiaries (4104 hours)	1,20,042
Total		1,38,56,275

Net Present Value: The Impact Value is adjusted to reflect the Net Present Value (NPV) of the projected outcome values. This is to reflect the present day value of benefits projected into the future. A **discount rate of 4%** has been used for the NPV calculations.

$$\text{SRoI} = \{\text{Total present value of impact} / \text{Total present value of input}\}$$

The below table depicts the NPV evaluated as of 2022 and forecasted for 2027 (considering the duration period of 5 years for each outcome):

Table 11- SROI Calculation

Outputs	Outcomes	Indicators and Sources	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 1	Year 2	Year 3	Year 4	Year 5
Construction and refurbishment of Check dams/ Water Harvesting Structures	Creation of sustainable water supply through increment in availability and accessibility of water	Increased availability of water for irrigation - surface water from WHS (Number of farmers x Avg increase in Irrigated land)	Irrigation charges by Gujarat government (per hectare)	314.00	3%	0%	23%	20%	7,124	7,124	5,699	4,559	3,647	2,918
		Increased availability of water in wells / borewells (number of farmers/community members x Avg increase in availability of water in months/days)	Average HH requires 220 LPCD daily and using it for a month's gets us the water requirement = 6600/HH/month Charges for purchasing water (One water tanker of 4000 litre capacity) - INR 200/- by Vadodara Municipal Corporation.	330.00	3%	0%	23%	20%	7,306	7,306	5,844	4,676	3,740	2,992
	Increased agriculture production due to increment in availability of water	Increase in availability of Net Sown Area (in Ha) (Number of farmers x Avg increase per farmer)	Average increase in Net sown area indicated by respondents (Ha) Avg Yield of Rice in Narmada district in Fy 2021-22 = 1026 kg/ha MSP of Paddy in Gujarat- 2203/Q	22602.78	3%	0%	23%	20%	2,18,244	2,18,244	1,74,595	1,39,676	1,11,741	89,393
		Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in Gujarat- 2203/Q	2203.00	3%	0%	23%	20%	10,47,487	10,47,487	8,37,990	6,70,392	5,36,313	4,29,051
		Reduction in Cost of Cultivation (Number of farmers x Avg reduction in cost annually)	Average reduction in Cost of Cultivation indicated by respondents (INR)	3270.83	3%	0%	23%	20%	1,15,578	1,15,578	92,462	73,970	59,176	47,341

Outputs	Outcomes	Indicators and Sources	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 1	Year 2	Year 3	Year 4	Year 5
		Reduction in Cost of Irrigation (Number of farmers using Mobile Engines for irrigation x Avg hours of irrigation)	Average reduction in Irrigation cost indicated by respondents (INR)	400	3%	0%	23%	20%	13,794	13,794	11,035	8,828	7,062	5,650
Trainings/ Workshops/ Demonstrations/ Non-pesticide management/ Mulching	Increased agriculture production due to enhanced agriculture practice	Adoption of improved agriculture practices (% of members indicating adoption of improved agriculture practices)	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in Gujarat- 2203/Q	2203.00	3%	0%	44%	33%	31,75,657	31,75,657	21,16,893	14,11,121	0	0
Availability of potable water for household consumption due to increased Ground water level and WHS	Increased quality an accessibility to potable water leading to improved health of community members	Reduction in Drudgery for members of household (number of households x Avg person-hours saved)	Minimum hours spent in rural India to fetch water = 15 hours Minimum wage paid under MGNREGA in FY 2021-22 per hour	438.75	3%	0%	23%	20%	3,77,185	3,77,185	3,01,748	2,41,399	1,93,119	1,54,495
		Reduction in water borne diseases (number of households x % respondents indicating improvement in health)	Mean OPOE (Out of Pocket Expenses) in Rural areas for all WASH related ailments across all service providers	661	3%	0%	23%	20%	3,92,092	3,92,092	3,13,674	2,50,939	2,00,751	1,60,601
	Increased access to water for animal husbandry activities	Increase in annual income due to availability of quality potable water for cattle and other animals (Number of households x % increase in milk yield)	Average increase in Milk Yield (in Litres per day) x Amount received for 1L of milk from Amul Dairy in Gujarat	52.00	3%	0%	23%	20%	2,42,740	2,42,740	1,94,192	1,55,353	1,24,283	99,426
Creation of employment opportunities	Availability of increased labour opportunities locally (own or nearby villages) due	Reduction in migration (seasonal for labour work) (number of members reporting	3 months of Zaid season and 8 days of work/month basis MGNREGA gives a total of 32 days of work Minimum wage paid	234.00	3%	0%	50%	20%	1,55,254	1,55,254	1,24,203	99,363	79,490	63,592

Outputs	Outcomes	Indicators and Sources	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 1	Year 2	Year 3	Year 4	Year 5
	to reduced migration	instances of reduced migration x days of work in WHS MGNREGA and/or agriculture)	under MGNREGA in FY 2021-22											
	Increased income due to fisheries due to increase in fish count in the river	Royalty paid to village by contractor	Annual income from fisheries (Revenue per village- assuming 3 villages)	50000.00	3%	0%	50%	20%	72,750	72,750	58,200	46,560	37,248	29,798
Establishing village-level institutions	Community led governance of water resources at village level	Formation of water committees in villages and creation of bylaws for water management in village (Number of village water user groups formed)	Subsidy given for training of Farmer Groups under ATMA scheme (NMAET)	5000.00	3%	0%	29%	20%	1,96,280	1,96,280	1,57,024	1,25,619	1,00,495	80,396
	Effective Operations and Management of water resources at village level	Efficient water management in village and repair-maintenance management (Number of water bodies created x Cost of manager)	Assuming one manager is required for management in each village, cost of daily wage paid in MGNREGA for 3 months of Rabi season (when the water harvested is actually utilized by the communities) has been taken as proxy	21060.00	3%	0%	29%	20%	8,26,729	8,26,729	6,61,383	5,29,107	4,23,285	3,38,628
Extended impact on community (beneficiaries and their family members)	Improved wellbeing for the beneficiaries and their family members	Improvement in Health seeking behaviour (Number of respondents reporting increased consumption of self-grown fruits and vegetables))	Basis NSS 68th Round (2011-12), MPCE in Rural areas on Fruits (Rs.41) and Vegetables (Rs.95). Inflation Adjusted Cost (using Cost Inflation Index) for MPCE at 2021-22 prices comes out to be Fruit-70.63/- and Vegetable-163.67/-. For a family of 4 members, the yearly expenditure has been	11246.61	3%	0%	70%	20%	22,60,170	22,60,170	18,08,136	14,46,509	11,57,207	9,25,766

Outputs	Outcomes	Indicators and Sources	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 1	Year 2	Year 3	Year 4	Year 5
Extended impact on the environment			considered for calculation.											
		Improved sensitization towards child's education (Number of respondents reporting increased spend on child's education)	Basis NSS 68th Round (2011-12), MPCE in Rural areas on Education is Rs.50. Inflation Adjusted Cost (using Cost Inflation Index) for MPCE at 2021-22 prices comes out to be Fruit-86.14/-. For a family of 2 children, the yearly expenditure has been considered for calculation.	2067.36	3%	0%	70%	20%	3,46,222	3,46,222	2,76,977	2,21,582	1,77,266	1,41,812
	Increased green cover due to access to water for extended period/ throughout the year due to WHS	Increased green cover canal/ river due to WHS construction for extended period/ throughout the year (in Metres)	Cost of Sowing/ Dibbling of seeds of grass, trees, and shrubs under MGNREGA (cost per metre)	0.58	3%	0%	70%	20%	54,642	54,642	43,714	34,971	27,977	22,381
	Improved soil health due to use of organic fertilizers and pesticides	Farmers spending less on chemical fertilisers and pesticides	Savings due to usage of homemade organic fertilisers/ Reduced expenses of chemical fertilisers = Average Cost of Fertilisers in India per acre	4347.00	3%	0%	70%	20%	10,11,982	10,11,982	8,09,585	6,47,668	5,18,135	4,14,508
	Reduced soil pollution due to reduced chemical usage	Farmers using ploughing to dig lower layer of soil	Per acre ploughing rates for farmers	700.00	3%	0%	70%	20%	1,62,960	1,62,960	1,30,368	1,04,294	83,436	66,748
	Improved biodiversity due to availability of water for extended period / throughout the year... (birds/animals from nearby	Community members enjoying view of more birds and animals with pleasant environment	Cost of visiting animal zoo/ bird zoo	20.00	3%	0%	70%	20%	6,699	6,699	5,359	4,287	3,430	2,744

Outputs	Outcomes	Indicators and Sources	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 1	Year 2	Year 3	Year 4	Year 5
	area using the water during summer)													
					3.00%	3%	0%			0	0	0	0	0

Total	1,00,99,102	1,00,99,102	76,55,649	58,42,126	35,44,804	28,35,843
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Present value of each year	1,00,99,102	73,61,201	54,01,374	31,51,318	24,24,091
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4.4 SROI Results

The SROI for this Analysis- evaluative SROI (as on 2022) and evaluative cum forecast SROI (as on 2027) - is derived from dividing the total present value of the impacts by the total input value of the investment. This is considered because the beneficiaries who have received the support in 2022 would realise the impact for the next 5 years i.e., by 2027.

The below table describes the SROI Value and the SROI Ratio before sensitivity analysis:

Net present value of social value created	SROI value
3,21,97,892	2.32
Value of total Investment	SROI Ratio
1,38,56,275	1:2.32

For every INR 1 invested, the programme has generated social impact of INR 2.32

Sensitivity Analysis: Our calculations to arrive at the results provided in this report are relied on a variety of primary and secondary data, but the beneficiary data introduced a higher level of uncertainty. This survey was utilized to estimate the attribution, additionality of APL interventions to specific outcomes, and the duration of time the impact would last.

Sensitivity Analysis was used to test variables and assumptions to ensure that conservative estimates have been used in arriving at the SROI. For each impact area, we tested the impact of using one standard deviation above and below the average response to attribution survey questions.

With sensitivity computation, the value of the APL program can then be stated in a range. For every INR 1 invested, the social value generated is between INR 2.07 to INR 2.35.

Sr. No.	Base case Parameters	Base case SROI	Test case Parameters	Test case SROI	Observation
1	Displacement is 0%	2.32	Displacement is 10%	2.07	Significant change
2	Attribution is 23% for WHS	2.32	Attribution is 20% for WHS	2.30	No significant change
3	Attribution is 23% for WHS	2.32	Attribution is 25% for WHS	2.28	No significant change
4	Attribution is 44% for Agriculture	2.32	Attribution is 40% for WHS	2.35	No significant change
5	Attribution is 44% for Agriculture	2.32	Attribution is 48% for WHS	2.29	No significant change
6	Deadweight is 3% & 10% for water harvested	2.32	Deadweight is 10%	2.23	No significant change

7	Deadweight is 3% & 10% for water harvested	2.32	Deadweight is 20%	2.19	No significant change
8	Deadweight is 3% & 10% for governance of water resources	2.32	Deadweight is 10%	2.24	No significant change
9	Deadweight is 3% & 10% for governance of water resources	2.32	Deadweight is 20%	2.21	No significant change

4.5 Limitations & assumptions for the SROI study

- The study is limited to the sample of beneficiaries interacted with on-ground during field visits.
- The survey conducted with sample beneficiaries is subjective in nature.
- The study is limited to the recall of the participants in the study.
- The financial proxies are limited to publicly available resources. The financial proxies are representative and based on professional judgement, but it may not be reflective of actual costs incurred due to several considerations. *(Refer to Appendix B for details of financial proxies)*
- The deadweight, displacement, drop off values are derived from the responses from the stakeholders.
- While information obtained from the public domain or external sources has not been verified for authenticity, accuracy, or completeness, we have obtained information, as far as possible, from sources generally considered to be reliable. However, it must be noted that some of these websites/third party sources may not be updated regularly. We assume no responsibility for the reliability and credibility of such information.

ANNEXURES

Table 12- Financial proxies

Summary of activity	Outcome	Indicators	Monetary valuation approach	Rate/unit
Construction and refurbishment of Check dams/ Water Harvesting Structures	Creation of sustainable water supply through increment in availability and accessibility of water	Increase in water harvesting capacity (Quantum of Water Potential created or Water Harvested in Cubic Metre)	Groundwater abstraction charges for Drinking and Domestic use (Central Water Commission) per cubic metre	2.00
		Increased availability of water for irrigation - surface water from WHS (Number of farmers x Avg increase in Irrigated land)	Irrigation charges by Gujarat government (per hectare)	314.00
		Increased availability of water in wells / borewells (number of farmers/community members x Avg increase in availability of water in months/days)	Average HH requires 220 LPCD daily and using it for a month gets us the water requirement = 6600/HH/month Charges for purchasing water (One water tanker of 4000-liter capacity) - INR 200/- by Vadodara Municipal Corporation.	330.00
	Increased agriculture production due to increment in availability of water	Increase in availability of Net Sown Area (in Ha) (Number of farmers x Avg increase per farmer)	Average increase in Net sown area indicated by respondents (Ha) Avg Yield of Rice in Narmada district in FY 2021-22 = 1026 kg/ha MSP of Paddy in Gujarat- 2203/Q	22602.78
		Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in Gujarat- 2203/Q	2203.00
		Reduction in Cost of Cultivation (Number of farmers x Avg reduction in cost annually)	Average reduction in Cost of Cultivation indicated by respondents (INR)	3270.83
		Reduction in Cost of Irrigation (Number of farmers using Mobile Engines for irrigation x Avg hours of irrigation)	Average reduction in Irrigation cost indicated by respondents (INR)	400
Trainings/ Workshops/ Demonstrations/ Non-pesticide management/ Mulching	Increased agriculture production due to enhanced agriculture practice	Adoption of improved agriculture practices (% of members indicating adoption of improved agriculture practices)	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in Gujarat- 2203/Q	2203.00
Availability of potable water for household consumption due to increased Ground water level and WHS	Increased quality an accessibility to potable water leading to improved health of community members	Reduction in Drudgery for members of household (number of households x Avg person-hours saved)	Minimum hours spent in rural India to fetch water = 15 hours Minimum wage paid under MGNREGA in FY 2021-22 per hour	438.75
		Reduction in water borne diseases (number of households x % respondents indicating improvement in health)	Mean OOPE (Out of Pocket Expenses) in Rural areas for all WASH related ailments across all service providers	661
	Increased access to water for animal husbandry activities	Increase in annual income due to availability of quality potable water for cattle and other animals (Number of households x % increase in milk yield)	Average increase in Milk Yield (in Litres per day) x Amount received for 1L of milk from Amul Dairy in Gujarat	52.00

Creation of employment opportunities	Availability of increased labour opportunities locally (own or nearby villages) due to reduced migration	Reduction in migration (seasonal for labour work) (number of members reporting instances of reduced migration x days of work in WHS MGNREGA and/or agriculture)	3 months of Zaid season and 8 days of work/month basis MGNREGA gives a total of 32 days of work Minimum wage paid under MGNREGA in FY 2021-22	234.00
	Increased income due to fisheries due to increase in fish count in the river	Royalty paid to village by contractor	Annual income from fishery (Revenue per village- assuming 3 villages)	50000.00
Establishing village-level institutions	Community led governance of water resources at village level	Formation of water committees in villages and creation of bylaws for water management in village (Number of village water user groups formed)	Subsidy given for training of Farmer Groups under ATMA scheme (NMAET)	5000.00
	Effective Operations and Management of water resources at village level	Efficient water management in village and repair-maintenance management (Number of water bodies created x Cost of manager)	Assuming one manager is required for management in each village, cost of daily wage paid in MGNREGA for 3 months of Rabi season (when the water harvested is actually utilized by the communities) has been taken as proxy	21060.00
Extended impact on community (beneficiaries and their family members)	Improved wellbeing for the beneficiaries and their family members	Improvement in Health seeking behaviour (Number of respondents reporting increased consumption of self-grown fruits and vegetables))	Basis NSS 68th Round (2011-12), MPCE in Rural areas on Fruits (Rs.41) and Vegetables (Rs.95). Inflation Adjusted Cost (using Cost Inflation Index) for MPCE at 2021-22 prices comes out to be Fruit-70.63/- and Vegetable-163.67/-. For a family of 4 members, the yearly expenditure has been considered for calculation.	11246.61
		Improved sensitization towards child's education (Number of respondents reporting increased spend on child's education)	Basis NSS 68th Round (2011-12), MPCE in Rural areas on Education is Rs.50. Inflation Adjusted Cost (using Cost Inflation Index) for MPCE at 2021-22 prices comes out to be Fruit-86.14/-. For a family of 2 children, the yearly expenditure has been considered for calculation.	2067.36
Extended impact on the environment	Increased green cover due to access to water for extended period/ throughout the year due to WHS	Increased green cover canal/ river due to WHS construction for extended period/ throughout the year (in Metres)	Cost of Sowing/ Dibbling of seeds of grass, trees, and shrubs under MGNREGA (cost per metre)	0.58
	Improved soil health due to use of organic fertilizers and pesticides	Farmers spending less on chemical fertilizers and pesticides	Savings due to usage of homemade organic fertilizers/ Reduced expenses of chemical fertilizers = Average cost of Fertilizers in India per acre	4347.00
	Reduced soil pollution due to reduced chemical usage	Farmers using ploughing to dig lower layer of soil	Per acre ploughing rates for farmers	700.00
	Improved bio-diversity due to availability of water for extended period / throughout the year.	Community members enjoying view of more birds and animals with pleasant environment	Cost of visiting animal zoo/ bird zoo	20.00

Annexure-II Structured interview questionnaire tool

A	Date of interview						
B	Village						
C	State						
E	Age	1 Below 25	1 25-40	1 41-60	Above 60		
F	Education	No formal education	Up to 8th	Up to 10th	Up to 12th	Beyond 12th	
G	Primary source of income	Agriculture	Salaried work	Non-salaried work	Home maker	Others	
H	Secondary source of income	Agriculture	Salaried work	Non-salaried work	Home maker	Others	
J	Household income						
K	Number of family members						
L	Do you have own land where you cultivate crops?	Yes	No	Others (please mention)	Sharecropping		
M	What is the area of your cultivable land?	Less than 2 acres	2-5 acres	More than 5 acres			
N	Which season you practice cultivation?	Kharif	Rabi	Summer			
O	Which crops do you cultivate?	Grains	Millete	Pulses	Vegetable	Fruits	others
P	Do your farm have irrigation facilities?	Yes	No, only dependent on rains	Others (please mention)			
Q	Are you aware about the water for livelihood project of APL?	Yes	No				
	What support did you receive as part of APL water resource project?	WHS	Agriculture interventions	other awareness programs			
	<i>Water harvesting structure</i>	Direct irrigation from WHS	water availability in well due to GW recharge	improved soil moisture	potable drinking water	water for livestock	
R	<i>Agriculture interventions</i>	Training/Exposure visits	Demonstrations	Farm plantation/vegetable cultivation	SRI	water efficiency	Application of Silt from WHS
	<i>Training/awareness programs</i>	Capacity building of VIs	workshops	other- please specify			

S	How does the project ensures inclusive access for all member of the community?	Accessibilit y for all social groups (caste, class, race, religion, others)	Accessibility to all social groups (Differently abled, elderly, others)				
	Sr.No	OECD-DAC/SROI Framework					
	Questions	Options					
1	Do you think there is an effect of water related activities done in your area?	Yes	No				
1	If yes, please specify						
2	How will you rate the availability of water prior to the implementation of a water for livelihood project in your area?	Good	Fair	Bad			
3	How will you rate the availability of water after the implementation of a water for livelihood project in your area?	Good	Fair	Bad			
4	Has your accessibility of water improved since the project intervention?	Yes	No				
5	Has the intervention resulted in increased water availability in your well/borewell?	Yes	No				
5	If yes, for what duration	less than a month	1-2 months	2-3 months	3-4 months	more than 4 months	
6	What was the average depth of water availability in your well/borewell before intervention? (in foot)	Summer	Monsoon	Winter			
7	What is the average depth of water availability in your well/borewell after intervention? (in foot)	Summer	Monsoon	Winter			
8	Do you believe that water quality has improved in your well/borewell since the implementation of WFL project?	Yes	No				
8	If yes, what has changed?	TDS	Water salinity	odor	other_	____Ple	

					ase specify			
9	Has the intervention resulted in surface water availability in water harvesting structure or stream?	Yes	No					
9	If yes, for what duration?	less than a month	1-2 months	2-3 months	3-4 months	more than 4 months		
1	Are you availing water for irrigation directly from WHS?	Yes	No					
1	If yes, how frequently?	Daily	twice a week	once a week	once in fortnight			
1	What impact did the water availability and improved access have on your farming practice	Increase area under irrigation	Multiple seasons	reduced input cost due to less irrigation or less use of electricity/fuel engine	Crop Change	Timely Availability of water	Increase d yield	other (please specify)
1	If increase in yield, can you provide the details	Pre	post					
1	Please quantify the impact the above on your family income?	Pre	Post					
3	How the availability of water has impacted your livestock?	Improved productivity	Added additional livestock	other (Specify)				
1	In case of increased productivity, can you quantify it (Yield in Liters)							
1	In case of additional livestock, please quantify							
2	Please quantify the impact of improvement in livestock on your family income?	Pre	Post					
1	What impact did it have on your personal life	Time saving	Reduced efforts	Improved health	others			
6	Do you believe that the availability of potable drinking water has brought some health benefits	Yes	No					
1	If yes, please specify	Reduced prevalence of disease	Improvement in water taste	lesser TDS				
8								
1								

191222	Did this resulted in avoiding health related expenditure that would have occurred otherwise?	Yes	No	
191222	if yes please quantify	Pre	Post	
20221222	Has this intervention resulted in saving of expenditure on potable water?	Yes	No	
20221222	How will you rate the quality of drinking water after the project?	Improved	No change	Deteriorated
20221222	How will you rate the availability of water on time?	Improved	No change	Deteriorated
23221222	Has WUA been formed in your village?	Yes	No	
24221222	Are you or any from your family part of any WUA/VI/FPO in your village?	Yes	No	
25221222	Have you received any training/exposure visit regarding NRM and water governance?	Yes	No	
26221222	How did the training benefit you and the group you are associated with?			
27221222	Are there any established norms for the usage of water?	Yes	No	
28221222	According to you how effective the VI/WUA/FPO in managing the O&M of WHS?			
29221222	Is there any separate fund setup for O&M? if yes what was the amount collected as on 31st march 2023			
30221222	What is the amount collected from households as water tax/ contribution for the O&M of WHS?			
31221222	How do you think that the role of WUAs can be sustained?			
33221222	Do you think that the interventions has an impact on the biodiversity in your area	Yes	No	
34221222	If yes, have you observed increased vegetation around the water bodies?	Yes	No	
35221222	If yes, have you observed any new or reemergence of new species around the water	Yes	No	

2	bodies due to the increased availability of water?							
30	If yes, have you observed increased citing of birds/wild animals around the water bodies due to the increased availability of water?	Yes	No					
30	If yes, do you believe there is an increase in availability of fuelwood due to the intervention?	Yes	No					
30	Please, discuss if there is any other observations							
31	How do you practice agriculture?	Farming on Own Land	Share Cropping	Farming on Lease	Others Specify			
32	What is the Total Net Sown Area?	Pre-intervention	Post-intervention					
33	Mention the name of all the crops that you grew before intervention	Rabi	Kharif	Summer				
33	Mention the name of all the crops that you grow after intervention	Rabi	Kharif	Summer				
41	What is the Total Irrigated Area?	Pre-intervention	Post-intervention					
44	Total Un-Irrigated Area	Pre-intervention	Post-intervention					
35	Please mention the mode of irrigation availed?	Surface/Flood Irrigation	Localized Irrigation	Drip Irrigation	Sprinkler Irrigation	Other Specify _____		
36	What is the source of water irrigated?	Rains	Rivers	Canals	Open Wells	Borewell	Tube well	Other Specify _____

3	Has there been any change in the cost of	Yes cost	Yes cost	No change	Don't	Others
8	irrigation after your association with APL?	reduced	increased		Know	Specify
3	What was the total cost incurred on irrigation					
9	before your association with APL in 2021-22					
	annually?					
4	What is the current average cost of irrigation					
0	annually?					
4	Were you able to practice efficient use of water	Yes	No			
1	for irrigation (Micro irrigation) in your farm					
4						
1	If yes what benefit you have realised ?					
.						
1						
4	Have you attended/observed the demonstration	Yes	No			
2	of sustainable agriculture practices?					
4	How will you rate the training- Demonstration &					
3	exposure visit in agricultural practices	Good	Fair	Poor		
	provided under the project?					
4	Are you able to replicate/implement the					
4	learnings from	Yes	No			
4	training/workshop/demonstrations?					
4	Have you applied non-chemical pesticides as					
5	demonstrated under the project?					
4	Have you done soil testing of your farm?	Yes	No			
6						
4						
6	If yes, did you implement the recommendations	Yes	No			
.	basis the test report?					
1						
4	How would you rate your understanding of the					
7	below improved agriculture practices?					
	<i>Integrated pest management</i>	Good	Fair	Poor		
	<i>Crop diversification</i>	Good	Fair	Poor		
	<i>Soil testing</i>	Good	Fair	Poor		
	<i>Agroforestry</i>	Good	Fair	Poor		
	<i>Agro-horticulture</i>	Good	Fair	Poor		
	<i>Azola production</i>	Good	Fair	Poor		
	<i>Vermi-compost</i>	Good	Fair	Poor		
	<i>Organic farming</i>	Good	Fair	Poor		

48	Have you undertaken tree plantation or vegetable cultivation?	Yes	No				
49	What benefits you have realised from the above?	Fruits/Vegetables for HH consumption	Fruits/Vegetable for selling	yet to be realised			
50	How will you rate the effectiveness of training/capacity building initiatives?	Good	Fair	Poor			
51	What benefits you have realised from the agriculture interventions	Improved soil health	reduced input cost	increased awareness	saved water	Increased production	
52	What was your total farm produce before the project?						
53	What is your total farm produce after the project?						
54	What was your cost of cultivation before the project?						
55	What is your cost of cultivation after the project?						
56	Have you able to reduce your input cost for agriculture through this project?						
57	What was your income from agriculture before the project?						
58	What is your income from agriculture after the project?						
59	How will you rate your overall experience of the agriculture intervention in bringing about positive change in your quality of life? (Good(1) / Fair(0) / Poor(-1))	Good	Fair	Poor			
60	What kind of role do you see for community members in sustaining the project in the long run?						
61	How do you think that the impacts of water for livelihood project can be sustained?						
62	How will you rate your overall experience in the water for livelihood project in bringing about positive change in your quality of life?	Good	Fair	Poor			
63	How will you rate the support provided under the project	Good	Fair	Poor			

	How the FPO/WUA adding value ? How it can improve? What else is needed					
6 4	According to you how much of the above impact was possible even in absence of APL program					
6 5	Can you rank the outcomes with their relative importance	Impact on Availability of Surface & Ground Water	Impact on Potable Water	Impact on Agricultural Land & Practices	Impact on Farmer's Livelihood	Other Impact Areas Apart from Water Rejuvenation
6 6 6 7 6 8 6 9 6 9 1 7 0 7 0 1	Do you know any activity/ initiative similar to APL? If yes, Please mention name such activity/initiative Do you think, that the program has still impact on daily life? Have you experienced any other unintended positive or negative outcomes other than discussed earlier? If Yes, please elaborate	Yes No				
7 0 7 0 1	Have you come across anyone else (other stakeholders as well) who experienced unintended positive or negative outcomes? If Yes, please elaborate	Yes No				
7 1 7 2	How long do you think the impact of this programme will last? How much attribution (in %) would you give for improvement in following parameters - Water Availability, Improved agriculture, Increased awareness, improved community based water governance, improved biodiversity a) Self b) APL/AKRSP	Less than 1 Years	1 to 3 years	3 to 5 Years	More than 5 years	

c) Government Initiatives

d) Other stakeholders (Please mention)

7 Any suggestions for improvement in this
3 programme:

Annexure-II Semi structured interview tool

A. General Information

Block:

Gram Panchayat:

Revenue Village:

Habitation:

B. FGD Participation Details

Total Members:

Male:

Female:

GP Members:

Any other institution members:

C. Guiding Questions

a. General

1. Have you heard of Water for Livelihoods program?
2. Are you aware of its components?
3. How did you get to know about program
4. What are the major challenges of your villages? How has Asian Paints Ltd helped you related to developmental works in your village?
5. How was the WUA formed? Who all is part of WUA?

6. How often you have a meeting with them and at what level (habitation/village/GP)?
7. Did you participate in any exposure visit? How was the experience?
8. What other types of programs / activities/ workshops / events were done with you? How was the experience?
9. Please share some examples of how work has been implemented differently under this program?

b. Watershed

10. How is the rainfall situation here?
11. What is the groundwater level in your region? In summer, monsoon and winter.
12. How many rivulets / nallahs are available in your village?
13. For what all services you use them?
14. In past, have you ever treated drainage lines?
15. How often do you do the de-silting of Water Harvesting Structures?
16. How do you manage the silt?
17. How do you plan the desilting projects?
18. How did you plan the type of intervention and location of intervention?
19. How did you prioritize them?
20. Who prepares the detailed estimate of work to be done? Do you have any say in that?
21. How did you monitored the quality of work while it was getting implemented?
22. Are all the drainages treated or still there is scope? If there is scope, how much?
23. Did you get the chance to work as labour? If yes, how many man-days you worked?
24. How much you got paid?
25. Did you also do any voluntary work? Could be in terms of labour or contributing money.
26. What impact you think these structures have created or would make in future?
27. In future it would need repair and maintenance, how are you going to manage that?

28. How was been your overall experience of working with these structures? Do you have any complaints or challenges?

c. Agriculture

1. What is the importance of agriculture in your lives?
2. What is your general impression on the status of agriculture in Indian society?
3. What is your general impression on the status of agriculture in your block/District?
4. Since how many years / generations has the community been practicing agriculture?
5. What are the kind of crops that you have cultivating since last few years? Is there a change in the type of crops cultivated in the last 4-5 years?
6. What is your impression about the status of agriculture in your block?
7. Have you noticed any changes in the agriculture in the last 4-5 years? Please mention a few noticeable changes.
8. Have you come across / benefited from APL's agriculture related interventions?
9. Did the interventions lead to increase in the area under cultivation?
10. Did the interventions lead to increase in agricultural production?
11. Has the consumption of agri-inputs (fertilizers, pesticides and others) changed in the last few years?
12. Does any of you practice organic farming?
13. Do you get any surplus produce from your farms
14. Where do you sell your produce? How far is the nearby market?
15. Do you sell your produce to wholesale /bulk dealers in the district or outside the district?
16. Do you feel there are more opportunities for the local population due to improvement in the agriculture production?

17. Do you migrate seasonally in search of occupation?
18. Did you receive any agriculture related trainings? If yes how has it helped you?
19. Do you feel the farmers in the community / village are aware about the modern agricultural practices?
20. Did you receive any financial support from APL for agricultural activities?
21. Did you take loans for supporting your agricultural activities?
22. What were the sources of money you took loans/ borrowed money from?
23. Did you take benefit from any Government schemes for agriculture or related activities?

d. Broader level impact questions

1. As a result of this program, do you feel that water scenario or agriculture pattern is changing?
2. Do you sense any significant change in coming years because of this?
3. What are your views on bio-diversity changes in your area?
4. Do you sense your participation in planning and execution of activities improved because of this program?
5. What are your observations/suggestions through which APL can improve the program design?
6. What is the status of Village institution? How can it be further strengthened?

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Impact Assessment of water resource development- Sriperumbudur and Cuddalore, Tamil Nadu

Asian Paints Limited

KPMG Assurance and Consulting Services LLP

January 2024

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Strictly Private and Confidential

V. Ravi
General Manager
Asian Paints Limited
Mumbai, Maharashtra– 400055
India
15 March 2024

Subject: Final-report for Impact assessment of Water Resource Development Projects


Dear Mr. V. Ravi,

We appreciate the opportunity to assist Asian Paints Limited in providing **Impact assessment of Water Resource Development Projects related services**.

Please find enclosed our final-report, which has been prepared in accordance with the scope and terms stated in our engagement letter dated 5th January 2024. With this deliverable, we have completed our obligations as stated in our engagement letter.

It has been our privilege to have this opportunity to work with you, and we look forward to continuing our relationship.

Yours sincerely

DocuSigned by:

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Full Signature _____
Name- Jignesh Thakkar
Director, ESG
KPMG Assurance and Consulting Services LLP

DISCLAIMER AND NOTICE TO READERS

This report has been prepared exclusively for Asian Paints Limited (APL) ("Client") in accordance with the terms of the Engagement letter/agreement between Client and KPMG Assurance and Consulting Services LLP ("KPMG" or "we") (collectively 'Contract'). The performance of KPMG's services and the report issued to the Client are based on and subject to the terms of the Contract.

KPMG does not accept or assume any liability, responsibility, or duty of care for any use of or reliance on this report by anyone, other than our client, to the extent agreed in the Agreement.

Impact assessment is limited to the projects allocated by Asian Paints Limited.

OECD-DAC and SROI frameworks have been used in preparing the report as detailed herein. No professional assurance standards ex. ISAE, SSAE etc. have been applied while preparing this report and accordingly the rigors applicable under such standards are not applicable for the scope covered by our report.

Procedures, analysis, and recommendations, if any, are advisory in nature basis the information collected from various sources both publicly and those provided by the client.

Our observations represent our understanding and interpretation of the facts based on reporting of beneficiaries and stakeholders.

Our report, by its very nature, may involve numerous assumptions, inherent risks, and uncertainties, both general and specific. The conclusions drawn shall be based on the information available with us at the time of preparing the report.

We have not performed an audit and shall not express an opinion or any other form of assurance. Further, comments in our report are not and shall not be intended, nor should they be interpreted to be legal advice or opinion. Client shall be fully and solely responsible for applying independent judgment, with respect to the findings included in the report, to make appropriate decisions in relation to future course of action, if any. We shall not take responsibility for the consequences resulting from decisions based on information included in the report.

While information obtained from the public domain or external sources has not been verified for authenticity, accuracy, or completeness, we have obtained information, as far as possible, from sources generally considered to be reliable. However, it must be noted that some of these websites/third party sources may not be updated regularly. We assume no responsibility for the reliability and credibility of such information.

Our work shall be limited to the specific procedures described in this Engagement Letter and shall be based only on the information and analysis of the data obtained through interviews of beneficiaries supported under the programme, selected as sample respondents and discussions with Client's team and stakeholders of the programme. Accordingly, changes in circumstances or information available after the review could affect the findings outlined in our report.

In no circumstances shall we be liable, for any loss or damage, of whatsoever nature, arising from information material to our work being withheld or concealed from us or misrepresented to us by any person to whom we make information requests.

In accordance with its policy, KPMG advises that neither it nor any of its partner, director or employee undertakes any responsibility arising in any way whatsoever, to any person other than Client in respect of the matters dealt with in this report, including any errors or omissions therein, arising through negligence or otherwise, howsoever caused.

In connection with our report or any part thereof, KPMG does not owe duty of care (whether in contract or in tort or under statute or otherwise) to any person or party to whom the report is circulated to and KPMG shall not be liable to any party who uses or relies on this report. KPMG thus disclaims all responsibility or liability for any costs, damages, losses, liabilities, expenses incurred by such third party arising out of or in connection with the report or any part thereof.

By reading our report, the reader of the report shall be deemed to have accepted the terms mentioned hereinabove.

ABBREVIATIONS

AKRSP	Aga Khan Rural Support Programme
ANMs	Auxiliary Nurse Midwives
APL	Asian Paints Ltd
ARWR	Annual Renewable Water Resources
BCM	Billion Cubic Meters
CEEW	Council on Energy, Environment and Water
CSE	Center for Science Education
CSR	Corporate Social Responsibility
FAO	Food and Agriculture Organisation
FGD	Focus Group Discussion
HH	Households
INR	Indian Rupees
NCIWRD	National Commission on Integrated Water Resources Development
NPV	Net present value
O&M	Operations and Maintenance
OECD DAC	Organization for Economic Co-operation and Development Assistance Committee Development
PRA	Participatory Rural Appraisal
PRI	Panchayati Raj Institutions
RFP	Request For Proposal
ROI	Return on Investment
SDG	Sustainable Development Goals
SPOCs	Single Point of contact
SROI	Social Return on Investment
TDS	Total Dissolved Solids
WHS	Water Harvesting Structure
WRD	Water Resource Development

EXECUTIVE SUMMARY

The philosophy of transformation has been in DNA of Asian Paints Limited and reinventing the industry has been in its nature. The same philosophy of transforming lives has been driving the CSR efforts concentrating on holistic and sustainable development of the community. The company believes in fostering relationship of trusts with the communities around the vicinity of plants and people in the unorganized sector. Under the umbrella of inclusive development, the initiatives focus on sectors of health & hygiene, water conservation, skill development and disaster management.

According to UN World Water Development Report (2022), India is the largest groundwater user globally. Approximately 45% of total irrigation and 80% of domestic water needs are met by groundwater. The unsustainable extraction practices over decades have thus led to overexploitation and water scarcity. In such challenging landscape, water harvesting and conservation under the umbrella of watershed management became need of the hour. Asian Paints engaged in holistic approach through their program "Water resource development" in Sriperumbudur and Cuddalore blocks of Tamil Nadu, which addresses not only water scarcity but also soil conservation and natural resource management for ensuring a sustainable and resilient water future for the country.

The main objectives of the impact study are to assess the impact of water stewardship activities with focus on the access and availability of surface and ground water, potable water, farmer's livelihood, land and agriculture practices, and governance. The study covered mix-methods approach consisting of quantitative and qualitative research methodology using primary and secondary data collection. The analysis of quantitative data was corroborated with anecdotal evidence from qualitative responses and observed through the lens of SROI framework and OECD-DAC framework. A total of 200 respondents from Ten villages were interacted for data collection in Sriperumbudur and Cuddalore blocks of Tamil Nadu including farmers, community members, and PRI members.

More than half of the respondents were between 41-60 age group and have formal education till class tenth. The sample covered respondents from economically weaker background (income ranging from 25 to 27 thousand), small to marginal farmers and primary source of income being agriculture.



RELEVANCE

Before intervention:

- All respondents indicated water accessibility issue
- 71% respondents reported high irrigation cost before intervention
- More than 50% of respondents indicated degraded soil health prior the intervention



COHERENCE

The program has direct contribution to below SDGs:



EFFECTIVENESS

100% respondents felt positive changes because of the water-related activities of the program.

All beneficiaries are aware of the initiative



EFFICIENCY

The program was completed on schedule and within the proposed budget.

No duplication or overlap of activities was observed with any other program on-ground and corroborated by respondents



IMPACT – Water Access & Availability

94 % respondents indicated increased accessibility and availability to water for over four months

More than half of the respondents indicated timely access of water for irrigation purpose

34% of respondents accessed water for irrigation directly from WHS



IMPACT – Reduced irrigation cost

More than half of the respondents evidenced sufficient availability of water for irrigation.

71% respondents indicated reduction in cost of irrigation

73% respondents indicated improved production.



IMPACT - Agriculture

Respondents indicated –

Increased production by 25-30%

58% respondents indicated improved soil health.

Increase in agriculture income in Rabi season by INR 25,000 to 35,000

76% of respondents shared that there is improved productivity of livestock

SUSTAINABILITY



100% of the Community members rated the support provided under the project as good

71% of respondents shared that impact of programme can be last three to five years.

This report also estimates the impacts felt by the beneficiaries and wider community as a result of the APL programme, by valuing them in monetary terms. We have examined the social impact of the APL programme arising from its CSR project during the FY 2021-22. To achieve this, we have estimated the social return on investment (SROI) generated by the programme by comparing the financial costs of the programme to the monetary value of the impacts it creates among its stakeholders. Whilst many of the impacts arose during the period of analysis, impacts would also occur or continue the effect for some time in future. Thus, forecasting methods have been used.

We estimate that for every INR 1 spent by the water for livelihood programme, INR 1.12 in social value has been generated through a mixture of socio-economic wellbeing among the beneficiaries.

01

INTRODUCTION



1 INTRODUCTION

This chapter consists of an overview of the water stress in Indian context and Asian Paints Ltd.'s CSR efforts to address the issue. It provides an overview of the project, implementing partners, project geographies, scope, and purpose of the study.

1.1 Background

Water stress and availability represent a formidable global challenge, with increasing demand, population growth, and climate change exacerbating the strain on water resources. CSE's State of India's Environment Report (2023) estimates that if the ongoing decline in global water availability persists, 87 out of 180 countries will face annual renewable water resources (ARWR) per capita falling below 1,700 cubic meters per year by 2050. India sustains around 17.74 percent of the world's population with only 4.5 percent of its freshwater resourcesⁱ. According to FAO's Aqua-stat reportsⁱⁱ (2015), India receives an average annual rainfall of 1,170 mm. This contributes to a total rainfall input of around 4,000 cubic kilometres of water as per the Planning Commission's Report of the Expert Group on Ground Water Management and Ownership (2007)ⁱⁱⁱ. The same report indicates that within this, 1,869 cubic kilometres constitute the average annual potential flow in rivers, while 432 cubic kilometres replenish the groundwater. India, despite being endowed with substantial water resources, faces a complex set of challenges related to water availability, quality, and distribution.

The depletion of groundwater levels, coupled with the pollution of surface water, presents a dual challenge. Groundwater, a critical resource for millions, is being extracted at a rate faster than natural replenishment, leading to a significant deficit. Simultaneously, about 70 percent of surface water resources in India are polluted, compromising the health of both humans and ecosystems. Wastewater from various sources, intensive agriculture, industrial activities, and untreated urban runoff contribute to this pollution, which contributes to the water-related morbidity in India. Arsenic and fluoride contamination in groundwater further exacerbate India's water quality issues. Certain regions, including parts of Assam, Bihar, Uttar Pradesh, Chhattisgarh, and West Bengal, grapple with arsenic levels above permissible limits. Fluoride contamination is prevalent in multiple states including the locations for this study, necessitating urgent remediation efforts^{iv}.

Thus, with increasing population, rapid urbanisation, and climate change impacts, India's water resources are under immense pressure.

In this challenging water landscape, the importance of watershed management becomes apparent. Watershed management is not merely a focus on water projects but involves a holistic approach to land-use practices, afforestation, and soil and water conservation. It is recognised as essential for sustainable

water development, contributing not only to water conservation but also to self-reliance in terms of food and energy. Lack of adequate watershed management may lead to increased reservoir sedimentation, altered stream flow patterns, and a range of environmental and socio-economic consequences. In conclusion, the water issues in India necessitate urgent and comprehensive water resource management strategies, with a particular emphasis on watershed management. A holistic approach that addresses not only water scarcity but also soil conservation and natural resource management is crucial for ensuring a sustainable and resilient water future for the country.

1.2 Asian Paints Limited

Asian Paints, headquartered in Mumbai, is one of the largest and leading paint companies in India. Established in 1942, the company has expanded its presence globally and is recognised for its innovative and high-quality products. Asian Paints operates in various segments, including decorative coatings, industrial coatings, and automotive coatings. The company has a strong emphasis on research and development, leading to continuous product innovation. Asian Paints has introduced eco-friendly and sustainable paint options, aligning with global trends towards environmentally conscious choices.

Beyond business, Asian Paints actively engages in Corporate Social Responsibility (CSR) initiatives. Guided by its philosophy of trust, fairness and care the CSR interventions are envisioned to make a sustainable difference to the environment in which it operates including activities which shall allow it to leverage its strengths. The primary objective of their CSR activities is to enhance and empower marginalised communities by tackling crucial social, economic, and environmental issues. These efforts focus on healthcare, water conservation, and community development, reflecting the company's commitment to social and environmental sustainability. APL's CSR initiatives are in alignment with SDG Goals, namely Goal 1 (No Poverty), Goal 2 (Zero Hunger), Goal 3 (Good Health and Well-being), Goal 6 (Clean Water and Sanitation), Goal 8 (Decent work and economic growth), Goal 11 (Sustainable cities and communities) and Goal 17 (Partnership for the goals).

APL has been implementing several initiatives in the area of Water, Health and Hygiene, Skills Development, and Disaster Relief. The Water Stewardship Program, initiated by Asian Paints Ltd, seeks to contribute to increasing water availability in the ecosystems surrounding its plants, playing a crucial role in enhancing water security in these regions. The program encompasses a spectrum of initiatives, including pond cleaning, desilting, construction of check-dams, and training farmers on micro-irrigation systems. Holistic approaches such as integrated pest and soil health management are integral to the program. The initiatives under the program are designed to fortify ecosystem services, enhancing water supplementation for both indoor use and food production. The program significantly contributes to groundwater recharge, a critical aspect of sustainable water management.

1.3 About The Study

In order to assess and understand the social impact created by its water stewardship interventions, Asian Paints Ltd. empanelled KPMG to facilitate impact assessment of the following intervention:

Water resource development project: Water resource development project has been initiated by Asian paints Ltd at Sriperumbudur and Cuddalore (Tamil Nadu). These interventions are specifically targeted towards water resource management in alignment with the improved agriculture practices.

The objective of this study was to assess the impact of these water stewardship activities on the beneficiaries and stakeholders covered under the project. The study aimed to understand the below immediate, medium, and longer-term impact of the interventions on the targeted beneficiaries:

Impact on Access & Availability of Surface & Ground Water	<ul style="list-style-type: none"> • To understand the impact on ground-water recharge based on well recharge data • To understand the duration of water availability post monsoon (in months)
Impact on Portable Water	<ul style="list-style-type: none"> • To assess impact on drinking water availability and quality due to rainwater water harvesting structures. • To assess impact on other areas like drudgery reduction, drop in health issues around the drinking water etc.
Impact on Agricultural Land & Practices	<ul style="list-style-type: none"> • To assess impact on season wise cropping pattern led by availability of water in the area. • To assess impact on soil health due to balance use of fertilizer because of adoption of recommendations of soil testing report and application of organic fertilizers

	<ul style="list-style-type: none"> To assess impact on knowledge level of the farmers about improved agricultural practices.
Impact on Farmer's Livelihood	<ul style="list-style-type: none"> To assess impact of water availability on crop production (yield/acre) To assess impact of water availability on productivity of livestock animals To assess impact on net return/acre per farmer. To assess the impact on livelihood opportunities created through the programme.
Other Impact Areas Apart from Water Rejuvenation & Canal Lining	<ul style="list-style-type: none"> To assess knowledge and adoption level of water efficient agricultural and risk mitigation farm practices. To assess level of ownership by the community in the asset created: Whether community-based institutions had been formed and taking care of maintenance aspects of the assets created under the project.

1.4 About The Project

Asian Paints' Water Stewardship Programs signifies the company's dedication to sustainable practices and responsible corporate citizenship. By addressing the challenge of water scarcity through community partnerships and integrated initiatives, Asian Paints aims to make a positive impact on both its operations and the communities it serves.

Water resource development projects have been initiated by Asian paints Ltd at Sriperumbudur and Cuddalore in Tamil Nadu. These interventions are specifically targeted towards water resource management in alignment with the improved agriculture practices.

Objectives of project:

Rejuvenation of Water Bodies:

- To increase water storage capacity and recharge through revival of traditional water bodies and construction of water harvesting structures so that to enhance irrigation and drinking water availability.

- To promote farm-based livelihood through demonstration of improved agricultural practices like Integrated pest management, crop diversification, soil testing, agroforestry, agro-horticultural, Azola production, Vermi composting, organic farming, and others etc.
- To create awareness, education among the community on judicious utilization of water resources and collective actions.

1.5 Implementing Partner

The National Agro Foundation (NAF), established in 2000 by Mr. C. Subramaniam, a prominent figure in India's Green Revolution and recipient of the Bharat Ratna Award, is a Public Charitable Trust with a vision to catalyse a rural revolution focused on agriculture and small and marginal farmers. Anchored in the principles of inclusive growth, NAF operates with a "Soil to Market" approach, building on Mr. Subramaniam's pioneering "Seed to Grain" philosophy from the Green Revolution era. Over the years, NAF has transitioned from modest beginnings to a dynamic and professional organization, delivering cutting-edge services that have made a substantial impact on rural communities. Collaborating with the government, corporate entities, and other stakeholders, NAF has implemented core programs addressing local and global challenges in agriculture and rural development. Its approach includes tailored training programs, capacity development initiatives, and the integration of new modalities and technologies. With dedicated research and development efforts, NAF has been working with over 2,20,000 farmers across 830+ villages across 15 states in India, demonstrating a commitment to positive change and sustainable development in the agricultural sector. NAF's collaborative efforts extend to partnerships with various government and non-government organizations, educational and research institutes, financial institutions, and corporate entities.

In collaboration with APL, NAF is actively engaged in the implementation of CSR projects centred around water resource development in the states of Haryana, Uttar Pradesh, Karnataka, and Tamil Nadu. This strategic partnership underscores a shared commitment to fostering the rejuvenation of water bodies, amplifying livelihood opportunities for farmers, and effectively managing natural resources. Within this collaborative framework, NAF assumes the responsibility of executing the specified activities, ensuring their timely completion, adherence to budgetary constraints, and achievement of anticipated outcomes. his cooperative effort aims to deliver tangible benefits to marginalised communities while addressing critical issues related to water resources and rural livelihoods.

1.6 Project Geographies

The impact assessment covers the following geographies where the project was implemented:

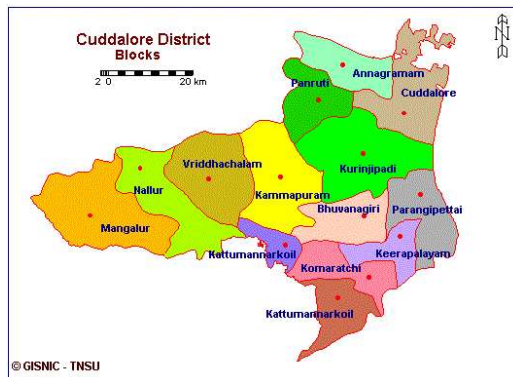
A brief description of the following project locations has been presented below:

Sriperumbudur and Cuddalore, Tamil Nadu



Tamil Nadu, the eleventh-largest state in India, faces significant water challenges exacerbated by its heavy reliance on monsoons. The state experiences a tropical climate with temperatures ranging from 18°C in winter to 43°C in summer. Its average annual rainfall of 925 mm, sourced from both the northeast and southwest monsoons, falls short of the national average (1,170 mm)^v. With a population of 72,147,030 and an economy ranking second in India, the state grapples with acute water scarcity and drought due to unpredictable monsoon patterns^{vi}. The current water deficit exceeds 11%, expected to worsen in the future^{vii}. Covering 4% of India's total area, it houses 7% of the population but possesses only 3% of the country's water resources^{viii}. Water scarcity compels Tamil Nadu to seek solutions such as water reuse and seawater desalination. In 2025, the projected water

needs for irrigation, domestic use, livestock, and industry are 52.7, 1.5, 1, and 2 billion m³, respectively^{ix}. However, available surface water and groundwater are estimated at 24.6 BCM and 23 BCM, highlighting a substantial deficit. Over 90% utilization of surface water necessitates a focus on groundwater resources^x. Despite challenges, the state ranks sixth in Indian agriculture, irrigating 3.5 MHA^{xi}. The net sown area in the state stands at 4908041 ha^{xii}. Rice cultivation, consuming over 45% of agricultural water, depends on canals, tanks, and groundwater^{xiii}. Previously, water distribution was evenly split, but current usage stands at 30% reservoir water, 20% tank water, and 50% groundwater^{xiv}. This shift in water usage can be attributed to the increasing scarcity of reservoir and tank water due to factors such as climate change and population growth. As a result, farmers have been relying more heavily on groundwater sources to sustain rice cultivation which highlights the need for interventions to build long-term water sustainability and mitigate potential negative impacts on local ecosystems.



Cuddalore, is a district in northeastern Tamil Nadu, India, is situated on the Coromandel Coast of the Bay of Bengal. The district has a rich agricultural heritage, with the total cultivated area being 3,13,223 hectares, out of which about 1,85,925 hectares are irrigated^{xv}. Of the entire cultivated land, 59% is irrigated and 41% is rainfed; the total area under cultivation is 247,582 hectares^{xvi}. The main crops grown in the district are paddy, Maize, Varagu, Blackgram, Greengram, Sugarcane, Groundnut, Gingelly and Cotton^{xvii}.

The district receives an average rainfall of 1206.7 mm^{xviii}. Groundwater is a significant source of irrigation in Cuddalore, with 593 tanks, 270 canals, and one major reservoir serving as the main source for irrigation^{xix}. The district faces various water challenges, including groundwater quality issues^{xx} indicating the need for sustainable water resource management.

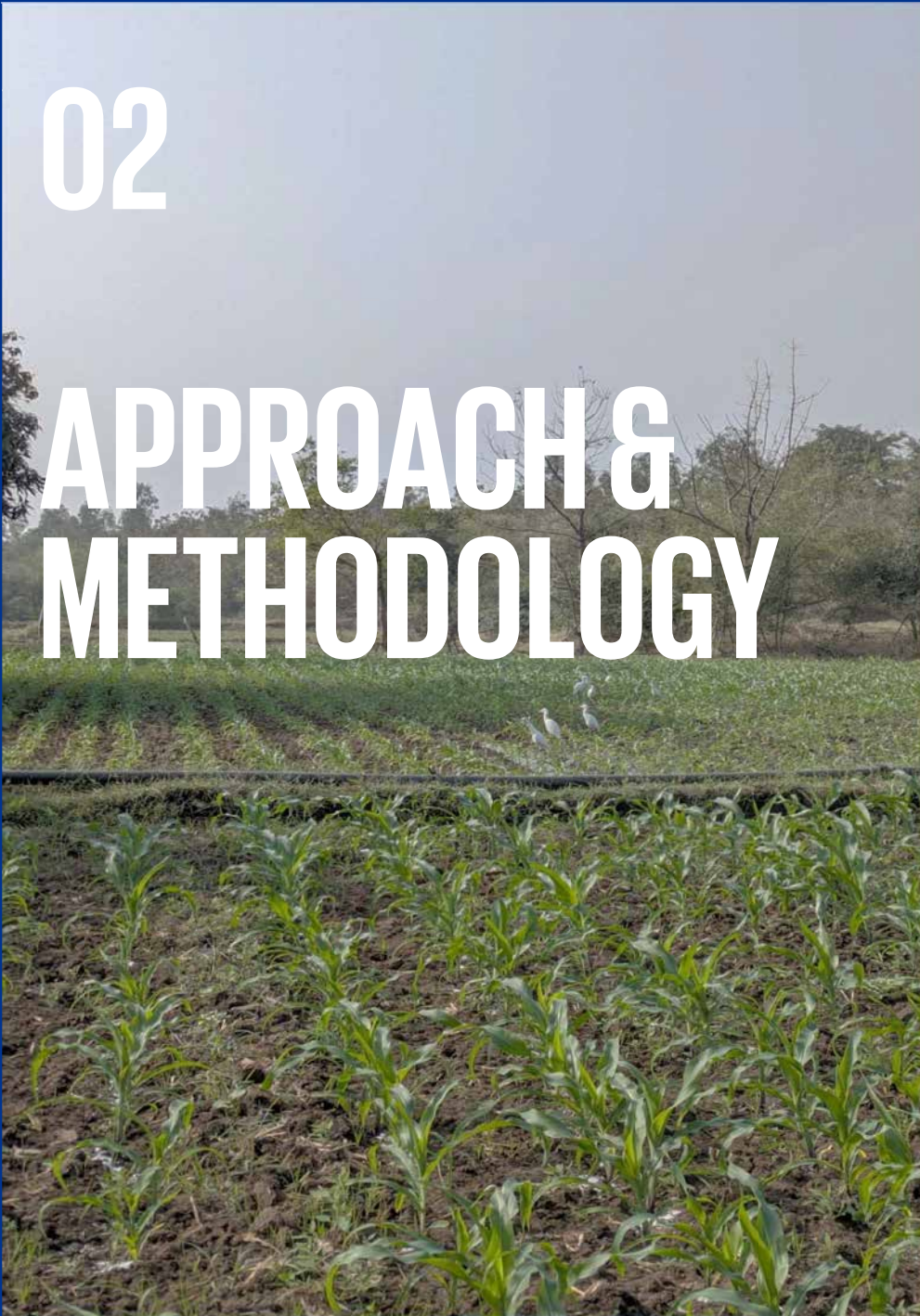


Sriperumbudur, a town in Kanchipuram district, Tamil Nadu, India, is known for its industrial activities, with several multinational companies having set up their manufacturing units in the region. The town and its surroundings are endowed with numerous water bodies such as the Sriperumbudur Lake, Elaneer Kulam and Perumal koil kulam, which serves as a source of water for irrigation and other purposes^{xxi}. Kancheepuram district generally encounters warm and moist climatic conditions. The typical annual precipitation across the district ranges from 1105 mm to

1214mm^{xxii}. According to the Kancheepuram district handbook, the cultivated land area amounts to 39,481 hectares^{xxiii}. The primary crops cultivated in the vicinity include paddy, sugarcane, groundnuts, cereals, and pulses. The district excels in the production of fruits, vegetables, and flowers within the state. The key horticultural crops comprise mango, cashew, and banana. The cultivation is primarily sustained by the tanks and dug wells situated in the region.

02

APPROACH & METHODOLOGY



2 APPROACH AND METHODOLOGY

The chapter provides details on the research design and methodology adopted for the impact assessment. It includes description of the key activities, data collection methods, and sampling strategies, employed to ensure the reliability and validity of the findings.

2.1 Our Approach

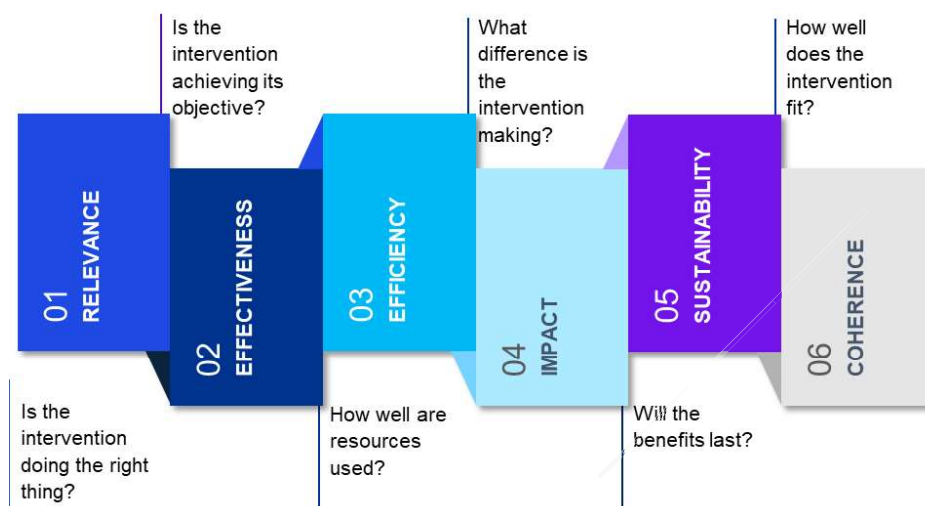
The study used the OECD DAC and SROI frameworks for designing the study and calculating social returns and impacts created due to APL's CSR projects on water stewardship. The former is widely used evaluation framework to assess the impact of social development programs, while SROI provides insights into project impact beyond traditional economic assessment tools.

This study adopted a four-phase structured methodology for evaluation as illustrated below. The adopted methodology ensured that OECD DAC evaluation criteria and SROI framework were followed throughout to effectively capture the impact of the program.

Phase I: Consulting and Scoping	Phase II: Research Design	Phase III: Data Collection	Phase IV: Analysis and Reporting
Kick-off meeting	Development of Impact Map	Development of field visit plan	Analysis of collected data using OECD DAC framework and estimating the SROI of the projects
Desk review of documents and reports related to the program	Mapping the stakeholders	Field visits and stakeholder interactions	Development of draft and final report
Determining scope of the study	Designing sampling strategy and data collection tools		Presentation to APL Team

2.1.1 OECD-DAC

The Organization for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) first laid out the evaluation criteria in the 1991. It is a framework that comprises of a set of criteria that aid in systemic assessment of on-going or completed development programs. This method helps to effectively assess various facets of the program and gain qualitative insights along with quantitative impact. The six evaluative criteria in accordance with the OECD-DAC evaluation framework are as follows:



These evaluation criteria have been defined below along with illustrative questions:

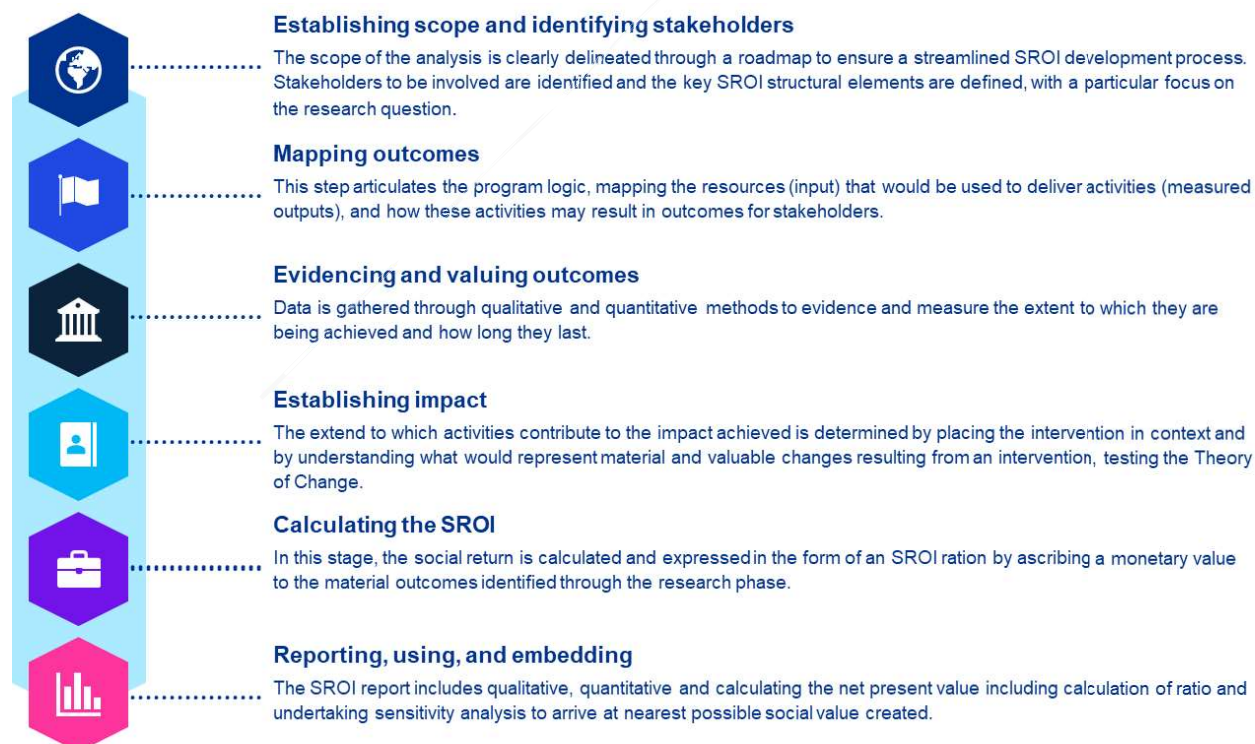
Evaluation Criteria	Illustrative Evaluation Questions	Cross-cutting Objectives
Relevance	<p>A measure of the extent to which the intervention objectives and design respond to beneficiaries, global, country, and partner/institution needs, policies, and priorities, and continue to do so if circumstances change.</p> <ul style="list-style-type: none"> ▪ To what extent are the objectives of the project still valid? ▪ Are the activities and outputs of the project consistent with the overall goal? ▪ Are the activities and outputs of the project consistent with the intended impacts and effects? 	<i>Commitments of the stakeholders are integrated into Project design and planning</i>

Effectiveness	<p>A measure of the extent to which the intervention achieved, or is expected to achieve, its objectives, and its results, including any differential results across groups.</p> <ul style="list-style-type: none"> ▪ To what extent were the objectives achieved / are likely to be achieved? ▪ What were the major factors influencing the achievement or non-achievement of the objectives? 	<i>Achieved cross-cutting objectives during project implementation</i>
Efficiency	<p>A measure of the extent to which the intervention delivers, or is likely to deliver, results in an economic and timely way.</p> <ul style="list-style-type: none"> ▪ Were activities cost-efficient? ▪ Were objectives achieved on time? ▪ Was the project implemented in the most efficient way compared to alternatives? 	<i>Resources are provided and efficiently used for participation of all stakeholders</i>
Impact	<p>A measure of the extent to which the intervention has generated or is expected to generate significant positive or negative, intended, or unintended, higher-level effects.</p> <ul style="list-style-type: none"> ▪ What has happened as a result of the project? ▪ What real difference has the activity made to the beneficiaries? How many people have been affected? 	<i>Achieved real and long-lasting positive changes in the lives of intended beneficiaries</i>
Sustainability	<p>A measure of the extent to which the net benefits of the intervention continue or are likely to continue.</p> <ul style="list-style-type: none"> ▪ To what extent did the benefits of a project continue after donor funding ceased? ▪ What were the major factors which influenced the achievement or non-achievement of sustainability of the project? ▪ What can be some of the innovative ways to make the project sustainable in the long run? 	<i>Likelihood that project achievements will continue after project</i>
Coherence	<p>A measure of the extent to which the intervention is compatible with other interventions in a country, sector, or institution.</p> <ul style="list-style-type: none"> ▪ Does the project address the synergies and interlinkages between the intervention and other interventions in the same organisation and in the same sector/policy landscape? Does it weaken or enhance the impact of any current programs or policies? ▪ Does the program lead to duplication of efforts? 	<i>The extent to which other interventions (particularly policies) support or undermine the intervention and vice versa.</i>

2.1.2 SOCIAL RETURN ON INVESTMENT (SROI)

Social Return on Investment (SROI) is a systematic method that endeavours to measure and incorporate value created because of investment – namely social, environmental, and economic value which is not fully reflected in conventional cost-benefit analyses. This method is used to monetise the social and environmental impact of the program and measure how much value has been created for each rupee invested/ spent on the program. The evaluative aspect of an SROI quantifies the value of the social impact of programs, and policies, and measures change in ways that are relevant to the people or organisations that experience or contribute to it. Through an SROI, organisations can evidence the social value their programs are achieving, gain deeper insight into what impact they are having for their stakeholders and can thus use this as an input for their company strategy. SROI is about value, rather than money. It can encompass the social value generated by an entire organisation or focus on just one specific aspect of the organisation's work.

SROI utilises the concept of “theory of change/ impact map” to describe the change creation by measuring social, environmental, and economic outcomes. It uses monetary values to represent the outcomes thus enabling calculation of ratio of benefits to costs to be calculated. SROI analysis includes case studies and qualitative, quantitative, and financial information thus helping organisations/ people to base their future decisions. The striking advantage of SROI study is that other impact assessment methodologies stop at identifying outcomes while SROI methodology goes beyond to value them and calculate the social value of impact. Steps of a SROI study are listed below –



Setting the Scope



Identification of stakeholders including beneficiary group, finalising the scope- setting the boundary of what is going to be considered for evaluative SROI - stakeholders including beneficiaries, impacts, program period, etc.

Mapping Outcomes



Creating impact map, identifying investments, and valuing inputs, identifying outcome and indicators for monitoring / evidencing outcomes

Evidencing Outcomes



Collecting and analysing outcome data and establishing how long the outcome will last

Establishing Impacts



Identifying and valuing financial proxies, adjusting outcomes using deadweight, displacement, attribution and drop off, calculating the impact

Calculating SROI



Programming the value of outcome into future based on the duration for which the impact will last, calculating the net present value including calculation of ratio and undertaking sensitivity analysis.

The process of calculation of SROI largely focuses on deadweight, displacement, attribution, and drop-off in association with any outcomes achieved. All these aspects are generally expressed as percentages and these percentages are applied to the financial proxy of each outcome to arrive at the total impact for the outcome. Therefore, we used a customised framework involving a combination of OECD-DAC and SROI to obtain a full picture of the impact created by APL.

2.2 Detailed Methodology

The following section discusses the methodology being employed by KPMG in this impact assessment, which has been broken down into four phases.

2.2.1 PHASE I: CONSULTING AND SCOPING

Activity 1: Inception meeting

As a first step, the KPMG team set up a scoping and kick-off meeting with the APL team to discuss the proposed work plan detailing out the various tasks to be conducted along with stipulated timelines. KPMG team had developed a detailed project plan to drive the engagement.

Activity 2: Desk-review and internal stakeholder engagement

The team conducted desk review of documents and reports shared by the client such as program concept notes, annual reports, program progress/closure reports, etc. Additionally secondary research was conducted to develop an in-depth understanding of the project locations, interventions, etc. Discussions with APL team and implementing agencies were conducted to understand the project interventions' KPIs, map external stakeholders, and determine sampling strategy and size.

2.2.2 PHASE II: RESEARCH DESIGN

Activity 1: Development of Impact Map/Theory of Change

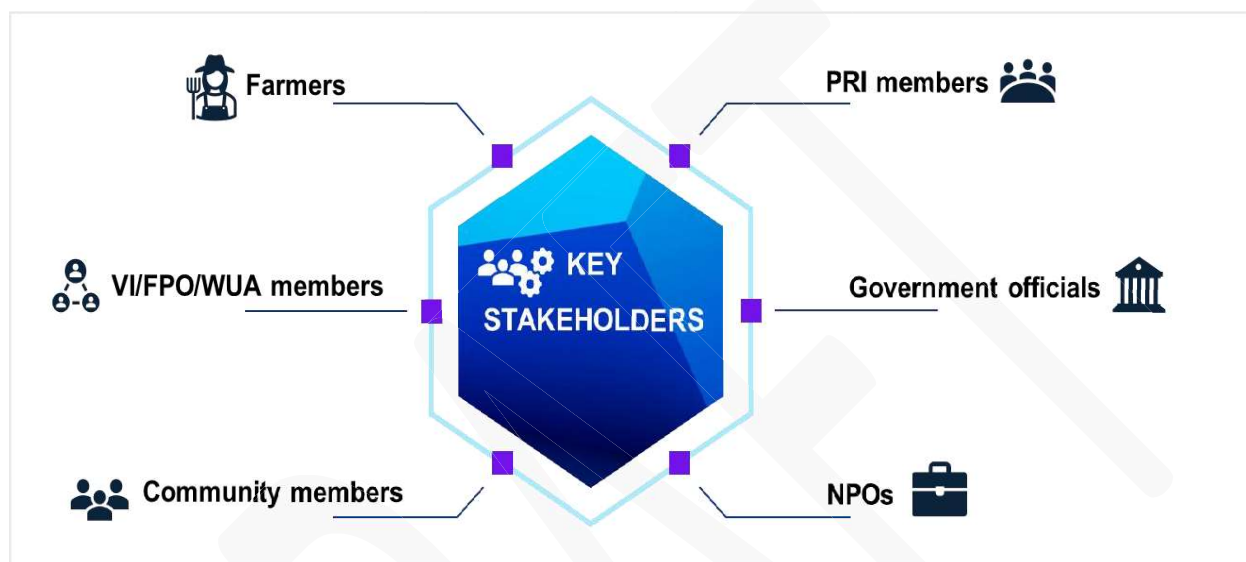
A theory of change-based impact map was developed to establish the outcome and impact parameters for the project. An impact map is defined as a logical chain/ framework giving an overview of how inputs (actions taken, or work performed) result into outputs (changes resulting from the interventions relevant to the outcomes), causing outcomes (likely or achieved short or medium-term effects arising out of the outputs of intervention) and impact (positive or negative, intended, or unintended, direct, or indirect effects created by the interventions).

Impact map for the Water Resource Development Project:

Stakeholder	Project Objectives	Inputs	Output	Outcome	Evidence Indicator
Farmers, Community members, students, other institutions	To increase water storage capacity and recharge through revival of traditional water bodies and construction of water harvesting structures so that to enhance irrigation and drinking water availability. To promote farm-based livelihood through demonstration of improved agricultural practices like Integrated pest management, crop diversification, soil testing, agroforestry, agro-horticultural, Azola production, vermicomposting, organic farming, and others etc. To create awareness, education among the community on judicious utilization of water resources and collective actions.	Construction and rejuvenation of Capacity building, Access to Finance, Time	Number of families reached out / availed benefits other water harvesting structures	Increase in agricultural production	Changes in availability of cultivated land Changes in cropping pattern by farmers Changes in multi-seasonal cropping
				Access to secure livelihood	Changes in the input cost required for agriculture- reduction in cost for irrigation
				Improved access & availability of surface and ground water	Changes in the irrigation fed agriculture, changes in the availability of water, reduced dependency on the other sources of water, Water conservation and efficient usage
			No. of families benefited from agriculture interventions	Creation of employment opportunities	Changes in the labour employment by the local population
				Improved agriculture practices	Changes in the input cost required for agriculture, adoption of improved agriculture practices
			No. of farmers reached out through awareness activities	Changes in KAP, Community ownership of assets created	Changes in community's knowledge, attitude and practices Community led governance of its resources, effective operations and maintenance of water structures

Activity 2: Stakeholder Mapping and Sampling strategy

Stakeholder mapping is the process of identifying all the stakeholders involved in a project and their roles and responsibilities on one map. The main benefit of a stakeholder map is to get a visual representation of all the people who can influence the project and how they are connected. Stakeholders who experience change, whether positive or negative because of the interventions carried out were considered for the study. Furthermore, their pertinence to the scope of the study and relevance to the overall analysis were assessed.



Sampling of stakeholders for engagement was done based on the materiality of the stakeholder and the extent of the impact on the stakeholder. Considering the overall outreach of the project as nearly 1151 beneficiaries, the statistically significant sampling has been derived using the method of 95 percent confidence level and five percent margin of error. Additionally, we have taken extra sample stakeholder in order to derive accurate social return on investment ratio. The stakeholder-wise mode of interaction has been detailed out below:

Stakeholder	Sample covered	Research Tools
Farmers	200	Survey, one-on-one interactions, FGDs
VI/FPO/WUA members		
Community members		
PRI Members		
Government Officials		
NAF staff		

Activity 3: Development of Data Collection Tools

This study employed a mixed-methods approach, incorporating both quantitative and qualitative data collection and analysis techniques. In the initial phases, detailed desk review was conducted to examine current knowledge and identify gaps and areas for further exploration. After literature review and development of research design, survey instruments were developed based on the impact map to collect data (quantitative and qualitative) from a sample population, utilizing an offline method to gather information on participants' experiences, attitudes, and behaviours. Semi-structured interviews with key stakeholders, including experts, PRI members, government officials, community leaders, and practitioners, were also designed to gain an in-depth exploration of the research topic and insights into emerging trends and best practices. Developed data collection tools were aligned to the key program objectives, scope outlined in the RFP, along with additional questions to add valuable insights for the case study. Tools prepared include:

- Tools for individual interactions
- Tools for focus group discussions
- Tools for other key stakeholder interactions
- Development of a research and data collection plan

2.2.3 PHASE III: DATA COLLECTION

Activity 1: Development of field-visit plan

Stakeholder interactions were through mutual discussion with APL and project implementing partner- NAF. A detailed timeline was developed for the field visits. The implementing partner has facilitated support in scheduling interactions, mobilising the stakeholders and translator (if needed). Additionally, the team consulted with the implementing partner to identify any potential challenges or obstacles that may arise during the field visit, such as language barriers, cultural differences, or safety concerns. This ensured that the data collection teams had access to the necessary resources and support to conduct the study in an efficient and ethical manner.

Activity 2: Conducting field visits

The stakeholder consultations were conducted through individual interviews, focus group discussions, KIs with other stakeholders. KPMG ensured inclusion of facilitators who possess previous experience in engaging with participants using their native/local languages. Training and sensitizing sessions were conducted for the data collection team to help them effectively communicate with the stakeholders. Team had conducted pre-testing/pilot testing of tools. The data collection process was monitored for completeness, accuracy, backcheck, and triangulation.

2.2.4 PHASE IV: ANALYSIS AND REPORTING

Activity 1: Data analysis and preliminary findings

During the data analysis, both qualitative and quantitative analysis were conducted on the data collected. To enhance accuracy and reliability, the findings from the quantitative data collected on the ground were triangulated to an extent. The collected information was thoroughly analysed on a location disaggregated basis, allowing for a detailed understanding of the specific areas involved. To calculate the social returns and impacts resulting from the program, the SROI framework and OECD-DAC framework were utilized. Additionally, a sensitivity analysis was conducted to examine the results of the SROI. The data and observations obtained during the primary data collection phase and document review were carefully analysed to inform report writing. The findings were further scrutinised basis the assurance standards for SROI assessments.

Activity 2: Development of report and presentation

A comprehensive and detailed report was created for Asian Paints Limited at the enterprise level encompassing the key observations, analysis, findings, and recommendations derived from the assessment. The report adhered to the guidelines provided by the OECD-DAC and SROI frameworks, ensuring accuracy and relevance. Before finalising the report, a draft version was shared with APL for discussion and their valuable inputs. After finalising, the report was presented to the leadership at APL. Furthermore, separate reports were prepared for each project, providing a breakdown of data and analysis. The data collected and the analysis have also been shared with APL.



3 ANALYSIS AND FINDINGS

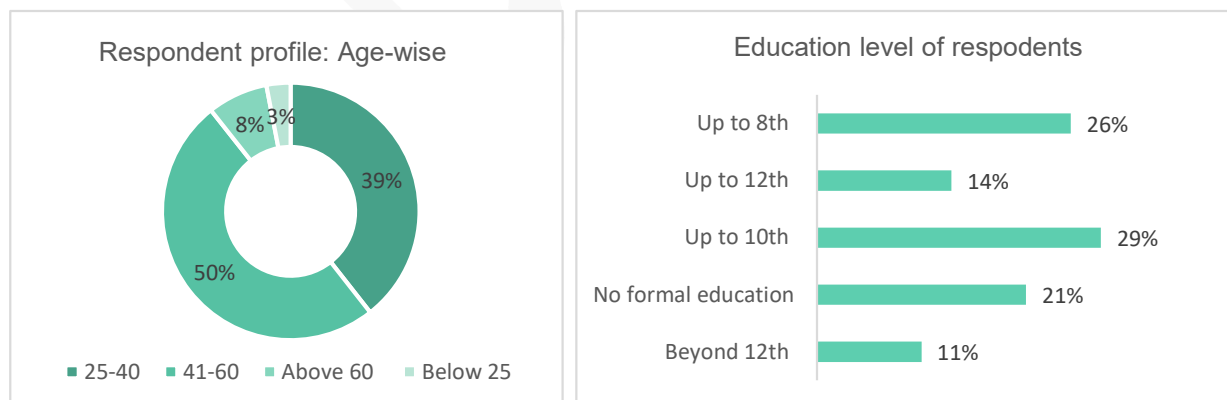
The section below highlights the findings and observations based on the interactions conducted with 66 beneficiaries of the Water for Livelihood program supported by Asian Paints Ltd. across the ten villages of Cuddlore and Sriperumbudur districts of Tamil Nadu.

3.1 Respondents Profile

Distribution of the respondents is as follows:

Locations	Sample Distribution
District - Cuddlore	45%
<i>Anukampattu</i>	3%
<i>Kannarapettai</i>	21%
<i>Kodhandaramapuram</i>	15%
<i>Pachankuppam</i>	3%
<i>Periyakattu Salai</i>	3%
District - Sriperumbudur	55%
<i>Devikumaramangalam</i>	2%
<i>Edaiyarpakkam</i>	15%
<i>Gunakaranbakkam</i>	15%
<i>Kottur</i>	11%
<i>Mahadevimangalam</i>	12%
Grand Total	100%

The respondents interviewed were largely (50 percent) from the age group of 41 to 60 years, followed by 39 percent from 25 to 40 years and percent from above 60 years. In terms of education level, majority (29



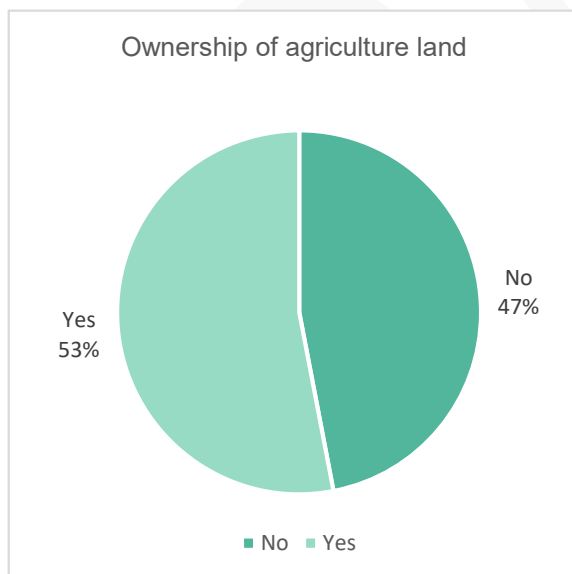
and 26 percent) of the respondents had education up to 10th and 8th standard whereas 21 percent had no formal education.

A significant number of respondents (73 percent) shared that primary occupation/ source of income is agriculture. Followed by 15 percent of respondents rely on non-salaried work. While others are dependent on non-salaried work and are homemakers.

The household size of the majority of respondents (88 percent) ranges from 3 to 5. Followed by 9 percent with more than 5 household size.

It was understood that a significant number (65 percent) of households have only two earning members. Followed by 17 and 15 percent with three and only one earning family member, respectively.

100 percent of the respondents who own land in Cuddalore have an irrigation facility. 21% of the respondents who owns land in Sriperumbudur have an irrigation facility.



53 percent of the respondents own the land and 47 percent do not own the land. 100 percent of the respondents who owns land in Cuddalore have the irrigation facility, on the other and only 21% of the respondents who owns land in Sriperumbudur have the irrigation facility at the farm.

100 percent of the respondents from both the districts who own the agricultural land grow crops in Kharif season. 91 percent grow in Rabi season and only 9 percent grow in Summer season. 97 percent of the respondents grow grains, followed by 20 percent who grow pulses, 6 percent grow millets and 6 percent grow

vegetables in their farm. 100 percent of the respondents from both the districts have received the benefit from WHS. However, 44 percent of the respondents from Sriperumbudur have received the benefit from agriculture interventions and 39 percent have received benefit from other awareness programs. 98 percent of the respondents reported that they are aware about the water for livelihood project of APL.

Seasons of cultivation			
Location	Kharif	Rabi	Zaid
Cuddlore	100%	100%	9%
Sriperumbudur	100%	88%	8%
Grand Total	100%	91%	9%

Crops cultivated				
Location	Grains	Millet	Pulses	Vegetable
Cuddlore	100%	18%	36%	0%
Sriperumbudur	96%	0%	13%	8%
Grand Total	97%	6%	20%	6%

Support received under the project:

Location	Benefitted from WHS	Benefited from agriculture interventions	Benefitted from other awareness programs
Cuddlore	100%	0%	0%
Sriperumbudur	100%	44%	39%
Grand Total	100%	24%	21%

Basis the OECD-DAC framework the project impact has been analysed and presented as below:

3.2 Evaluation Criteria: Relevance

Relevance is a measure of the extent to which the intervention objectives and design respond to beneficiaries' needs, policies, and priorities, and continue to do so if circumstances change.

Relevance assesses how well the programme connected with the aims and policies of the government in which it is being executed. It also seeks to determine whether the programme is relevant to the needs of the beneficiaries. The program's relevance is understood in this context in terms of community needs as well as connections to existing government operations.

3.2.1 Need of the community:

During the interaction with the respondents, the respondents were asked about the unprecedented challenges they faced in their villages prior to this intervention. Data collected indicate that 56 percent

respondent stated that one of the challenges they faced before the intervention was lack of sufficient water for their agricultural activities due to decreasing groundwater levels. During group discussion with the beneficiaries, they highlighted the challenges of declining trend of ground water level, water quality, increasing dependency on bore-well for agriculture due to scanty rainfall and water savvy agricultural techniques.

During discussion community members shared that 75% of water is being consumed for irrigation, water scarcity would impact the livelihood of the majority of small and marginal farm households. Significant number of respondents (more than 60 percent) shared that un-availability of water for irrigation purpose in the region. During group discussion respondents highlighted challenges of increased dependency on chemical fertilizers. It also leads to other associated problems like water pollution, intrusion of minerals etc. impacting the health and hygiene of the community.

3.2.2 Alignment to Schedule VII of the Companies Act, 2013^{xxiv}

The programme has been designed to cater to marginalised communities residing in the vicinity of Asian Paints Ltd.'s operational areas in alignment with the provisions of Section 135 of The Companies Act (2013) and CSR Rules.

The actions undertaken as part of the programme fall into the following broad categories of the section:

- (i) eradicating hunger, poverty, and malnutrition, promoting health care including preventive health care and sanitation [including contribution to the Swachh Bharat Kosh set-up by the Central Government for the promotion of sanitation] and making available safe drinking water
- (iv) ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining quality of soil, air and water [including contribution to the Clean Ganga Fund set-up by the Central Government for rejuvenation of river Ganga].
- (x) rural development projects

3.3 Evaluation Criteria: Coherence

Coherence refers to the compatibility of the intervention with other interventions in a country, sector, or institution. It measures the extent to which other interventions (particularly policies) support or undermine the intervention, and vice versa

3.3.1 Alignment of the programme with National Priorities and Sustainable Development Goals

The Sustainable Development Goals (SDGs), commonly referred to as the global goals, were established by all United Nations members in 2015 with the aim of eradicating poverty, preserving the environment, and guaranteeing that everyone lives in peace and prosperity by 2030. India was a key contributor to the development of the SDGs and is dedicated to fulfilling them by 2030.

Due to the nature of the intervention, the programme has an impact on a wide range of SDG-related outcomes, as shown below:

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Due to the nature of the intervention, the programme has an impact on a wide range of SDG-related outcomes, as shown below:

Targets			Relevance
GOAL	1- No	Poverty	<p>Target 1.4</p> <p>By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.</p>
			<p>The project initiated a programme on Water resource development to improve the water management and governance of land and water resources by strengthening community stewardship</p>

<p>GOAL 2- Zero Hunger</p> 	<p>Target 2.4</p> <p>By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.</p>	<p>The project activities target to strengthen rural livelihoods through agriculture productivity and better adaptive capacities.</p>
<p>GOAL 6- Clean Water and Sanitation</p> 	<p>Target 6.1</p> <p>By 2030, achieve universal and equitable access to safe and affordable drinking water for all.</p> <p>Target 6.4</p> <p>By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from waterscarcity.</p>	<p>The project activities included rejuvenation of water bodies in villages to improve access to water for the community members for drinking and irrigation purposes.</p>
<p>GOAL 15- Life on Land</p> 	<p>Target 15.1</p> <p>By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.</p> <p>Target 15.2</p> <p>By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.</p>	<p>Project activities included promotion of agro-forestry and prevention of natural resources among the community members. Within water resource development initiatives, water user groups were formed for operation and maintenance of the infrastructures constructed and sustainability of the project.</p>

3.4 EVALUATION CRITERIA: EFFECTIVENESS

Effectiveness is defined as an assessment of the factors influencing progress toward outcomes for each stakeholder as well as validation of the robustness of systems and processes.

It aids in ensuring that the implementation and monitoring processes are sturdy to achieve optimum social impact. The efficacy of the programme is established by examining how well the program's activities were carried out as well as the effectiveness with which the program's systems and processes were implemented.

Asian Paints Ltd. implemented the 'Water for Livelihood' project in partnership with NAF that have a presence in the field. This ensured that they developed good rapport with the villagers and increased their awareness about the project through various activities like FGD's, workshops and trainings. The project was implemented with support of village heads/ Gram Pradhan in the respective villages. Timelines and milestones for the project were also decided in consultation with village and panchayat members.

In the project, promotion of better irrigation methods and techniques through interventions such as training programmes, demonstrations and exposure visits were undertaken with the communities, across the project locations. Farmers shared that they found such exercises very relevant to their livelihoods and adopted the suggested agricultural and irrigation techniques aiming at improving agriculture productivity. It was reported that during the interaction, all beneficiaries (100 percent) were aware of sustainable agricultural practices. They gave a positive rating on the effectiveness of the training sessions conducted on various topics such as water conservation and management and soil analysis.

Across the Cuddalore and Sriperumbudur regions, respondents felt that there has been positive impact of water-related activities implemented by APL. They have shared the experience of increased accessibility of surface water, increase in water column in wells, improvement in soil moisture regime, availability of potable drinking water for their families and livestock. Below table shows the responses recorded from the ground on above mentioned outcomes.

Locations	Direct irrigation from WHS	Water for livestock	Potable drinking water	Improved soil moisture	Water in well due to GW recharge
Cuddalore	40%	37%	83%	23%	53%
Sriperumbudur	53%	67%	75%	25%	39%

Water resource development program focused on agriculture interventions included training, demonstration and capacity building and efficient use of water in irrigation activities. During interaction, respondents shared positive remarks for improved soil health, reduced in input cost for agriculture and increased production. They have also shared the experience of improved water potential in the region across the

season. Project implementing partner conducted an awareness and training session on water conservation, pisciculture, and milch animals. The attendees gave positive feedback about the training and capacity building sessions.

Agriculture outcomes shared by beneficiaries:

Location	Improved soil health	Reduced input cost	Increased awareness	Increased production	Saved water
Cuddalore	43%	23%	67%	60%	33%
Sriperumbudur	56%	47%	86%	72%	39%

Based on the discussions with local communities, it has been observed that the ongoing efforts to strengthen institutions have resulted in an improvement in the management of land and water resources. This has also led to better access to benefits such as fodder, resources, and water from the commons for the poor and marginalized members of the village. Moreover, it has fostered a sense of unity among the community members.

All respondents shared that project ensures inclusive access to all social groups (differently abled, elderly and others)

3.5 Evaluation Criteria: Efficiency

The efficiency criterion seeks to determine whether the project was completed in a cost-effective and timely way. The purpose is to establish whether the inputs—funds, knowledge, time, etc. were effectively employed to create the intervention outcomes.

Duplication/ overlap of project activities: Duplication of effort arises when similar interventions are needlessly undertaken within the same community/ location due to poor knowledge management and inadequate coordination of projects, thereby resulting in fund and resource inefficiency. However, in this case, it was observed that the beneficiaries did not have access to any other similar programmes in the region during field observations and interaction with respondents.

3.6 Evaluation Criteria: Impact

The impact has been measured in terms of the proportion of respondents who reported having a significant change in their lives due to the initiation of the project.

The goal of measuring the impact is to determine the project's primary or secondary long-term impacts. This could be direct or indirect, intentional, or unintentional. The unintended consequences of an intervention can be favourable or harmful.

The program's socioeconomic impacts are discussed in the following paragraphs.

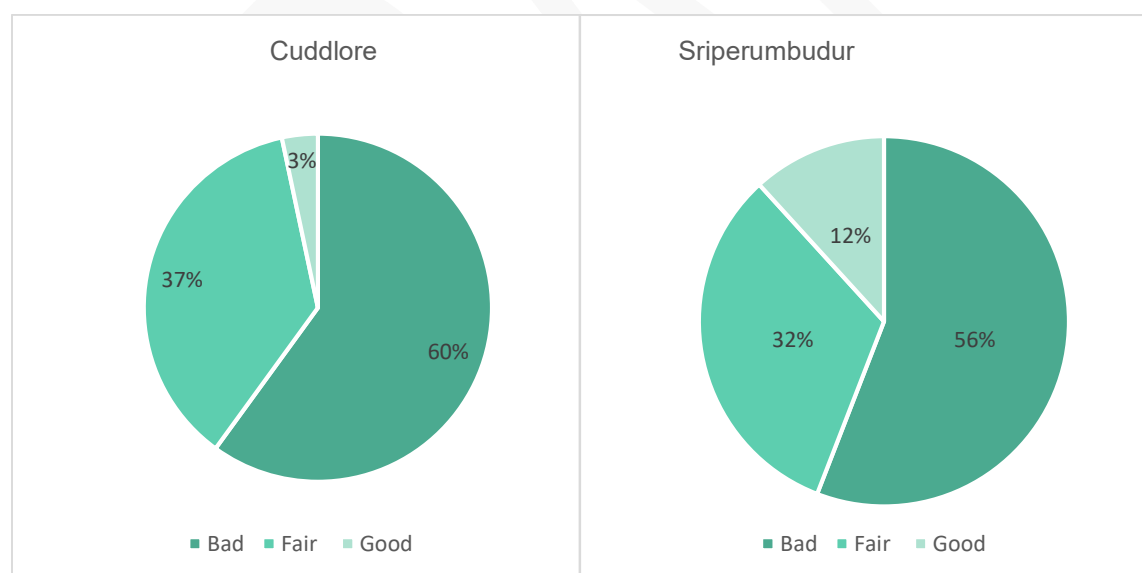
3.6.1 Impact on Access & Availability of Surface & Ground Water

The project interventions were designed and implemented with an aim to make water more accessible to the villagers.

Availability of water:

60 percent of the respondents from Cuddlore and 56 percent of the respondents from Sriperumbudur rated the availability of the water prior to the implementation of water for livelihood project in their area as bad. However, 100 percent of the respondents from Cuddlore and Sriperumbudur rated the availability of the water after the implementation of water for livelihood project in their area as Good.

Water availability before intervention-



Water accessibility:

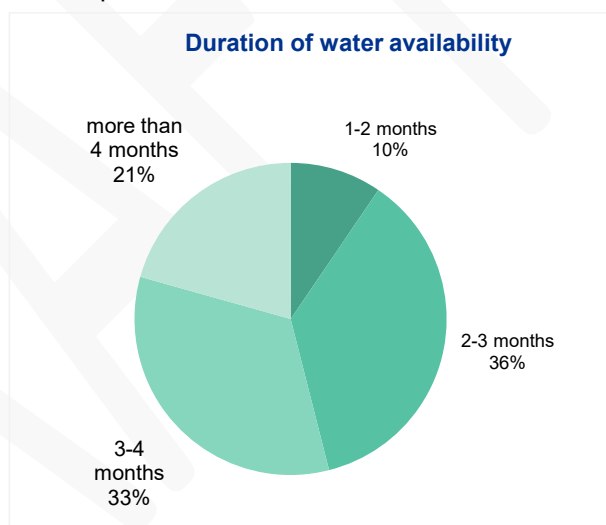
92 percent of the respondents reported that the project has improved their accessibility to water as compared to the pre-intervention period. The respondents have attributed the same to the water interventions carried out in their villages. The increment of the accessibility has further enabled stakeholders to strengthen their livelihood and personal activities that are directly linked with water.

Water availability & water quality in wells: 43 percent of the respondents from Cuddlore and 12 percent from Sriperumbudur have reported the increased availability of the water in well/ borewells after the implementation of project. More than 90 percent of the respondents reported increased availability for more than two months post monsoon. Though, the depth of water in their borewells have remained unchanged, the retention of water shows enhanced resilience. 20 percent of the respondents believe that water quality has improved in well/borewell since the implementation of WFL project. They believe that water salinity and water TDS levels have reduced considerably.

Districts	% of Respondents
Cuddlore	43%
Sriperumbudur	12%

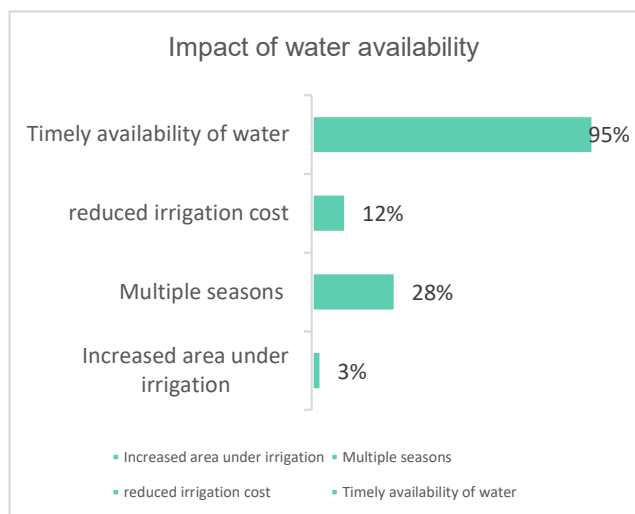
Surface water availability: 95 percent of the respondents reported the intervention has resulted in surface water availability in water harvesting structure or stream. The duration of water availability has also been increased. 36 percent have reported that the water availability has increased for 2 to 3 months, 33 percent have reported increase for 3 to 4 months and 21 percent have reported availability for more than 4 months.

29 percent respondents stated that they have been directly availing the water available in the water harvesting structure for agriculture and livestock related activities. With the increased availability of water, the respondents have reported that the frequency of water usage for irrigation purpose has improved, recently and now majority of them use it once in a week, while 44 percent provided that they access it twice in a week.



Impact of water availability: 69 percent of the respondents stated that timely availability of water has improved since the intervention. Furthermore, 42 percent also expressed that sufficient water is available for their irrigation. Additionally, 12 percent reported the less expenditure on irrigation post the project implementation.

Impact of water availability on agriculture: Overall, 95 percent of the beneficiaries have reported timely



availability of water for irrigation purpose 79 percent respondents stated to have increased production due to the availability of water. 91 percent of the respondents from Cuddlore and 74 percent respondents from Sriperumbudur district, who practice farming in their own land reported that their agricultural production as increased because of the project. Additionally, 94 percent of the respondents reported that they have saved time efforts required as compared to prior after the project implementation. Additional benefits realised by the respondents include fulfilment of

family responsibilities and more water availability for livestock etc.

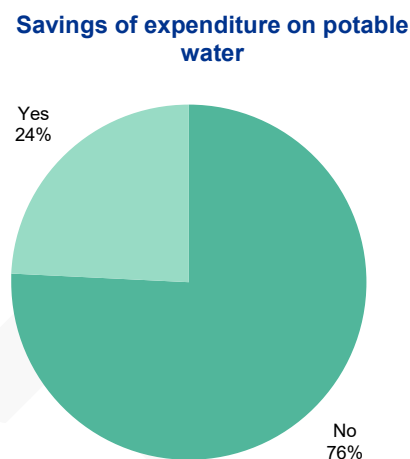
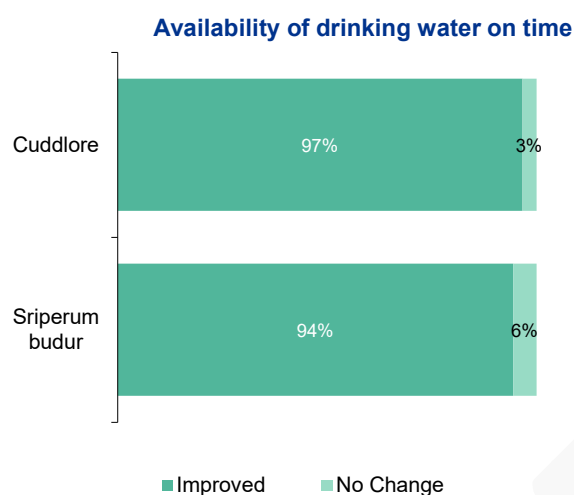
Water Governance

25 percent of the respondents form Sriperumbudur reported that the WUA/VI/FPO has been formed in their village. Out of those 19 percent reported that either they or their family members are part of WUA/VI in the village.

All of the respondents from Sriperumbudur have stated to receive a training or exposure visits on the topic of water resource management and water governance.

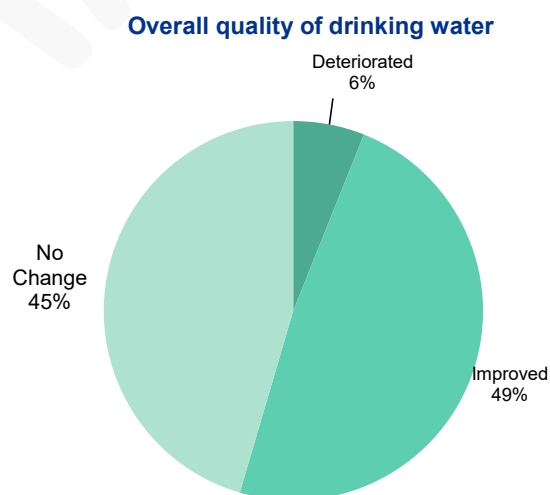
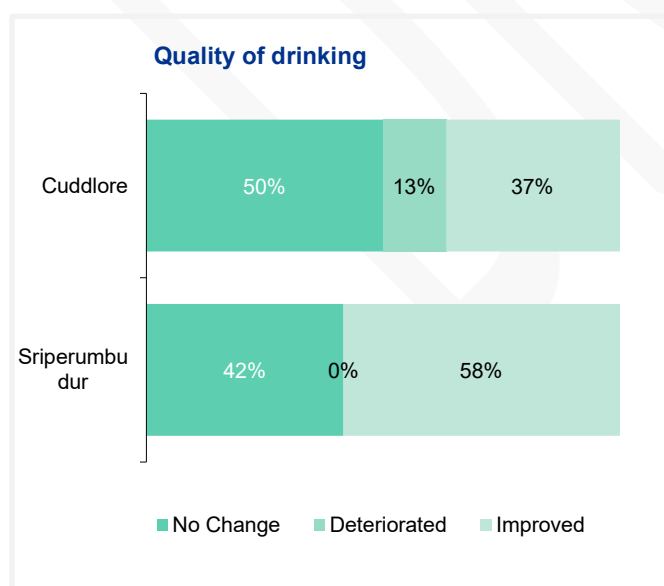
3.6.2 Impact on Potable Water

Drinking water availability



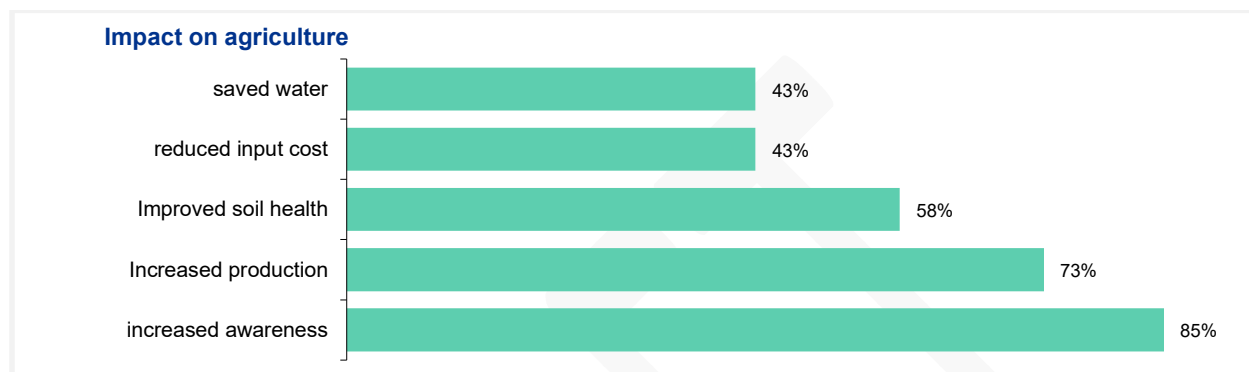
97 percent respondents from Cuddlore and 94 percent from Sriperumbudur rated the availability of drinking water has got improved after the project implementation. Overall, 24 percent of the respondents also reported that they have saved on expenses on availing potable water due to the intervention.

Drinking water quality: 58 percent from Sriperumbudur of the respondents and 37 percent of the respondents from Cuddlore reported that the quality of drinking water has been improved after the project implementation. 21 percent of the respondents reported that water availability has improved their health. Out of those reporting the health benefits, 93 percent reported improved water taste and 86 percent reported reduced TDS of water.



3.6.3 Impact on Agricultural Land and Practices

Impact on farming practices



Around 85 percent of the respondents have reported an increase in their awareness on various topics pertaining to agriculture and bring it into practice. About 58 percent and 73 percent of the study participants reported an improved soil health and increased production, respectively. During discussion 43% respondents also shared that there has been a reduction in the costs of cultivation and the water usage for agriculture purpose.

Increase in Yield: Information on improved agricultural techniques such as application of organic pesticides, irrigation scheduling and crop varieties have helped in saving the costs incurred on fertilisers. pesticides and irrigation while increasing the crop yields . The respondents reported that the level of yield prior to intervention was around 10 quintals per acer which has increased to 12.5 quintals/acre post intervention, amounting to a delta change of around 2.5 quintals/acre. The highest increase in yield (paddy) was reported from the villages of Sriperumbudur.

Increase in yield (in quintal)			
Villages	Pre	Post	Delta Change
Cuddlore	7.5	9.5	2
Sriperumbudur	12	15.5	2.5
Overall	10	12.5	2.3

Impact of availability of water on livestock: Around 76% of the respondents who are practicing livestock rearing shared that there was an improvement in the productivity of their livestock owing to increased availability of water.

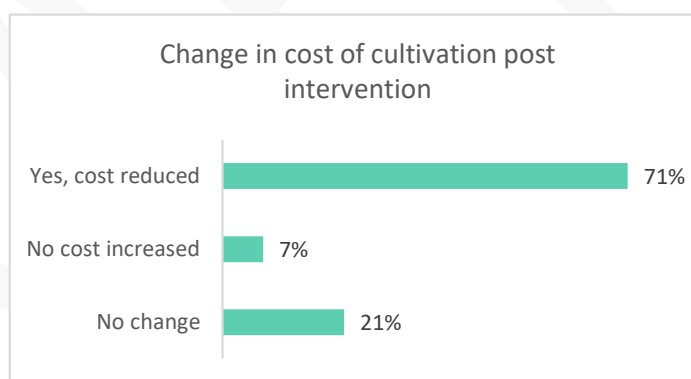
Besides, savings on fodder expenses, improved fodder and water availability is also helping in improving the livestock productivity and milk yield and the people are now more confident of increasing the number of livestock that

they keep. Thus, 35% of the respondents have added additional ruminants in the recent time.



3.6.4 Impact on Farmer's Livelihood

Impact on cost of cultivation: With the adoption of agriculture practices Farmers helped in reduction in the cost for irrigation. 71 percent stated that the cost of agriculture has reduced while 21 percent experienced no change in the cost of cultivation. However, 7 percent respondents experienced increased cost of cultivation.

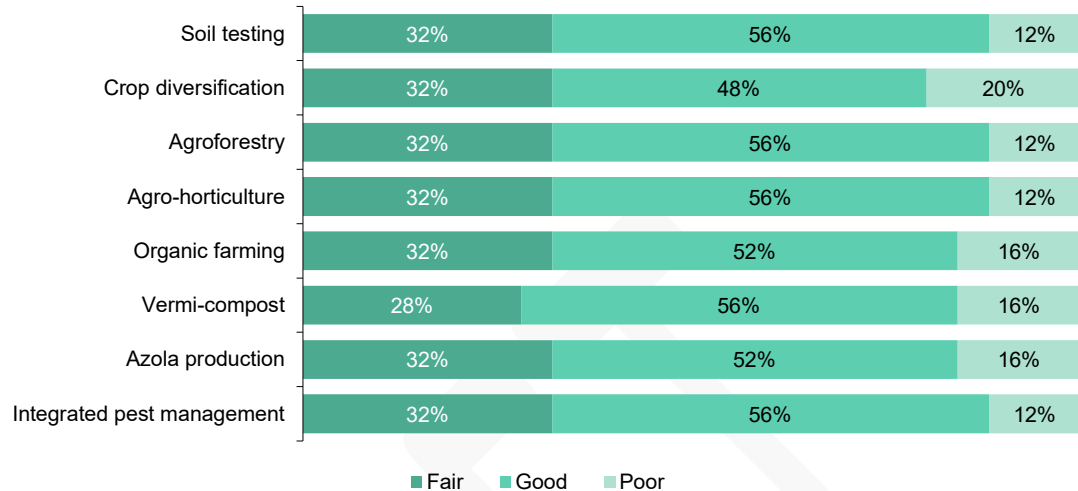


As per the beneficiary data, the estimated reduction in cost of cultivation is about 2842/acre per farmer.

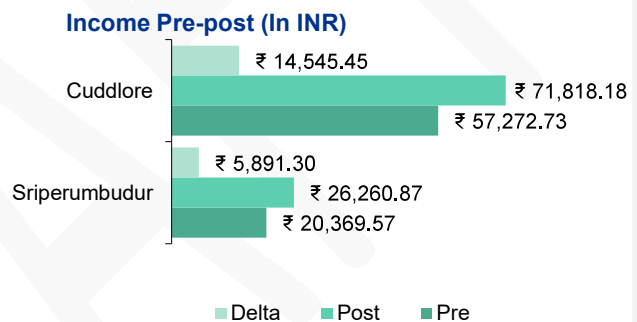
The programme also included activities such as exposure visits and trainings for the community members across the project locations for promotion of better irrigation methods and techniques. Farmers shared that they found such exercises very relevant to their livelihoods and adopted the suggested agricultural and irrigation techniques aiming at reduction in cost of cultivation, improving crop yields, agricultural productivity, and water savings.

Improved knowledge, attitude, and practices: On an average 54 percent respondents shared improvement in knowledge in soil testing, crop diversification, agroforestry, agro-horticulture, organic farming, vermi-compost, azola production and integrated pest management.

Knowledge levels of the beneficiaries



Impact on family income: The increase in yield, reduction in cost of cultivation, enhanced production due to improved water potential and knowledge level of beneficiaries towards improved agriculture practices resulted in an increase in family income for the respondents. Overall, the average family income from agricultural yield reported by respondents prior to intervention was INR 38,821.15 per farmer which increased to INR 49,039.53 per farmer amounting to a delta change of INR 10,281 (26 percent).

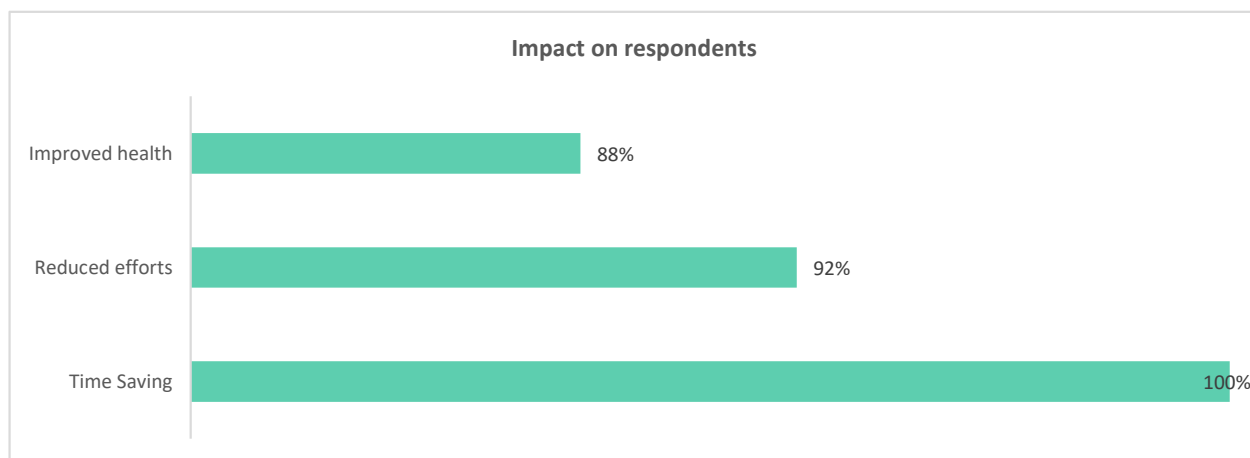


Location	Pre	Post	Delta
Sriperumbudur	₹ 20,369.57	₹ 26,260.87	₹ 5,891.30
Cuddlore	₹ 57,272.73	₹ 71,818.18	₹ 14,545.45
Average	₹ 38,821.15	₹ 49,039.53	₹ 10,218.38

3.6.5 Other Impact Areas

Impact on health, efforts and time:

The respondents also shared the impact of the project interventions on their health, time saved, and efforts. All the respondents shared that there was an increase in the time saved. 92% of the respondents reported reduction in efforts and 88% indicated improvement in their health post-intervention.



3.7 Evaluation Criteria: Sustainability

Sustainability assesses how well the programme secures the long-term viability of its outcomes and influence. The continuation of a positive effect after development or aid has stopped is referred to as sustainability. This evaluation criterion contains key elements concerning the likelihood of continuous long-term benefits and risk tolerance. To achieve sustainability, a governing framework, financial model, and operating system must be established.

100% of the Community members rated the support provided under the project as good

Due to programme activities: agricultural and physical interventions, the economically marginalized people benefitted the most. The promotion of organic farming and sustainable agriculture has triggered a change in the perception of the people. On similar note, respondents shared their views on the long-lasting impact of the project. As a result, 74 and 68 percent of respondents shared that they believe that the project impact can be last three to five years whereas from Cuddlore and Sriperumbudur respectively.

Duration of project	Cuddlore	Sriperumbudur
Less than 1 year	3%	3%
1 to 3 years	16%	26%
More than 3 years	82%	71%

WAY FORWARD

Water is a crucial resource and a critical input in nearly all processes of life. Adequate availability of water is important for agriculture and animal husbandry to increase the productivity. As has been mentioned in the introductory chapter, with groundwater being increasingly over-exploited, agriculture is becoming increasingly difficult to pursue; thus, contributing to rural distress and migration. The water resource development initiative aimed to improve the livelihoods of people living in rural areas. One of the objectives of the programme was to revive traditional institutional mechanisms related to water and enable them to function effectively in a water-stressed environment. This includes governing complex and scarce resources like groundwater. Some of the suggestive way forward is outlined below:

Scalability/ Replicability	<ul style="list-style-type: none">• An integrated programme to bring about a change by leveraging technology in agriculture to move it from subsistence to enterprise-level cultivation can be aimed. the approach can be a mix of sustainable farming approaches (good agriculture practices, creating Agri-entrepreneurs, Input and Output aggregation for small farmer groups, establishing Hitech Farm Demonstrations, Organising Krishi Choupals for specific technical information dissemination), deployment of IoT solutions (installation of weather stations to measure real time in-situ dynamic climatic and edaphic factors; and pest traps) and by improving their access to information through technology use (Missed call facility, phone call consultations, Smart App notifications, WhatsApp groups, SMSs and the Agri-entrepreneur service to provide more personalized and one on one support to farmers.)• The program may expand the other set of watershed activities in the same geography. It could be around treating other drainage lines, fodder grass seeding, strengthening other rural livelihoods, decreasing anthropogenic pressure, and others.• The program may adopt IWRM (Integrated Water Resources Management) at the river basin level. A river basin approach is a practical framework based on geographical and hydrological characteristics by addressing downstream and upstream basin-wide issues.
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	Enablers	<ul style="list-style-type: none"> Improving the program delivery by training and orienting PRI members on the larger objectives, intended outcomes, and the process to be followed. Convergence opportunities with government and non-government institutions can be explored to scale and replicate the programme. Establishing village institutions/FPOs led by community members can build support systems for small and marginal farmers. This ensures transparency and fairness in product pricing.
	Community participation	<ul style="list-style-type: none"> It is essential to explore and implement new and innovative methods for engaging communities. This will help in sharing knowledge among community members, making communities equal partners in the pursuit of water security. Women's participation in the program can be strengthen through establishing institutional groups led by women member of the family. Involvement in decision-making and regular participation of women members in various institutions in the region. Community-participation is the to bringing about effective change in challenging common beliefs and guiding them towards recognising and addressing the water crisis in their community. For instance, the prevailing notion in many communities is that groundwater depletion is solely caused by low rainfall. However, interactive discussions can help the community understand that while rainfall may have become erratic, changes in agricultural practices over the years could also contribute to the fast-depleting groundwater.
	Establishing institutions for community led governance	<ul style="list-style-type: none"> To ensure the sustainability of the interventions, local governance mechanisms must be further strengthened. This could be achieved through enabling strong community institutions and their acceptance by PRI members. Community institutions may be formed at habitation level to ensure reaching out to the last mile. These institutions shall draft their byelaws and their capacity building can be done to make them self-reliant over a period.

Involvement of women in community institutions, program implementation and decision making in future course of action

- In order to establish water stewardship, community driven by-laws would ensure optimum utilisation of water from common resources by all stakeholders. To enable the same, activities like crop-water budgeting exercise shall be carried out at habitation level.
- It is advisable to allocate user rights and collection of user charges formally for usage of the benefits created under common property resources.

4 MEASURING THE SOCIAL RETURNS

As explained in Chapter 2, this report has used two evaluation frameworks which are OECD-DAC and SRoI. Generally, OECD-DAC helps in gaining a qualitative understanding of the impact. On the other hand, SRoI helps organizations in evaluating changes which are being created by measuring social, environmental, and economic outcomes and providing monetary values to represent them. SRoI also helps in understanding the total value generated for every rupee invested for interventions.

There are two types of SRoI:

- Evaluative, which is conducted retrospectively and based on actual outcomes that have already taken place.
- Forecast, which predicts how much social value will be created if the activities meet their intended outcome.

For this study, both evaluative as well as forecasting SRoI has been considered. SRoI primarily involves six stages which are as follows:

- Stage 1: Establishing Scope and identifying key stakeholders
- Stage 2: Mapping outcomes
- Stage 3: Evidencing outcomes and giving them a value
- Stage 4: Establishing impact
- Stage 5: Calculating the SRoI
- Stage 6: Reporting

Stage 1 and Stage 2 have been discussed in-depth in Chapter 2. Further stages have been elaborated in the ensuing sections.

4.1 Evidencing outcomes

After formulating the impact map, indicators to measure the outcomes were developed based on the evaluation team's interaction with beneficiaries of the interventions and other relevant stakeholders like PRI Members, implementation team members etc. Also, evidence of outcomes was collected using primary and secondary data.

Quantity of Change: The quantity of change for the impact map has been calculated by extrapolating the number of responses from the sample covered to the total population of the beneficiaries. Depending on the responses received during data collection, a proportionate percentage of total beneficiaries is calculated.

The below provides details about the evidence indicators for the outcomes and the quantity of change against each indicator.

Table 1- Quantities of change

Outcome description	Indicators and Sources	Number of people experiencing described outcome
Creation of sustainable water supply through increment in availability and accessibility of water	Increase in water harvesting capacity (Quantum of Water Potential created or Water Harvested in Cubic Meter)	1
	Increased availability of water for irrigation - surface water from WHS (Number of farmers x Avg increase in Irrigated land)	190
	Increased availability of water in wells / borewells (number of farmers/community members x Avg increase in availability of water in months/days)	98
Increased agriculture production due to increment in availability of water	Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	180
	Reduction in Cost of Cultivation (Number of farmers x Avg reduction in cost annually)	154
	Reduction in Cost of Irrigation (Number of farmers using Mobile Engines for irrigation x Avg hours of irrigation)	130
Increased agriculture production due to enhanced agriculture practice	Adoption of improved agriculture practices (% of members indicating adoption of improved agriculture practices)	200
Increased access to water for animal husbandry activities	Increase in annual income due to availability of quality potable water for cattle and other animals (Number of households x % increase in milk yield)	70
Community led governance of water resources at village level	Formation of water committees in villages and creation of bylaws for water management in village (Number of village water user groups formed)	48

Duration of Outcome: Some outcomes will last through a beneficiary's life, while some will last only till the input activity persists.

For the purpose of this SROI Analysis, outcomes realised due to intervention of infrastructure activities have been considered for a maximum of 5 years for the impacts whereas, for the intangible interventions such as training the duration of impact is restricted to 3 years. These considerations are based on the following assumptions:

- Water Resources Development intervention has long lasting effects, especially the rise in ground water and surface water level due to the construction of check dams, rejuvenation of existing ponds, etc. This increased duration is also reflected in the resulting economic and social impacts for the community.
- In case of interventions which involve components of training or are related to skill/knowledge training, the beneficiaries will need to upgrade knowledge required for their respective subject due to advancement in technology and rapidly evolving market economy and climatic situations.
- Based on nature of interventions and dynamics of the income generating activities, impact due to the contribution from beneficiaries and other stakeholders will outweigh the impacts due to contribution and support from APL.

Financial Proxy and Value of Financial Proxy: An SROI analysis has used financial proxies in order to establish the value of identified outcomes. As a standard practice, prices are used as a proxy for value of services. Sometimes, the outcomes reported by stakeholders cannot be traded in a market or are intangible. Hence for such outcomes, the closest, comparable value has been identified for that service. Please refer Table 12- Financial proxies for outcome wise proxy details.

4.2 Establishing Impacts

In order to provide credibility to the analysis and prevent over-claiming, the SROI calculation has taken into consideration aspects like attribution, displacement, deadweight, and drop-off into account.

Establishing impact consists of an estimation on how much of the outcome would have happened anyway and what proportion of the outcome can be attributed to the activities that occur during the programme or project. Establishing impact is crucial, as it reduces the risk of over counting. Thus, an important part of SROI is 'measuring impact' by accounting for attribution, deadweight, displacement, and drop-off. The following section details how these were addressed:

Attribution: Attribution is the process of considering impact in exclusivity of any other intervention by other agencies.

There are two ways have been taken to arrive at Attribution. Beneficiaries have been asked to assign / attribute percentage against each stakeholder and against each change. Average of such attribution of beneficiaries helps to arrive at Attribution. In case of lack of sufficient data from beneficiaries, equity-based attribution was also considered.

Here the attribution was collected during data collection from individuals through questionnaire. The same was validated and moderated (if required) through attribution findings from FGDs of the respective interventions. List of stakeholders considered for attribution were as follows:

- Asian Paints Limited along with implementation partner
- Others- Self / Family/ Relatives, Community, Government officials from Agriculture, Animal Husbandry and Water Resources Development Sectors etc.

Deadweight: Deadweight is an estimation of social benefits that would have resulted anyway i.e., without the intervention.

Basis the respondents' assertions, the deadweight has been considered as 0% and the reasons have been presented below:

- There are no other organisations working in the region on similar issues.
- The focused approach of APL implemented through the support like training, affordable inputs and grant support has led to the increase in agricultural productivity.
- Support provided by APL is aimed at efficient spending and creation of quality infrastructure and is participatory in nature.

Displacement: Displacement is positive impact on one stakeholder at the cost of a negative impact on another stakeholder.

In case of this SRoI study, displacement was assumed as Nil percent for agriculture intervention considering no adverse or negative impact reported by any respondents. In case of other interventions, there are no major organisations, private or non-profit working in similar sections.

Drop-off and Duration: Drop-off is the portion of outcomes that are not sustained. The drop-off will vary depending on nature of project interventions and activities involved in it. Intervention wise drop-off along with reasons is given below:

- Intangibles @33 percent: Acquiring of new skill sets, multi-cropping and other inputs have strengthened the base of agriculture economy in the region. Farmers have also reported a significant rise in self-confidence. Due to these factors, the impact is assumed to last for 3 years.
- Water Resources Development @20 percent: Creation of quality infrastructure for water resources development results in long lasting effects. Communities have also observed a significant improvement in ground water and surface water levels. Thus, it is assumed that impacts of these interventions would last over a period of 5 years.

Double Counting: Due to the nature of the identified impacts, there is a potential for double counting when aggregating isolated impact values. An example is the overlap between agriculture productivity increase due to agriculture as well as water interventions. To resolve this, we excluded the first year of impact due to agriculture for the overlapping respondents.

For a detailed view, refer Table 11- SROI Calculation

Considering the above parameters, the impact of each outcome is calculated with the following formula:

4.3 Calculating Impact

Impact = Quantity of outcome * Financial Proxy Value * Attribution – Deadweight – Displacement – Drop-off for each year

SROI is a ratio of cumulative present value for each outcome against the total investment in the project
i.e., **SROI = Total NPV of social value / NPV of investment**

Total Input Value: The inputs from APL, beneficiaries and other stakeholders are considered for the SROI calculation stage. The assumption being all the inputs have worked together to create the observed impact. Even absence of either one of the inputs from stakeholders other than APL will have not generated the impact observed as a part of the current study. Various inputs considered for this study included financial contribution from APL, beneficiaries and other stakeholders and the cost of time invested by beneficiaries as a part of training / exposure activities. The value of the financial inputs has been provided by the APL and the inputs of programme (other than financial inputs) have been valued in consultation with APL CSR team.

The below table represents the total cumulative investments from all the stakeholders towards the project from the time period 2021- 2022:

Table 2- Inputs calculation

InputType	Input description	Total value(INR)
Financial inputs	CSR Funding from APL	1,77,58,300

Net Present Value: The Impact Value is adjusted to reflect the Net Present Value (NPV) of the projected outcome values. This is to reflect the present day value of benefits projected into the future.

A discount rate of 4% has been used for the NPV calculations.

$$SRoI = \{ \text{Total present value of impact} / \text{Total present value of input} \}$$

The below table depicts the NPV evaluated as of 2022 and forecasted for 2027 (considering the duration period of 5 years for each outcome):

Table 3- SROI Calculation

Outputs	Outcomes	Indicators and Sources	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 1	Year 2	Year 3	Year 4	Year 5
Construction and refurbishment of Check dams/ Water Harvesting Structures	Creation of sustainable water supply through increment in availability and accessibility of water	Increase in water harvesting capacity (Quantum of Water Potential created or Water Harvested in Cubic Metre)	Groundwater abstraction charges for Drinking and Domestic use (Central Water Commission) per cubic metre	2	0%	0%	25%	20%	41996	41996	33596	26877	21502	17201
		Increased availability of water for irrigation - surface water from WHS (Number of farmers x Avg increase in irrigated land)	Irrigation charges by Tamil Nadu government (per hectare)	62	0%	0%	25%	20%	8804	8804	7043	5634	4507	3606
		Increased availability of water in wells / borewells (number of farmers/communities members x Avg increase in availability of water in months/days)	Average HH requires 220 LPCD daily and using it for a months gets us the water requirement = 6600/HH/month Average charges for purchasing water (One water tanker of 4000 litre capacity) - INR 200/-	330	0%	0%	25%	20%	24255	24255	19404	15523	12419	9935
	Increased agriculture production due to increment in availability of water	Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in Gujarat- 2203/Q	2203	0%	0%	25%	20%	1308582	1308582	1046866	837492	669994	535995
		Reduction in Cost of Cultivation (Number of farmers x Avg reduction in cost annually)	Average reduction in Cost of Cultivation indicated by respondents (INR)	2000	0%	0%	25%	20%	231000	231000	184800	147840	118272	94618

	Reduction in Cost of Irrigation (Number of farmers using Mobile Engines for irrigation x Avg hours of irrigation)	Average reduction in Irrigation cost indicated by respondents (INR)	4000	0%	0%	25%	20%	6240000	6240000	4992000	3993600	3194880	2555904
Increased access to water for animal husbandry activities	Increase in annual income due to availability of quality potable water for cattles and other animals (Number of households x % increase in milk yield)	Average increase in Milk Yield (in Litres per day) x Amount received for 1L of milk in Tamil Nadu	44	0%	0%	25%	20%	2310	2310	1848	1478	1183	946

4.4 SROI Results

The SROI for this Analysis- evaluative SROI (as on 2022) and evaluative cum forecast SROI (as on 2027) - is derived from dividing the total present value of the impacts by the total input value of the investment. This is considered because the beneficiaries who have received the support in 2022 would realise the impact for the next 5 years i.e., by 2027.

The below table describes the SROI Value and the SROI Ratio before sensitivity analysis:

Net present value of social value created	SROI value
1,99,40,476	1.12
Net present value of total Investment	SROI Ratio
1,77,58,300	1:1.12

For every INR 1 invested, the programme has generated social impact of INR 1.12

Sensitivity Analysis: Our calculations to arrive at the results provided in this report are relied on a variety of primary and secondary data, but the beneficiary data introduced a higher level of uncertainty. This survey was utilized to estimate the attribution, additionality of APL interventions to specific outcomes, and the duration of time the impact would last.

Sensitivity Analysis was used to test variables and assumptions to ensure that conservative estimates have been used in arriving at the SROI. For each impact area, we tested the impact of using one standard deviation above and below the average response to attribution survey questions. The sensitivity analysis suggests that the difference between base and test case SROI is not significant which signifies that the SROI value calculated above is not too sensitive to the discounting factors and thus the range of impact value would be considered as $\pm 10\%$ of the above stated value.

Sr. No.	Base case Parameters	Base case SROI	Test case Parameters	Test case SROI	Observation
1	Displacement is 0%	1.45	Displacement is 10%	1.31	No significant change
2	Displacement is 0%	1.45	Displacement is 20%	1.16	Significant change
3	Attribution is 25%	1.45	Attribution is 5%	1.85	Significant change
4	Attribution is 25%	1.45	Attribution is 15%	1.65	No significant change
5	Attribution is 25%	1.45	Attribution is 35%	1.26	No significant change
6	Attribution is 25%	1.45	Attribution is 45%	1.07	Significant change

4.5 Limitations & assumptions for the SROI study

- The study is limited to the sample of beneficiaries interacted with on-ground during field visits.
- The survey conducted with sample beneficiaries is subjective in nature.
- The study is limited to the recall of the participants in the study.
- The financial proxies are limited to publicly available resources. The financial proxies are representative and based on professional judgement, but it may not be reflective of actual costs incurred due to several considerations. (Refer to Appendix B for details of financial proxies)
- The deadweight, displacement, drop off values are derived from the responses from the stakeholders.
- While information obtained from the public domain or external sources has not been verified for authenticity, accuracy, or completeness, we have obtained information, as far as possible, from sources generally considered to be reliable. However, it must be noted that some of these websites/third party sources may not be updated regularly. We assume no responsibility for the reliability and credibility of such information.

5 ANNEXURES

Table 4- Financial proxies

Summary of activity	Outcome	Indicators	Monetary valuation approach	Rate/unit
Construction and refurbishment of Check dams/ Water Harvesting Structures	Creation of sustainable water supply through increment in availability and accessibility of water	Increase in water harvesting capacity (Quantum of Water Potential created or Water Harvested in Cubic Metre)	Groundwater abstraction charges for Drinking and Domestic use (Central Water Commission) per cubic metre	2
		Increased availability of water for irrigation - surface water from WHS (Number of farmers x Avg increase in Irrigated land)	Irrigation charges by Tamil Nadu government (per hectare)	62
		Increased availability of water in wells / borewells (number of farmers/community members x Avg increase in availability of water in months/days)	Average HH requires 220 LPCD daily and using it for a months gets us the water requirement = 6600/HH/month Average charges for purchasing water (One water tanker of 4000 litre capacity) - INR 200/-	330
	Increased agriculture production due to increment in availability of water	Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in Gujarat- 2203/Q	2203
		Reduction in Cost of Cultivation	Average reduction in Cost of Cultivation	2000

		(Number of farmers x Avg reduction in cost annually)	indicated by respondents (INR)	
		Reduction in Cost of Irrigation (Number of farmers using Mobile Engines for irrigation x Avg hours of irrigation)	Average reduction in Irrigation cost indicated by respondents (INR)	4000
	Increased access to water for animal husbandry activities	Increase in annual income due to availability of quality potable water for cattle and other animals (Number of households x % increase in milk yield)	Average increase in Milk Yield (in Litres per day) x Amount received for 1L of milk in Tamil Nadu	44
Trainings/ Workshops/ Demonstrations/ Non-pesticide management/ Mulching	Increased agriculture production due to enhanced agriculture practice	Adoption of improved agriculture practices (% of members indicating adoption of improved agriculture practices)	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in Gujarat- 2203/Q	2203
Establishing village-level institutions	Community led governance of water resources at village level	Formation of water committees in villages and creation of bylaws for water management in village (Number of village water user groups formed)	Subsidy given for training of Farmer Groups under ATMA scheme (NMAET)	5000

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- ^{xxii} [Microsoft Word - DistricT Brochure modified.doc \(cgwb.gov.in\)](https://cgwb.gov.in/sites/default/files/2022-10/cuddalore.pdf)
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- ^{xxiv} [Schedule-VII.pdf \(icai.org\)](https://icai.org/Schedule-VII.pdf)
- ^{xxv} [Schedule-VII.pdf \(icai.org\)](https://icai.org/Schedule-VII.pdf)



Impact Assessment of Water Resource Management Project-Kharawad, Rohtak District, Haryana

Asian Paints Limited

KPMG Assurance and Consulting Services LLP

January 2024

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Strictly Private and Confidential

V. Ravi
General Manager
Asian Paints Limited
Mumbai, Maharashtra– 400055
India
15 March 2024

**Subject: Final-report for Impact assessment of Water Resource Development
Projects**


Dear Mr. V. Ravi,

We appreciate the opportunity to assist Asian Paints Limited in providing **Impact assessment of Water Resource Development Projects related services**.

Please find enclosed our final-report, which has been prepared in accordance with the scope and terms stated in our engagement letter dated 5th January 2024. With this deliverable, we have completed our obligations as stated in our engagement letter.

It has been our privilege to have this opportunity to work with you, and we look forward to continuing our relationship.

Yours sincerely

DocuSigned by:

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Full Signature _____

Name- Jignesh Thakkar

Director, ESG

KPMG Assurance and Consulting Services LLP

DISCLAIMER AND NOTICE TO READERS

This report has been prepared exclusively for Asian Paints Limited (APL) ("Client") in accordance with the terms of the Engagement letter/agreement between Client and KPMG Assurance and Consulting Services LLP ("KPMG" or "we") (collectively 'Contract'). The performance of KPMG's services and the report issued to the Client are based on and subject to the terms of the Contract.

KPMG does not accept or assume any liability, responsibility, or duty of care for any use of or reliance on this report by anyone, other than our client, to the extent agreed in the Agreement.

Impact assessment is limited to the projects allocated by Asian Paints Limited.

OECD-DAC and SROI frameworks have been used in preparing the report as detailed herein. No professional assurance standards ex. ISAE, SSAE etc. have been applied while preparing this report and accordingly the rigors applicable under such standards are not applicable for the scope covered by our report.

Procedures, analysis, and recommendations, if any, are advisory in nature basis the information collected from various sources both publicly and those provided by the client.

Our observations represent our understanding and interpretation of the facts based on reporting of beneficiaries and stakeholders.

Our report, by its very nature, may involve numerous assumptions, inherent risks, and uncertainties, both general and specific. The conclusions drawn shall be based on the information available with us at the time of preparing the report.

We have not performed an audit and shall not express an opinion or any other form of assurance. Further, comments in our report are not and shall not be intended, nor should they be interpreted to be legal advice or opinion. Client shall be fully and solely responsible for applying independent judgment, with respect to the findings included in the report, to make appropriate decisions in relation to future course of action, if any. We shall not take responsibility for the consequences resulting from decisions based on information included in the report.

While information obtained from the public domain or external sources has not been verified for authenticity, accuracy, or completeness, we have obtained information, as far as possible, from sources generally considered to be reliable. However, it must be noted that some of these websites/third party sources may

not be updated regularly. We assume no responsibility for the reliability and credibility of such information.

Our work shall be limited to the specific procedures described in this Engagement Letter and shall be based only on the information and analysis of the data obtained through interviews of beneficiaries supported under the programme, selected as sample respondents and discussions with Client's team and stakeholders of the programme. Accordingly, changes in circumstances or information available after the review could affect the findings outlined in our report.

In no circumstances shall we be liable, for any loss or damage, of whatsoever nature, arising from information material to our work being withheld or concealed from us or misrepresented to us by any person to whom we make information requests.

In accordance with its policy, KPMG advises that neither it nor any of its partner, director or employee undertakes any responsibility arising in any way whatsoever, to any person other than Client in respect of the matters dealt with in this report, including any errors or omissions therein, arising through negligence or otherwise, howsoever caused.

In connection with our report or any part thereof, KPMG does not owe duty of care (whether in contract or in tort or under statute or otherwise) to any person or party to whom the report is circulated to and KPMG shall not be liable to any party who uses or relies on this report. KPMG thus disclaims all responsibility or liability for any costs, damages, losses, liabilities, expenses incurred by such third party arising out of or in connection with the report or any part thereof.

By reading our report, the reader of the report shall be deemed to have accepted the terms mentioned hereinabove.

ABBREVIATIONS

APL	Asian Paints Ltd
ARWR	Annual Renewable Water Resources
BCM	Billion Cubic Meters
CEEW	Council on Energy, Environment and Water
CSE	Center for Science Education
CSR	Corporate Social Responsibility
FAO	Food and Agriculture Organisation
FGD	Focus Group Discussion
HH	Households
INR	Indian Rupees
NAF	National Agro Foundation
NCIWRD	National Commission on Integrated Water Resources Development
NPV	Net present value
O&M	Operations and Maintenance
OECD DAC	Organization for Economic Co-operation and Development Assistance Committee Development
PRA	Participatory Rural Appraisal
PRI	Panchayati Raj Institutions
RFP	Request For Proposal
ROI	Return on Investment
SDG	Sustainable Development Goals
SPOC	Single Point of contact
SROI	Social Return on Investment
TDS	Total Dissolved Solids
WHS	Water Harvesting Structure
WRD	Water Resource Development

EXECUTIVE SUMMARY

The philosophy of transformation has been in DNA of Asian Paints Limited and reinventing the industry has been in its nature. The same philosophy of transforming lives has been driving the CSR efforts concentrating on holistic and sustainable development of the community. The company believes in fostering relationship of trusts with the communities around the vicinity of plants and people in the unorganized sector. Under the umbrella of inclusive development, the initiatives focus on sectors of health & hygiene, water conservation, skill development and disaster management.

According to UN World Water Development Report (2022), India is the largest groundwater user globally. Approximately 45% of total irrigation and 80% of domestic water needs are met by groundwater. The unsustainable extraction practices over decades have thus led to overexploitation and water scarcity. Due to such issues, canal water has been a significant alternative source to many farmers in India. However, accessibility and timely availability has been a major concern. In such challenging landscape, Asian Paints engaged in an innovative and modern approach through their program "Water Resource Management" in Kharawad Village of Rohtak district in Haryana, which addresses not only water accessibility for irrigation but also reduces cost incurred on irrigation with traditional methods for ensuring a sustainable and resilient agriculture in the region.

The main objectives of the impact study are to assess the impact of canal lining activities with focus on the access and availability of surface a water, farmer`s livelihood, land and agriculture practices, and governance. The study covered mix-methods approach consisting of quantitative and qualitative research methodology using primary and secondary data collection. The analysis of quantitative data was corroborated with anecdotal evidence from qualitative responses and observed through the lens of SROI framework and OECD-DAC framework. A total of 100 respondents from the villages were interacted for data collection in Rohtak district of Haryana, including farmers, community members, PRI members and Water User Association members.

More than half of the respondents were between 25-60 age group and have formal education till class eighth. The sample covered respondents from varied economic background including small to marginal farmers with primary source of income being agriculture.



IMPACT – Water Access & Availability

100 % respondents indicated increased accessibility and availability to water for over four months

90% respondents indicated they have lowered the usage of ground water for irrigation

100% respondents accessed water for irrigation directly from Canal



IMPACT – Reduced irrigation cost

100% respondents felt the good availability of irrigation water.

100% respondents indicated reduction in expenditure incurred on irrigation.

100 % respondents indicated reduced efforts and labour cost.

94% respondents indicated reduced expenses on operations and maintenance of the channels



IMPACT - Agriculture

Respondents indicated –

Increased production by 25-30%

Increased area under cultivation by 0.2 acres/farmer

Increase in agriculture income in Rubi season by INR 30,000 to 45,000

Increased productivity of Livestock with median increase in yield by 3 litres



IMPACT – Water governance

100% of the respondents stated that individual farmers take up the cleaning and maintenance requirement

A Separate funds for O&M of canal have been collected INR 300/acre biannually)

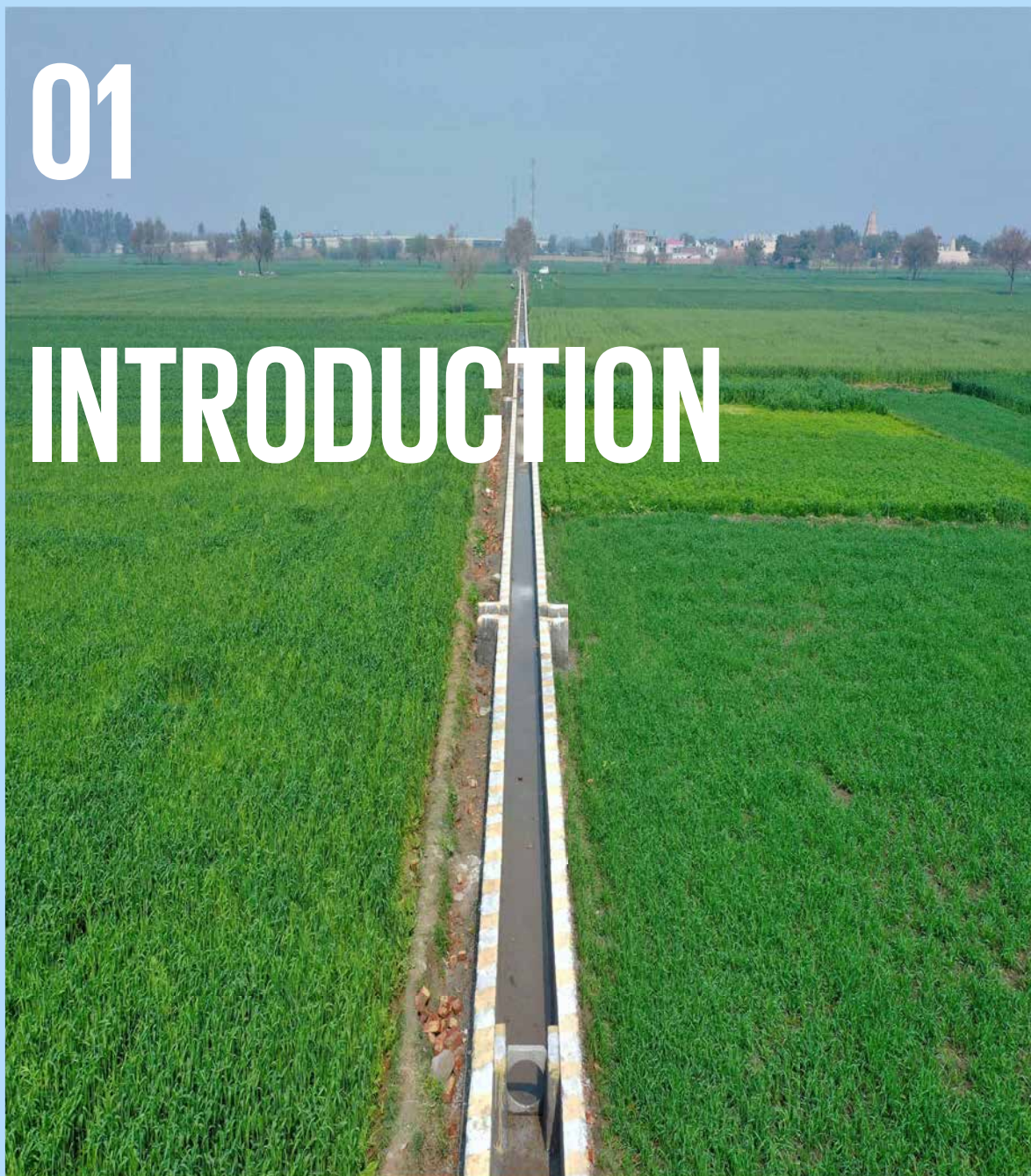
This fund is either deposited to a bank account of a pre-existing WUA or paid to the labours for seasonal cleaning

This report also estimates the impacts felt by the beneficiaries and wider community as a result of the APL programme, by valuing them in monetary terms. We have examined the social impact of the APL programme arising from its CSR project during the FY 2021-22. To achieve this, we have estimated the social return on investment (SROI) generated by the programme by comparing the financial costs of the programme to the monetary value of the impacts it creates among its stakeholders. Whilst many of the impacts arose during the period of analysis, impacts would also occur or continue the effect for some time in future. Thus, forecasting methods have been used.

We estimate that for every INR 1 spent by the Water Resource Development programme, INR 7.41 in social value has been generated through a mixture of socio-economic wellbeing among the beneficiaries.

01

INTRODUCTION



INTRODUCTION

This chapter consists of an overview of the water stress in Indian context and Asian Paints Ltd.'s CSR efforts to address the issue. It provides an overview of the project, implementing partners, project geographies, scope, and purpose of the study.

1.1 BACKGROUND

Water stress and availability represent a formidable global challenge, with increasing demand, population growth, and climate change exacerbating the strain on water resources. CSE's State of India's Environment Report (2023) estimates that if the ongoing decline in global water availability persists, 87 out of 180 countries will face annual renewable water resources (ARWR) per capita falling below 1,700 cubic meters per year by 2050. India sustains around 17.74 percent of the world's population with only 4.5 percent of its freshwater resourcesⁱ. According to FAO's Aqua-stat reportsⁱⁱ (2015), India receives an average annual rainfall of 1,170 mm. This contributes to a total rainfall input of around 4,000 cubic kilometres of water as per the Planning Commission's Report of the Expert Group on Ground Water Management and Ownership (2007)ⁱⁱⁱ. The same report indicates that within this, 1,869 cubic kilometres constitute the average annual potential flow in rivers, while 432 cubic kilometres replenish the groundwater. India, despite being endowed with substantial water resources, faces a complex set of challenges related to water availability, quality, and distribution.

The depletion of groundwater levels, coupled with the pollution of surface water, presents a dual challenge. Groundwater, a critical resource for millions, is being extracted at a rate faster than natural replenishment, leading to a significant deficit. Simultaneously, about 70 percent of surface water resources in India are polluted, compromising the health of both humans and ecosystems. Wastewater from various sources, intensive agriculture, industrial activities, and untreated urban runoff contribute to this pollution, which contributes to the water-related morbidity in India. Arsenic and fluoride contamination in groundwater further exacerbate India's water quality issues. Certain regions, including parts of Assam, Bihar, Uttar Pradesh, Chhattisgarh, and West Bengal, grapple with arsenic levels above permissible limits. Fluoride contamination is prevalent in multiple states including the locations for this study (Haryana) necessitating urgent remediation efforts^{iv}.

Thus, with increasing population, rapid urbanisation, and climate change impacts, India's water resources are under immense pressure.

In this challenging water landscape, the importance of watershed management becomes apparent. Watershed management is not merely a focus on water projects but involves a holistic approach to land-

use practices, afforestation, and soil and water conservation. It is recognised as essential for sustainable water development, contributing not only to water conservation but also to self-reliance in terms of food and energy. Lack of adequate ground water management may lead to increased water overdraft, depletion, salinity and a range of environmental and socio-economic consequences. In conclusion, the water issues in India necessitate urgent and comprehensive water resource management strategies, with a particular emphasis on alternates like surface water. A holistic approach that addresses not only water availability but also the accessibility.

1.2 ASIAN PAINTS LIMITED

Asian Paints, headquartered in Mumbai, is one of the largest and leading paint companies in India. Established in 1942, the company has expanded its presence globally and is recognised for its innovative and high-quality products. Asian Paints operates in various segments, including decorative coatings, industrial coatings, and automotive coatings. The company has a strong emphasis on research and development, leading to continuous product innovation. Asian Paints has introduced eco-friendly and sustainable paint options, aligning with global trends towards environmentally conscious choices.

Beyond business, Asian Paints actively engages in Corporate Social Responsibility (CSR) initiatives. Guided by its philosophy of trust, fairness and care the CSR interventions are envisioned to make a sustainable difference to the environment in which it operates including activities which shall allow it to leverage its strengths. The primary objective of their CSR activities is to enhance and empower marginalised communities by tackling crucial social, economic, and environmental issues. These efforts focus on healthcare, water conservation, and community development, reflecting the company's commitment to social and environmental sustainability. APL's CSR initiatives are in alignment with SDG Goals, namely Goal 1 (No Poverty), Goal 2 (Zero Hunger), Goal 3 (Good Health and Well-being), Goal 6 (Clean Water and Sanitation), Goal 8 (Decent work and economic growth), Goal 11 (Sustainable cities and communities) and Goal 17 (Partnership for the goals).

APL has been implementing several initiatives in the area of Water, Health and Hygiene, Skills Development, and Disaster Relief. The Water Stewardship Program, initiated by Asian Paints, seeks to contribute to increasing water availability in the ecosystems surrounding its plants, playing a crucial role in enhancing water security in these regions. The program encompasses a spectrum of initiatives, including pond cleaning, desilting, construction of check-dams, irrigation canal lining, and training farmers on micro-irrigation systems. Holistic approaches such as integrated pest and soil health management are integral to the program. The initiatives under the program are designed to fortify ecosystem services, enhancing water

supplementation for both indoor use and food production. The program significantly contributes to groundwater recharge, a critical aspect of sustainable water management.

1.3 ABOUT THE STUDY

To understand the impact created by its interventions, Asian Paints Limited. empanelled KPMG to facilitate impact assessment of its Water Resource Development programme. The objective of this study was to assess the impact of these water stewardship activities on the beneficiaries and stakeholders covered under the projects. The study aimed to understand the below immediate, medium, and longer-term impact of the interventions on the targeted beneficiaries:

Impact on Access & Availability of Surface & Ground Water	<ul style="list-style-type: none"> • To understand the duration of water availability post monsoon (in months) • To understand the impact of water accessibility, availability & livelihood of the farmers
Impact on Agricultural Land & Practices	<ul style="list-style-type: none"> • To assess impact on season wise cropping pattern led by availability of water in the area. • To assess impact on soil health due to use of canal water • To assess impact on knowledge level of the farmers about improved agricultural practices.
Impact on Farmer's Livelihood	<ul style="list-style-type: none"> • To assess impact of water availability on crop production (yield/acre) • To assess impact of water availability on productivity of livestock animals • To assess impact on net return/acre per farmer. • To assess the impact on livelihood opportunities created through the programme.
Other Impact Areas Apart from Canal Lining	<ul style="list-style-type: none"> • To assess knowledge and adoption level of water efficient agricultural and risk mitigation farm practices. • To assess level of ownership by the community in the asset created: Whether community-based institutions had been formed and taking care of maintenance aspects of the assets created under the project.

1.4 ABOUT THE PROJECT

Asian Paints' Water Stewardship programs signifies the company's dedication to sustainable practices and responsible corporate citizenship. By addressing the challenge of water scarcity through community partnerships and integrated initiatives, Asian Paints aims to make a positive impact on both its operations and the communities it serves.

A major part of Rohtak is waterlogged, which is the main reason for the deterioration of the quality of Groundwater. The reasons of water logging are mainly attributed to the dense canal network and the subsequent seepage through canals. The waterlogged areas vary from pre-monsoon to post-monsoon period.

All the irrigation/drainage channels are made with soil bunds which lead to more conveyance loss. There are limited channels that have been done with bricks lining works by Government of Haryana. Still, there is a huge gap and disparity within locations. Due to this, there is a huge conveyance loss during irrigation. In order to address the above-mentioned issues and sustain the natural resources, Water Resource Development program was initiated by APL.

Water Resource Development Programme was initiated by Asian Paints in 2021-22 with aim to improve the irrigation water access to the farmers community by implementing Canal lining intervention for 75 households and 60 Acres of farmland in the Kharawad village of Rohtak district.

Objective of the project:

- To ensure increased & equitable access to the farmers of the area for irrigation purpose
- To reduce maintenance cost through canal lining
- To minimize dependency on ground water for irrigation purpose
- To decrease the fuel consumption of pumps in tube well due to its reduced usage
- To ensure productivity enhancement of crops

1.4.1 About National Agro Foundation (NAF)

The National Agro Foundation (NAF), established in 2000 by Mr. C. Subramaniam, a prominent figure in India's Green Revolution and recipient of the Bharat Ratna Award, is a Public Charitable Trust with a vision to catalyse a rural revolution focused on agriculture and small and marginal farmers. Anchored in the principles of inclusive growth, NAF operates with a "Soil to Market" approach, building on Mr. Subramaniam's pioneering "Seed to Grain" philosophy from the Green Revolution era. Over the years, NAF has transitioned from modest beginnings to a dynamic and professional organization, delivering cutting-

edge services that have made a substantial impact on rural communities. Collaborating with the government, corporate entities, and other stakeholders, NAF has implemented core programs addressing local and global challenges in agriculture and rural development. Its approach includes tailored training programs, capacity development initiatives, and the integration of new modalities and technologies. With dedicated research and development efforts, NAF has reached over 220,000 farmers in 830+ villages across 15 states in India, demonstrating a commitment to positive change and sustainable development in the agricultural sector. NAF's collaborative efforts extend to partnerships with various government and non-government organizations, educational and research institutes, financial institutions, and corporate entities.

In collaboration with APL, NAF is actively engaged in the implementation of CSR projects centred around water resource development in the states of Haryana, Uttar Pradesh, Karnataka, and Tamil Nadu. This strategic partnership underscores a shared commitment to fostering the rejuvenation of water bodies, amplifying livelihood opportunities for farmers, and effectively managing natural resources. Within this collaborative framework, NAF assumes the responsibility of executing the specified activities, ensuring their timely completion, adherence to budgetary constraints, and achievement of anticipated outcomes. Simultaneously, APL extends crucial technical and financial support to NAF, facilitating the realization of project objectives and the establishment of a sustainable and inclusive development model. This cooperative effort aims to deliver tangible benefits to marginalized communities while addressing critical issues related to water resources and rural livelihoods.

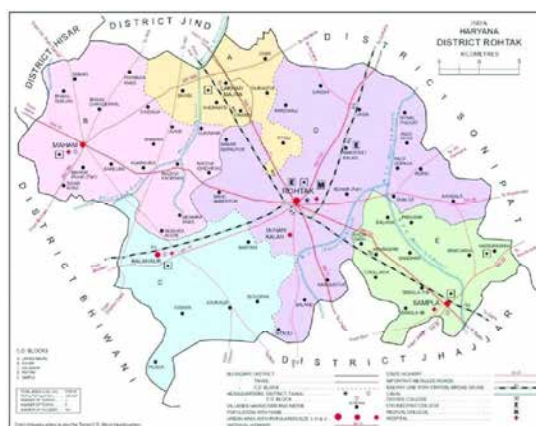
1.5 PROJECT GEOGRAPHIES



Haryana, located in the north-western part of India, grapples with distinct water challenges that impact its agrarian landscape. The state has been divided into nine physiographic units and is drained by two major rivers, namely Ghaggar and Yamuna^v. In Haryana, the climate is a mix of subtropical, semi-arid to sub-humid, continental and monsoon type, with rainfall ranging from less than 300 mm in the southwest to over 1000 mm in the hilly areas of Shivalik hills^{vi}. At the state level, the normal rainfall is 588 mm^{vii}. Both the northern and southern regions of the state are currently confronted with the issue of groundwater depletion. In contrast, the central region, which includes Rohtak, Jhajjar, and a portion of Jind, Hisar, and Sirsa, is grappling with an increase in groundwater levels,

resulting in water logging and salinization problems. On the other hand, the southwestern region of the state is characterized by arid, sandy, and infertile land. The primary sources of irrigation in Haryana are tube wells and canals, with a net irrigated area share of 58.71 and 41.28 percent respectively. The state heavily relies on groundwater for irrigation and domestic use, leading to a concerning over-exploitation of aquifers^{viii}. The Green Revolution's success in the mid-20th century, while transforming Haryana into a major agricultural hub, also contributed to the depletion of groundwater resources. At present, 64 blocks of the state (54%)^{ix} have been designated as dark blocks due to the excessive exploitation of groundwater resources. The decline in water tables raises concerns about the sustainability of agriculture, a sector critical to the state's economy. The high demand for water, coupled with the limited availability of surface water sources, underscores the need for effective water management strategies in Haryana.

Rohtak is in the central region of the state of Haryana and is surrounded by the district of Jind in the north, Sonipat in the south, Jhajjar in the east, and Hisar and Bhiwani in the west. The district lies in a low-lying area of Gangetic plain^x and has a population of 1,061,204 as of 2011^{xi}. The economy of Rohtak is primarily agricultural, with the main crops being paddy, bajra, arhar and cotton^{xii}. Rice, Cotton, Sugarcane, Bajra, and Jowar constitute the principal agricultural produce that are cultivated during the Kharif season^{xiii}. In the Rabi season, Wheat, Mustard, and Sugarcane serve as the predominant crops in the Rohtak district^{xiv}. In Rohtak, the average size of landholding is around 1.88 hectares^{xv}. Ber, Guave and Marigold are the key horticulture crops for the district, whereas onion, potato, carrot and cucumber are the main vegetables grown in the area^{xvi}. Rohtak is facing significant water issues, including waterlogging, rising water tables and poor groundwater quality^{xvii}. Out of the nine districts in Haryana, Rohtak is the worst affected by the problem of waterlogging. On an average, the annual rise in water table is around 6 cm^{xviii}. There is a rising trend of water table with around 98% of the district reporting groundwater level of less than 10 meters from the ground surface^{xix}. Average annual rainfall in the district stands at 592 mm^{xx}. The situation is further exacerbated by heavy rains, which can cause damage to crop and infrastructure^{xxi}.



Ground Water Resources Data (in ham) of Rohtak district^{xxii}

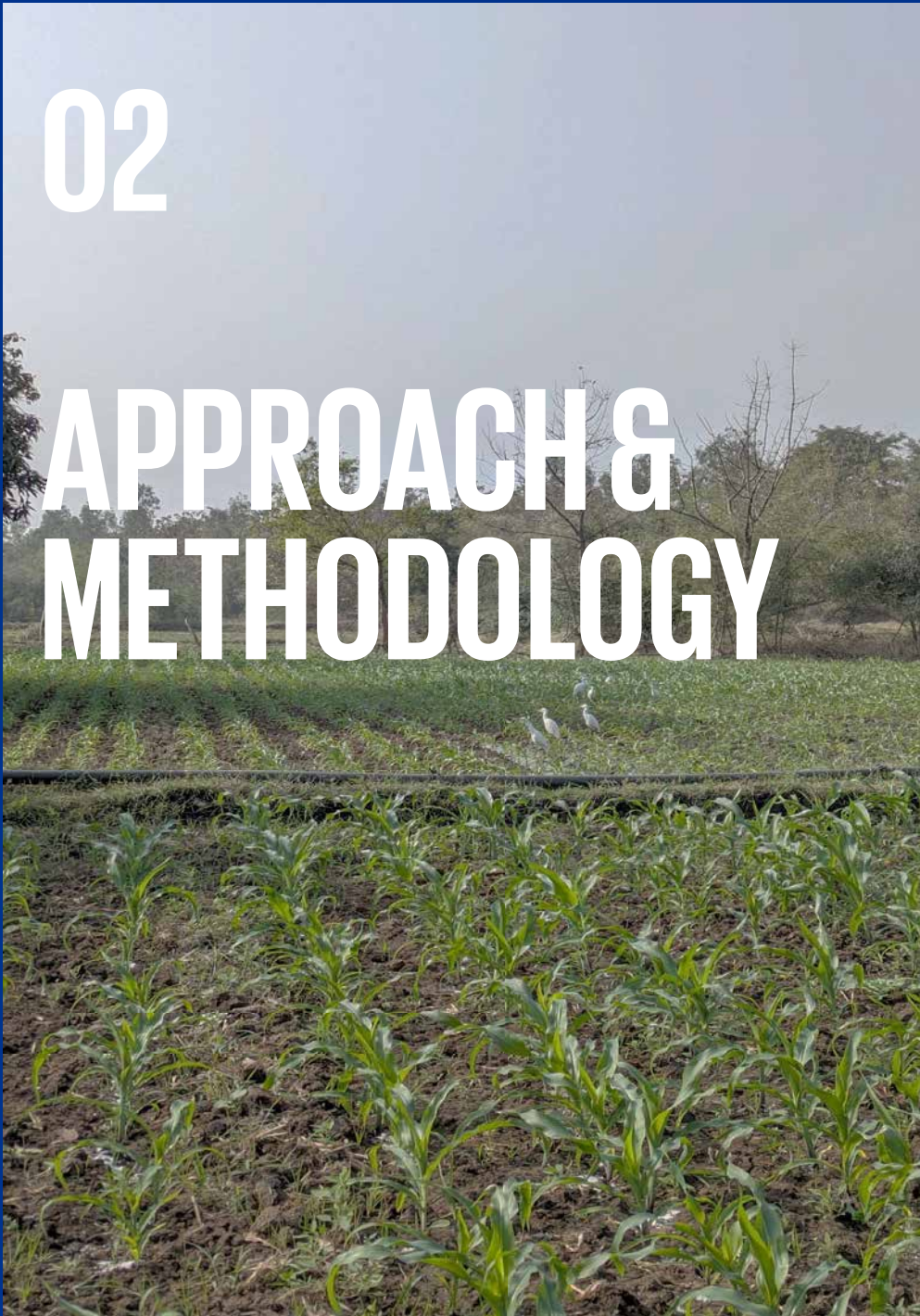
Details	Value (in ham)
Annual Irrigation Draft	14166.66
Annual Domestic and Industrial Draft	601.71
Annual Groundwater Draft (Total)	14768.37
Annual Replenishable Groundwater Resources (Total)	32434.15

Natural Discharge Non-monsoon season	2687.56
Net Groundwater Availability	29746.59
Groundwater Availability for Future Irrigation	14967.69
Stage of Groundwater Development (%)	49.65

The project locations are in Kharawar a of Rohtak.

02

APPROACH & METHODOLOGY



APPROACH AND METHODOLOGY

The chapter provides details on the research design and methodology adopted for the impact assessment. It includes description of the key activities, data collection methods, and sampling strategies, employed to ensure the reliability and validity of the findings.

2.1 OUR APPROACH

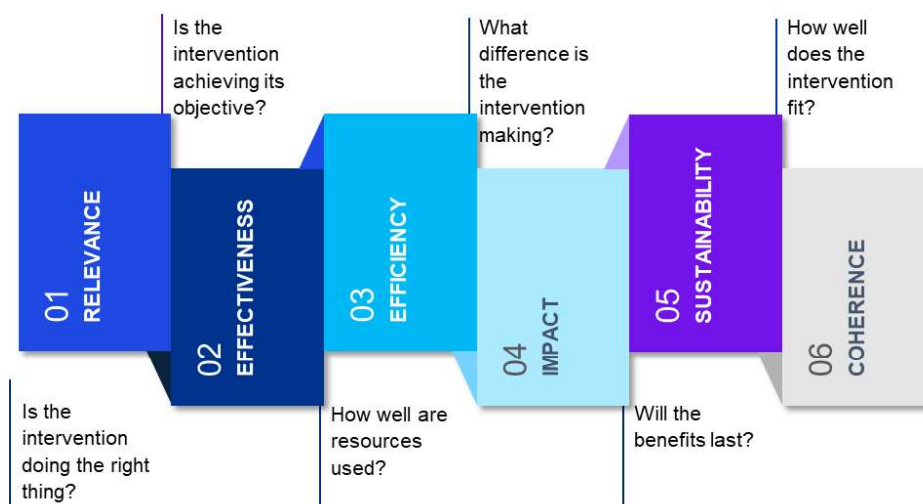
The study used the OECD DAC and SROI frameworks for designing the study and calculating social returns and impacts created due to APL's CSR projects on water stewardship. The former is widely used evaluation framework to assess the impact of social development programs, while SROI provides insights into project impact beyond traditional economic assessment tools.

This study adopted a four-phase structured methodology for evaluation as illustrated below. The adopted methodology ensured that OECD DAC evaluation criteria and SROI framework were followed throughout to effectively capture the impact of the program.

Phase I: Consulting and Scoping	Phase II: Research Design	Phase III: Data Collection	Phase IV: Analysis and Reporting
Kick-off meeting	Development of Impact Map	Development of field visit plan	Analysis of collected data using OECD DAC framework and estimating the SROI of the projects
Desk review of documents and reports related to the program	Mapping the stakeholders	Field visits and stakeholder interactions	Development of draft and final report
Determining scope of the study	Designing sampling strategy and data collection tools		Presentation to APL Team

2.1.1 OECD-DAC

The Organization for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) first laid out the evaluation criteria in the 1991. It is a framework that comprises of a set of criteria that aid in systemic assessment of on-going or completed development programs. This method helps to effectively assess various facets of the program and gain qualitative insights along with quantitative impact. The six evaluative criteria in accordance with the OECD-DAC evaluation framework are as follows:



These evaluation criteria have been defined below along with illustrative questions:

Evaluation Criteria	Illustrative Evaluation Questions	Cross-cutting Objectives
Relevance	<p>A measure of the extent to which the intervention objectives and design respond to beneficiaries, global, country, and partner/institution needs, policies, and priorities, and continue to do so if circumstances change.</p> <ul style="list-style-type: none"> ▪ To what extent are the objectives of the project still valid? ▪ Are the activities and outputs of the project consistent with the overall goal? ▪ Are the activities and outputs of the project consistent with the intended impacts and effects? 	<i>Commitments of the stakeholders are integrated into Project design and planning</i>

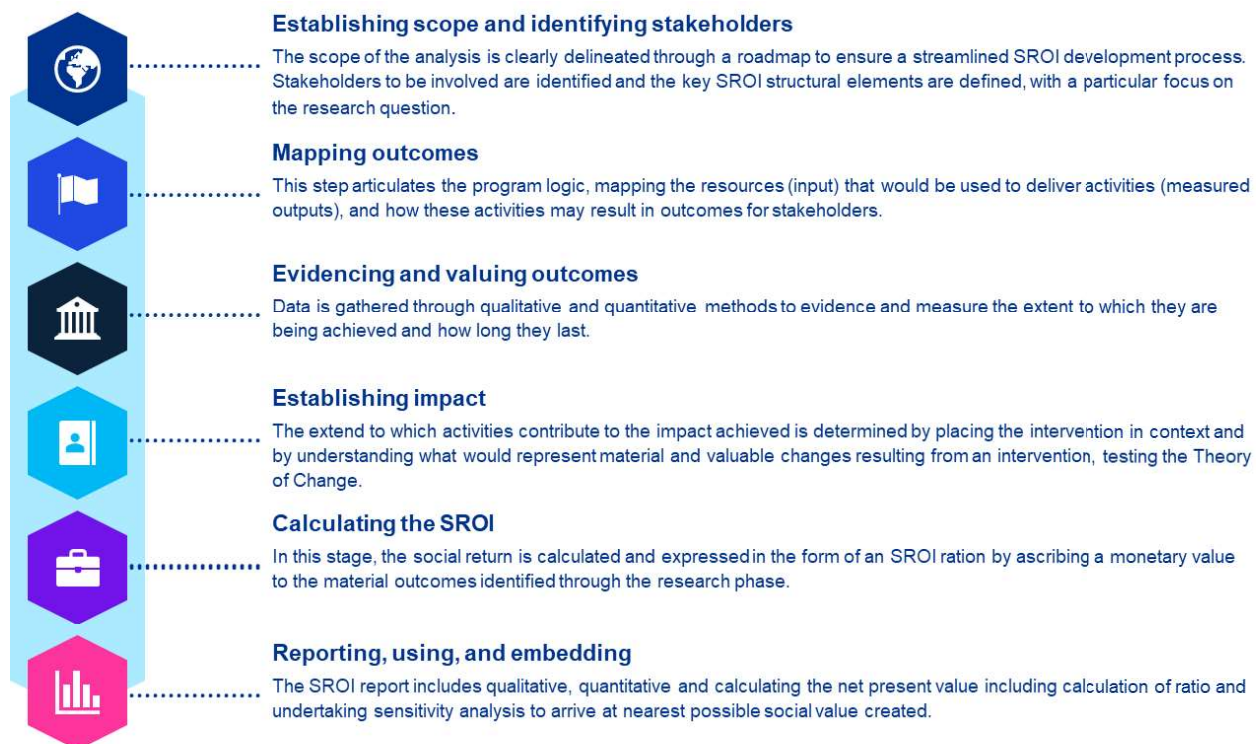
Evaluation Criteria	Illustrative Evaluation Questions	Cross-cutting Objectives
Effectiveness	<p>A measure of the extent to which the intervention achieved, or is expected to achieve, its objectives, and its results, including any differential results across groups.</p> <ul style="list-style-type: none"> ▪ To what extent were the objectives achieved / are likely to be achieved? ▪ What were the major factors influencing the achievement or non-achievement of the objectives? 	<i>Achieved cross-cutting objectives during project implementation</i>
Efficiency	<p>A measure of the extent to which the intervention delivers, or is likely to deliver, results in an economic and timely way.</p> <ul style="list-style-type: none"> ▪ Were activities cost-efficient? ▪ Were objectives achieved on time? ▪ Was the project implemented in the most efficient way compared to alternatives? 	<i>Resources are provided and efficiently used for participation of all stakeholders</i>
Impact	<p>A measure of the extent to which the intervention has generated or is expected to generate significant positive or negative, intended, or unintended, higher-level effects.</p> <ul style="list-style-type: none"> ▪ What has happened as a result of the project? ▪ What real difference has the activity made to the beneficiaries? How many people have been affected? 	<i>Achieved real and long-lasting positive changes in the lives of intended beneficiaries</i>
Sustainability	<p>A measure of the extent to which the net benefits of the intervention continue or are likely to continue.</p> <ul style="list-style-type: none"> ▪ To what extent did the benefits of a project continue after donor funding ceased? ▪ What were the major factors which influenced the achievement or non-achievement of sustainability of the project? ▪ What can be some of the innovative ways to make the project sustainable in the long run? 	<i>Likelihood that project achievements will continue after project</i>
Coherence	<p>A measure of the extent to which the intervention is compatible with other interventions in a country, sector, or institution.</p> <ul style="list-style-type: none"> ▪ Does the project address the synergies and interlinkages between the intervention and other interventions in the same organisation and in the same 	<i>The extent to which other interventions (particularly policies) support or undermine the</i>

Evaluation Criteria	Illustrative Evaluation Questions	Cross-cutting Objectives
	sector/policy landscape? Does it weaken or enhance the impact of any current programs or policies? ▪ Does the program lead to duplication of efforts?	<i>intervention and vice versa.</i>

2.1.2 SOCIAL RETURN ON INVESTMENT (SROI)

Social Return on Investment (SROI) is a systematic method that endeavours to measure and incorporate value created because of investment – namely social, environmental, and economic value which is not fully reflected in conventional cost-benefit analyses. This method is used to monetise the social and environmental impact of the program and measure how much value has been created for each rupee invested/ spent on the program. The evaluative aspect of an SROI quantifies the value of the social impact of programs, and policies, and measures change in ways that are relevant to the people or organisations that experience or contribute to it. Through an SROI, organisations can evidence the social value their programs are achieving, gain deeper insight into what impact they are having for their stakeholders and can thus use this as an input for their company strategy. SROI is about value, rather than money. It can encompass the social value generated by an entire organisation or focus on just one specific aspect of the organisation's work.

SROI utilises the concept of “theory of change/ impact map” to describe the change creation by measuring social, environmental, and economic outcomes. It uses monetary values to represent the outcomes thus enabling calculation of ratio of benefits to costs to be calculated. SROI analysis includes case studies and qualitative, quantitative, and financial information thus helping organisations/ people to base their future decisions. The striking advantage of SROI study is that other impact assessment methodologies stop at identifying outcomes while SROI methodology goes beyond to value them and calculate the social value of impact. Steps of a SROI study are listed below –








Setting the Scope 	Identification of stakeholders including beneficiary group, finalising the scope- setting the boundary of what is going to be considered for evaluative SROI - stakeholders including beneficiaries, impacts, program period, etc.
Mapping Outcomes 	Creating impact map, identifying investments, and valuing inputs, identifying outcome sand indicators for monitoring / evidencing outcomes
Evidencing Outcomes 	Collecting and analysing outcome data and establishing how long the outcome will last
Establishing Impacts 	Identifying and valuing financial proxies, adjusting outcomes using deadweight, displacement, attribution and drop off, calculating the impact
Calculating SROI 	Programming the value of outcome into future based on the duration for which the impact will last, calculating the net present value including calculation of ratio and undertaking sensitivity analysis.

Figure 1 SROI framework

The process of calculation of SROI largely focuses on deadweight, displacement, attribution, and drop-off in association with any outcomes achieved. All these aspects are generally expressed as percentages and these percentages are applied to the financial proxy of each outcome to arrive at the total impact for the outcome. Therefore, we used a customised framework involving a combination of OECD-DAC and SROI to obtain a full picture of the impact created by APL.

2.2 DETAILED METHODOLOGY

The following section discusses the methodology being employed by KPMG in this impact assessment, which has been broken down into four phases.

PHASE I: CONSULTING AND SCOPING

Activity 1: Inception meeting

As a first step, the KPMG team set up a scoping and kick-off meeting with the APL team to discuss the proposed work plan detailing out the various tasks to be conducted along with stipulated timelines. KPMG team had developed a detailed project plan to drive the engagement.

Activity 2: Desk-review and internal stakeholder engagement

The team conducted desk review of documents and reports shared by the client such as program concept notes, annual reports, program progress/closure reports, etc. Additionally secondary research was conducted to develop an in-depth understanding of the project locations, interventions, etc. Discussions with APL team and implementing agencies were conducted to understand the project interventions' KPIs, map external stakeholders, and determine sampling strategy and size.

PHASE II: RESEARCH DESIGN

Activity 1: Development of Impact Map/Theory of Change

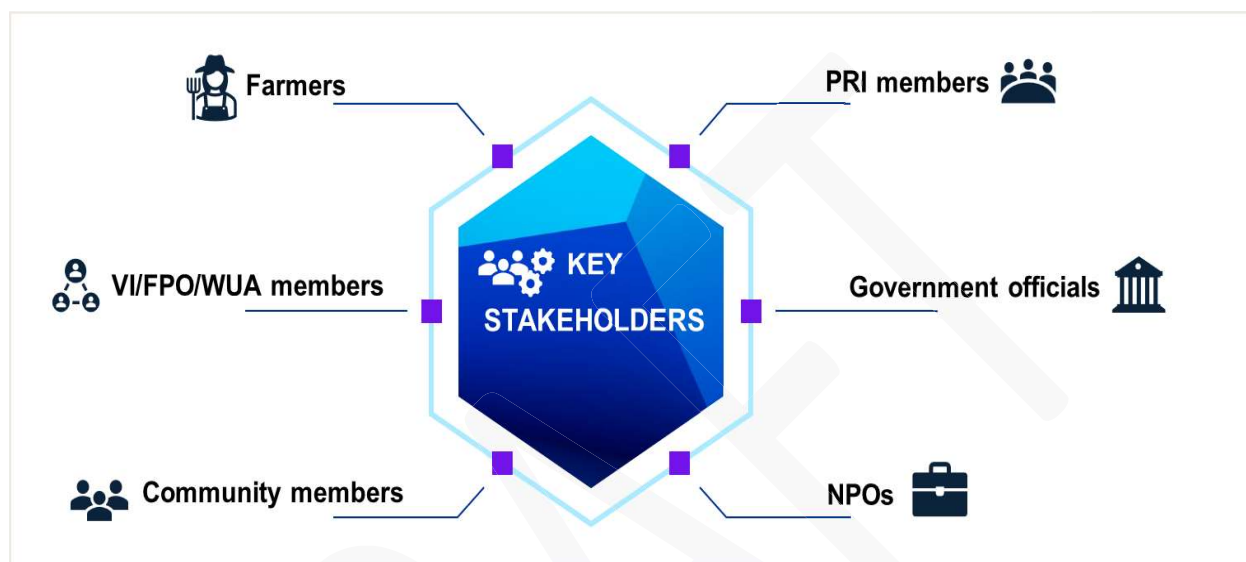
A theory of change-based impact map was developed to establish the outcome and impact parameters for the project. An impact map is defined as a logical chain/ framework giving an overview of how inputs (actions taken, or work performed) result into outputs (changes resulting from the interventions relevant to the outcomes), causing outcomes (likely or achieved short or medium-term effects arising out of the outputs of intervention) and impact (positive or negative, intended, or unintended, direct, or indirect effects created by the interventions).

Impact map for the Water Resource Development Project:

Stakeholder	Project Objectives	Inputs	Output	Outcome	Evidence Indicator
Farmers, Community members, students, other institutions	To increase water storage capacity construction of water channel structures so that to enhance irrigation water availability	Construction of canal lining, Capacity building, Access to Finance, Time	Number of families reached out / availed benefits from water channel structures	Increase in agricultural production	Changes in availability of cultivated land Changes in cropping pattern by farmers Changes in multi-seasonal cropping
				Access to secure livelihood	Changes in the input cost required for agriculture- reduction in cost for irrigation
				Improved access & availability of surface water	Changes in the irrigation fed agriculture, changes in the availability of water, reduced dependency on the other sources of water, Water conservation and efficient usage
				Creation of employment opportunities	Changes in the labor employment by the local population
			No. of families benefited from agriculture interventions	Improved agriculture practices	Changes in the input cost required for agriculture, adoption of improved agriculture practices
			No. of farmers reached out through awareness activities	Changes in KAP, Community ownership of assets created	Changes in community's knowledge, attitude and practices Community led governance of its resources, effective operations and maintenance of water structures

Activity 2: Stakeholder Mapping and Sampling strategy

Stakeholder mapping is the process of identifying all the stakeholders involved in a project and their roles and responsibilities on one map. The main benefit of a stakeholder map is to get a visual representation of all the people who can influence the project and how they are connected. Stakeholders who experience change, whether positive or negative because of the interventions carried out were considered for the study. Furthermore, their pertinence to the scope of the study and relevance to the overall analysis were assessed.



Sampling of stakeholders for engagement was done based on the materiality of the stakeholder and the extent of the impact on the stakeholder. Considering the overall outreach of the project as nearly 1151 beneficiaries, the statistically significant sampling has been derived using the method of 95 percent confidence level and five percent margin of error. Additionally, we have taken extra sample stakeholder in order to derive accurate social return on investment ratio. The stakeholder-wise mode of interaction has been detailed out below:

Stakeholder name	Project	Sample covered	Research Tools
Farmers VI/FPO/WUA members Community members PRI Members Government Officials NAF staff	Water Resource Development	70	Survey, one-on-one interactions, FGDs

Activity 3: Development of Data Collection Tools

This study employed a mixed-methods approach, incorporating both quantitative and qualitative data collection and analysis techniques. In the initial phases, detailed desk review was conducted to examine current knowledge and identify gaps and areas for further exploration. After literature review and development of research design, survey instruments were developed based on the impact map to collect data (quantitative and qualitative) from a sample population, utilizing an offline method to gather information on participants' experiences, attitudes, and behaviours. Semi-structured interviews with key stakeholders, including experts, PRI members, government officials, community leaders, and practitioners, were also designed to gain an in-depth exploration of the research topic and insights into emerging trends and best practices. Developed data collection tools were aligned to the key program objectives, scope outlined in the RFP, along with additional questions to add valuable insights for the case study. Tools prepared include:

- Tools for individual interactions
- Tools for focus group discussions
- Tools for other key stakeholder interactions
- Development of a research and data collection plan

PHASE III: DATA COLLECTION

Activity 1: Development of field-visit plan

Stakeholder interactions were through mutual discussion with APL and project implementing partner- NAF. A detailed timeline was developed for the field visits. The implementing partner has facilitated support in scheduling interactions, mobilising the stakeholders and translator (if needed). Additionally, the team consulted with the implementing partner to identify any potential challenges or obstacles that may arise during the field visit, such as language barriers, cultural differences, or safety concerns. This ensured that the data collection teams had access to the necessary resources and support to conduct the study in an efficient and ethical manner.

Activity 2: Conducting field visits

The stakeholder consultations were conducted through individual interviews, focus group discussions, KIIs with other stakeholders. KPMG ensured inclusion of facilitators who possess previous experience in engaging with participants using their native/local languages. Training and sensitizing sessions were conducted for the data collection team to help them effectively communicate with the stakeholders. Team had conducted pre-testing/pilot testing of tools. The data collection process was monitored for completeness, accuracy, backcheck, and triangulation.

PHASE IV: ANALYSIS AND REPORTING

Activity 1: Data analysis and preliminary findings

During the data analysis, both qualitative and quantitative analysis were conducted on the data collected. To enhance accuracy and reliability, the findings from the quantitative data collected on the ground were triangulated to an extent. The collected information was thoroughly analysed on a location disaggregated basis, allowing for a detailed understanding of the specific areas involved. To calculate the social returns and impacts resulting from the program, the SROI framework and OECD-DAC framework were utilized. Additionally, a sensitivity analysis was conducted to examine the results of the ROI. The data and observations obtained during the primary data collection phase and document review were carefully analysed to inform report writing. The findings were further scrutinised basis the assurance standards for SROI assessments.

Activity 2: Development of report and presentation

A comprehensive and detailed report was created for Asian Paints Limited at the enterprise level encompassing the key observations, analysis, findings, and recommendations derived from the assessment. The report adhered to the guidelines provided by the OECD-DAC and SROI frameworks, ensuring accuracy and relevance. Before finalising the report, a draft version was shared with APL for discussion and their valuable inputs. After finalising, the report was presented to the leadership at APL. Furthermore, separate reports were prepared for each project, providing a breakdown of data and analysis. The data collected and the analysis have also been shared with APL.

03

ANALYSIS & FINDINGS

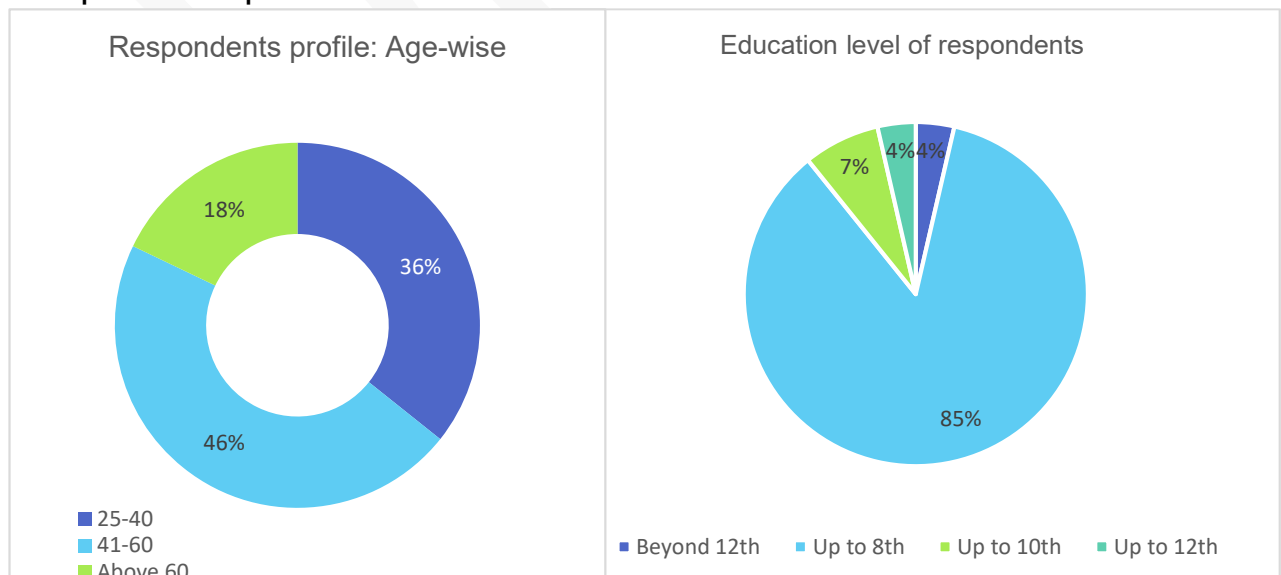




ANALYSIS AND FINDINGS

The section below highlights the findings and observations based on the interactions conducted with the sampled beneficiaries of the Water Resource Management program of Asian Paints Limited implemented by NAF in Kharawad village, of Rohtak district, Haryana.

Respondents profile



96% of the respondents shared that their primary occupation/ source of the income is agriculture, with 4% reporting being involved in other works. The average family size for the respondents stands at 7. All respondents shared that they owned the land they cultivate, and it has irrigation facilities.

96% of the respondents shared that they cultivate in both Kharif and Rabi seasons, with 14% sharing that they also cultivate in Zaid season but mostly for fodder purpose. All the respondents (100%) reported that they cultivated grains (Paddy and Wheat). Additionally, around 14% and 4% of the study participants shared that they grew millets and vegetables respectively.

All the respondents shared that they were aware about the Water Resource Management program supported by Asian Paints Limited and reported of receiving benefits from the canal lining intervention and around 61% shared that they benefitted from the awareness activities conducted. While reporting the effects of the intervention of all respondents have indicated that they have benefitted from the channel construction work and been accessing direct irrigation from the canal water. The immediate effects reported by the respondents are improved accessibility and availability of water, reduction of expenditure on irrigation, decrement of efforts, enhanced soil health etc. Around 50% of the respondents reported that they had participated in trainings on improved agriculture practices. All the respondents provided that the project ensured inclusive access for all members and/or social groups (caste, class, race, religion, disability, elderly, etc.) of the community.

3.1 EVALUATION CRITERIA: RELEVANCE

Relevance is a measure of the extent to which the intervention objectives and design respond to beneficiaries' needs, policies, and priorities, and continue to do so if circumstances change.

Relevance assesses how well the programme connected with the aims and policies of the government in which it is being executed. It also seeks to determine whether the programme is relevant to the needs of the beneficiaries. The program's relevance is understood in this context in terms of community needs as well as connections to existing government operations.

3.1.1 Needs of the community

During the interview, the respondents were asked about the challenges they faced in their villages prior to this intervention. Data collected indicate that all respondent stated that one of the challenges they faced before the intervention was lack of sufficient water for their agricultural use due to the salinity issue with the ground water from tube wells. Though canal connectivity had been existed, the channels were used to get blocked thus, impacting the water pressure. During group discussion with the beneficiaries, they stated that the farmers had to employ additional resources to get access to the water. Further, it was underscored

that the farmers at the end of channels were greatly affected due this issue. The data collected from the beneficiaries on their water-related challenges before implementation of the program highlighted their poor conditions around water availability, thereby establishing the need for this program.

3.1.2 Alignment to Schedule VII of the Companies Act, 2013^{xxiii}

The programme has been designed to cater to marginalised communities residing in the vicinity of Asian Paints Ltd.'s operational areas in alignment with the provisions of Section 135 of the Companies Act (2013) and CSR Rules.

The actions undertaken as part of the programme fall into the following broad categories of the section:

- (i) eradicating hunger, poverty, and malnutrition, promoting health care including preventive health care and sanitation [including contribution to the Swachh Bharat Kosh set-up by the Central Government for the promotion of sanitation] and making available safe drinking water
- (iv) ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining quality of soil, air and water [including contribution to the Clean Ganga Fund set-up by the Central Government for rejuvenation of river Ganga].
- (x) rural development projects




3.2 EVALUATION CRITERIA: COHERENCE

Coherence refers to the compatibility of the intervention with other interventions in a country, sector, or institution. It measures the extent to which other interventions (particularly policies) support or undermine the intervention, and vice versa

3.2.1 Alignment of the programme with National Priorities and Sustainable Development Goals

The Sustainable Development Goals (SDGs), commonly referred to as the global goals, were established by all United Nations members in 2015 with the aim of eradicating poverty, preserving the environment, and guaranteeing that everyone lives in peace and prosperity by 2030. India was a key contributor to the development of the SDGs and is dedicated to fulfilling them by 2030.

Due to the nature of the intervention, the programme has an impact on a wide range of SDG-related outcomes, as shown below:

SDG Goal	Targets	Relevance
<p>GOAL 1: No Poverty</p> 	<p>Target 1.4</p> <p>By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.</p>	<p>The project initiated a programme on Water Commons to improve the management and governance of land and water resources by strengthening community stewardship</p>
<p>GOAL 2: Zero Hunger</p> 	<p>Target 2.4</p> <p>By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.</p>	<p>The project activities target to strengthen rural livelihoods through agriculture productivity and better adaptive capacities.</p>
<p>GOAL 6: Clean Water and Sanitation</p> 	<p>Target 6.1</p> <p>By 2030, achieve universal and equitable access to safe and affordable drinking water for all.</p> <p>Target 6.4</p> <p>By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from waterscarcity.</p>	<p>The project activities included constructing/repairing water harvesting structures such as canals in villages to improve access to water for the community members for irrigation purposes.</p>
<p>GOAL 15: Life on Land</p> 	<p>Target 15.1</p> <p>By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains, and drylands, in line with obligations under international agreements.</p> <p>Target 15.2</p>	<p>Project activities included promotion initiatives such as water user groups were formed for operation and maintenance of the infrastructures constructed and sustainability of the project.</p>

	By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.	
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Water crisis threatens the health and development of communities across the world. Over the years, the government at centre and states has been making considerable efforts to address the issue of depleting groundwater. While the Ministry of Jal Shakti^{xxiv} aims to devise policies and programs for better management of water in the country, the Government of India had launched the Jal Shakti Abhiyan in 2019^{xxv} with an aim to improve water availability including groundwater conditions in various water stressed blocks. Following that, the Government launched “catch the rain campaign” in 2021^{xxvi} emphasising on creating rainwater harvesting structures. In this scenario, Asian Paints Limited. project on water resource development livelihood aligns with the national priorities of and the government’s efforts of doubling the farmers income.

3.3 EVALUATION CRITERIA: EFFECTIVENESS

Effectiveness is defined as an assessment of the factors influencing progress toward outcomes for each stakeholder as well as validation of the robustness of systems and processes.

It aids in ensuring that the implementation and monitoring processes are sturdy to achieve optimum social impact. The efficacy of the programme is established by examining how well the program’s activities were carried out as well as the effectiveness with which the program’s systems and processes were implemented.

Asian Paints Limited implemented the water resource management project in partnership with NAF that have a presence in the field. ensured that they developed good rapport with the villagers and increased their awareness about the project through various activities like FGD’s, workshops and trainings. The project was implemented with support of village heads/ Gram Pradhan in the respective villages. Timelines and milestones for the project were also decided in consultation with village and panchayat members.

In Water Resource Management project, the interventions focused on increasing access to water for irrigation through canal lining activities as well as enhancing agricultural practices through interventions such as, exposure visits and training programs.

All the respondents shared that there has been a positive effect of the water management activities conducted in their area. Overall, the study participants shared that the interventions resulted in time savings, improvement in water availability, and increase in income (approximately INR 10,000 to 1,00,000).

3.4 EVALUATION CRITERIA: EFFICIENCY

The efficiency criterion seeks to determine whether the project was completed in a cost-effective and timely way. The purpose is to establish whether the inputs—funds, knowledge, time, etc. were effectively employed to create the intervention outcomes. This evaluation criterion attempts to determine whether the programme was completed on schedule and within budget.

Timeliness of delivery or implementation of project interventions: The programme was implemented on time by NAF with support from APL in the selected regions as per the detailed area and beneficiary selection process defined.

Cost efficiency of project activities: It was also found out through interaction with the APL and NAF team members that there was no overshooting of the budget, and all the activities were executed well within the allocated budget. Payment milestones were clearly defined as such, and interventions were implemented in the districts in consultation with the key village stakeholders.

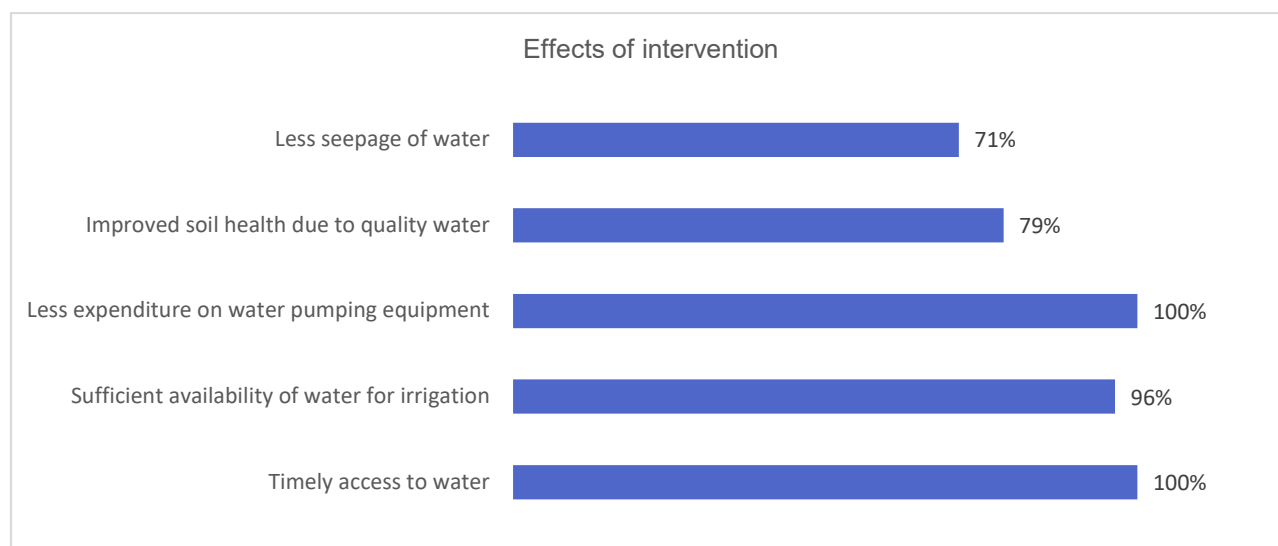
Duplication/ overlap of project activities: Duplication of effort arises when similar interventions are needlessly undertaken within the same community/ location due to poor knowledge management and inadequate coordination of projects, thereby resulting in fund and resource inefficiency. During field observations and interaction with respondents, it was observed that the beneficiaries did not have access to any other similar water programme in the region.

3.5 EVALUATION CRITERIA: IMPACT

The impact has been measured in terms of the proportion of respondents who reported having a significant change in their lives due to the initiation of the project.

The goal of measuring the impact is to determine the project's primary or secondary long-term impacts. This could be direct or indirect, intentional, or unintentional. The unintended consequences of an intervention can be favourable or harmful.

As per the responses from the sampled beneficiaries, the below are the effects evidenced due to the interventions:

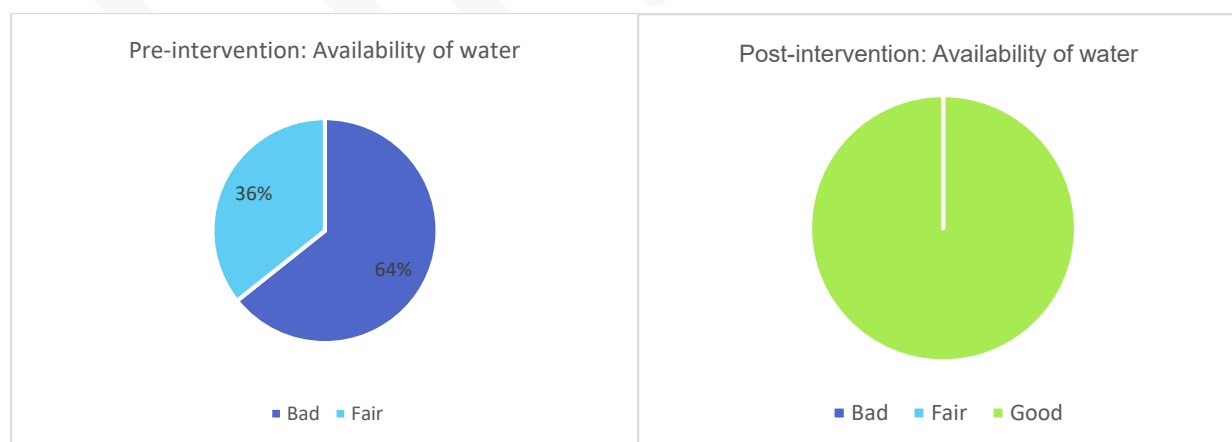


The program's socioeconomic impacts are discussed in the following paragraphs.

3.5.1 Impact on access & availability of water for irrigation

The project interventions were designed and implemented with an aim to improve water accessibility to the farmers and thereby enhance the agriculture outputs.

Around 64% of the respondents rated the availability of water prior to the intervention as 'bad' with about 36% of them rating it as 'fair'. None of the respondents rated the availability of water prior to the intervention as 'good'. Post-intervention, all respondents have rated the availability of water as 'good'. 100% of the respondents shared that there has been an improvement in their accessibility to water since project interventions. Thus, the project interventions have helped in increasing the availability of water for the beneficiaries.



All respondents shared that the canal lining activities has improved their access to water in a timely manner. 96% of the respondents reported that it has helped ensure availability of sufficient water for irrigation

purposes. All respondents also reported decrement in expenditure on water pumping. Around 79% of the respondents shared that there was improvement in soil health post intervention with 71% sharing that there has been a reduction in water seepage.

As stated by the respondents, prior to the intervention, accessing water through canal was a time consuming as well as a labour-intensive task which additionally required inputs such as diesel run water pump set. Adding to the woes, the water flow used get disturbed due to its condition. The farmers at the tail end used to face increased difficulties in accessing sufficient water within the limited slots.

Furthermore, the respondents also grumbled about the water seepage throughout the canal channel which used to spoil the crops due to access water. While ground water-based irrigation was an option available to these farmers, it was reported that the ground water in the village is highly saline in nature which further caused degradation of soil health. As per the collective beliefs of the farmers, the canal water brings many benefits including improving the soil health.

3.5.3 Impact on Agriculture and Livelihood

Impact on irrigation cost

As reported by all the respondents, there has been a significant reduction in the cost which they used to spend on getting access to water. In both cases, either ground water or canal water farmers had to use diesel based pumping set which is estimated to cost approximately INR 1,000/- per irrigation cycle and there are 12 cycles on average per year. With this, the diesel engine cost reduction is estimated to be in the range of INR 12,000/- to 16,500/- per beneficiary every year. Further, 60% respondents also shared that the erstwhile practice required more hands and used to take a few days to irrigate the entire land parcel. However, post intervention, the water flows through the canal without any obstruction and with pressure which has completely eliminated the need of water pumping. farmers are able to irrigate land within few hours with reduced human efforts thus, requiring less labour.

Overall, the respondents who experienced a positive impact reported 52% reduction in the cost of irrigation after the interventions. The respondents reported that average irrigation cost prior to intervention was INR 34,107 annually which reduced to INR 16,393 post intervention, amounting to a delta change of around INR 17,714 (52% reduction).

Impact on land under cultivation

As per the respondents there has been a marginal growth in the area under irrigation as they were already irrigating the entire land using various additional inputs however, as per majority of the stakeholders there is an increase in land under cultivation due to the reclamation of piece of land previously occupied by channel bunds which they believe to be 0.1-0.2 acre per farmer. The farmers expressed their happiness

with this piece of land under cultivation which brings in the benefits which were being lost prior to the intervention.

Impact on agriculture produce : 100% of the respondents shared that there was increase in productivity due to the improved access and availability of water. As per the reported data, the mean of per acre yield prior to the intervention was 10.6 quintals, that rose to 15.5 quintals per acre post intervention, amounting to a delta change of around 46%. This shows the positive impact of the intervention on the beneficiaries, the distribution of impact appeared to be linear and spread across the beneficiaries which indicates equitable distribution of impact and no concentration among a few beneficiaries. These results are primarily for Rabi season as farmers access to canal-based irrigation post monsoon only. The Zaid crops are mainly for the purpose of fodder for their livestock.

Impact on livestock: Around 32% of the respondents shared that there was an improvement in the productivity of their livestock owing to increased availability of water. As stated above, farmers have been taking Zaid crop mainly for the purpose of green fodder. Due to the availability of green and nutritious fodder throughout the year, farmers have evidenced that milk production has an increased. As stated, prior to the intervention the average yield per ruminant was at 9.3 litres which has increased to 14.7 litres post intervention. This amounts to a delta change of around 57% or 5.3 litres. Similarly, about 4% of the respondents reported that there was increase in fodder availability post project intervention due to improved availability of water. Moreover, farmer also indicated that due to good quality fodder during summer the milking period has been extended by weeks.

Other Impact:

With the sufficient water availability, the beneficiaries have also seen impact of improving social relations and coordination with the peers as there is a significant reduction in disagreements and conflicts resulting due to limited access to water.

3.6 EVALUATION CRITERIA: SUSTAINABILITY

Sustainability assesses how well the programme secures the long-term viability of its outcomes and influence.

Sustainability refers to the sustainability of an intervention's positive effects after development or assistance has ended. This evaluation criterion includes significant elements related to the likelihood of ongoing long-term benefits and risk tolerance. Setting up a governance structure, financial model, and operating system is necessary to ensure sustainability.

The programme had an in-built exit strategy with sustainability at its core. The intervention has created a community pool resource which would be accessed by all members collectively. Considering the same has been handed over to the beneficiaries and respective government department for its operations and maintenance. As per the respondents, the water users already are a part of a committee set up as a governance mechanism that will look after the Operations & Maintenance of canal channels.

Governance of water usage from the channel:

70% of the interviewed community members shared that an existing Water User Association (WUA) exists in the village and respondents were a part of the same. The water users have set some standard rules and protocols of usage so that everyone gets equitable access to water.

Furthermore, all the respondents shared that they collect INR ~300/acre on a biannual basis for the cleaning of the channel. A separate contribution for O&M of the channels is being collected by WUA. The respondents shared that around INR 300 was collected from households as water tax/ contribution towards the O&M.

Other impacts:

As denoted by the respondents the newly constructed channels lines have been helpful in draining out the excess rainwater during monsoon resulting in less flooding and reduced crop damage.

Additionally, the unlined channel required a lot of maintenance and was expensive but Lined channel requires less maintenance and predominantly the cleaning is done by the farmers themselves.

Furthermore, the newly constructed channels have water-stoppers which regulates the water flow and reduce flooding.



3.7 CASE STUDIES

Case study – 1:



Mr. Sandeep, an ex-serviceman and a dedicated farmer in Kharwad village, Rohtak, has been cultivating his small land, continuing a family tradition in agriculture. Despite technological advancements, he highlighted the adverse impact on natural resources, particularly high salinity in groundwater. This compelled reliance on canal irrigation, which, unfortunately, utilized outdated mud channels, leading to inefficient water distribution.

Facing challenges, including the need for diesel engines to augment water supply and increased cultivation costs, Mr. Sanjay and fellow farmers struggled to access sufficient irrigation. However, the scenario transformed positively with the implementation of the canal lining initiative by Asian Paints Limited. Mr. Sanjay reported a marked increase in water availability, resulting in enhanced agricultural production and a significant reduction in irrigation costs.

Notably, the positive changes extended to his cattle farming, with a notable boost in milk production attributed to improved water accessibility, allowing additional fodder during summer months. Expressing satisfaction, Mr. Sanjay not only appreciates the support received but also commits to maintaining the canal lining structure for the benefit of future generations.

WAY FORWARD:

Water is a crucial resource and a critical input in nearly all processes of life. Adequate availability of water for agriculture and animal husbandry is important for effective and productive yield. As has been mentioned in the introductory chapter, with groundwater being increasingly over-exploited, agriculture the livelihood most connected with it is becoming increasingly to pursue; thus, contributing to rural distress and migration. The water resource development initiative aims to improve the livelihoods of people living in rural areas. However, the larger objective is to revive traditional institutional mechanisms related to water and enable them to function effectively in a water-stressed environment. This includes governing complex and scarce resources like groundwater. To achieve this goal, suggestions are outlined below:

	Scalability/ Replicability	<ul style="list-style-type: none"> • Although water resource development initiatives primarily focus on improving livelihood and agriculture related outcomes, it is important to understand that the initiative to strengthen ecosystem service, which in turn benefits ecological health. It is critical to acknowledge and strengthen this aspect of the initiative in the long-run. • It is recommended to establish convergence with the government programmes
	Enablers	<ul style="list-style-type: none"> • Improving the program delivery by training and orienting PRI members on the larger objectives, intended outcomes, and the process to be followed.
	Community view point	<ul style="list-style-type: none"> • It is essential to explore and implement new and innovative methods for engaging communities. This will help in sharing knowledge among community members, making communities equal partners in the pursuit of water security. • Community-led governance can be effective in challenging common beliefs and guiding them towards recognizing and addressing the water crisis in their community. For instance, the prevailing notion in many communities is that groundwater depletion is solely caused by low rainfall. However, interactive discussions can help the community understand that while rainfall may have become erratic, changes in

		agricultural practices over the years could also contribute to the fast-depleting groundwater.
	Community-led governance	<ul style="list-style-type: none"> • The community institution is to be strengthened to make it self-reliant on parameters of assessing, documenting, planning and ensuring effective implementation of the program. • by-laws shall be drafted to ensure optimum utilisation of water from common resources by all community members to ensure the same, water budgeting exercise by user groups shall be carried out at the habitation level.

MEASURING THE SOCIAL RETURNS

As explained in Chapter 2, this report has used two evaluation frameworks which are OECD-DAC and SRoI. Generally, OECD-DAC helps in gaining a qualitative understanding of the impact. On the other hand, SRoI helps organizations in evaluating changes which are being created by measuring social, environmental, and economic outcomes and providing monetary values to represent them. SRoI also helps in understanding the total value generated for every rupee invested for interventions.

There are two types of SRoI:

- Evaluative, which is conducted retrospectively and based on actual outcomes that have already taken place.
- Forecast, which predicts how much social value will be created if the activities meet their intended outcome.

For this study, both evaluative as well as forecasting SRoI has been considered. SRoI primarily involves six stages which are as follows:

- Stage 1: Establishing Scope and identifying key stakeholders
- Stage 2: Mapping outcomes
- Stage 3: Evidencing outcomes and giving them a value
- Stage 4: Establishing impact
- Stage 5: Calculating the SRoI
- Stage 6: Reporting

Stage 1 and Stage 2 have been discussed in-depth in Chapter 2. Further stages have been elaborated in the ensuing sections.

4.1 Evidencing outcomes

After formulating the impact map, indicators to measure the outcomes were developed based on the evaluation team's interaction with beneficiaries of the interventions and other relevant stakeholders like PRI Members, implementation team members etc. Also, evidence of outcomes was collected using primary and secondary data.

Quantity of Change: The quantity of change for the impact map has been calculated by extrapolating the number of responses from the sample covered to the total population of the beneficiaries. Depending on the responses received during data collection, a proportionate percentage of total beneficiaries is calculated.

The below provides details about the evidence indicators for the outcomes and the quantity of change against each indicator.

Table 1- Quantities of change

Activity	Outcome	Indicator	Quantities of change
Construction and refurbishment of canal lining	Creation of sustainable water supply through increment in availability and accessibility of water	Reduction in the annual utilisation of ground water due to channel lining Saving in ground water overdraft (Kilolitres)	1,59,137
		Increased availability of water for irrigation - surface water from canal (Number of farmers x Avg increase in Irrigated land)	75
	Increased agriculture production due to increment in availability of water	Increase in availability of Net Sown Area (in Ha) (Number of farmers x Avg increase per farmer)	75
		Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	75
		Reduction in Cost of Irrigation (Number of farmers using Mobile Engines for irrigation x Avg hours of irrigation)	75
		Reduction in labour/efforts	75
Improved awareness and growth of fodder	Increased fodder for livestockss	Increased productivity of livestock due to fodder and water availability	75
Trainings/ Workshops/ Demonstrations/ Soil Health testing	Increased agriculture production due to enhanced agriculture practice	Adoption of improved agriculture practices (% of members indicating adoption of improved agriculture practices)	75
	Effective Operations and Management of water resources at village level	Efficient water management in village and repair-maintenance management Contribution per acre X total land under irrigation	75
Extended impact on community (beneficiaries and their family members)	Improved wellbeing for the beneficiaries and their family members	Improvement in Health seeking behaviour (Number of respondents reporting increased consumption of milk and vegetables)	75
		Improved sensitization towards child's education (Number of respondents reporting increased spend on child's education)	75

Duration of Outcome: Some outcomes will last through a beneficiary's life, while some will last only till the input activity persists.

For the purpose of this SRoI Analysis, outcomes realised due to intervention of infrastructure activities have been considered for a maximum of 5 years for the impacts whereas, for the intangible interventions such as training the duration of impact is restricted to 3 years. These considerations are based on the following assumptions:

- Water Resources Development intervention has long lasting effects, especially the improved accessibility of canal water rise in ground water and surface water level due to the construction of check dams, rejuvenation of existing ponds, etc. This increased duration is also reflected in the resulting economic and social impacts for the community.
- In case of interventions which involve components of training or are related to skill/knowledge training, the beneficiaries will need to upgrade knowledge required for their respective subject due to advancement in technology and rapidly evolving market economy and climatic situations.
- Based on nature of interventions and dynamics of the income generating activities, impact due to the contribution from beneficiaries and other stakeholders will outweigh the impacts due to contribution and support from APL.

Financial Proxy and Value of Financial Proxy: An SROI analysis has used financial proxies in order to establish the value of identified outcomes. As a standard practice, prices are used as a proxy for value of services. Sometimes, the outcomes reported by stakeholders cannot be traded in a market or are intangible. Hence for such outcomes, the closest, comparable value has been identified for that service. Please refer Table 4- Financial proxies for outcome wise proxy details.

4.2 Establishing Impacts

In order to provide credibility to the analysis and prevent over-claiming, the SROI calculation has taken into consideration aspects like attribution, displacement, deadweight, and drop-off into account.

Establishing impact consists of an estimation on how much of the outcome would have happened anyway and what proportion of the outcome can be attributed to the activities that occur during the programme or project. Establishing impact is crucial, as it reduces the risk of over counting. Thus, an important part of SROI is 'measuring impact' by accounting for attribution, deadweight, displacement, and drop-off. The following section details how these were addressed:

Attribution: Attribution is the process of considering impact in exclusivity of any other intervention by other agencies.

There are two ways have been taken to arrive at Attribution. Beneficiaries have been asked to assign / attribute percentage against each stakeholder and against each change. Average of such attribution of beneficiaries helps to arrive at Attribution. In case of lack of sufficient data from beneficiaries, equity-based attribution was also considered.

Here the attribution was collected during data collection from individuals through questionnaire. The same was validated and moderated (if required) through attribution findings from FGDs of the respective interventions. List of stakeholders considered for attribution were as follows:

- Asian Paints Limited along with implementation partner
- Others- Self / Family/ Relatives, Community, Government officials from Agriculture, Animal Husbandry and Water Resources Development Sectors etc.

Deadweight: Deadweight is an estimation of social benefits that would have resulted anyway i.e., without the intervention.

Basis the respondents' assertions, the deadweight has been considered as **3%** and the reasons have been presented below:

- There are no other organisations working in the region on similar issues.
- The focused approach of APL implemented through the support like training, affordable inputs and grant support has led to the increase in agricultural productivity.
- Support provided by APL is aimed at efficient spending and creation of quality infrastructure and is participatory in nature.

Displacement: Displacement is positive impact on one stakeholder at the cost of a negative impact on another stakeholder.

In case of this SRol study, displacement was assumed as **Nil** percent for agriculture intervention considering no adverse or negative impact reported by any respondents. In case of other interventions, there are no major organisations, private or non-profit working in similar sections.

Drop-off and Duration: Drop-off is the portion of outcomes that are not sustained. The drop-off will vary depending on nature of project interventions and activities involved in it. Intervention wise drop-off along with reasons is given below:

- **Intangibles @33 percent:** Acquiring of new skill sets, multi-cropping and other inputs have strengthened the base of agriculture economy in the region. Farmers have also reported a significant rise in self-confidence. Due to these factors, the impact is assumed to last for 3 years.
- **Water Resources Development @20 percent:** Creation of quality infrastructure for water resources development results in long lasting effects. Communities have also observed a significant improvement in ground water and surface water levels. Thus, it is assumed that impacts of these interventions would last over a period of 5 years.

Double Counting: Due to the nature of the identified impacts, there is a potential for double counting when aggregating isolated impact values.

For a detailed view, refer [Table 3- SROI Calculation](#)

Considering the above parameters, the impact of each outcome is calculated with the following formula:

4.3 Calculating Impact

Impact = Quantity of outcome * Financial Proxy Value * Attribution – Deadweight – Displacement – Drop-off for each year

SROI is a ratio of cumulative present value for each outcome against the total investment in the project i.e., **SROI = Total NPV of social value / NPV of investment**

Total Input Value: The inputs from APL, beneficiaries and other stakeholders are considered for the SROI calculation stage. The assumption being all the inputs have worked together to create the observed impact. Even absence of either one of the inputs from stakeholders other than APL will have not generated the impact observed as a part of the current study. Various inputs considered for this study included financial contribution from APL, beneficiaries and other stakeholders and the cost of time invested by beneficiaries as a part of training / exposure activities. The value of the financial inputs has been provided by the APL and the inputs of programme (other than financial inputs) have been valued in consultation with APL CSR team.

The below table represents the total cumulative investments from all the stakeholders towards the project from the time period 2021- 2022:

Table 2- Inputs calculation

Financial inputs	CSR Funding from APL	1,09,25,300
Time input	Time input from beneficiaries (4104 hours)	4,72,764

Total

1,13,98,064

Net Present Value: The Impact Value is adjusted to reflect the Net Present Value (NPV) of the projected outcome values. This is to reflect the present day value of benefits projected into the future. A **discount rate of 4%** has been used for the NPV calculations.

$$\text{SRol} = \{\text{Total present value of impact} / \text{Total present value of input}\}$$

The below table depicts the NPV evaluated as of 2022 and forecasted for 2027 (considering the duration period of 5 years for each outcome):

Table 3- SROI Calculation

Outcomes	Indicators and Sources	Quantity (scale)	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 1	Year 2	Year 3	Year 4	Year 5
Creation of sustainable water supply through increment in availability and accessibility of water	Reduction in the annual utilisation of ground water due to channel lining Saving in ground water overdraft (Kilolitres)	1	Groundwater abstraction charges for Drinking and Domestic use (Central Water Commission) per cubic metre	2	10%	0%	20%	20%	229157	229157	183326	146661	117329	93863
	Increased availability of water for irrigation - surface water from canal (Number of farmers x Avg increase in Irrigated land)	75.00	Irrigation charges by Haryana government (per acres) for flow irrigation wheat (CWC2013)	197	10%	0%	50%	20%	4854	4854	3883	3106	2485	1988
Increased agriculture production due to increment in availability of water	Increase in availability of Net Sown Area (in Ha) (Number of farmers x Avg increase per farmer)	75.00	Average increase in Net sown area indicated by respondents 0.2 acres Avg Yield of Wheat in Fy 2021-22 = 15 Q/acres MSP of	6375	0%	0%	10%	20%	430313	430313	344250	275400	220320	176256

Outcomes	Indicators and Sources	Quantity (scale)	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 1	Year 2	Year 3	Year 4	Year 5
Reduction in irrigation cost due to improved access to water			Wheat in Haryana- Rs. 2125/Q											
	Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	75.00	Average increase in agriculture production is 4 Q/ acres Total area = 60 acres MSP of Paddy in Haryana- Rs. 2203/Q	510000	10%	0%	30%	20%	24097500	24097500	19278000	15422400	12337920	9870336
	Reduction in Cost of Irrigation (Number of farmers using Mobile Engines for irrigation x Avg cost of irrigation)	75.00	Average reduction in Irrigation cost indicated by respondents (12,000 INR)	12000	0%	0%	10%	20%	810000	810000	648000	518400	414720	331776
	Reduction in labour/efforts	75.00	Times saved due to reduced efforts (2 mandays per irrigation cycle) Minimum wage* # of days	4728	10%	20%	10%	20%	229763	229763	183811	147049	117639	94111

Outcomes	Indicators and Sources	Quantity (scale)	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 1	Year 2	Year 3	Year 4	Year 5
Increased fodder for livestock	Increased productivity of livestock due to fodder and water availability	24.00	Haryana VITA milk cost per liter = 54 Rs/L	54	10%	0%	50%	20%	699840	699840	559872	447898	358318	286654
Increased agriculture production due to enhanced agriculture practice	Adoption of improved agriculture practices (% of members indicating adoption of improved agriculture practices)	75.00	Assistance provided for Farmer's training under NMOOP scheme, wherein INR 400/- per farmer per day are given for providing training to farmer. Assuming a total of two days, INR 800/- per farmer is assistance provided under the scheme.	800	0.00%	0.00%	0.00%	33%	27600	27600	18401	12268	8179	5453
Effective Operations and Management of water resources at village level	Efficient water management in village and repair-maintenance management	60.00	Average O&M charges collected is 300 Rs/ beneficiary (by Respondents)	300	10%	0%	70%	20%	9720	9720	7776	6221	4977	3981

Outcomes	Indicators and Sources	Quantity (scale)	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 1	Year 2	Year 3	Year 4	Year 5
Improved wellbeing for the beneficiaries and their family members	Improvement in Health seeking behaviour (Number of respondents reporting increased consumption of milk and vegetables)	75.00	Basis NSS 68th Round (2011-12), MPCE in Rural areas on Fruits (Rs.41) and Vegetables (Rs.95). Inflation Adjusted Cost (using Cost Inflation Index) for MPCE at 2021-22 prices comes out to be Fruit-70.63/- and Vegetable-163.67/-. For a family of 4 members, the yearly expenditure has been considered for calculation.	11247	10%	0%	30%	20%	106280	106280	85024	68019	54416	43532

Outcomes	Indicators and Sources	Quantity (scale)	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 1	Year 2	Year 3	Year 4	Year 5
	Improved sensitization towards child's education (Number of respondents reporting increased spend on child's education)	75.00	Basis NSS 68th Round (2011-12), MPCE in Rural areas on Education is Rs.50. Inflation Adjusted Cost (using Cost Inflation Index) for MPCE at 2021-22 prices comes out to be Fruit-86.14/-. For a family of 2 children, the yearly expenditure has been considered for calculation.	2067	10%	0%	30%	20%	19537	19537	15629	12503	10003	8002

Total	26636964	26636964	21309571	17047657	13638125	10910500
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Present value of each year	26636964	20489972	15761517	12124244	9326341
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4.4 SROI Results

The SROI for this Analysis- evaluative SROI (as on 2022) and evaluative cum forecast SROI (as on 2027) - is derived from dividing the total present value of the impacts by the total input value of the investment. This is considered because the beneficiaries who have received the support in 2022 would realise the impact for the next 5 years i.e., by 2027.

The below table describes the SROI Value and the SROI Ratio before sensitivity analysis:

Net present value of social value created	SROI value
8,44,07,605	7.41
Net present value of total Investment	SROI Ratio
1,13,98,064	7.41:1

For every INR 1 invested, the programme has generated social impact of INR 7.41

Sensitivity Analysis: Our calculations to arrive at the results provided in this report are relied on a variety of primary and secondary data, but the beneficiary data introduced a higher level of uncertainty. This survey was utilized to estimate the attribution, additionality of APL interventions to specific outcomes, and the duration of time the impact would last.

Sensitivity Analysis was used to test variables and assumptions to ensure that conservative estimates have been used in arriving at the SROI. For each impact area, we tested the impact of using one standard deviation above and below the average response to attribution survey questions. The sensitivity analysis suggests that the difference between base and test case SROI is not significant which signifies that the SROI value calculated above is not too sensitive to the discounting factors and thus the range of impact value would be considered as 6.17 to 8.46.

Sr. No.	Base case Parameters	Base case SROI	Test case Parameters	Test case SROI	Observation
1	Displacement is 0% & 20% for Reduction in labour/efforts	7.41	Displacement is +10%	6.64	No significant change
2	Displacement is 0% & 20% for Reduction in labour/efforts	7.41	Displacement is +20%	6.17	Significant change
3	Attribution is 30% for extended impacts	7.41	Attribution is 40% for extended impacts	7.40	No significant change
4	Attribution is 30% for extended impacts	7.41	Attribution is 20% for extended impacts	7.41	No significant change
5	Attribution is 10% to 50% for WHS related outcomes	7.41	Attribution is -10% for WHS	8.46	Significant change

6	Attribution is 10% to 50% for WHS related outcomes	7.41	Attribution is +10% for WHS	6.36	Significant change
7	Attribution is 30% to 70% for Agriculture production	7.41	Attribution is -10% for Agriculture production	7.47	No significant change
8	Attribution is 30% to 70% for Agriculture production	7.41	Attribution is +10% for Agriculture production	7.39	No significant change
9	Deadweight is 0% to 10%	7.41	Deadweight is 10%	7.39	No significant change
10	Deadweight is 0% to 10%	7.41	Deadweight is 20%	6.54	Significant change
11	Deadweight is 0% to 10%	7.41	Deadweight is 0%	8.25	Significant change

ANNEXURES

Table 4- Financial proxies

Outcomes	Indicators and Sources	Valuation approach (monetary)	Rate
Creation of sustainable water supply through increment in availability and accessibility of water	Reduction in the annual utilisation of ground water due to channel lining Saving in ground water overdraft (Kilolitres)	Groundwater abstraction charges for Drinking and Domestic use (Central Water Commission) per cubic metre	2
	Increased availability of water for irrigation - surface water from canal (Number of farmers x Avg increase in Irrigated land)	Irrigation charges by Haryana government (per acres) for flow irrigation wheat (CWC2013)	197
Increased agriculture production due to increment in availability of water	Increase in availability of Net Sown Area (in Ha) (Number of farmers x Avg increase per farmer)	Average increase in Net sown area indicated by respondents 0.2 acres Avg Yield of Wheat in Fy 2021-22 = 15 Q/acres MSP of Wheat in Haryana- Rs. 2125/Q	6375
	Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	Average increase in agriculture production is 4 Q/ acres Total area = 60 acres MSP of Paddy in Haryana- Rs. 2203/Q	510000
Reduction in irrigation cost due to improved access to water	Reduction in Cost of Irrigation (Number of farmers using Mobile Engines for irrigation x Avg hours of irrigation)	Average reduction in Irrigation cost indicated by respondents (12,000 INR)	12000
	Reduction in labour/efforts	Times saved due to reduced efforts (2 mandays per irrigation cycle) Minimum wage* # of days	4728
Increased fodder for livestock	Increased productivity of livestock due to fodder and water availability	Haryana VITA milk cost per liter = 54 Rs/L	54
Increased agriculture production due to enhanced agriculture practice	Adoption of improved agriculture practices (% of members indicating adoption of improved agriculture practices)	No training cost for knowledge enhancement on agricultural practices as KVK provides similar training free of cost	0
Effective Operations and Management of water resources at village level	Efficient water management in village and repair-maintenance management (Number of water bodies created x Cost of manager)	Average O&M charges collected is 300 Rs/ beneficiary (by Respondents)	300
Improved wellbeing for the beneficiaries and their family members	Improvement in Health seeking behaviour (Number of respondents reporting increased consumption of milk and vegetables)	Basis NSS 68th Round (2011-12), MPCE in Rural areas on Fruits (Rs.41) and Vegetables (Rs.95). Inflation Adjusted Cost (using Cost Inflation Index) for MPCE at 2021-22 prices comes out to be Fruit-70.63/- and Vegetable-163.67/-. For a family of 4 members, the yearly expenditure has been considered for calculation.	11247
	Improved sensitization towards child's education (Number of respondents reporting increased spend on child's education)	Basis NSS 68th Round (2011-12), MPCE in Rural areas on Education is Rs.50. Inflation Adjusted Cost (using Cost Inflation Index) for MPCE at 2021-22 prices comes out to be Fruit-86.14/-. For a family of 2 children, the yearly expenditure has been considered for calculation.	2067

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Impact Assessment of Water Resource Management Project-Kasna, Uttar Pradesh

Asian Paints Limited

KPMG Assurance and Consulting Services LLP

January 2024

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15 March 2024

**Subject: Final-report for Impact assessment of Water Resource Development
Projects**


Dear Mr. V. Ravi,

We appreciate the opportunity to assist Asian Paints Limited in providing **Impact assessment of Water Resource Development Projects related services**.

Please find enclosed our final-report, which has been prepared in accordance with the scope and terms stated in our engagement letter dated 5th January 2024. With this deliverable, we have completed our obligations as stated in our engagement letter.

It has been our privilege to have this opportunity to work with you, and we look forward to continuing our relationship.

Yours sincerely

DocuSigned by:

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Full Signature _____

Name- Jignesh Thakkar

Director, ESG

KPMG Assurance and Consulting Services LLP

DISCLAIMER AND NOTICE TO READERS

This report has been prepared exclusively for Asian Paints Limited (APL) ("Client") in accordance with the terms of the Engagement letter/agreement between Client and KPMG Assurance and Consulting Services LLP ("KPMG" or "we") (collectively 'Contract'). The performance of KPMG's services and the report issued to the Client are based on and subject to the terms of the Contract.

KPMG does not accept or assume any liability, responsibility, or duty of care for any use of or reliance on this report by anyone, other than our client, to the extent agreed in the Agreement.

Impact assessment is limited to the projects allocated by Asian Paints Limited.

OECD-DAC and SROI frameworks have been used in preparing the report as detailed herein. No professional assurance standards ex. ISAE, SSAE etc. have been applied while preparing this report and accordingly the rigors applicable under such standards are not applicable for the scope covered by our report.

Procedures, analysis, and recommendations, if any, are advisory in nature basis the information collected from various sources both publicly and those provided by the client.

Our observations represent our understanding and interpretation of the facts based on reporting of beneficiaries and stakeholders.

Our report, by its very nature, may involve numerous assumptions, inherent risks, and uncertainties, both general and specific. The conclusions drawn shall be based on the information available with us at the time of preparing the report.

We have not performed an audit and shall not express an opinion or any other form of assurance. Further, comments in our report are not and shall not be intended, nor should they be interpreted to be legal advice or opinion. Client shall be fully and solely responsible for applying independent judgment, with respect to the findings included in the report, to make appropriate decisions in relation to future course of action, if any. We shall not take responsibility for the consequences resulting from decisions based on information included in the report.

While information obtained from the public domain or external sources has not been verified for authenticity, accuracy, or completeness, we have obtained information, as far as possible, from sources generally considered to be reliable. However, it must be noted that some of these websites/third party sources may not be updated regularly. We assume no responsibility for the reliability and credibility of such information.

Our work shall be limited to the specific procedures described in this Engagement Letter and shall be based only on the information and analysis of the data obtained through interviews of beneficiaries supported under the programme, selected as sample respondents and discussions with Client's team and stakeholders of the programme. Accordingly, changes in circumstances or information available after the review could affect the findings outlined in our report.

In no circumstances shall we be liable, for any loss or damage, of whatsoever nature, arising from information material to our work being withheld or concealed from us or misrepresented to us by any person to whom we make information requests.

In accordance with its policy, KPMG advises that neither it nor any of its partner, director or employee undertakes any responsibility arising in any way whatsoever, to any person other than Client in respect of the matters dealt with in this report, including any errors or omissions therein, arising through negligence or otherwise, howsoever caused.

In connection with our report or any part thereof, KPMG does not owe duty of care (whether in contract or in tort or under statute or otherwise) to any person or party to whom the report is circulated to and KPMG shall not be liable to any party who uses or relies on this report. KPMG thus disclaims all responsibility or liability for any costs, damages, losses, liabilities, expenses incurred by such third party arising out of or in connection with the report or any part thereof.

By reading our report, the reader of the report shall be deemed to have accepted the terms mentioned hereinabove.

ABBREVIATIONS

APL	Asian Paints Ltd
ARWR	Annual Renewable Water Resources
BCM	Billion Cubic Meters
CEEW	Council on Energy, Environment and Water
CSE	Center for Science Education
CSR	Corporate Social Responsibility
FAO	Food and Agriculture Organisation
FGD	Focus Group Discussion
HH	Households
INR	Indian Rupees
NAF	National Agro Foundation
NCIWRD	National Commission on Integrated Water Resources Development
NPV	Net present value
O&M	Operations and Maintenance
OECD DAC	Organization for Economic Co-operation and Development Assistance Committee Development
PRA	Participatory Rural Appraisal
PRI	Panchayati Raj Institutions
RFP	Request For Proposal
ROI	Return on Investment
SDG	Sustainable Development Goals
SPOC	Single Point of contact
SROI	Social Return on Investment
TDS	Total Dissolved Solids
WHS	Water Harvesting Structure
WRD	Water Resource Development

EXECUTIVE SUMMARY

The philosophy of transformation has been in DNA of Asian Paints Limited and reinventing the industry has been in its nature. The same philosophy of transforming lives has been driving the CSR efforts concentrating on holistic and sustainable development of the community. The company believes in fostering relationship of trusts with the communities around the vicinity of plants and people in the unorganized sector. Under the umbrella of inclusive development, the initiatives focus on sectors of health & hygiene, water conservation, skill development and disaster management.

According to UN World Water Development Report (2022), India is the largest groundwater user globally. Approximately 45 Percent of total irrigation and 80 Percent of domestic water needs are met by groundwater. the unsustainable extraction practices over decades have thus led to overexploitation and water scarcity. In such challenging landscape, water harvesting and conservation under the umbrella of watershed management became need of the hour. Asian Paints engaged in holistic approach through their program "Water Resource Management" in 4 villages of Bulandshahr in Uttar Pradesh, which addresses not only water scarcity but also soil conservation and natural resource management for ensuring a sustainable and resilient water future for the country.

The main objectives of the impact study are to assess the impact of water stewardship activities with focus on the access and availability of surface and ground water, potable water, farmer's livelihood, land and agriculture practices, and governance. The study covered mix-methods approach consisting of quantitative and qualitative research methodology using primary and secondary data collection. The analysis of quantitative data was corroborated with anecdotal evidence from qualitative responses and observed through the lens of SROI framework and OECD-DAC framework. A total of 50 respondents from three villages were interacted for data collection in the intervention villages of Uttar Pradesh, including farmers, community members, PRI members and Water User Association members.

More than half of the respondents were between 25-60 age group and have formal education till class eighth. The sample covered respondents from varied economic background including small to marginal farmers with primary source of income being agriculture.



RELEVANCE

Needs of Community: Before intervention,

- 70% respondents indicated depleting ground water level
- 40% respondents stated high cost of cultivation and disconnect with the modern knowledge & technology pertaining to agriculture

Alignment to Schedule VII of the Companies Act, 2013

- Activity- I (Healthcare, Sanitation and Water)
- Activity- IV (Environment sustainability)
- Activity- X (Rural development)



COHERENCE

Alignment with National Priorities:

Directly converges with *Jal Shakti Abhiyan* and 'Catch the Rain' campaign of Ministry of Jal Shakti.

Alignment with SDGs:

Due to the nature of the intervention, the programme has direct contribution to below SDGs:





EFFECTIVENESS

100% respondents felt positive changes because of the water-related activities of the program (water saved from runoffs, revival of traditional and culturally significant water bodies)

All beneficiaries are aware of the Sustainable Agriculture Practices (improved soil health, reduced input cost, efficient use of water in irrigation, increased production).



EFFICIENCY

The program was completed on schedule and within the proposed budget.

No duplication or overlap of activities was observed with any other program on-ground and corroborated by respondents

This report also estimates the impacts felt by the beneficiaries and wider community as a result of the APL programme, by valuing them in monetary terms. We have examined the social impact of the APL programme arising from its CSR project during the FY 2021-22. To achieve this, we have estimated the social return on investment (SROI) generated by the programme by comparing the financial costs of the programme to the monetary value of the impacts it creates among its stakeholders. Whilst many of the impacts arose during the period of analysis, impacts would also occur or continue the effect for some time in future. Thus, forecasting methods have been used.

We estimate that for every INR 1 spent by the Water Resource Development programme, INR 0.82 in social value has been generated through a mixture of socio-economic wellbeing among the beneficiaries.

01

INTRODUCTION

INTRODUCTION

This chapter consists of an overview of the water stress in Indian context and Asian Paints Ltd.'s CSR efforts to address the issue. It provides an overview of the project, implementing partners, project geographies, scope, and purpose of the study.

1.1 BACKGROUND

Water stress and availability represent a formidable global challenge, with increasing demand, population growth, and climate change exacerbating the strain on water resources. CSE's State of India's Environment Report (2023) estimates that if the ongoing decline in global water availability persists, 87 out of 180 countries will face annual renewable water resources (ARWR) per capita falling below 1,700 cubic meters per year by 2050. India sustains around 17.74 percent of the world's population with only 4.5 percent of its freshwater resourcesⁱ. According to FAO's Aqua-stat reportsⁱⁱ (2015), India receives an average annual rainfall of 1,170 mm. This contributes to a total rainfall input of around 4,000 cubic kilometres of water as per the Planning Commission's Report of the Expert Group on Ground Water Management and Ownership (2007)ⁱⁱⁱ. The same report indicates that within this, 1,869 cubic kilometres constitute the average annual potential flow in rivers, while 432 cubic kilometres replenish the groundwater. India, despite being endowed with substantial water resources, faces a complex set of challenges related to water availability, quality, and distribution.

The depletion of groundwater levels, coupled with the pollution of surface water, presents a dual challenge. Groundwater, a critical resource for millions, is being extracted at a rate faster than natural replenishment, leading to a significant deficit. Simultaneously, about 70 percent of surface water resources in India are polluted, compromising the health of both humans and ecosystems. Wastewater from various sources, intensive agriculture, industrial activities, and untreated urban runoff contribute to this pollution, which contributes to the water-related morbidity in India. Arsenic and fluoride contamination in groundwater further exacerbate India's water quality issues. Certain regions, including parts of Assam, Bihar, Uttar Pradesh, Chhattisgarh, and West Bengal, grapple with arsenic levels above permissible limits. Fluoride contamination is prevalent in multiple states including the locations for this study (Haryana) necessitating urgent remediation efforts^{iv}.

Thus, with increasing population, rapid urbanisation, and climate change impacts, India's water resources are under immense pressure.

In this challenging water landscape, the importance of watershed management becomes apparent. Watershed management is not merely a focus on water projects but involves a holistic approach to land-use practices, afforestation, and soil and water conservation. It is recognised as essential for sustainable water development, contributing not only to water conservation but also to self-reliance in terms of food and energy. Lack of adequate ground water management may lead to increased water overdraft, depletion, salinity and a range of environmental and socio-economic consequences. In conclusion, the water issues in India necessitate urgent and comprehensive water resource management strategies, with a particular emphasis on alternates like surface water. A holistic approach that addresses not only water availability but also the accessibility.

1.2 ASIAN PAINTS LIMITED

Asian Paints Limited, headquartered in Mumbai, is one of the largest and leading paint companies in India. Established in 1942, the company has expanded its presence globally and is recognised for its innovative and high-quality products. Asian Paints operates in various segments, including decorative coatings, industrial coatings, and automotive coatings. The company has a strong emphasis on research and development, leading to continuous product innovation. Asian Paints has introduced eco-friendly and sustainable paint options, aligning with global trends towards environmentally conscious choices.

Beyond business, Asian Paints actively engages in Corporate Social Responsibility (CSR) initiatives. Guided by its philosophy of trust, fairness and care the CSR interventions are envisioned to make a sustainable difference to the environment in which it operates including activities which shall allow it to leverage its strengths. The primary objective of their CSR activities is to enhance and empower marginalised communities by tackling crucial social, economic, and environmental issues. These efforts focus on healthcare, water conservation, and community development, reflecting the company's commitment to social and environmental sustainability. APL's CSR initiatives are in alignment with SDG Goals, namely Goal 1 (No Poverty), Goal 2 (Zero Hunger), Goal 3 (Good Health and Well-being), Goal 6 (Clean Water and Sanitation), Goal 8 (Decent work and economic growth), Goal 11 (Sustainable cities and communities) and Goal 17 (Partnership for the goals).

APL has been implementing several initiatives in the area of Water, Health and Hygiene, Skills Development, and Disaster Relief. The Water Stewardship Program, initiated by Asian Paints, seeks to contribute to increasing water availability in the ecosystems surrounding its plants, playing a crucial role in enhancing water security in these regions. The program encompasses a spectrum of initiatives, including pond cleaning, desilting, construction of check-dams, irrigation canal lining, and training farmers on micro-irrigation systems. Holistic approaches such as integrated pest and soil health management are integral to the program. The initiatives under the program are designed to fortify ecosystem services, enhancing water supplementation for both indoor use and food production. The program significantly contributes to groundwater recharge, a critical aspect of sustainable water management.

1.3 ABOUT THE STUDY

To understand the impact created by its interventions, Asian Paints Limited. empanelled KPMG to facilitate impact assessment of its Water Resource Development programme. The objective of this study was to assess the impact of these water stewardship activities on the beneficiaries and stakeholders covered under the projects. The study aimed to understand the below immediate, medium, and longer-term impact of the interventions on the targeted beneficiaries:

Impact on Access & Availability of Surface & Ground Water	<ul style="list-style-type: none">• To understand the impact on ground-water recharge based on well recharge data• To understand the duration of water availability post monsoon (in months)• To understand the impact of water accessibility, availability &
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	livelihood of the farmers
Impact on Agricultural Land & Practices	<ul style="list-style-type: none"> To assess impact on season wise cropping pattern led by availability of water in the area. To assess impact on soil health due to use of canal water To assess impact on knowledge level of the farmers about improved agricultural practices.
Impact on Farmer's Livelihood	<ul style="list-style-type: none"> To assess impact of water availability on crop production (yield/acre) To assess impact of water availability on productivity of livestock animals To assess impact on net return/acre per farmer. To assess the impact on livelihood opportunities created through the programme.
Other Impact Areas Apart from Water Rejuvenation	<ul style="list-style-type: none"> To assess knowledge and adoption level of water efficient agricultural and risk mitigation farm practices. To assess level of ownership by the community in the asset created: Whether community-based institutions had been formed and taking care of maintenance aspects of the assets created under the project.

1.4 ABOUT THE PROJECT

Asian Paints' Water Stewardship Programs signifies the company's dedication to sustainable practices and responsible corporate citizenship. By addressing the challenge of water scarcity through community partnerships and integrated initiatives, Asian Paints aims to make a positive impact on both its operations and the communities it serves.

The existing water bodies in the project area are almost shallow in nature. The actual water holding capacity of the water bodies are much less compared to their original potential. The primary cause for this is due to lack of maintenance. De-silting or deepening of the water bodies was not carried out in since few years. The area of the water bodies was shrinking day-by-day due to various factors, and thereby leading to the minimal storage capacity of water and that too for a short duration only. It was neither augmenting groundwater recharge and drainage of excess water nor supporting the irrigation requirement. The restructuring of the water bodies is essential, and all the major tanks should be de-silted along with deepening.

In order to address the above-mentioned issues and sustain the natural resources, Water Resource Development Programme was initiated by Asian Paints in 2021-22 with aim to improve ground water recharge potential through rejuvenation of existing waterbodies in the 4 villages of Bulandshahr district of Uttar Pradesh

Objective of the project:

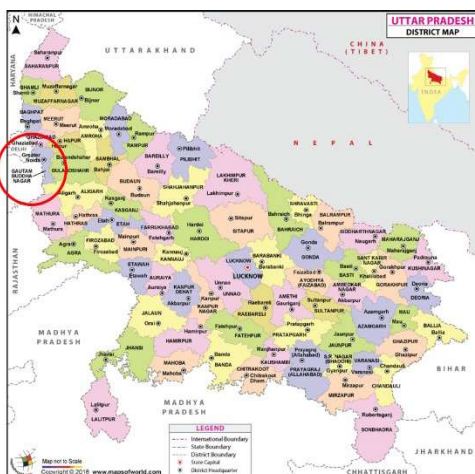
To bring integrated efforts at demand and supply side to effectively manage the water resources while improving the livelihoods of farmers

1.4.1 About National Agro Foundation (NAF)

The National Agro Foundation (NAF), established in 2000 by Mr. C. Subramaniam, a prominent figure in India's Green Revolution and recipient of the Bharat Ratna Award, is a Public Charitable Trust with a vision to catalyse a rural revolution focused on agriculture and small and marginal farmers. Anchored in the principles of inclusive growth, NAF operates with a "Soil to Market" approach, building on Mr. Subramaniam's pioneering "Seed to Grain" philosophy from the Green Revolution era. Over the years, NAF has transitioned from modest beginnings to a dynamic and professional organization, delivering cutting-edge services that have made a substantial impact on rural communities. Collaborating with the government, corporate entities, and other stakeholders, NAF has implemented core programs addressing local and global challenges in agriculture and rural development. Its approach includes tailored training programs, capacity development initiatives, and the integration of new modalities and technologies. With dedicated research and development efforts, NAF has reached over 220,000 farmers in 830+ villages across 15 states in India, demonstrating a commitment to positive change and sustainable development in the agricultural sector. NAF's collaborative efforts extend to partnerships with various government and non-government organizations, educational and research institutes, financial institutions, and corporate entities.

In collaboration with APL, NAF is actively engaged in the implementation of CSR projects centred around water resource development in the states of Haryana, Uttar Pradesh, Karnataka, and Tamil Nadu. This strategic partnership underscores a shared commitment to fostering the rejuvenation of water bodies, amplifying livelihood opportunities for farmers, and effectively managing natural resources. Within this collaborative framework, NAF assumes the responsibility of executing the specified activities, ensuring their timely completion, adherence to budgetary constraints, and achievement of anticipated outcomes. Simultaneously, APL extends crucial technical and financial support to NAF, facilitating the realization of project objectives and the establishment of a sustainable and inclusive development model. This cooperative effort aims to deliver tangible benefits to marginalized communities while addressing critical issues related to water resources and rural livelihoods.

1.5 PROJECT GEOGRAPHIES



Uttar Pradesh is a populous and agriculturally significant state in northern India^{vi}. The state faces challenges related to the over-exploitation of groundwater due to increasing demand. In Uttar Pradesh, groundwater is the main source of irrigation and supplies most of water for drinking purposes and other needs. The State of Groundwater in Uttar Pradesh Report (2021) indicates that groundwater supplies approximately 70 Percent of the water used for irrigated agriculture in the state, in addition to meeting 90 Percent of rural domestic needs, over 75 Percent of urban water consumption, and 95 Percent of industrial, infrastructural, and commercial demands^{vii}. Urban areas are facing significant stress due to extensive groundwater mining, especially in places where about 95 Percent of municipal bodies rely on groundwater for drinking water supplies^{viii}. Most major cities in the state have witnessed a

widespread decline in groundwater levels, exceeding the significant annual decline threshold of 20 cm, with a drop ranging from 0.5 to 1 meter per year over the last 15-20 years^{ix}. Another alarming factor contributing to the groundwater crisis is the deficient rainfall in the state. Between 1991-2000, the decline in rainfall was 8 Percent, but in the last two decades, the rate of decline has accelerated, reaching more than 20 Percent^x. The state consistently faces below-average rainfall (normal annual rainfall is 947.4 mm), negatively impacting surface storages, soil moisture, and groundwater recharge^{xi}. The rainfall pattern has become unpredictable, marked by extreme events and fewer rainy days. Thus, large-scale extraction of groundwater in the state highlights the need for effectively managing and regulating groundwater resources to ensure long-term water sustainability for the diverse needs of the state's population.



Kasna is suburb in the Gautam Buddha Nagar district of Uttar Pradesh, India. Gautam Buddha Nagar district in Uttar Pradesh, India, is a region marked by rapid urbanization and economic development. The economy of Gautam Buddh Nagar is diverse, encompassing various sectors, including manufacturing, information technology, and services. The burgeoning population, coupled with urban development and industrial activities, has strained the local water resources. The water challenges in Gautam Buddha Nagar district, Uttar Pradesh, are significant and multifaceted. Depleted groundwater levels have adversely affected water availability for agriculture and drinking water supply. The district has also been grappling with flooding alerts during monsoon, particularly due to the rise in water levels of the Hindon and Yamuna rivers, which poses risks to low-lying areas^{xii}. Moreover, the quality of groundwater in the district has been a cause for concern, with high levels of nitrates, fluoride, and uranium found in the groundwater, rendering it unsuitable for drinking purposes^{xiii}. Furthermore, the deterioration of water bodies in the district have been a pressing issue prompting efforts to restore rural water bodies, including ponds to address the water scarcity and provide additional water holding capacity^{xiv}.

Ground Water Resources Data (in ham) of Gautam Budhha Nagar district ^{xv}	
Details	Value (in ham)
Annual Irrigation Draft	60634
Annual Domestic and Industrial Draft	1530.81
Annual Groundwater Draft (Total)	62164.81
Annual Replenishable Groundwater Resources (Total)	67159.4
Natural Discharge Non-monsoon season	5924.21

02

APPROACH & METHODOLOGY

APPROACH AND METHODOLOGY

The chapter provides details on the research design and methodology adopted for the impact assessment. It includes description of the key activities, data collection methods, and sampling strategies, employed to ensure the reliability and validity of the findings.

2.1 OUR APPROACH

The study used the OECD DAC and SROI frameworks for designing the study and calculating social returns and impacts created due to APL's CSR projects on water stewardship. The former is widely used evaluation framework to assess the impact of social development programs, while SROI provides insights into project impact beyond traditional economic assessment tools.

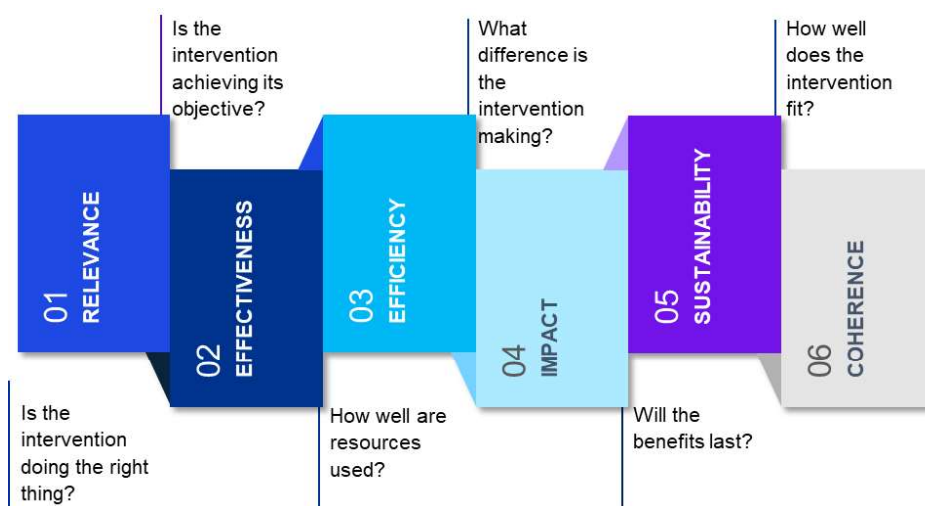
This study adopted a four-phase structured methodology for evaluation as illustrated below. The adopted methodology ensured that OECD DAC evaluation criteria and SROI framework were followed throughout to effectively capture the impact of the program.

Phase I: Consulting and Scoping	Phase II: Research Design	Phase III: Data Collection	Phase IV: Analysis and Reporting
Kick-off meeting	Development of Impact Map	Development of field visit plan	Analysis of collected data using OECD DAC framework and estimating the SROI of the projects
Desk review of documents and reports related to the program	Mapping the stakeholders	Field visits and stakeholder interactions	Development of draft and final report
Determining scope of the study	Designing sampling strategy and data collection tools		Presentation to APL Team

Stakeholder	Reason for Inclusion	Data collection tool
Farmers/community members who have been benefitted due to water harvesting related interventions	Since the farmers are the direct beneficiaries of this study hence it is important to include them to understand if the objectives of this program have been met.	Structured Questionnaire: were developed In-depth Interview: were also undertaken
Farmers who have been benefitted due to agriculture related interventions	Agriculture is a key intervention, Hence, it is critical to get their perspective of the beneficiaries	Structured Questionnaire: were developed for Teachers In-depth Interview: were also undertaken
Stakeholders excluded from the study		
PRI Members and government officials	Excluded - Tertiary stakeholders not considered	Not applicable

2.1.1 OECD-DAC

The Organization for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) first laid out the evaluation criteria in the 1991. It is a framework that comprises of a set of criteria that aid in systemic assessment of on-going or completed development programs. This method helps to effectively assess various facets of the program and gain qualitative insights along with quantitative impact. The six evaluative criteria in accordance with the OECD-DAC evaluation framework are as follows:



These evaluation criteria have been defined below along with illustrative questions:

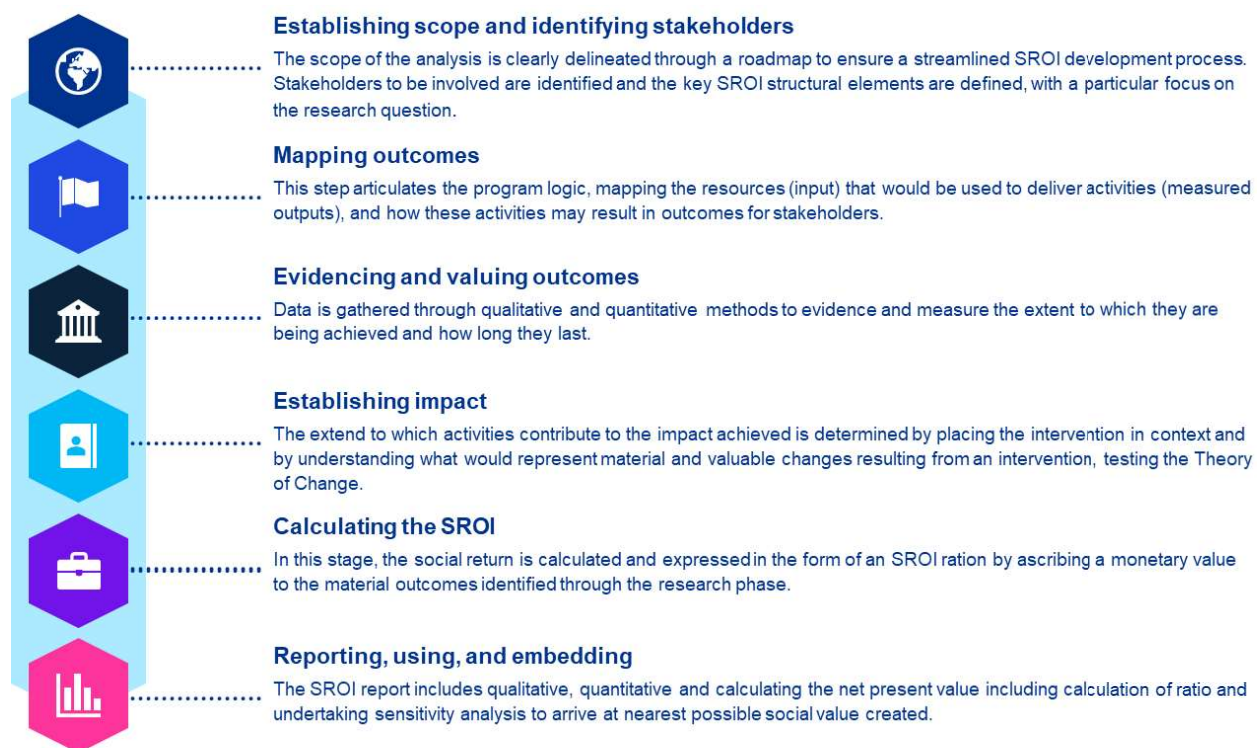
Evaluation Criteria	Illustrative Evaluation Questions	Cross-cutting Objectives
Relevance	<p>A measure of the extent to which the intervention objectives and design respond to beneficiaries, global, country, and partner/institution needs, policies, and priorities, and continue to do so if circumstances change.</p> <ul style="list-style-type: none"> To what extent are the objectives of the project still valid? Are the activities and outputs of the project consistent with the overall goal? Are the activities and outputs of the project consistent with the intended impacts and effects? 	<i>Commitments of the stakeholders are integrated into Project design and planning</i>
Effectiveness	<p>A measure of the extent to which the intervention achieved, or is expected to achieve, its objectives, and its results, including any differential results across groups.</p> <ul style="list-style-type: none"> To what extent were the objectives achieved / are likely to be achieved? What were the major factors influencing the achievement or non-achievement of the objectives? 	<i>Achieved cross-cutting objectives during project implementation</i>
Efficiency	<p>A measure of the extent to which the intervention delivers, or is likely to deliver, results in an economic and timely way.</p> <ul style="list-style-type: none"> Were activities cost-efficient? 	<i>Resources are provided and efficiently used for</i>

Evaluation Criteria	Illustrative Evaluation Questions	Cross-cutting Objectives
	<ul style="list-style-type: none"> ▪ Were objectives achieved on time? ▪ Was the project implemented in the most efficient way compared to alternatives? 	<i>participation of all stakeholders</i>
Impact	<p>A measure of the extent to which the intervention has generated or is expected to generate significant positive or negative, intended, or unintended, higher-level effects.</p> <ul style="list-style-type: none"> ▪ What has happened as a result of the project? ▪ What real difference has the activity made to the beneficiaries? How many people have been affected? 	<i>Achieved real and long-lasting positive changes in the lives of intended beneficiaries</i>
Sustainability	<p>A measure of the extent to which the net benefits of the intervention continue or are likely to continue.</p> <ul style="list-style-type: none"> ▪ To what extent did the benefits of a project continue after donor funding ceased? ▪ What were the major factors which influenced the achievement or non-achievement of sustainability of the project? ▪ What can be some of the innovative ways to make the project sustainable in the long run? 	<i>Likelihood that project achievements will continue after project</i>
Coherence	<p>A measure of the extent to which the intervention is compatible with other interventions in a country, sector, or institution.</p> <ul style="list-style-type: none"> ▪ Does the project address the synergies and interlinkages between the intervention and other interventions in the same organisation and in the same sector/policy landscape? Does it weaken or enhance the impact of any current programs or policies? ▪ Does the program lead to duplication of efforts? 	<i>The extent to which other interventions (particularly policies) support or undermine the intervention and vice versa.</i>

2.1.2 SOCIAL RETURN ON INVESTMENT (SROI)

Social Return on Investment (SROI) is a systematic method that endeavours to measure and incorporate value created because of investment – namely social, environmental, and economic value which is not fully reflected in conventional cost-benefit analyses. This method is used to monetise the social and environmental impact of the program and measure how much value has been created for each rupee invested/ spent on the program. The evaluative aspect of an SROI quantifies the value of the social impact of programs, and policies, and measures change in ways that are relevant to the people or organisations that experience or contribute to it. Through an SROI, organisations can evidence the social value their programs are achieving, gain deeper insight into what impact they are having for their stakeholders and can thus use this as an input for their company strategy. SROI is about value, rather than money. It can encompass the social value generated by an entire organisation or focus on just one specific aspect of the organisation's work. SROI utilises the concept of “theory of change/ impact map” to describe the change creation by measuring social, environmental, and economic outcomes. It uses monetary values to represent the outcomes thus enabling calculation of ratio of benefits to costs to be calculated. SROI analysis includes case studies and qualitative, quantitative, and

financial information thus helping organisations/ people to base their future decisions. The striking advantage of SROI study is that other impact assessment methodologies stop at identifying outcomes while SROI methodology goes beyond to value them and calculate the social value of impact. Steps of a SROI study are listed below –








Setting the Scope 	Identification of stakeholders including beneficiary group, finalising the scope- setting the boundary of what is going to be considered for evaluative SROI - stakeholders including beneficiaries, impacts, program period, etc.
Mapping Outcomes 	Creating impact map, identifying investments, and valuing inputs, identifying outcome sand indicators for monitoring / evidencing outcomes
Evidencing Outcomes 	Collecting and analysing outcome data and establishing how long the outcome will last
Establishing Impacts 	Identifying and valuing financial proxies, adjusting outcomes using deadweight, displacement, attribution and drop off, calculating the impact
Calculating SROI 	Programming the value of outcome into future based on the duration for which the impact will last, calculating the net present value including calculation of ratio and undertaking sensitivity analysis.

Figure 1 SROI framework

The process of calculation of SROI largely focuses on deadweight, displacement, attribution, and drop-off in association with any outcomes achieved. All these aspects are generally expressed as percentages and these percentages are applied to the financial proxy of each outcome to arrive at the total impact for the outcome. Therefore, we used a customised framework involving a combination of OECD-DAC and SROI to obtain a full picture of the impact created by APL.

2.2 DETAILED METHODOLOGY

The following section discusses the methodology being employed by KPMG in this impact assessment, which has been broken down into four phases.

PHASE I: CONSULTING AND SCOPING

Activity 1: Inception meeting

As a first step, the KPMG team set up a scoping and kick-off meeting with the APL team to discuss the proposed work plan detailing out the various tasks to be conducted along with stipulated timelines. KPMG team had developed a detailed project plan to drive the engagement.

Activity 2: Desk-review and internal stakeholder engagement

The team conducted desk review of documents and reports shared by the client such as program concept notes, annual reports, program progress/closure reports, etc. Additionally secondary research was conducted to develop an in-depth understanding of the project locations, interventions, etc. Discussions with APL team and implementing agencies were conducted to understand the project interventions' KPIs, map external stakeholders, and determine sampling strategy and size.

PHASE II: RESEARCH DESIGN

Activity 1: Development of Impact Map/Theory of Change

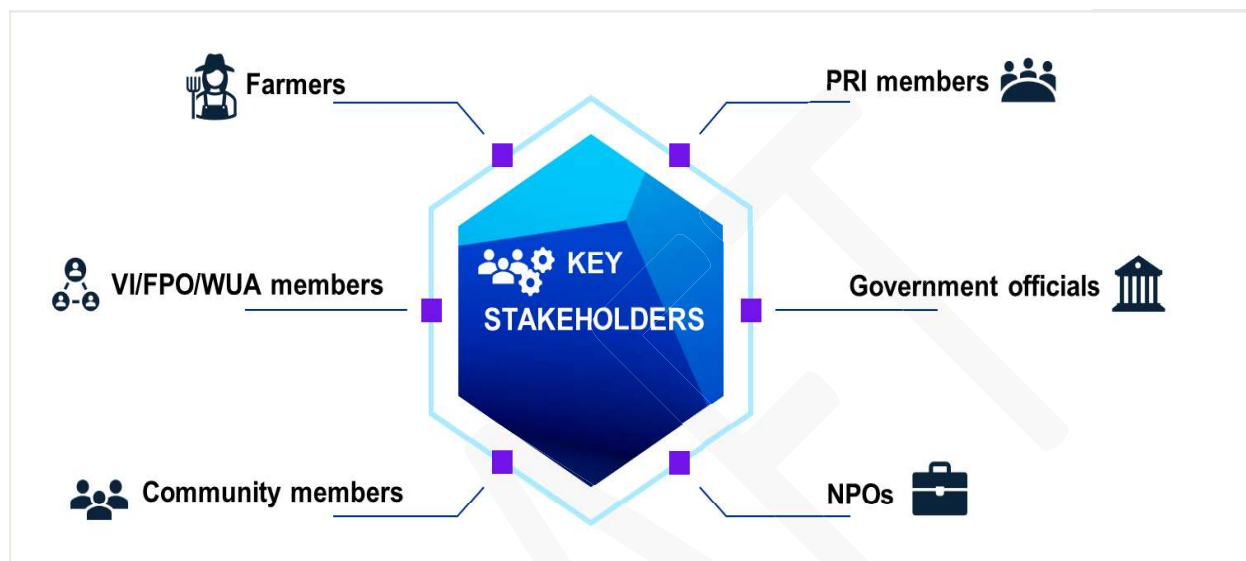
A theory of change-based impact map was developed to establish the outcome and impact parameters for the project. An impact map is defined as a logical chain/ framework giving an overview of how inputs (actions taken, or work performed) result into outputs (changes resulting from the interventions relevant to the outcomes), causing outcomes (likely or achieved short or medium-term effects arising out of the outputs of intervention) and impact (positive or negative, intended, or unintended, direct, or indirect effects created by the interventions).

Impact map for the Water Resource Development Project:

Stakeholder	Project Objectives	Inputs	Output	Outcome	Evidence Indicator
Farmers, Community members, students, other institutions	To increase water storage capacity and recharge through revival of traditional water bodies and construction of water harvesting structures so that to enhance irrigation and drinking water availability.	Construction and rejuvenation of ponds, Capacity building, Access to Finance, Time	Number of families reached out / availed benefits other water harvesting structures	Increase in agricultural production	Changes in availability of cultivated land Changes in cropping pattern by farmers Changes in multi-seasonal cropping
				Access to secure livelihood	Changes in the input cost required for agriculture- reduction in cost for irrigation
				Improved access & availability of surface and ground water	Changes in the irrigation fed agriculture, changes in the availability of water, reduced dependency on the other sources of water, Water conservation and efficient usage
	To promote farm-based livelihood through demonstration of improved agricultural practices like Integrated pest management, crop diversification, soil testing, agroforestry, agro-horticultural, Azola production, vermicomposting, organic farming, and others etc.		No. of families benefited from agriculture interventions No. of farmers reached out through awareness activities	Creation of employment opportunities	Changes in the labour employment by the local population
	To create awareness, education among the community on judicious utilization of water resources and collective actions.			Improved agriculture practices	Changes in the input cost required for agriculture, adoption of improved agriculture practices
				Changes in KAP, Community ownership of assets created	Changes in community's knowledge, attitude and practices Community led governance of its resources, effective operations and maintenance of water structures

Activity 2: Stakeholder Mapping and Sampling strategy

Stakeholder mapping is the process of identifying all the stakeholders involved in a project and their roles and responsibilities on one map. The main benefit of a stakeholder map is to get a visual representation of all the people who can influence the project and how they are connected. Stakeholders who experience change, whether positive or negative because of the interventions carried out were considered for the study. Furthermore, their pertinence to the scope of the study and relevance to the overall analysis were assessed.



Sampling of stakeholders for engagement was done based on the materiality of the stakeholder and the extent of the impact on the stakeholder. Considering the overall outreach of the project as nearly 1151 beneficiaries, the statistically significant sampling has been derived using the method of 95 percent confidence level and five percent margin of error. Additionally, we have taken extra sample stakeholder in order to derive accurate social return on investment ratio. The stakeholder-wise mode of interaction has been detailed out below:

Stakeholder name	Project	Sample covered	Research Tools
Farmers	Water Resource Development	50	Survey, one-on-one interactions, FGDs
VI/FPO/WUA members			
Community members			
PRI Members			
Government Officials			
NAF staff			

Activity 3: Development of Data Collection Tools

This study employed a mixed-methods approach, incorporating both quantitative and qualitative data collection and analysis techniques. In the initial phases, detailed desk review was conducted to examine current knowledge and

identify gaps and areas for further exploration. After literature review and development of research design, survey instruments were developed based on the impact map to collect data (quantitative and qualitative) from a sample population, utilizing an offline method to gather information on participants' experiences, attitudes, and behaviours. Semi-structured interviews with key stakeholders, including experts, PRI members, government officials, community leaders, and practitioners, were also designed to gain an in-depth exploration of the research topic and insights into emerging trends and best practices. Developed data collection tools were aligned to the key program objectives, scope outlined in the RFP, along with additional questions to add valuable insights for the case study. Tools prepared include:

- Tools for individual interactions
- Tools for focus group discussions
- Tools for other key stakeholder interactions
- Development of a research and data collection plan

PHASE III: DATA COLLECTION

Activity 1: Development of field-visit plan

Stakeholder interactions were through mutual discussion with APL and project implementing partner- NAF. A detailed timeline was developed for the field visits. The implementing partner has facilitated support in scheduling interactions, mobilising the stakeholders and translator (if needed). Additionally, the team consulted with the implementing partner to identify any potential challenges or obstacles that may arise during the field visit, such as language barriers, cultural differences, or safety concerns. This ensured that the data collection teams had access to the necessary resources and support to conduct the study in an efficient and ethical manner.

Activity 2: Conducting field visits

The stakeholder consultations were conducted through individual interviews, focus group discussions, KIs with other stakeholders. KPMG ensured inclusion of facilitators who possess previous experience in engaging with participants using their native/local languages. Training and sensitizing sessions were conducted for the data collection team to help them effectively communicate with the stakeholders. Team had conducted pre-testing/pilot testing of tools. The data collection process was monitored for completeness, accuracy, backcheck, and triangulation.

PHASE IV: ANALYSIS AND REPORTING

Activity 1: Data analysis and preliminary findings

During the data analysis, both qualitative and quantitative analysis were conducted on the data collected. To enhance accuracy and reliability, the findings from the quantitative data collected on the ground were triangulated to an extent. The collected information was thoroughly analysed on a location disaggregated basis, allowing for a detailed understanding of the specific areas involved. To calculate the social returns and impacts resulting from the program, the SROI framework and OECD-DAC framework were utilized. Additionally, a sensitivity analysis was conducted to examine the results of the ROI. The data and observations obtained during the primary data collection phase and

document review were carefully analysed to inform report writing. The findings were further scrutinised basis the assurance standards for SROI assessments.

Activity 2: Development of report and presentation

A comprehensive and detailed report was created for Asian Paints Limited at the enterprise level encompassing the key observations, analysis, findings, and recommendations derived from the assessment. The report adhered to the guidelines provided by the OECD-DAC and SROI frameworks, ensuring accuracy and relevance. Before finalising the report, a draft version was shared with APL for discussion and their valuable inputs. After finalising, the report was presented to the leadership at APL. Furthermore, separate reports were prepared for each project, providing a breakdown of data and analysis. The data collected and the analysis have also been shared with APL.

03

ANALYSIS & FINDINGS



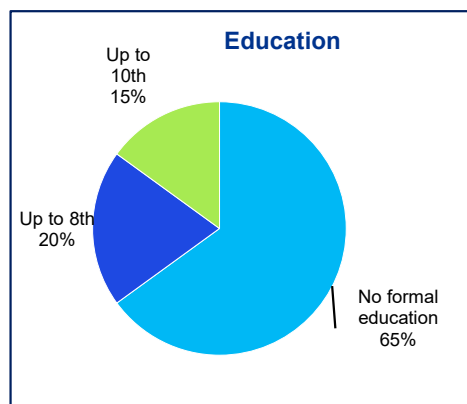
ANALYSIS AND FINDINGS

The section below highlights the findings and observations based on the interactions conducted with the sampled beneficiaries of the Water for Livelihood programme supported by Asian Paints Ltd. across the four villages – Dulhera, Mahepa-Jagir, Hasanpur and Masotta of Bulandshahr district of Uttar Pradesh.

Respondents profile

The study interacted with stakeholders from the age group of 25 to 60 years. 55 Percent of the respondents were from 25–40-year category and 45 Percent belonged to the age group of 41–60-years.

Agriculture was the primary occupation of all the respondents. Thus, the respondents were highly dependent on agriculture and majority of them do not have any secondary income source. Respondents have family members ranging from 4 to 12 people. 90 Percent of the respondents shared that they were the only earning member of the family.



100 Percent of the respondents shared they owned the land where they practice agriculture. All the respondents shared that they cultivate crops in Kharif and Rabi season, and 65 Percent shared that they take crops in summer season. 100 Percent of the respondents reported that they cultivated grains, followed by 30 Percent vegetables, 5 Percent millets. 100 Percent of the respondents shared that they have irrigation facility at farmland. All the respondents indicated that

they were aware about the 'Water for Livelihood' project of Asian Paints Limited. About 50 Percent of the respondents shared that they have received support for agricultural interventions and 50 Percent shared they have received support through pond related interventions.

3.1 EVALUATION CRITERIA: RELEVANCE

Relevance is a measure of the extent to which the intervention objectives and design respond to beneficiaries' needs, policies, and priorities, and continue to do so if circumstances change.

Relevance assesses how well the programme connected with the aims and policies of the government in which it is being executed. It also seeks to determine whether the programme is relevant to the needs of the beneficiaries. The program's relevance is understood in this context in terms of community needs as well as connections to existing government operations.

3.1.1 Needs of the community

During the interview, the respondents were asked about the challenges they faced in their villages prior to this intervention. Data collected indicate that all the respondent stated that one of the challenges they faced before the intervention was ever decreasing water level in their tube wells and thus, the increased need of deepening the existing source or digging a new one to get sufficient water for the irrigation purpose. During group discussion with the beneficiaries, they stated that unpredictable rainfall lately has been adding to the woes of most of the farmers.

The data collected from the beneficiaries on their water-related challenges before implementation of the program highlighted their poor conditions around water availability, thereby establishing the need for this program.

3.1.2 Alignment to Schedule VII of the Companies Act, 2013^{xvi}

The programme has been designed to cater to marginalised communities residing in the vicinity of Asian Paints Ltd.'s operational areas in alignment with the provisions of Section 135 of the Companies Act (2013) and CSR Rules.

The actions undertaken as part of the programme fall into the following broad categories of the section:

- (i) eradicating hunger, poverty, and malnutrition, promoting health care including preventive health care and sanitation [including contribution to the Swachh Bharat Kosh set-up by the Central Government for the promotion of sanitation] and making available safe drinking water
- (iv) ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining quality of soil, air and water [including contribution to the Clean Ganga Fund set-up by the Central Government for rejuvenation of river Ganga].
- (x) rural development projects



3.2 EVALUATION CRITERIA: COHERENCE


Coherence refers to the compatibility of the intervention with other interventions in a country, sector, or institution. It measures the extent to which other interventions (particularly policies) support or undermine the intervention, and vice versa

3.2.1 Alignment of the programme with National Priorities and Sustainable Development Goals

The Sustainable Development Goals (SDGs), commonly referred to as the global goals, were established by all United Nations members in 2015 with the aim of eradicating poverty, preserving the environment, and guaranteeing that everyone lives in peace and prosperity by 2030. India was a key contributor to the development of the SDGs and is dedicated to fulfilling them by 2030.

Due to the nature of the intervention, the programme has an impact on a wide range of SDG-related outcomes, as shown below:

SDG Goal	Targets	Relevance
GOAL 1: No Poverty 	Target 1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.	The project initiated a programme on Water Commons to improve the management and governance of land and water resources by strengthening community stewardship
GOAL 2: Zero Hunger 	Target 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.	The project activities target to strengthen rural livelihoods through agriculture productivity and better adaptive capacities.
GOAL 6: Clean Water and Sanitation 	Target 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all. Target 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals	The project activities included constructing/repairing water harvesting structures such as canals in villages to improve access to water for the community members for irrigation purposes.

	and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from waterscarcity.	
GOAL 15: Life on Land 	<p>Target 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains, and drylands, in line with obligations under international agreements.</p> <p>Target 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.</p>	Project activities included promotion initiatives such as water user groups were formed for operation and maintenance of the infrastructures constructed and sustainability of the project.

Water crisis threatens the health and development of communities across the world. Over the years, the government has been making considerable efforts to address the issue of depleting groundwater. While the Ministry of Jal Shakti^{xvii} aims to devise policies and programs for better management of water in the country, the Government of India had launched the Jal Shakti Abhiyan in 2019^{xviii} with an aim to improve water availability including groundwater conditions in various water stressed blocks. Following that, the Government launched “catch the rain campaign” in 2021^{xix} emphasizing on creating rainwater harvesting structures. In this scenario, Asian Paints Limited’s project- water resource management aligns with the national priorities of and the government’s efforts of rejuvenating water bodies to address the issue of depleting groundwater in the country.

100 Percent respondents rated that the project ensures accessibility for all social groups (caste, class, race, religion, others) and accessibility to all social groups (Differently abled, elderly, others)

3.3 EVALUATION CRITERIA: EFFECTIVENESS

Effectiveness is defined as an assessment of the factors influencing progress toward outcomes for each stakeholder as well as validation of the robustness of systems and processes.

It aids in ensuring that the implementation and monitoring processes are sturdy to achieve optimum social impact. The efficacy of the programme is established by examining how well the program’s activities were carried out as well as the effectiveness with which the program’s systems and processes were implemented.

Asian Paints Ltd. implemented the water resource management in partnership with NAF that have a presence in the field. ensured that they developed good rapport with the villagers and increased their awareness about the project through various activities like FGD’s, workshops and trainings. The project was implemented with support of village heads/ Gram Pradhan in the respective villages. Timelines and milestones for the project were also decided in consultation with village and panchayat members.

The project has undertaken the rejuvenation of existing ponds and creation of new ponds with the objective of restraining the runoff and improve percolation which would improve the depleting ground water levels. As stated by the stakeholders, considerations such as cultural significance, vicinity with the village and farmlands was done. Additionally, promotion of better irrigation methods and techniques through interventions such as Farm level demonstrations and training programmes were undertaken with the communities, across the project locations. Farmers shared that they found such exercises very relevant to their livelihoods and will be adopting the suggested agricultural and irrigation techniques aiming at improving agriculture productivity. It was reported that during the interaction, all beneficiaries (100 Percent) were aware of sustainable agricultural practices and they have provided positive ratings on the effectiveness of the training sessions conducted on various topics such as integrated pest management, Azola farming, Soil testing, vermicomposting, and organic farming. Below charts indicate beneficiaries' response to the implementation of learnings from training sessions conducted. A significant number of beneficiaries appreciated the support provided by the NAF team during the implementation on their farmland.

Furthermore, all the respondents were aware about the Asian Paints Limited's CSR programme and its implementing partner.

3.4 EVALUATION CRITERIA: EFFICIENCY

The efficiency criterion seeks to determine whether the project was completed in a cost-effective and timely way.

The purpose is to establish whether the inputs—funds, knowledge, time, etc. were effectively employed to create the intervention outcomes. This evaluation criterion attempts to determine whether the programme was completed on schedule and within budget.

Duplication/ overlap of project activities: Duplication of effort arises when similar interventions are needlessly undertaken within the same community/ location due to poor knowledge management and inadequate coordination of projects, thereby resulting in fund and resource inefficiency. During field observations and interaction with respondents, it was observed that the beneficiaries did not have access to any other similar water programme in the region.

3.5 EVALUATION CRITERIA: IMPACT

The impact has been measured in terms of the proportion of respondents who reported having a significant change in their lives due to the initiation of the project.

The goal of measuring the impact is to determine the project's primary or secondary long-term impacts. This could be direct or indirect, intentional, or unintentional. The unintended consequences of an intervention can be favourable or harmful.

The program's socioeconomic impacts are discussed in the following paragraphs.

3.5.1 Impact on Access & Availability of Surface & Ground Water

Impact on ground water: APL has provided support for water improvement in the area by rejuvenation/construction of pond. A significant number of respondents provided that the ground water recharge has increased due to the pond as the rainwater runoff has been stopped and water from the villages stays in village.

Around 74 Percent of the respondents shared that there has been a positive effect of water management activities done in their village. The respondents shared that there has been improved stability of water level and increase in water table in some cases. As reported by community members in focus group discussions, a few old tube wells were drying up in recent time which forced farmers in digging a new well with more depth, however, in the areas where more than one ponds have been constructed/rejuvenated, stakeholders have evidenced improved water levels.

The respondents having farmlands in the vicinity of ponds reported that they have seen a slight increase in the water table which also seems stable as compared to pre-intervention period

Average depth of water availability in well/borewell (in foot)			
	Zaid	Monsoon	Winter
Pre-Intervention	42	30	29
Post Intervention	40	27	28
Delta Change	2	3	1

40 percent of the respondents reported that the intervention resulted in increased water availability in their wells for a duration of more than 4 months. The highest delta of average 3 feet was observed during the monsoon. In the summer season,

Further, 13 percent of the respondents rated that the water quality has improved in their well/borewell since the implementation of Water Resource Management project as they believed with the decreasing water level water gets saline thus, due to water level stability, the water quality remains "Good". As detailed in the below table a majority of the respondents stated that due to pond rejuvenation, there are getting timely access whereas 33 Percent also added upon the sufficient availability of water for irrigation.

Changes due to the project	
Timely access to water	67%
Sufficient availability of water for irrigation	33%

Increased water availability has also resulted in ease of cultivating multiple seasons as farmers have confidence on the water availability.

Impact on livelihood/life	
Multiple seasons	42%
Reduced input cost due to less irrigation or less use of electricity/fuel engine/deepening of well	21%
Timely availability of water	11%

Reduction in cost of irrigation:

About 15 percent respondents reported that there is slight reduction in the cost of irrigation owing to project intervention. The respondents who reported reduction in the cost of irrigation reported a decrease of 5 to 7 percent. On average, the annual cost on irrigation of the respondents is INR 5,000 to INR 7,000 depending on the land parcel size.

The project has helped increase water harvesting potential of the village through rejuvenating traditional water bodies/structures in the villages that were not maintained earlier. This has stabilized the ground water level in the village as reviving/constructing multiple ponds in same area have improved the water level. Considering that these ponds have been selected in the vicinity of the village habitation, the agriculture impact was observed to be limited.

3.5.2 Impact on Agricultural Land and Practices

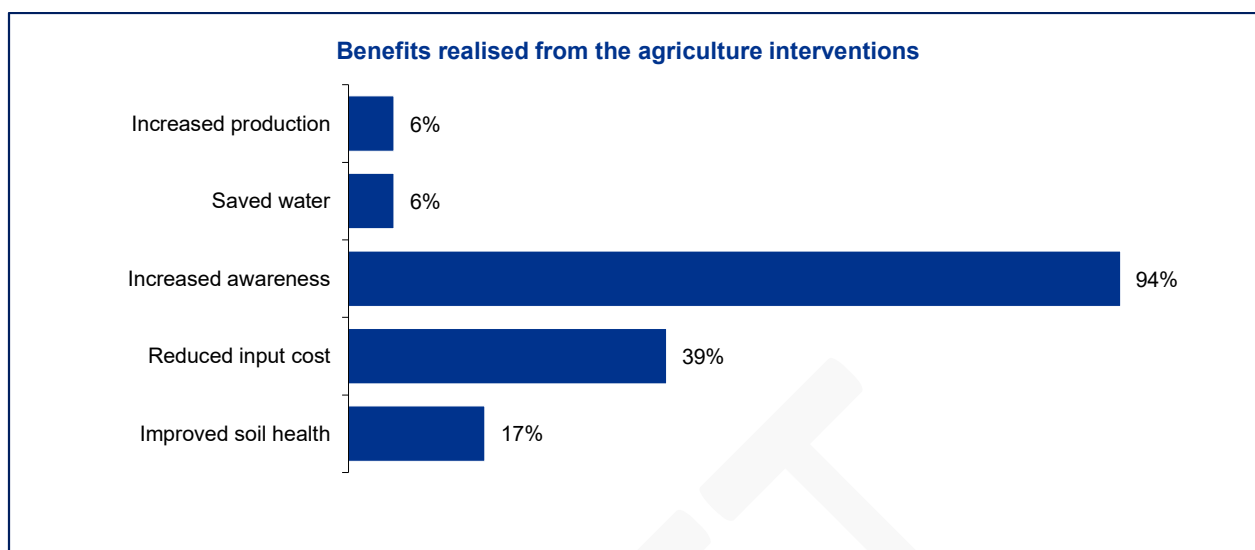
All the respondents shared that they practiced farming on their own land. Average net sown area per farmer is 3.4 acres. Respondents practice cultivation in all three seasons to some extent. 90 percent of the respondents grow Paddy (Rice) and remaining 10 percent take Jowar, Bajra, Maize in Kharif season. 100 percent of the respondents grow wheat in the Rabi season. 10 percent grow vegetables in Zaid season. Crop cultivation pattern before and after interventions remains same.

The size of total irrigated land per respondent varies from 1 acre to 5 acres and average is 3.4 acres per farmer. All the respondents shared that they engaged in surface/flood Irrigation. 100 percent of respondents shared that they were dependent on rains and 80 percent of respondents shared that they utilised tube wells as one of the key sources of irrigation. Additionally, the respondents also had access to canal irrigation channels.

10 Percent of the respondents have also reported ease of cultivation in multiple seasons owing to the availability of water.

Benefits due to agriculture interventions:

Around 70 percent of the respondents reported that there has been an improvement in their awareness on agricultural practices because of this intervention. 39 percent reported that there has been a reduction in input cost for agriculture. 17 percent shared that there has been improvement in the soil health, followed by 6 percent of respondents reporting an increase in production and saving on water costs. On average, the farm produce per farmer has been reported to be increased by around 26 percent.



28 percent of the respondents shared that they started cultivating vegetable post project interventions. 80 percent of them practice it for household consumption purposes while 20 percent cultivating for the selling purpose. Respondents shared that slowly the production pattern is changing, and more people are cultivating vegetables. The respondents indicated that the production of Okra (Bhindi) has increased from last 2 to 3 years. However, this save could not positively impact the income due to lower market demand

Additionally, a few beneficiaries who had adopted the practices such as chemical fertilisers basis the soil test report reported that they could cut down the cost of fertilisers approximately by INR 1,400 per acre however, in order to recover crop damage (yellowness) occurred afterwards, they had to use additional fertilisers.

Furthermore, As stated during the FGDs, many respondents were interested to adopt the usage of micro-nutrients like Rhizobium but could not access it from the local market.

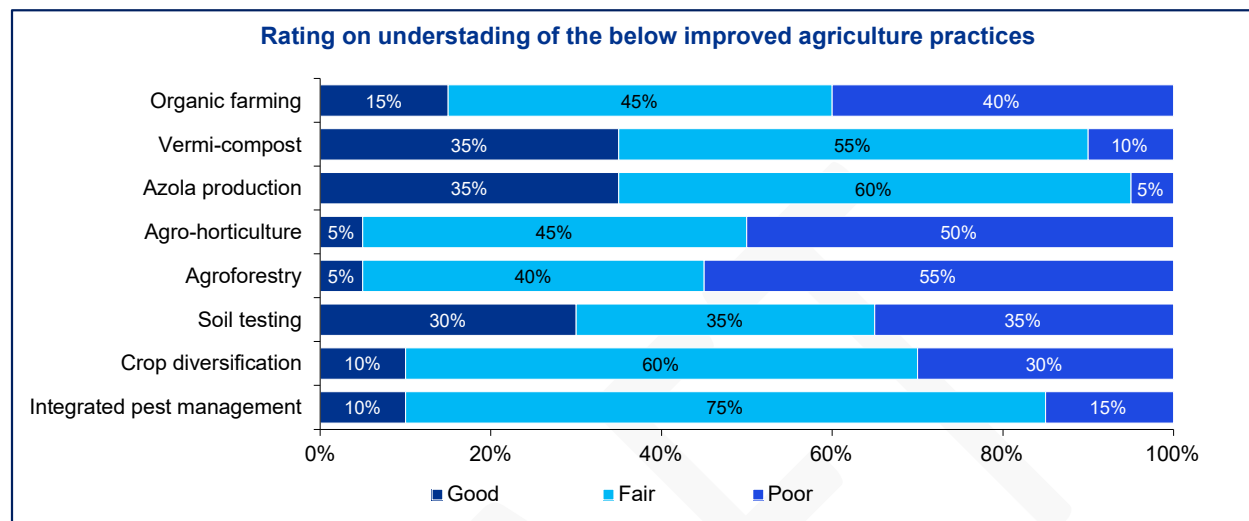
3.5.3 Impact on Farmer's Livelihood

100 Percent of the respondents had agriculture as their primary source of livelihood. Respondents also shared that they are highly dependent on agriculture as it's the only occupation pursued by them.

Impact of Agriculture intervention (trainings):

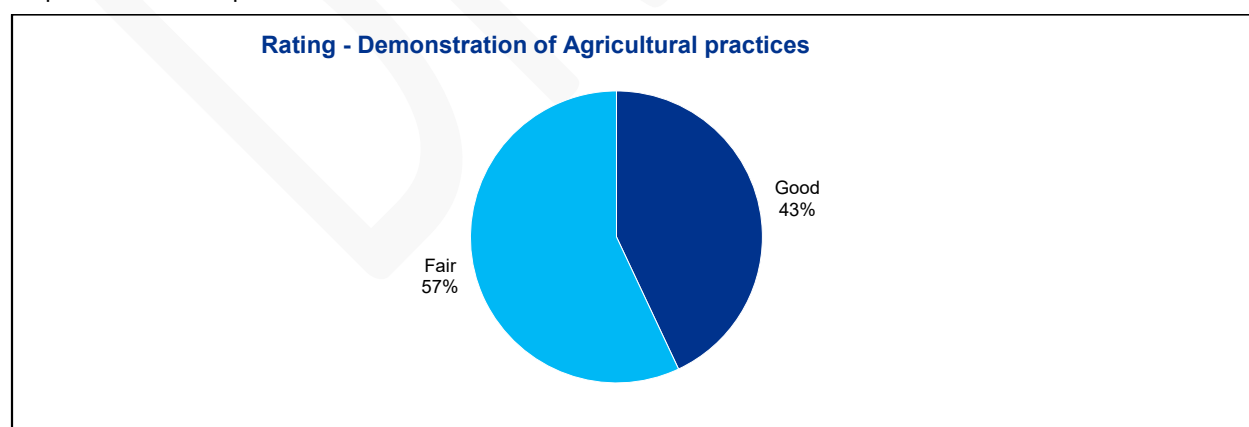
Improving information on good agricultural techniques such as line sowing, seed treatment, application of organic pesticides, irrigation scheduling etc. and provision of micro nutrients- such as rhizobium and soil testing with recommendation report have helped in saving the costs incurred on fertilizers, pesticides and irrigation while also increased the yields. 20 Percent percent of the respondents reported that the cost of cultivation has reduced by 30-50 Percent. Consumption of the agri-inputs such as pesticides, fertilizers, hybrid seeds, has not changed significantly. This increase is in comparison to the time before the project intervention.

Farmers shared that they found such exercises relevant to their livelihoods and adopted the suggested agricultural techniques aiming at improving agriculture productivity, crop yields, and reducing the cost of cultivation. 10 percent of the respondents reported that the productivity/ yield for crop production has increased by 20 percent to 30 percent during the first season.



APL had conducted training sessions on different topics such as Integrated pest management, Crop diversification, soil testing, Azola production, agro-horticulture, vermi-compost and organic farming etc. All the respondents shared that they have attended training sessions. Around 18 percent shared that they found the understanding about different agricultural practices as good.

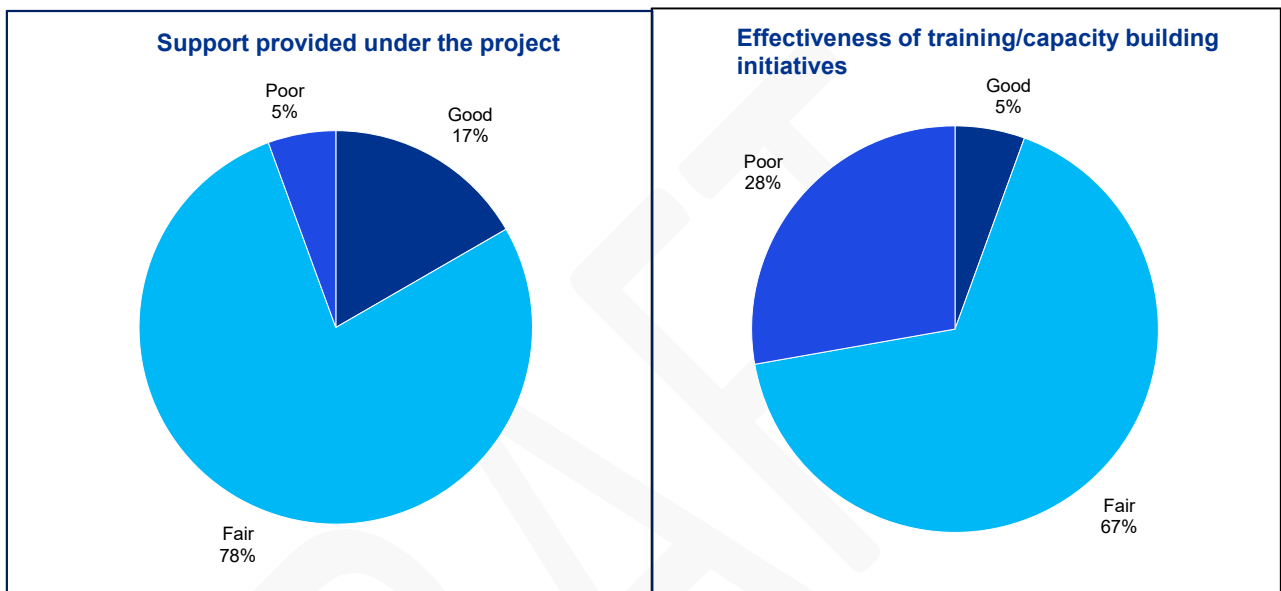
47 percent reported that they have attended the demonstration of sustainable agriculture practices. All the respondents who attended demonstration sessions shared that the demonstration in agricultural practices were effective. Around 43 percent of the respondents rated the sessions as 'Good' and 57 Percent rated it as 'Fair'.



43 percent of the respondents who had attended demonstration sessions shared that they replicated/implemented the learnings from training/workshop/demonstrations.

60 percent of the respondents shared that they have done soil testing of their farm under the project. All of the farmers who have attended the soil testing training were confident about the know-how of testing and some of them have followed the same in the subsequent season.

Support provided under agriculture intervention: 95 percent of the respondents rated the training support provided under the project for agriculture interventions positively. 72 percent of the respondents found the training sessions as effective



Impact on agriculture income of the farmers:

Due to the soil testing-based recommendations and use of organic fertilisers, natural pesticides, the farmers were successful in reducing their cost of cultivation by 20-25 percent amounting to INR 8000-15000.

Overall, the respondents have indicated that the intervention has led to an average contribution of 32 percent to their household income. The average income reported prior the intervention was INR 22,000 which has now enhanced to INR 29,000. An average change of INR 7,000 was reported by the beneficiaries.

3.6 EVALUATION CRITERIA: SUSTAINABILITY

Sustainability assesses how well the programme secures the long-term viability of its outcomes and influence.

The continuation of a positive effect after development or aid has stopped is referred to as sustainability. This evaluation criterion contains key elements concerning the likelihood of continuous long-term benefits and risk tolerance. To achieve sustainability, a governing framework, financial model, and operating system must be established.

100 Percent of the community members rated their overall experience in the 'water resource management' project in bringing about positive change in your quality of life as good

100 Percent of the Community members rated the support provided under the project as good

Sustainability refers to the sustainability of an intervention's positive effects after development or assistance has ended. This evaluation criterion includes significant elements related to the likelihood of ongoing long-term benefits and risk tolerance. Setting up a governance structure, financial model, and operating system is necessary to ensure sustainability.

The programme had an in-built exit strategy with sustainability at its core. The rejuvenated ponds have been handed over to the respective gram panchayat for its O&M.



WAY FORWARD:

Water is a crucial resource and a critical input in nearly all processes of life. Adequate availability of water for agriculture and animal husbandry is important for effective and productive yield. As has been mentioned in the introductory chapter, with groundwater being increasingly over-exploited, agriculture the livelihood most connected with it is becoming increasingly difficult to pursue; thus, contributing to rural distress and migration. The water resource development initiative aims to improve the livelihoods of people living in rural areas. However, a long term objective would be to revive traditional institutional mechanisms related to water and enable them to function effectively in a water-stressed environment. This includes governing complex and scarce resources like groundwater. To achieve this goal, suggestions are outlined below:

	Scalability/ Replicability	<ul style="list-style-type: none"> Although water resource development initiatives primarily focus on improving livelihood and agriculture related outcomes, it's important to understand that the initiative to strengthen ecosystem service, which in turn benefit ecological health. It is critical to acknowledge and strengthen this aspect of the initiative in the long-run. It is recommended to establish convergence with the government programmes
	Enablers	<ul style="list-style-type: none"> Improving the program delivery by training and orienting PRI members on the larger objectives, intended outcomes, and the process to be followed. Involving key stakeholders from the community would bring a better visibility and would influence more people to adopt the improved practices. In terms of agriculture, the farm level demonstration can be transformed into a farmer's field school which would enhance the outreach while maximising the impact.
	Community perception	<ul style="list-style-type: none"> It is essential to explore and implement new and innovative methods for engaging communities. This will help in sharing knowledge among community members, making communities equal partners in the pursuit of water security. Community-led governance can be effective in challenging common beliefs and guiding them towards recognising and addressing the water crisis in their community. For instance, the prevailing notion in many communities is that groundwater depletion is solely caused by low rainfall. However, interactive discussions can help the community understand that while rainfall may have

		become erratic, changes in agricultural practices over the years could also contribute to the fast-depleting groundwater.
	Community-led governance	<ul style="list-style-type: none"> The community institution is to be strengthened to make it self-reliant on parameters of assessing, documenting, planning and ensuring effective implementation of the program.
	Influencing change	<ul style="list-style-type: none"> In order to further strengthen the existing practices, crop diversification and shift towards less water intensive cropping can be given gravity of attention.

MEASURING THE SOCIAL RETURNS

As explained in Chapter 2, this report has used two evaluation frameworks which are OECD-DAC and SRoI. Generally, OECD-DAC helps in gaining a qualitative understanding of the impact. On the other hand, SRoI helps organizations in evaluating changes which are being created by measuring social, environmental, and economic outcomes and providing monetary values to represent them. SRoI also helps in understanding the total value generated for every rupee invested for interventions.

There are two types of SRoI:

- Evaluative, which is conducted retrospectively and based on actual outcomes that have already taken place.
- Forecast, which predicts how much social value will be created if the activities meet their intended outcome.

For this study, both evaluative as well as forecasting SRoI has been considered. SRoI primarily involves six stages which are as follows:

- Stage 1: Establishing Scope and identifying key stakeholders
- Stage 2: Mapping outcomes
- Stage 3: Evidencing outcomes and giving them a value
- Stage 4: Establishing impact
- Stage 5: Calculating the SRoI
- Stage 6: Reporting

Stage 1 and Stage 2 have been discussed in-depth in Chapter 2. Further stages have been elaborated in the ensuing sections.

4.1 Evidencing outcomes

After formulating the impact map, indicators to measure the outcomes were developed based on the evaluation team's interaction with beneficiaries of the interventions and other relevant stakeholders like PRI Members, implementation team members etc. Also, evidence of outcomes was collected using primary and secondary data.

Quantity of Change: The quantity of change for the impact map has been calculated by extrapolating the number of responses from the sample covered to the total population of the beneficiaries. Depending on the responses received during data collection, a proportionate percentage of total beneficiaries is calculated.

The below provides details about the evidence indicators for the outcomes and the quantity of change against each indicator.

Table 1- Quantities of change

Output	Outcome	Indicator	# of beneficiaries	Depth
Rejuvenation of ponds	Creation of sustainable water supply through increment in availability and accessibility of water	Increase in water harvesting capacity (Quantum of Water Potential created or Water Harvested in kilolitres)	1	10462
		Increased availability of water in wells / borewells due to ground water recharge (number of farmers/community members x Avg increase in availability of water in months/days)	1528	4

Improved agriculture practices	Increased agriculture productivity due to enhanced agriculture practice and increased water availability	Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	1528	6 %
		Reduction in Cost of Cultivation (Number of farmers x Avg reduction in cost annually)	515	6 %
		Reduction in Cost of Irrigation due to improved irrigation (Number of farmers using Mobile Engines for irrigation x Avg hours of irrigation)	1528	21 %
		Increased knowledge about agricultural practices (Actual beneficiaries * Percent of members indicating increase in awareness)	505	72 %
		Adoption of soil testing	10	100 %
Awareness campaign to school students	Increased awareness on water conservation & management	Increased awareness on water conservation & management	280	100 %

Duration of Outcome: Some outcomes will last through a beneficiary's life, while some will last only till the input activity persists.

For the purpose of this SROI Analysis, outcomes realised due to intervention of infrastructure activities have been considered for a maximum of 5 years for the impacts whereas, for the intangible interventions such as training the duration of impact is restricted to 3 years. These considerations are based on the following assumptions:

- Water Resources Development intervention has long lasting effects, especially the rise in ground water and surface water level due to the construction of check dams, rejuvenation of existing ponds, etc. This increased duration is also reflected in the resulting economic and social impacts for the community.
- In case of interventions which involve components of training or are related to skill/knowledge training, the beneficiaries will need to upgrade knowledge required for their respective subject due to advancement in technology and rapidly evolving market economy and climatic situations.
- Based on nature of interventions and dynamics of the income generating activities, impact due to the contribution from beneficiaries and other stakeholders will outweigh the impacts due to contribution and support from APL.

Financial Proxy and Value of Financial Proxy: An SROI analysis has used financial proxies in order to establish the value of identified outcomes. As a standard practice, prices are used as a proxy for value of services. Sometimes, the outcomes reported by stakeholders cannot be traded in a market or are intangible. Hence for such outcomes, the closest, comparable value has been identified for that service. Please refer [Table 12- Financial proxies](#) for outcome wise proxy details.

4.2 Establishing Impacts

In order to provide credibility to the analysis and prevent over-claiming, the SROI calculation has taken into consideration aspects like attribution, displacement, deadweight, and drop-off into account.

Establishing impact consists of an estimation on how much of the outcome would have happened anyway and what proportion of the outcome can be attributed to the activities that occur during the programme or project. Establishing impact is crucial, as it reduces the risk of over counting. Thus, an important part of SROI is 'measuring impact' by accounting for attribution, deadweight, displacement, and drop-off. The following section details how these were addressed:

Attribution: Attribution is the process of considering impact in exclusivity of any other intervention by other agencies.

There are two ways have been taken to arrive at Attribution. Beneficiaries have been asked to assign / attribute percentage against each stakeholder and against each change. Average of such attribution of beneficiaries helps to arrive at Attribution. In case of lack of sufficient data from beneficiaries, equity-based attribution was also considered.

Here the attribution was collected during data collection from individuals through questionnaire. The same was validated and moderated (if required) through attribution findings from FGDs of the respective interventions. List of stakeholders considered for attribution were as follows:

- Asian Paints Limited along with implementation partner
- Others- Self / Family/ Relatives, Community, Government officials from Agriculture, Animal Husbandry and Water Resources Development Sectors etc.

Deadweight: Deadweight is an estimation of social benefits that would have resulted anyway i.e., without the intervention.

Basis the respondents' assertions, the deadweight has been considered as **10 Percent** and the reasons have been presented below:

- There are no other organisations working in the region on similar issues.
- The focused approach of APL implemented through the support like training, affordable inputs and grant support has led to the increase in agricultural productivity.
- Support provided by APL is aimed at efficient spending and creation of quality infrastructure and is participatory in nature.

Displacement: Displacement is positive impact on one stakeholder at the cost of a negative impact on another stakeholder.

In case of this SROI study, displacement was assumed as **Nil** percent for agriculture intervention considering no adverse or negative impact reported by any respondents. In case of other interventions, there are no major organisations, private or non-profit working in similar sections.

Drop-off and Duration: Drop-off is the portion of outcomes that are not sustained. The drop-off will vary depending on nature of project interventions and activities involved in it. Intervention wise drop-off along with reasons is given below:

- **Intangibles @33 percent:** Acquiring of new skill sets, multi-cropping and other inputs have strengthened the base of agriculture economy in the region. Farmers have also reported a significant rise in self- confidence. Due to these factors, the impact is assumed to last for 3 years.
- **Water Resources Development @20 percent:** Creation of quality infrastructure for water resources development results in long lasting effects. Communities have also observed a significant improvement in ground water and surface water levels. Thus, it is assumed that impacts of these interventions would last over a period of 5 years.

Double Counting: Due to the nature of the identified impacts, there is a potential for double counting when aggregating isolated impact values.

For a detailed view, refer [Table 11- SROI Calculation](#)

Considering the above parameters, the impact of each outcome is calculated with the following formula:

4.3 Calculating Impact

Impact = Quantity of outcome * Financial Proxy Value * Attribution – Deadweight – Displacement – Drop-off for each year

SROI is a ratio of cumulative present value for each outcome against the total investment in the project
i.e., **SROI = Total NPV of social value / NPV of investment**

Total Input Value: The inputs from APL, beneficiaries and other stakeholders are considered for the SROI calculation stage. The assumption being all the inputs have worked together to create the observed impact. Even absence of either one of the inputs from stakeholders other than APL will have not generated the impact observed as a part of the current study. Various inputs considered for this study included financial contribution from APL, beneficiaries and other stakeholders and the cost of time invested by beneficiaries as a part of training / exposure activities. The value of the financial inputs has been provided by the APL and the inputs of programme (other than financial inputs) have been valued in consultation with APL CSR team.

The below table represents the total cumulative investments from all the stakeholders towards the project from the time period 2021- 2022:

Table 2- Inputs calculation

Input Type	Input description	Total input value (INR)
Financial inputs	CSR Funding from APL	1,43,70,961

Time contributed by beneficiaries	Time cost (4 hours/training* minimum wage)	84,667
Total		1,44,55,628

Net Present Value: The Impact Value is adjusted to reflect the Net Present Value (NPV) of the projected outcome values. This is to reflect the present-day value of benefits projected into the future.

A discount rate of 4 Percent has been used for the NPV calculations.

$$\text{SRol} = \{\text{Total present value of impact} / \text{Total present value of input}\}$$

The below table depicts the NPV evaluated as of 2022 and forecasted for 2027 (considering the duration period of 5 years for each outcome):

Table 3- SROI Calculation

Outputs	Outcomes	Indicators and Sources	Quantity (scale)	Amount of change per stakeholder	Duration of outcomes	Valuation approach (monetary)	Monetary valuation	Deadweight Percent	Displacement Percent	Attribution Percent	Drop off Percent	Impact calculation	Year 0	Year 1	Year 2	Year 3	Year 4
Rejuvenation of ponds	Creation of sustainable water supply through income in availability and accessibility of water	Increase in water harvesting capacity (Quantum of Water Potential created or Potential in Water Harvested in kilolitres)	1	10462	5	Groundwater abstraction charges for Drinking and Domestic use (Central Water Commission) per cubic metre	2	10 %	0 %	15 %	20 %	16,007	16,006	12,805	10,245	8,195.51	6,556.41
	Increased availability of water	Increase in availability of water in wells / borewells due to ground water recharge (number of farmers/community members x Avg increase in availability of water in months/days)	1528	4	5	Average HH requires 220 LPCD daily and using it for a months gets us the water requirement = 6600/HH/month Charges for purchasing water (One water tanker of 4000 litre capacity) - INR 200/	330	10 %	0 %	15 %	20 %	15,42,974	15,42,974	12,34,379	9,87,504	7,90,003	6,32,002
Improved agricultural practices	Increase in agricultural productivity due to enhanced agricultural practice and increased water	Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	1528	6 Percent	5	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in UP- 3Q Average per Quintal cost - 2760 Rs (https://www.commodityonline.com/m)	8280	10 %	0 %	15 %	20 %	5,80,719	5,80,719	4,64,576	3,71,660	2,97,328	2,37,863

Outputs	Outcomes	Indicators and Sources	Quantity (scale)	Amount of change per stakeholder	Duration of outcomes	Valuation approach (monetary)	Monetary valuation	Deadweight Percent	Displacement Percent	Attribution Percent	Drop Off Percent	Impact calculation	Year 0	Year 1	Year 2	Year 3	Year 4
	availability					and prices/rice)											
		Reduction in Cost of Cultivation (Number of farmers x Avg reduction in cost annually)	515	6 Percent	3	Average reduction in Cost of Cultivation indicated by respondents (INR) - 15,000/beneficiary	15000	10 %	0 %	15 %	33 %	3,54,578	3,54,578	2,36,397	1,57,606	0	0
		Reduction in Cost of Irrigation due to improved irrigation (Number of farmers using Mobile Engines for irrigation x Avg hours of irrigation)	1528	21 Percent	5	Average cost of borewell drilling is 100 Rs/feet. Assuming 5 feet drilling (https://www.agrifarming.in/borewell-drilling-cost-pump-price-and-pipe-cost)	500	10 %	0 %	15 %	20 %	1,22,737	1,22,737	98,189	78,551	62,841	50,273
		Increased knowledge about agricultural practices (Actual beneficiaries * Percent of members indicating increase in awareness)	505	72 Percent	3	Training cost of farmers on Vermicompost, Vegetable Cultivation, Preparation of organic formulation, Azolla production, IPM Training, Technology based cultivation, Soil health Management https://www.nhb.gov.in/Training/Brochure/NUR_KV K.pdf	4000	10 %	0 %	15 %	33 %	11,12,616	11,12,616	7,41,781	4,94,545	0	0

Outputs	Outcomes	Indicators and Sources	Quantity (scale)	Amount of change per stakeholder	Duration of outcomes	Valuation approach (monetary)	Monetary valuation	Deadweight Percent	Displacement Percent	Attribution Percent	Drop off Percent	Impact calculation	Year 0	Year 1	Year 2	Year 3	Year 4
		Adoption of soil testing	10	100 Percent	3	Soil health testing https://ihr.res.in/soil-and-water-analysis)	500	10 %	0 %	15 %	33 %	3,825	3,825	2,550	1,700	0	0
Awareness campaign to school students	Increased awareness on water conservation & management	Increased awareness on water conservation & management	280	100 Percent	3	Training cost for water management per students (https://www.udemy.com/course/water-management/)	450	10 %	0 %	15 %	33 %	96,390	96,390	64,263	42,844	0	0

Total	3829846	3829846	2854941	2144656	1158368	926694
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Present value of each year	3829846	2745136	1982855	1029785	792142
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4.4 SROI Results

The SROI for this Analysis- evaluative SROI (as on 2022) and evaluative cum forecast SROI (as on 2027) - is derived from dividing the total present value of the impacts by the total input value of the investment. This is considered because the beneficiaries who have received the support in 2022 would realise the impact for the next 5 years i.e., by 2027.

The below table describes the SROI Value and the SROI Ratio before sensitivity analysis: (in INR)

Net present value of social value created	SROI value
1,19,16,175	0.82
Total Investment	SROI Ratio
2,03,14,581	1: 0.82

For every INR 1 invested, the programme has generated social impact of INR 0.82

Sensitivity Analysis: Our calculations to arrive at the results provided in this report are relied on a variety of primary and secondary data, but the beneficiary data introduced a higher level of uncertainty. This survey was utilized to estimate the attribution, additionality of APL interventions to specific outcomes, and the duration of time the impact would last.

Sensitivity Analysis was used to test variables and assumptions to ensure that conservative estimates have been used in arriving at the SROI. For each impact area, we tested the impact of using one standard deviation above and below the average response to attribution survey questions. The sensitivity analysis suggests that the social impact value generated would be between 0.66 to 0.92 against every rupee invested.

Sr. No.	Base case Parameters	Base case SROI	Test case Parameters	Test case SROI	Observation
1	Displacement is 20 Percent and 0 Percent	0.82	Displacement is 20 Percent	0.66	Significant change
2	Displacement is 20 Percent and 0 Percent	0.82	Displacement is 10 Percent	0.74	No Significant change
3	Deadweight is 10 Percent	0.82	Deadweight is 20 Percent	0.92	Significant change
4	Attribution is 15 Percent	0.82	Attribution is 5 Percent	0.92	Significant change
5	Attribution is 15 Percent	0.82	Attribution is 20 Percent	0.78	No significant change

ANNEXURES

Table 4- Financial proxies

Outcomes	Indicators and Sources	Valuation approach (monetary)	Rate
Creation of sustainable water supply through increment in availability and accessibility of water	Increase in water harvesting capacity (Quantum of Water Potential created or Water Harvested in kilolitres)	Groundwater abstraction charges for Drinking and Domestic use (Central Water Commission) per cubic metre	2
	Increased availability of water in wells / borewells due to ground water recharge (number of farmers/community members x Avg increase in availability of water in months/days)	Average HH requires 220 LPCD daily and using it for a months gets us the water requirement = 6600/HH/month Charges for purchasing water (One water tanker of 4000 litre capacity) - INR 200/	330
Increased agriculture productivity due to enhanced agriculture practice and increased water availability	Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in UP- 3/Q Average per Quintal cost - 2760 Rs (https://www.commodityonline.com/mandiprices/rice)	8280
	Reduction in Cost of Cultivation (Number of farmers x Avg reduction in cost annually)	Average reduction in Cost of Cultivation indicated by respondents (INR) - 15,000/ beneficiary	15000
	Reduction in Cost of Irrigation due to improved irrigation (Number of farmers using Mobile Engines for irrigation x Avg hours of irrigation)	Average cost of borewell drilling is 100 Rs/ feet. Assuming 5 feet drilling (https://www.agrifarming.in/borewell-drilling-cost-pump-price-and-pipe-cost)	500
	Increased knowledge about agricultural practices (Actual beneficiaries * Percent of members indicating increase in awareness)	Training cost of farmers on Vermicompost, Vegetable Cultivation, Preparation of organic formulation, Azolla production, IPM Training, Technology based cultivation, Soil health Management https://www.nhb.gov.in/Training/Brochure/NUR_KVK.pdf	4000
	Adoption of soil testing	Soil health testing https://ihr.res.in/soil-and-water-analysis)	500
Increased awareness on water conservation & management	Increased awareness on water conservation & management	Training cost for water management per students (https://www.udemy.com/course/water-management/)	450

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- ⁱ State of India's Environment 2023 by Centre for Science and Environment and Down To Earth Magazine. Article sourced at: <https://www.downtoearth.org.in/news/water/world-water-week-2023-demand-and-pollution-of-the-precious-resource-are-increasing-which-is-not-a-good-sign-91220>
- ⁱⁱ [fao.org/aquastat/en/countries-and-basins/country-profiles/country/IND/index.html](https://www.fao.org/aquastat/en/countries-and-basins/country-profiles/country/IND/index.html)
- ⁱⁱⁱ Planning Commission 2007 Report of the Expert Group on Ground Water Management and Ownership, Government of India, New Delhi, September 2007.
- ^{iv} https://www.adriindia.org/adri/india_water_facts
- ^{vi} [History | Official website of State Portal, Government of Uttar Pradesh, India \(up.gov.in\)](https://up.gov.in)
- ^{vii} State of Groundwater in Uttar Pradesh, Water Aid, 2021 [state-of-ground-water-20210927.pdf \(cseindia.org\)](https://www.cseindia.org/state-of-ground-water-20210927.pdf)
- ^{viii} State of Groundwater in Uttar Pradesh, Water Aid, 2021 [state-of-ground-water-20210927.pdf \(cseindia.org\)](https://www.cseindia.org/state-of-ground-water-20210927.pdf)
- ^{ix} State of Groundwater in Uttar Pradesh, Water Aid, 2021 [state-of-ground-water-20210927.pdf \(cseindia.org\)](https://www.cseindia.org/state-of-ground-water-20210927.pdf)
- ^x State of Groundwater in Uttar Pradesh, Water Aid, 2021 [state-of-ground-water-20210927.pdf \(cseindia.org\)](https://www.cseindia.org/state-of-ground-water-20210927.pdf)
- ^{xi} State of Groundwater in Uttar Pradesh, Water Aid, 2021 [state-of-ground-water-20210927.pdf \(cseindia.org\)](https://www.cseindia.org/state-of-ground-water-20210927.pdf)
- ^{xii} <https://www.hindustantimes.com/cities/noida-news/gautam-budh-nagar-administration-issues-alert-for-possible-flooding-in-low-lying-areas-due-to-rise-in-river-levels-101690222092314.html>
- ^{xiii} <https://indianexpress.com/article/cities/delhi/nitrate-uranium-in-gautam-buddha-nagar-groundwater-8433027/>
- ^{xiv} [A success story: How we restored 15 rural waterbodies in UP's Gautam Buddha Nagar \(downtoearth.org.in\)](https://www.downtoearth.org.in/a-success-story-how-we-restored-15-rural-waterbodies-in-up-s-gautam-buddha-nagar)
- ^{xv} [India-WRIS \(indiawris.gov.in\)](https://indiawris.gov.in)
- ^{xvi} [Schedule-VII.pdf \(icai.org\)](https://www.icaai.org/Schedule-VII.pdf)
- ^{xvii} [Ministry of Jal Shakti](https://www.ministryofjalshakti.gov.in)
- ^{xviii} [Press Information Bureau \(pib.gov.in\)](https://www.pib.gov.in)
- ^{xix} pib.gov.in/PressReleaselframePage.aspx?PRID=1705798#:~:text=Ministry of Jal Shakti is taking up a,areas of all the districts in the country.



Impact Assessment of Water for Livelihood Project- Mysore, Karnataka

Asian Paints Limited

KPMG Assurance and Consulting Services LLP

January 2024

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Strictly Private and Confidential

V. Ravi
General Manager
Asian Paints Limited
Mumbai, Maharashtra– 400055
India
15 March 2024

**Subject: Final-report for Impact assessment of Water Resource Development
Projects**

Dear Mr. V. Ravi,

We appreciate the opportunity to assist Asian Paints Limited in providing **Impact assessment of Water Resource Development Projects related services**.

Please find enclosed our final-report, which has been prepared in accordance with the scope and terms stated in our engagement letter dated 5th January 2024. With this deliverable, we have completed our obligations as stated in our engagement letter.

It has been our privilege to have this opportunity to work with you, and we look forward to continuing our relationship.

Yours sincerely

DocuSigned by:

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Full Signature _____

Name- Jignesh Thakkar

Director, ESG

KPMG Assurance and Consulting Services LLP

DISCLAIMER AND NOTICE TO READERS

This report has been prepared exclusively for Asian Paints Limited (APL) ("Client") in accordance with the terms of the Engagement letter/agreement between Client and KPMG Assurance and Consulting Services LLP ("KPMG" or "we") (collectively 'Contract'). The performance of KPMG's services and the report issued to the Client are based on and subject to the terms of the Contract.

KPMG does not accept or assume any liability, responsibility, or duty of care for any use of or reliance on this report by anyone, other than our client, to the extent agreed in the Agreement.

Impact assessment is limited to the projects allocated by Asian Paints Limited.

OECD-DAC and SROI frameworks have been used in preparing the report as detailed herein. No professional assurance standards ex. ISAE, SSAE etc. have been applied while preparing this report and accordingly the rigors applicable under such standards are not applicable for the scope covered by our report.

Procedures, analysis, and recommendations, if any, are advisory in nature basis the information collected from various sources both publicly and those provided by the client.

Our observations represent our understanding and interpretation of the facts based on reporting of beneficiaries and stakeholders.

Our report, by its very nature, may involve numerous assumptions, inherent risks, and uncertainties, both general and specific. The conclusions drawn shall be based on the information available with us at the time of preparing the report.

We have not performed an audit and shall not express an opinion or any other form of assurance. Further, comments in our report are not and shall not be intended, nor should they be interpreted to be legal advice or opinion. Client shall be fully and solely responsible for applying independent judgment, with respect to the findings included in the report, to make appropriate decisions in relation to future course of action, if any. We shall not take responsibility for the consequences resulting from decisions based on information included in the report.

While information obtained from the public domain or external sources has not been verified for authenticity, accuracy, or completeness, we have obtained information, as far as possible, from sources generally considered to be reliable. However, it must be noted that some of these websites/third party sources may not be updated regularly. We assume no responsibility for the reliability and credibility of such information.

Our work shall be limited to the specific procedures described in this Engagement Letter and shall be based only on the information and analysis of the data obtained through interviews of beneficiaries supported under the programme, selected as sample respondents and discussions with Client's team and stakeholders of the programme. Accordingly, changes in circumstances or information available after the review could affect the findings outlined in our report.

In no circumstances shall we be liable, for any loss or damage, of whatsoever nature, arising from information material to our work being withheld or concealed from us or misrepresented to us by any person to whom we make information requests.

In accordance with its policy, KPMG advises that neither it nor any of its partner, director or employee undertakes any responsibility arising in any way whatsoever, to any person other than Client in respect of the matters dealt with in this report, including any errors or omissions therein, arising through negligence or otherwise, howsoever caused.

In connection with our report or any part thereof, KPMG does not owe duty of care (whether in contract or in tort or under statute or otherwise) to any person or party to whom the report is circulated to and KPMG shall not be liable to any party who uses or relies on this report. KPMG thus disclaims all responsibility or liability for any costs, damages, losses, liabilities, expenses incurred by such third party arising out of or in connection with the report or any part thereof.

By reading our report, the reader of the report shall be deemed to have accepted the terms mentioned hereinabove.

EXECUTIVE SUMMARY

The philosophy of transformation has been in DNA of Asian Paints Limited and reinventing the industry has been in its nature. The same philosophy of transforming lives has been driving the CSR efforts concentrating on holistic and sustainable development of the community. The company believes in fostering relationship of trusts with the communities around the vicinity of plants and people in the unorganized sector. Under the umbrella of inclusive development, the initiatives focus on sectors of health & hygiene, water conservation, skill development and disaster management.

According to UN World Water Development Report (2022), India is the largest groundwater user globally. Approximately 45% of total irrigation and 80% of domestic water needs are met by groundwater. the unsustainable extraction practices over decades have thus led to overexploitation and water scarcity. In such challenging landscape, water harvesting and conservation under the umbrella of watershed management became need of the hour. Asian Paints engaged in holistic approach through their program "Water Resource Development" in Mysore, Karnataka, which addresses not only water scarcity but also soil conservation and natural resource management for ensuring a sustainable and resilient water future for the country.

The main objectives of the impact study are to assess the impact of water stewardship activities with focus on the access and availability of surface and ground water, potable water, farmer`s livelihood, land and agriculture practices, and governance. The study covered mix-methods approach consisting of quantitative and qualitative research methodology using primary and secondary data collection. The analysis of quantitative data was corroborated with anecdotal evidence from qualitative responses and observed through the lens of SROI framework and OECD-DAC framework. A total of 100 respondents from three villages were interacted for data collection in the intervention villages of Mysore, Karnataka, including farmers, community members, and PRI members.

More than half of the respondents were between 25-60 age group and have formal education till class tenth. The sample covered respondents from varied economic background including small to marginal farmers with primary source of income being agriculture.



RELEVANCE

Before intervention:

- 90% respondents indicated scarcity of water
- 50% respondents engaged only in Rain-fed cultivation
- Half of respondents indicated high TDS



COHERENCE

The program has direct contribution to below SDGs:



EFFECTIVENESS

100% respondents felt positive changes because of the water-related activities of the program.

All beneficiaries are aware of the Sustainable Agriculture Practices.



EFFICIENCY

The program was completed on schedule and within the proposed budget.

No duplication or overlap of activities was observed with any other program on-ground and corroborated by respondents



IMPACT – Water Access & Availability

94% respondents indicated increased accessibility and availability to water for over three to four months

88% respondents indicated moderate to high increase in water column in wells in all three seasons, especially summers

32% respondents accessed water for irrigation directly from WHS



IMPACT – Potable Water

37% respondents felt the good availability of potable water.

89% respondents rated good to availability of drinking water

89% respondents indicated also improved quality of water

54% respondents indicated reduced TDS in potable water.



IMPACT - Agriculture

Respondents indicated –

33% of respondents shared that they were able to replicate agricultural practices demonstrated through intervention

100% of respondents shared 'good' rating for impact on potable water, integrated pest management intervention, and soil testing activity conducted.

SUSTAINABILITY



100% of the Community members rated the support provided under the project as good

100% of respondents shared that impact of programme can be last more than five years.

This report also estimates the impacts felt by the beneficiaries and wider community as a result of the APL programme, by valuing them in monetary terms. We have examined the social impact of the APL programme arising from its CSR project during the FY 2021-22. To achieve this, we have estimated the social return on investment (SROI) generated by the programme by comparing the financial costs of the programme to the monetary value of the impacts it creates among its stakeholders. Whilst many of the impacts arose during the period of analysis, impacts would also occur or continue the effect for some time in future. Thus, forecasting methods have been used.

We estimate that for every INR 1 spent by the Water Resource Development programme, INR 1.46 in social value has been generated through a mixture of socio-economic wellbeing among the beneficiaries.

01

INTRODUCTION



1 INTRODUCTION

This chapter consists of an overview of the water stress in Indian context and Asian Paints Ltd.'s CSR efforts to address the issue. It provides an overview of the project, implementing partners, project geographies, scope, and purpose of the study.

1.1 BACKGROUND

Water stress and availability represent a formidable global challenge, with increasing demand, population growth, and climate change exacerbating the strain on water resources. CSE's State of India's Environment Report (2023) estimates that if the ongoing decline in global water availability persists, 87 out of 180 countries will face annual renewable water resources (ARWR) per capita falling below 1,700 cubic meters per year by 2050. India sustains around 17.74 percent of the world's population with only 4.5 percent of its freshwater resourcesⁱ. According to FAO's Aqua-stat reportsⁱⁱ (2015), India receives an average annual rainfall of 1,170 mm. This contributes to a total rainfall input of around 4,000 cubic kilometres of water as per the Planning Commission's Report of the Expert Group on Ground Water Management and Ownership (2007)ⁱⁱⁱ. The same report indicates that within this, 1,869 cubic kilometres constitute the average annual potential flow in rivers, while 432 cubic kilometres replenish the groundwater. India, despite being endowed with substantial water resources, faces a complex set of challenges related to water availability, quality, and distribution.

The depletion of groundwater levels, coupled with the pollution of surface water, presents a dual challenge. Groundwater, a critical resource for millions, is being extracted at a rate faster than natural replenishment, leading to a significant deficit. Simultaneously, about 70 percent of surface water resources in India are polluted, compromising the health of both humans and ecosystems. Wastewater from various sources, intensive agriculture, industrial activities, and untreated urban runoff contribute to this pollution, which contributes to the water-related morbidity in India. Arsenic and fluoride contamination in groundwater further exacerbate India's water quality issues. Certain regions, including parts of Assam, Bihar, Uttar Pradesh, Chhattisgarh, and West Bengal, grapple with arsenic levels above permissible limits. Fluoride contamination is prevalent in multiple states including the locations for this study (Gujarat, Karnataka, Uttar Pradesh, Haryana, and Tamil Nadu), necessitating urgent remediation efforts^{iv}.

Thus, with increasing population, rapid urbanisation, and climate change impacts, India's water resources are under immense pressure.

In this challenging water landscape, the importance of watershed management becomes apparent. Watershed management is not merely a focus on water projects but involves a holistic approach to land-use practices, afforestation, and soil and water conservation. It is recognised as essential for sustainable

water development, contributing not only to water conservation but also to self-reliance in terms of food and energy. Lack of adequate watershed management may lead to increased reservoir sedimentation, altered stream flow patterns, and a range of environmental and socio-economic consequences. In conclusion, the water issues in India necessitate urgent and comprehensive water resource management strategies, with a particular emphasis on watershed management. A holistic approach that addresses not only water scarcity but also soil conservation and natural resource management is crucial for ensuring a sustainable and resilient water future for the country.

1.2 ASIAN PAINTS LIMITED

Asian Paints, headquartered in Mumbai, is one of the largest and leading paint companies in India. Established in 1942, the company has expanded its presence globally and is recognised for its innovative and high-quality products. Asian Paints operates in various segments, including decorative coatings, industrial coatings, and automotive coatings. The company has a strong emphasis on research and development, leading to continuous product innovation. Asian Paints has introduced eco-friendly and sustainable paint options, aligning with global trends towards environmentally conscious choices.

Beyond business, Asian Paints actively engages in Corporate Social Responsibility (CSR) initiatives. Guided by its philosophy of trust, fairness and care the CSR interventions are envisioned to make a sustainable difference to the environment in which it operates including activities which shall allow it to leverage its strengths. The primary objective of their CSR activities is to enhance and empower marginalised communities by tackling crucial social, economic, and environmental issues. These efforts focus on healthcare, water conservation, and community development, reflecting the company's commitment to social and environmental sustainability. APL's CSR initiatives are in alignment with SDG Goals, namely Goal 1 (No Poverty), Goal 2 (Zero Hunger), Goal 3 (Good Health and Well-being), Goal 6 (Clean Water and Sanitation), Goal 8 (Decent work and economic growth), Goal 11 (Sustainable cities and communities) and Goal 17 (Partnership for the goals).

APL has been implementing several initiatives in the area of Water, Health and Hygiene, Skills Development, and Disaster Relief. The Water Stewardship Program, initiated by Asian Paints, seeks to contribute to increasing water availability in the ecosystems surrounding its plants, playing a crucial role in enhancing water security in these regions. The program encompasses a spectrum of initiatives, including pond cleaning, desilting, construction of check-dams, irrigation, and training farmers on micro-irrigation systems. Holistic approaches such as integrated pest and soil health management are integral to the program. The initiatives under the program are designed to fortify ecosystem services, enhancing water supplementation for both indoor use and food production. The program significantly contributes to groundwater recharge, a critical aspect of sustainable water management.

1.3 ABOUT THE STUDY

To strategize and plan their water stewardship interventions, Asian Paints Ltd. empanelled KPMG to facilitate impact assessment of the following intervention:

Water resource development project: Water resource development projects have been initiated by Asian Paints Ltd in Mysore District of Karnataka. These interventions are specifically targeted towards water resource management in alignment with the improved agriculture practices.

The objective of this study was to assess the impact of these water stewardship activities on the beneficiaries and stakeholders covered under the projects. The study aimed to understand the below immediate, medium, and longer-term impact of the interventions on the targeted beneficiaries:

Impact on Access & Availability of Surface & Ground Water	<ul style="list-style-type: none">• To understand the impact on ground-water recharge based on well recharge data• To understand the duration of water availability post monsoon (in months)
Impact on Portable Water	<ul style="list-style-type: none">• To assess impact on drinking water availability and quality due to rainwater water harvesting structures.• To assess impact on other areas like drudgery reduction, drop in health issues around the drinking water etc.
Impact on Agricultural Land & Practices	<ul style="list-style-type: none">• To assess impact on season wise cropping pattern led by availability of water in the area.• To assess impact on soil health due to balance use of fertilizer because of adoption of recommendations of soil testing report and application of organic fertilizers• To assess impact on knowledge level of the farmers about improved agricultural practices.
Impact on Farmer's Livelihood	<ul style="list-style-type: none">• To assess impact of water availability on crop production (yield/acre)• To assess impact of water availability on productivity of livestock animals• To assess impact on net return/acre per farmer.• To assess the impact on livelihood opportunities created through the programme.
Other Impact Areas Apart from Water Rejuvenation	<ul style="list-style-type: none">• To assess knowledge and adoption level of water efficient agricultural and risk mitigation farm practices.• To assess level of ownership by the community in the asset created: Whether community-based institutions had been formed and taking care of maintenance aspects of the assets created under the project.

1.4 ABOUT THE PROJECT

Asian Paints Ltd.'s Water Stewardship Programme signifies the company's dedication to sustainable practices and responsible corporate citizenship. By addressing the challenge of water scarcity through community partnerships and integrated initiatives, Asian Paints Limited aims to make a positive impact on both its operations and the communities it serves.

WATER RESOURCE DEVELOPMENT

Water resource development project have been initiated by Asian paints Ltd at Mysore (Karnataka). Under this project interventions are specifically targeted towards water resource management in alignment with the improved agriculture practices.

Objectives of project:

Rejuvenation of Water Bodies:

- To increase water storage capacity and recharge through revival of traditional water bodies and construction of water harvesting structures so that to enhance irrigation and drinking water availability.
- To promote farm-based livelihood through demonstration of improved agricultural practices like Integrated pest management, crop diversification, soil testing, agroforestry, agro-horticultural, Azola production, Vermi composting, organic farming, and others etc.
- To create awareness, education among the community on judicious utilization of water resources and collective actions.

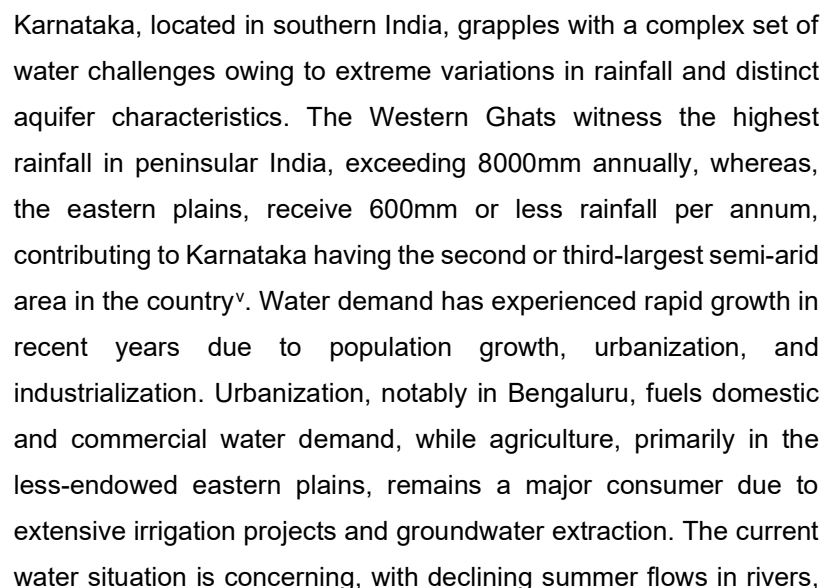
1.5 IMPLEMENTING PARTNERS

The National Agro Foundation (NAF), established in 2000 by Mr. C. Subramaniam, a prominent figure in India's Green Revolution and recipient of the Bharat Ratna Award, is a Public Charitable Trust with a vision to catalyse a rural revolution focused on agriculture and small and marginal farmers. Anchored in the principles of inclusive growth, NAF operates with a "Soil to Market" approach, building on Mr. Subramaniam's pioneering "Seed to Grain" philosophy from the Green Revolution era. Over the years, NAF has transitioned from modest beginnings to a dynamic and professional organization, delivering cutting-edge services that have made a substantial impact on rural communities. Collaborating with the government, corporate entities, and other stakeholders, NAF has implemented core programs addressing local and global challenges in agriculture and rural development. Its approach includes tailored training programs, capacity development initiatives, and the integration of new modalities and technologies. With

In collaboration with APL, NAF is actively engaged in the implementation of CSR projects centred around water resource development in Karnataka. This strategic partnership underscores a shared commitment to fostering the rejuvenation of water bodies, amplifying livelihood opportunities for farmers, and effectively managing natural resources. Within this collaborative framework, NAF is responsible for executing the specified activities, ensuring their timely completion, adherence to budgetary constraints, and achievement of anticipated outcomes. Simultaneously, APL extends crucial technical and financial support to NAF, facilitating the realization of project objectives and the establishment of a sustainable and inclusive development model. This cooperative effort aims to deliver tangible benefits to marginalized communities while addressing critical issues related to water resources and rural livelihoods.

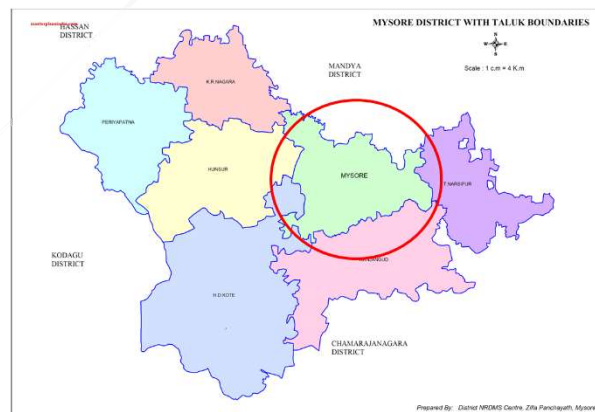
The impact assessment will cover the following states where the projects were implemented: Mysore, Karnataka.

Mysore, Karnataka



alarming groundwater depletion in many regions, and surface water pollution. Summer flows in most rivers are declining, with evidence of some rivers nearly drying up, impacting major reservoir inflows and leading to the complete drying of numerous minor irrigation tanks. These declines are primarily attributed to increased water use in the catchments rather than climate change. Groundwater depletion significantly contributes to declining summer season flows in rivers. Groundwater levels have been plummeting for several decades, particularly in the eastern plains, where 44 out of 176 talukas are declared 'over-exploited,' posing severe challenges to sustainable water management. Moreover, surface water bodies across the state face varying pollution, with 13 out of 17 monitored river stretches and most urban tanks showing contamination^{vi}. Karnataka is possibly the most drought-prone state in the country, having experienced a drought in 12 of the 16 years between 2001 and 2016^{vii}. Water scarcity, pollution, and the uneven distribution of water resources for life and livelihood further compound the issues faced by the state. Water consumption patterns range from over 340 litres per capita per day (LPCD) in parts of Bengaluru to less than 50 LPCD in poorer households and many small towns^{viii}. Approximately 60% of rural habitations receive less than 40 LPCD water supply, leading to widespread water scarcity during the summer season for most households^{ix}. Thus, the water resources in Karnataka are facing severe stress, posing a threat to water security in both rural and urban areas.

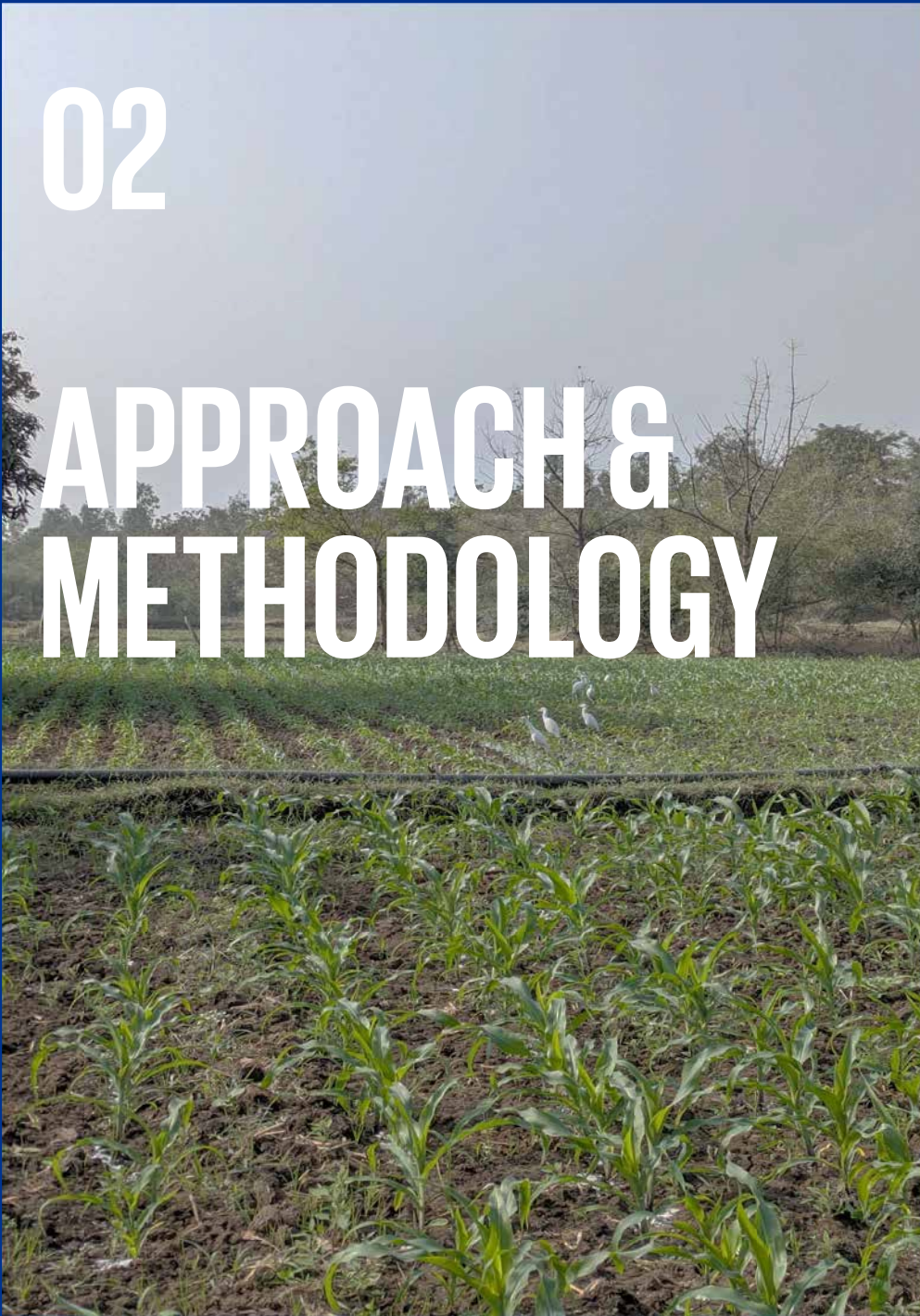
Mysore, the state's southernmost city, is bordered by Kerala and Tamil Nadu to the south and Bengaluru and Hubli to the north and east, respectively. Mysore district receives an average rainfall of 786.7 mm, with about 50% of the annual rainfall occurring during the southwest monsoon period^x. The net sown area accounts for 72% of total geographical area with covering approximately 1107 km², followed by pulses and Ragi cultivated in 989 and 972 km², respectively. Cotton, Sugarcane,



Jowar, Tobacco, and Oilseeds also contribute significantly to the agricultural diversity. There are two agro-climatic zones in the district as a result of the influence of climate and soil conditions on crop patterns- the Southern Dry Zone and the Southern Transition Zone^{xi}. The Southern Dry Zone is characterized by a mean annual rainfall of 670 to 888 mm^{xii}, with red sandy loams and black soils being the predominant soil types. The main crops grown in this zone include ragi, sugarcane, cotton, and plantation crops. On the other hand, the Southern Transition Zone, which has a relatively higher rainfall ranging from 611 to 1053 mm^{xiii}, features red sandy loams as the primary soil type. The major crops cultivated in this zone are rice, pulses, and groundnut. Despite having significant water sources, concerns about the sustainability of groundwater persist due to rapid urbanization and heightened demand. There is a need for adopting sustainable water management practices to augment ground water recharge and address the water challenges in Mysore.

02

APPROACH & METHODOLOGY



2 APPROACH AND METHODOLOGY

The chapter provides details on the research design and methodology adopted for the impact assessment. It includes description of the key activities, data collection methods, and sampling strategies, employed to ensure the reliability and validity of the findings.

2.1 OUR APPROACH

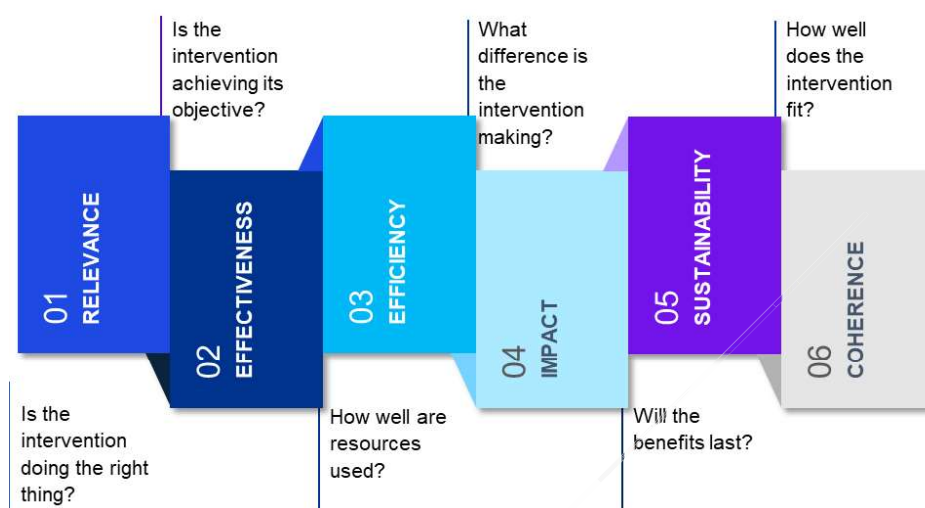
The study used the OECD DAC and SROI frameworks for designing the study and calculating social returns and impacts created due to APL's CSR projects on water stewardship. The former is widely used evaluation framework to assess the impact of social development programs, while SROI provides insights into project impact beyond traditional economic assessment tools.

This study adopted a four-phase structured methodology for evaluation as illustrated below. The adopted methodology ensured that OECD DAC evaluation criteria and SROI framework were followed throughout to effectively capture the impact of the program.

Phase I: Consulting and Scoping	Phase II: Research Design	Phase III: Data Collection	Phase IV: Analysis and Reporting
Kick-off meeting	Development of Impact Map	Development of field visit plan	Analysis of collected data using OECD DAC framework and estimating the SROI of the projects
Desk review of documents and reports related to the program	Mapping the stakeholders	Field visits and stakeholder interactions	Development of draft and final report
Determining scope of the study	Designing sampling strategy and data collection tools		Presentation to APL Team

2.1.1 OECD-DAC

The Organization for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) first laid out the evaluation criteria in the 1991. It is a framework that comprises of a set of criteria that aid in systemic assessment of on-going or completed development programs. This method helps to effectively assess various facets of the program and gain qualitative insights along with quantitative impact. The six evaluative criteria in accordance with the OECD-DAC evaluation framework are as follows:



These evaluation criteria have been defined below along with illustrative questions:

Evaluation Criteria	Illustrative Evaluation Questions	Cross-cutting Objectives
Relevance	<p>A measure of the extent to which the intervention objectives and design respond to beneficiaries, global, country, and partner/institution needs, policies, and priorities, and continue to do so if circumstances change.</p> <ul style="list-style-type: none"> ▪ To what extent are the objectives of the project still valid? ▪ Are the activities and outputs of the project consistent with the overall goal? ▪ Are the activities and outputs of the project consistent with the intended impacts and effects? 	<i>Commitments of the stakeholders are integrated into Project design and planning</i>

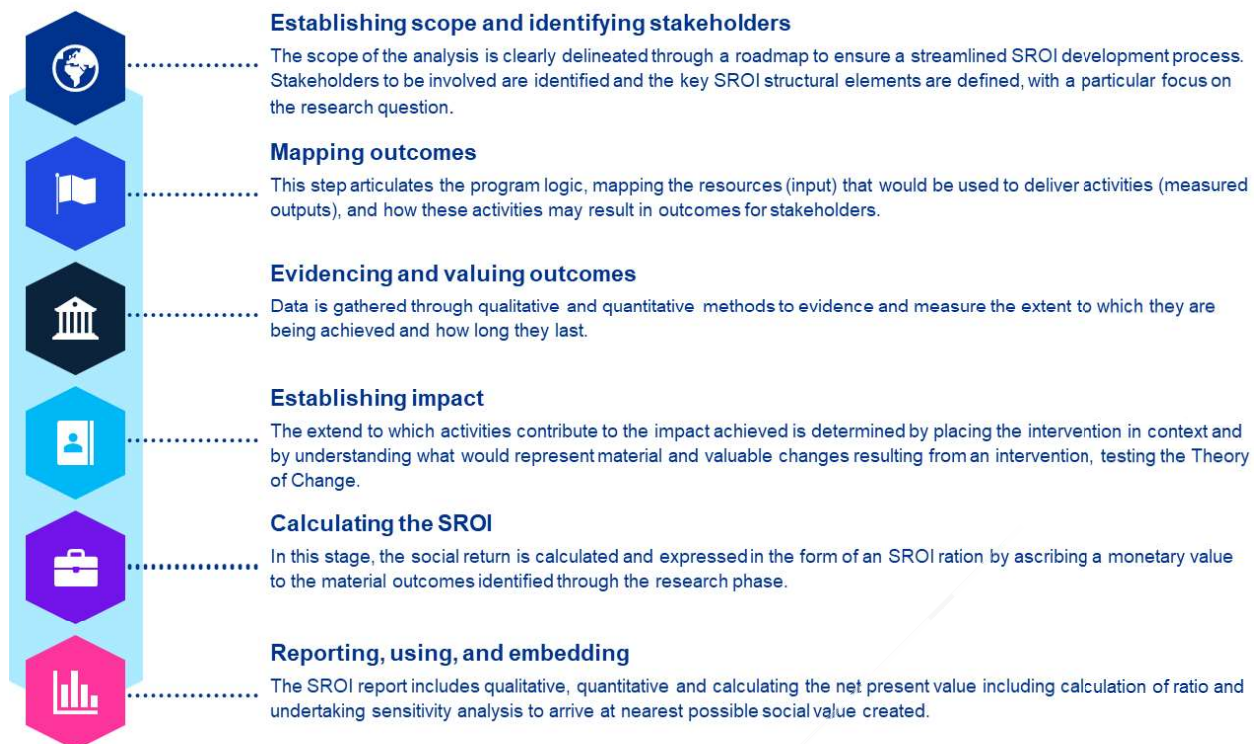
Evaluation Criteria	Illustrative Evaluation Questions	Cross-cutting Objectives
Effectiveness	<p>A measure of the extent to which the intervention achieved, or is expected to achieve, its objectives, and its results, including any differential results across groups.</p> <ul style="list-style-type: none"> ▪ To what extent were the objectives achieved / are likely to be achieved? ▪ What were the major factors influencing the achievement or non-achievement of the objectives? 	<i>Achieved cross-cutting objectives during project implementation</i>
Efficiency	<p>A measure of the extent to which the intervention delivers, or is likely to deliver, results in an economic and timely way.</p> <ul style="list-style-type: none"> ▪ Were activities cost-efficient? ▪ Were objectives achieved on time? ▪ Was the project implemented in the most efficient way compared to alternatives? 	<i>Resources are provided and efficiently used for participation of all stakeholders</i>
Impact	<p>A measure of the extent to which the intervention has generated or is expected to generate significant positive or negative, intended, or unintended, higher-level effects.</p> <ul style="list-style-type: none"> ▪ What has happened as a result of the project? ▪ What real difference has the activity made to the beneficiaries? How many people have been affected? 	<i>Achieved real and long-lasting positive changes in the lives of intended beneficiaries</i>
Sustainability	<p>A measure of the extent to which the net benefits of the intervention continue or are likely to continue.</p> <ul style="list-style-type: none"> ▪ To what extent did the benefits of a project continue after donor funding ceased? ▪ What were the major factors which influenced the achievement or non-achievement of sustainability of the project? ▪ What can be some of the innovative ways to make the project sustainable in the long run? 	<i>Likelihood that project achievements will continue after project</i>
Coherence	<p>A measure of the extent to which the intervention is compatible with other interventions in a country, sector, or institution.</p> <ul style="list-style-type: none"> ▪ Does the project address the synergies and interlinkages between the intervention and other interventions in the same organisation and in the same 	<i>The extent to which other interventions (particularly policies) support or undermine the</i>

Evaluation Criteria	Illustrative Evaluation Questions	Cross-cutting Objectives
	sector/policy landscape? Does it weaken or enhance the impact of any current programs or policies? ▪ Does the program lead to duplication of efforts?	<i>intervention and vice versa.</i>

2.1.2 SOCIAL RETURN ON INVESTMENT (SROI)

Social Return on Investment (SROI) is a systematic method that endeavours to measure and incorporate value created because of investment – namely social, environmental, and economic value which is not fully reflected in conventional cost-benefit analyses. This method is used to monetise the social and environmental impact of the program and measure how much value has been created for each rupee invested/ spent on the program. The evaluative aspect of an SROI quantifies the value of the social impact of programs, and policies, and measures change in ways that are relevant to the people or organisations that experience or contribute to it. Through an SROI, organisations can evidence the social value their programs are achieving, gain deeper insight into what impact they are having for their stakeholders and can thus use this as an input for their company strategy. SROI is about value, rather than money. It can encompass the social value generated by an entire organisation or focus on just one specific aspect of the organisation's work.

SROI utilises the concept of “theory of change/ impact map” to describe the change creation by measuring social, environmental, and economic outcomes. It uses monetary values to represent the outcomes thus enabling calculation of ratio of benefits to costs to be calculated. SROI analysis includes case studies and qualitative, quantitative, and financial information thus helping organisations/ people to base their future decisions. The striking advantage of SROI study is that other impact assessment methodologies stop at identifying outcomes while SROI methodology goes beyond to value them and calculate the social value of impact. Steps of a SROI study are listed below –








Setting the Scope 	Identification of stakeholders including beneficiary group, finalising the scope- setting the boundary of what is going to be considered for evaluative SROI - stakeholders including beneficiaries, impacts, program period, etc.
Mapping Outcomes 	Creating impact map, identifying investments, and valuing inputs, identifying outcome sand indicators for monitoring / evidencing outcomes
Evidencing Outcomes 	Collecting and analysing outcome data and establishing how long the outcome will last
Establishing Impacts 	Identifying and valuing financial proxies, adjusting outcomes using deadweight, displacement, attribution and drop off, calculating the impact
Calculating SROI 	Programming the value of outcome into future based on the duration for which the impact will last, calculating the net present value including calculation of ratio and undertaking sensitivity analysis.

Figure 1 SROI framework

The process of calculation of SROI largely focuses on deadweight, displacement, attribution, and drop-off in association with any outcomes achieved. All these aspects are generally expressed as percentages and these percentages are applied to the financial proxy of each outcome to arrive at the total impact for the outcome. Therefore, we used a customised framework involving a combination of OECD-DAC and SROI to obtain a full picture of the impact created by APL.

2.2 DETAILED METHODOLOGY

The following section discusses the methodology being employed by KPMG in this impact assessment, which has been broken down into four phases.

2.2.1 PHASE I: CONSULTING AND SCOPING

Activity 1: Inception meeting

As a first step, the KPMG team set up a scoping and kick-off meeting with the APL team to discuss the proposed work plan detailing out the various tasks to be conducted along with stipulated timelines. KPMG team had developed a detailed project plan to drive the engagement.

Activity 2: Desk-review and internal stakeholder engagement

The team conducted desk review of documents and reports shared by the client such as program concept notes, annual reports, program progress/closure reports, etc. Additionally secondary research was conducted to develop an in-depth understanding of the project locations, interventions, etc. Discussions with APL team and implementing agencies were conducted to understand the project interventions' KPIs, map external stakeholders, and determine sampling strategy and size.

2.2.2 PHASE II: RESEARCH DESIGN

Activity 1: Development of Impact Map/Theory of Change

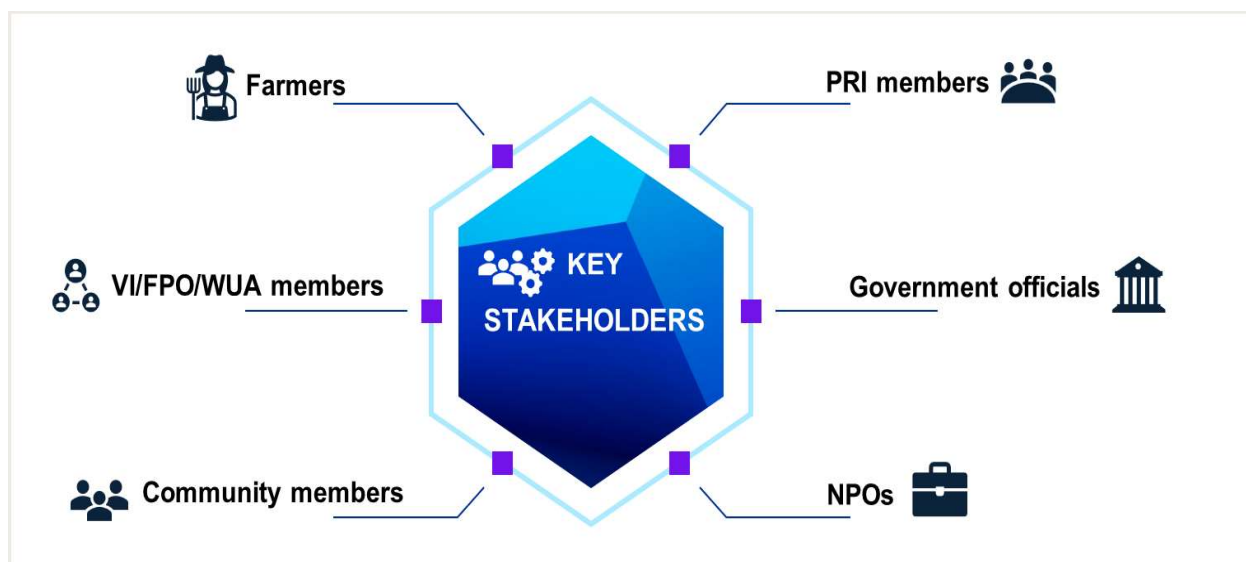
A theory of change-based impact map was developed to establish the outcome and impact parameters for the project. An impact map is defined as a logical chain/ framework giving an overview of how inputs (actions taken, or work performed) result into outputs (changes resulting from the interventions relevant to the outcomes), causing outcomes (likely or achieved short or medium-term effects arising out of the outputs of intervention) and impact (positive or negative, intended, or unintended, direct, or indirect effects created by the interventions).

Impact map for the Water for Livelihoods Project:

Stakeholder	Project Objectives	Inputs	Output	Outcome	Evidence Indicator	
Farmers, Community members FPO/VI/WUA	To promote basic supplementary irrigation facilities by creating and strengthening water harvesting structures and increase water storage and availability;	Construction and refurbishment of check dams, ponds and other WHS, Capacity building, Access to Finance, Time	Number of families reached out / availed benefits of check dams and other water harvesting structures	Increase in agricultural production	Changes in availability of cultivated land Changes in cropping pattern by farmers Changes in multi-seasonal cropping	
				Access to secure livelihood	Changes in the input cost required for agriculture	
				Creation of sustainable water supply	Changes in the irrigation fed agriculture, changes in the availability of water, reduced dependency on the other sources of water	
				Creation of employment opportunities	Changes in the labour employment by the local population	
	To improve and stabilize surface soil to convert unirrigated land to irrigated land.		No. of families benefited from Group wells & Borewell	Access to potable water	Reduction in water borne diseases (Improvement in health), reduction of drudgery (time saved)	
			To encourage sustainable farming practices to increase household income of tribal farming community, in addition to benefiting the environment.	No. of families benefited from agriculture interventions	Access to secure livelihood	Changes in the input cost required for agriculture, adoption of improved agriculture practices
				No. of village institutions benefited	Establishing community stewardship over the common water resources	Community led governance of its resources, effective operations, and maintenance of water structures
			To organize and strengthen the village institutions around water harvesting and related livelihoods	Increase in water storage capacity	Improved biodiversity in the catchment area	Increase in biomass in command area, Improved bio-diversity – presence of bird and animal species, Improved soil health, Reduced soil pollution.

Activity 2: Stakeholder Mapping and Sampling strategy

Stakeholder mapping is the process of identifying all the stakeholders involved in a project and their roles and responsibilities on one map. The main benefit of a stakeholder map is to get a visual representation of all the people who can influence the project and how they are connected. Stakeholders who experience change, whether positive or negative because of the interventions carried out were considered for the study. Furthermore, their pertinence to the scope of the study and relevance to the overall analysis were assessed.



Sampling of stakeholders for engagement was done based on the materiality of the stakeholder and the extent of the impact on the stakeholder. Considering the overall outreach of the project as 1210 beneficiaries, the statistically significant sampling has been derived using the method of 95 percent confidence level and five percent margin of error. Additionally, we have taken extra sample stakeholder in order to derive accurate social return on investment ratio. The stakeholder-wise mode of interaction has been detailed out below:

Stakeholder name	Sample covered	Research Tools
Farmers	100	Survey, One-on-one interactions, FGDs
VI/FPO/WUA members		
Community members		
PRI Members		
Government Officials		
NAF staff		

Stakeholder	Reason for Inclusion	Data collection tool
Farmers/community members who have been benefitted due to water harvesting related interventions	Since the farmers are the direct beneficiaries of this study hence it is important to include them to understand if the objectives of this program have been met.	Structured Questionnaire: were developed In-depth Interview: were also undertaken
Farmers who have been benefitted due to agriculture related interventions	Agriculture is a key intervention, Hence, it is critical to get their perspective of the beneficiaries	Structured Questionnaire: were developed for Teachers In-depth Interview: were also undertaken
Stakeholders excluded from the study		
PRI Members and government officials	Excluded - Tertiary stakeholders not considered	Not applicable

Activity 3: Development of Data Collection Tools

This study employed a mixed-methods approach, incorporating both quantitative and qualitative data collection and analysis techniques. In the initial phases, detailed desk review was conducted to examine current knowledge and identify gaps and areas for further exploration. After literature review and development of research design, survey instruments were developed based on the impact map to collect data (quantitative and qualitative) from a sample population, utilizing an offline method to gather information on participants' experiences, attitudes, and behaviours. Semi-structured interviews with key stakeholders, including experts, PRI members, government officials, community leaders, and practitioners, were also designed to gain an in-depth exploration of the research topic and insights into emerging trends and best practices. Developed data collection tools were aligned to the key program objectives, scope outlined in the RFP, along with additional questions to add valuable insights for the case study. Tools prepared include:

- Tools for individual interactions
- Tools for focus group discussions
- Tools for other key stakeholder interactions
- Development of a research and data collection plan

2.2.3 PHASE III: DATA COLLECTION

Activity 1: Development of field-visit plan

Stakeholder interactions were through mutual discussion with APL and project implementing partner- NAF. A detailed timeline was developed for the field visits. The implementing partner has facilitated support in

scheduling interactions, mobilising the stakeholders and translator (if needed). Additionally, the team consulted with the implementing partner to identify any potential challenges or obstacles that may arise during the field visit, such as language barriers, cultural differences, or safety concerns. This ensured that the data collection teams had access to the necessary resources and support to conduct the study in an efficient and ethical manner.

Activity 2: Conducting field visits

The stakeholder consultations were conducted through individual interviews, focus group discussions, KIs with other stakeholders. KPMG ensured inclusion of facilitators who possess previous experience in engaging with participants using their native/local languages. Training and sensitizing sessions were conducted for the data collection team to help them effectively communicate with the stakeholders. Team had conducted pre-testing/pilot testing of tools. The data collection process was monitored for completeness, accuracy, backcheck, and triangulation.

2.2.4 PHASE IV: ANALYSIS AND REPORTING

Activity 1: Data analysis and preliminary findings

During the data analysis, both qualitative and quantitative analysis were conducted on the data collected. To enhance accuracy and reliability, the findings from the quantitative data collected on the ground were triangulated to an extent. The collected information was thoroughly analysed on a location disaggregated basis, allowing for a detailed understanding of the specific areas involved. To calculate the social returns and impacts resulting from the program, the SROI framework and OECD-DAC framework were utilized. Additionally, a sensitivity analysis was conducted to examine the results of the ROI. The data and observations obtained during the primary data collection phase and document review were carefully analysed to inform report writing. The findings were further scrutinised basis the assurance standards for SROI assessments.

Activity 2: Development of report and presentation

A comprehensive and detailed report was created for Asian Paints Limited at the enterprise level encompassing the key observations, analysis, findings, and recommendations derived from the assessment. The report adhered to the guidelines provided by the OECD-DAC and SROI frameworks, ensuring accuracy and relevance. Before finalising the report, a draft version was shared with APL for discussion and their valuable inputs. After finalising, the report was presented to the leadership at APL. Furthermore, separate reports were prepared for each project, providing a breakdown of data and analysis. The data collected and the analysis have also been shared with APL.



03

ANALYSIS & FINDINGS





3 ANALYSIS AND FINDINGS

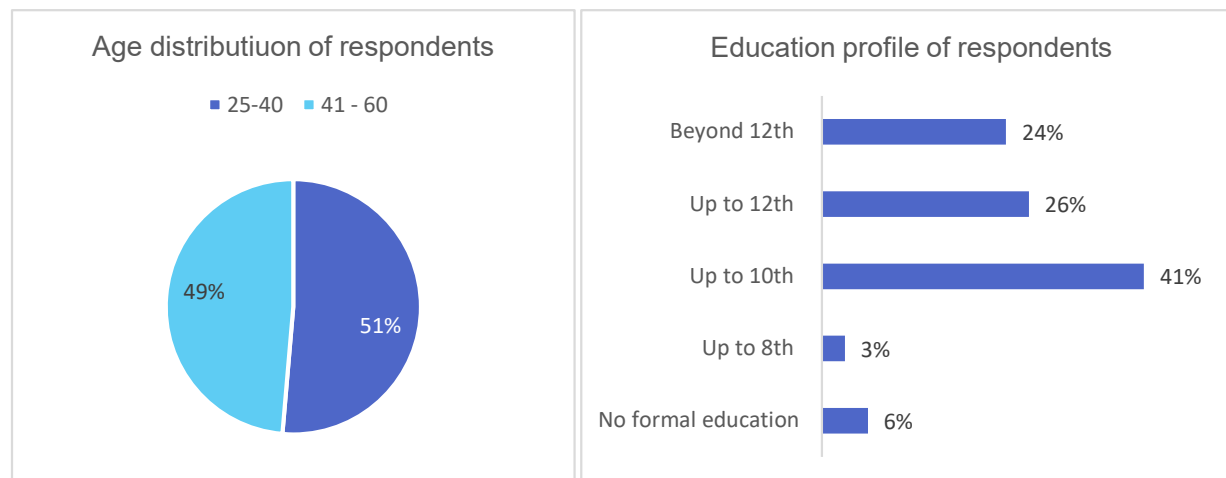
The section below highlights the findings and observations based on the interactions conducted with 36 beneficiaries of the Water Resource Development project supported by Asian Paints Ltd. across the ten villages of Mysore districts of Karnataka.

3.1 Respondents profile

Distribution of the respondents is as follows:

Villages	% Respondents
Basavattige	22%
Handvinahalli	32%
Hedathalle	8%
Hullimavu	16%
Kamahalli	22%
Total	100%

The respondents interviewed were largely (51 percent) from the age group of 25 to 40 years, followed by 49 percent from 41 to 60 years. In terms of education level, majority (29 and 26 percent) of the respondents had education up to 10th and 8th standard whereas 21 percent had no formal education.



All the respondents (100 percent) shared that primary occupation/ source of income is agriculture. Nearly 60 percent reported labour and non-salaried work as a secondary source of income.

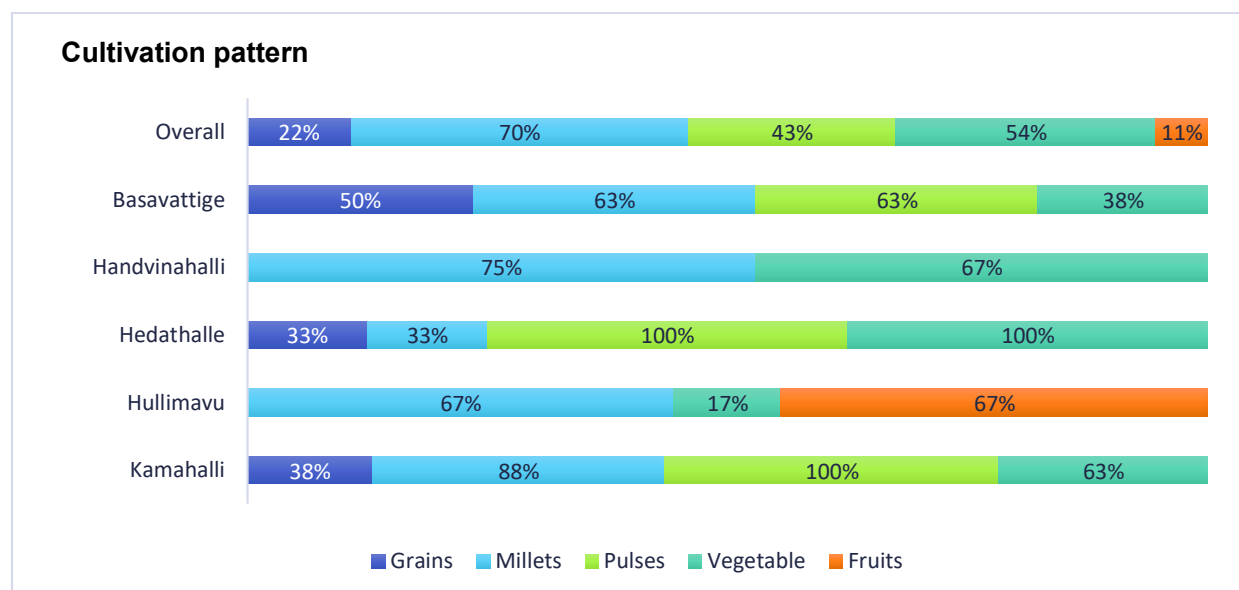
One-fourth of respondents have family size of four or less members. Rest of them have family size ranging 5-7 members, indicating high pressure on earning members.

For nearly half of the respondents, they were the sole earning members in the family and about 40 percent indicated having two earning members.

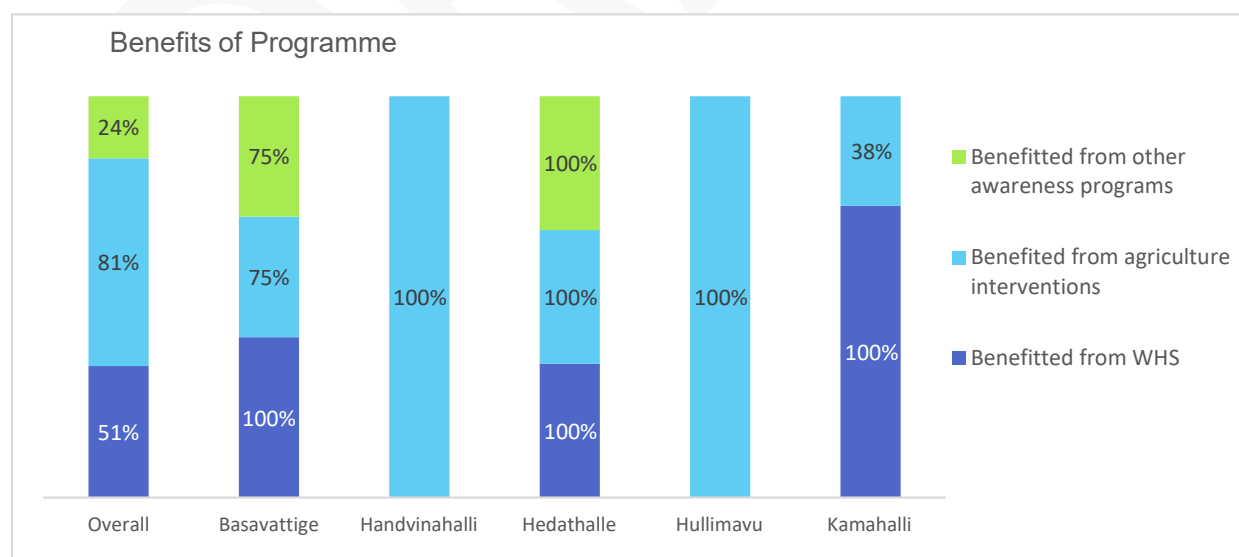
All respondents from Mysore district indicated owning agricultural land.

During the discussion, all respondents from all villages reported owning less than two acres of agricultural land, thus can be categorised as marginal farmers. 62 percent of respondents had irrigation facilities on their land, while the remaining 38 percent of farmers were practicing rain-fed agriculture. A vast majority of respondents (86 percent) practice cultivation in both Kharif and Rabi season, while the remaining 14 percent only cultivate in Kharif season. During discussion, it was understood that millets, pulses, grains, and

vegetables are the most cultivated crops in the region. Millets are grown by more than one-third (70 percent) of respondents, followed by vegetables (54 percent) and pulses (43 percent).



All respondents reported being aware about the Water for Livelihood programme of APL. More than three-fourths (81 percent) of respondents have received agriculture support while nearly half of respondents (51 percent) have benefitted from WHS interventions and one-fourth (24 percent) respondent have benefitted from awareness programs. All respondents from Kamahalli, Basavattige, and Hedathalle have received the benefit from WHS. The respondents from Handvinahalli and Hullimavu indicated receiving support only for agriculture interventions.



Basis the OECD-DAC framework the project impact has been analysed and presented as below:

3.2 3.1 EVALUATION CRITERIA: RELEVANCE

Relevance is a measure of the extent to which the intervention objectives and design respond to beneficiaries' needs, policies, and priorities, and continue to do so if circumstances change.

Relevance assesses how well the programme connected with the aims and policies of the government in which it is being executed. It also seeks to determine whether the programme is relevant to the needs of the beneficiaries. The program's relevance is understood in this context in terms of community needs as well as connections to existing government operations.

3.2.1 Need of the community:

Water resource development in the Mysore block of Karnataka state is crucial to address water scarcity and ensure sustainable agriculture practices. Upon focused group discussion, community members shared water scarcity challenges faced before the project implementation. They shared that there has been lack of systematic harvesting of rainwater in the region resulting in fallow land. Over the years, agriculture has become cost intensive. Existing ponds/ tanks were shallow in nature and needed deepening to improve storage capacity. The water from these ponds was predominantly used for cattle rearing and not for irrigation purposes. Most of the agricultural lands of small and marginal farmers were rainfed and level of ground water above 600 feet, on an average, as indicated by respondents. Basis the information shared, large scale farmers usually cultivated water intensive crops like sugar cane and banana. On the other hand, small and marginal farmers grew ragi, maize, pulses, and vegetables. Additionally, the agriculture practices were chemical intensive.

3.2.2 Alignment to Schedule VII of the Companies Act, 2013^{xiv}

The programme has been designed to cater to marginalised communities residing in the vicinity of Asian Paints Ltd.'s operational areas in alignment with the provisions of Section 135 of the Companies Act (2013) and CSR Rules.

The actions undertaken as part of the programme fall into the following broad categories of the section:

- (i) eradicating hunger, poverty, and malnutrition, promoting health care including preventive health care and sanitation [including contribution to the Swachh Bharat Kosh set-up by the Central Government for the promotion of sanitation] and making available safe drinking water
- (iv) ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining quality of soil, air and water [including contribution to the Clean Ganga Fund set-up by the Central Government for rejuvenation of river Ganga].
- (x) rural development projects


3.3 EVALUATION CRITERIA: COHERENCE



Coherence refers to the compatibility of the intervention with other interventions in a country, sector, or institution. It measures the extent to which other interventions (particularly policies) support or undermine the intervention, and vice versa


3.3.1 Alignment of the programme with National Priorities and Sustainable Development Goals

The Sustainable Development Goals (SDGs), commonly referred to as the global goals, were established by all United Nations members in 2015 with the aim of eradicating poverty, preserving the environment, and guaranteeing that everyone lives in peace and prosperity by 2030. India was a key contributor to the development of the SDGs and is dedicated to fulfilling them by 2030.

Due to the nature of the intervention, the programme has an impact on a wide range of SDG-related outcomes, as shown below:

SDG Goal		Targets	Relevance
GOAL 1	No Poverty 	Target 1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.	The project initiated a programme on Water resource development to improve the water management and governance of land and water resources by strengthening community stewardship

GOAL 2	Zero Hunger <div>  </div>	<p>Target 2.4</p> <p>By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.</p>	<p>The project activities target to strengthen rural livelihoods through agriculture productivity and better adaptive capacities.</p>
GOAL 6	Clean Water and Sanitation <div>  </div>	<p>Target 6.1</p> <p>By 2030, achieve universal and equitable access to safe and affordable drinking water for all.</p> <p>Target 6.4</p> <p>By 2030, substantially increase water- use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from waterscarcity.</p>	<p>The project activities included rejuvenation of water bodies in villages to improve access to water for the community members for drinking and irrigation purposes.</p>

GOAL 15	Life on Land 	Target 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements. Target 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.	Project activities included promotion of prevention of natural resources among the community members. Within water resource development initiatives, water user groups were formed for operation and maintenance of the infrastructures constructed and sustainability of the project.
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Water crisis threatens the health and development of communities across the world. Over the years, the government has been making considerable efforts to address the issue of depleting groundwater. While the Ministry of Jal Shakti^{xv} aims to devise policies and programs for better management of water in the country, the Government of India had launched the Jal Shakti Abhiyan in 2019^{xvi} with an aim to improve water availability including groundwater conditions in various water stressed blocks. Following that, the Government launched “catch the rain campaign” in 2021^{xvii} emphasising on creating rainwater harvesting structures. In this scenario, Asian Paints Ltd. project on water for livelihood aligns with the national priorities of and the government’s efforts of rejuvenating water bodies to address the issue of depleting groundwater in the country.

3.4 EVALUATION CRITERIA: EFFECTIVENESS

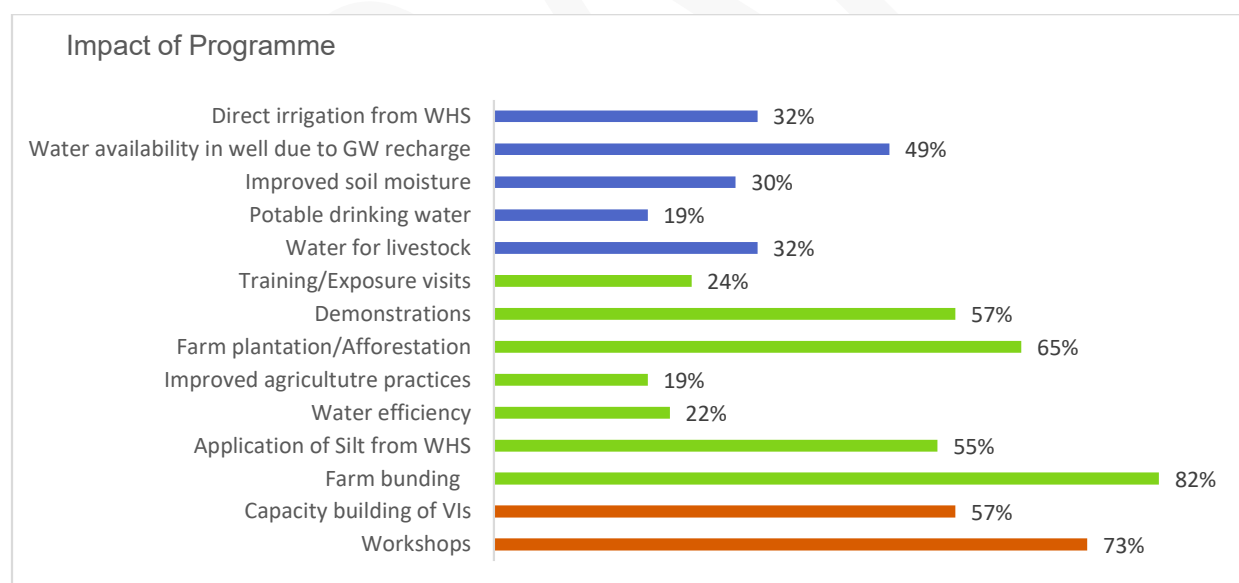
Effectiveness is defined as an assessment of the factors influencing progress toward outcomes for each stakeholder as well as validation of the robustness of systems and processes.

It aids in ensuring that the implementation and monitoring processes are sturdy to achieve optimum social impact. The efficacy of the programme is established by examining how well the program's activities were carried out as well as the effectiveness with which the program's systems and processes were implemented.

Asian Paints Ltd. implemented the Water for Livelihood project in partnership with NAF that have a presence in the field. It was ensured that good rapport is established with the villagers and made them aware about the project through various activities like FGD's, workshops and trainings. The project was implemented with support of village heads/ Gram Pradhan in the respective villages. Timelines and milestones for the project were also decided in consultation with village and panchayat members.

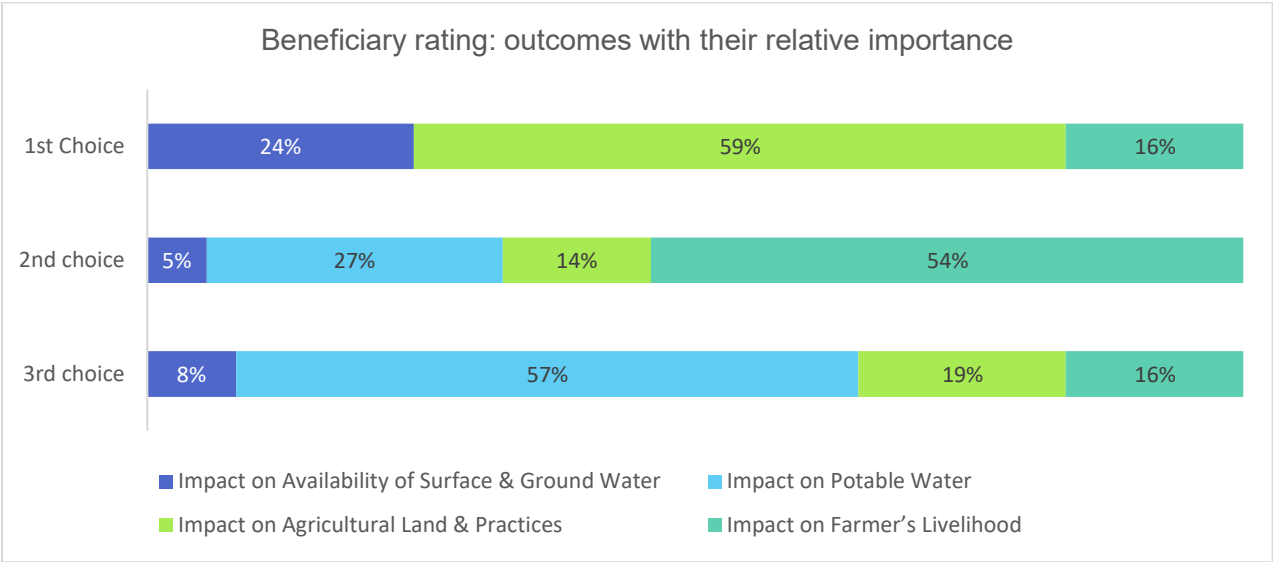
In Water resource development project, promotion of better irrigation methods and techniques through agriculture interventions and awareness programmes were undertaken with the communities, across the project locations. Farmers shared that they found such exercises very relevant and adopted the suggested techniques aiming at improving agriculture productivity.

Across the Mysore region respondents felt that there has been a positive impact of water-related activities implemented by APL. They have shared the experience of increased accessibility of surface water, improvement in soil moisture regime, and availability of potable drinking water for their families and livestock. The below table shows the responses recorded from the ground on above mentioned outcomes.

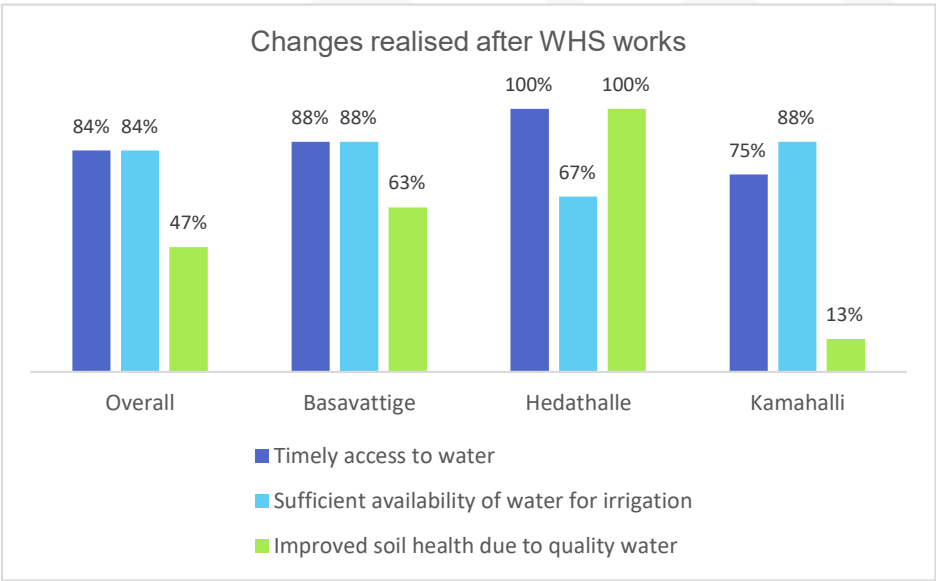


Water resource development programs focused on agriculture interventions included training, demonstration, awareness program and efficient use of water in irrigation activities. During interaction, respondents shared positive remarks about improved awareness, and increased agriculture yield over the year. They have also shared the experience of improved water potential in the region across the season.

Relative importance of agriculture outcomes shared by beneficiaries:



The graph displays the project outcomes' ranking based on beneficiaries' experience and impact. Approximately 59% of beneficiaries prioritized the impact on agricultural land and practices as their first choice, followed by 54% ranking the impact on farmers' livelihood as the second, and 57% selecting the impact on potable water as their third choice.



100 percent of respondents were aware about the Asian Paints Limited's 'Water Resource Management' programme in their area, showcasing strong brand recognition amongst communities. Due to water resource development activities in Basavattige, Hedathalle, and Kamahalli villages,

the beneficiaries reported the positive impact of water availability in their region. They stated that they have experienced improved soil health, water potential, and timely access to water throughout the year.

3.5 EVALUATION CRITERIA: EFFICIENCY

The efficiency criterion seeks to determine whether the project was completed in a cost-effective and timely way. The purpose is to establish whether the inputs—funds, knowledge, time, etc. were effectively employed to create the intervention outcomes.

Duplication/ overlap of project activities: Duplication of effort arises when similar interventions are needlessly undertaken within the same community/ location due to poor knowledge management and inadequate coordination of projects, thereby resulting in fund and resource inefficiency. However, in this case, it was observed that the beneficiaries did not have access to any other similar programmes in the region during field observations and interaction with respondents.

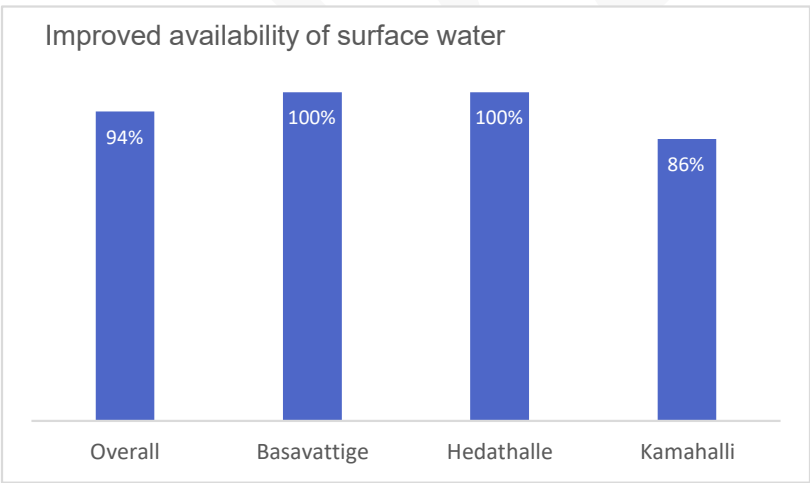
3.6 EVALUATION CRITERIA: IMPACT

The impact has been measured in terms of the proportion of respondents who reported having a significant change in their lives due to the initiation of the project.

The goal of measuring the impact is to determine the project's primary or secondary long-term impacts. This could be direct or indirect, intentional, or unintentional. The unintended consequences of an intervention can be favourable or harmful.

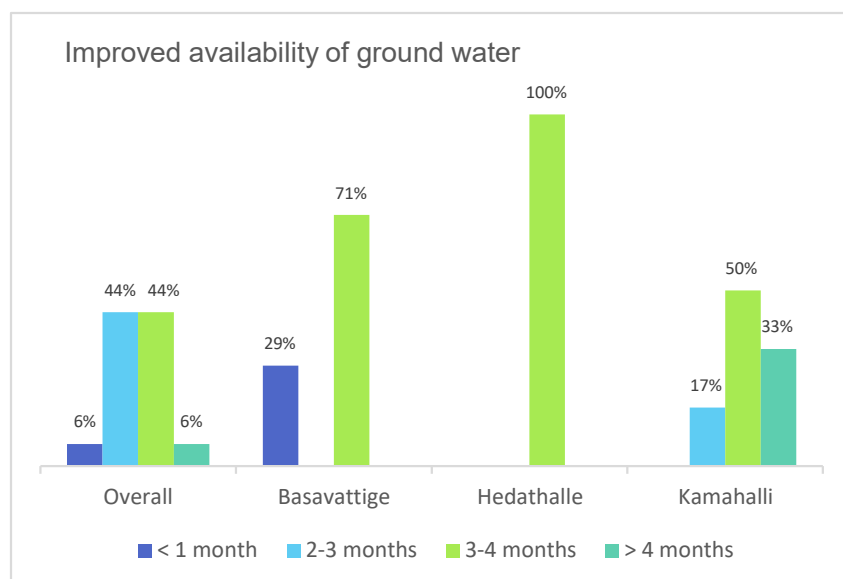
The program's socioeconomic impacts are discussed in the following paragraphs.

3.6.1 Impact on Access & Availability of Surface & Ground Water



The interventions of the project were planned and executed to provide the community members with better access to water resources. Across all three villages where project work was implemented, on average 94 percent of community members shared that they have experienced improved availability of water post-intervention. In Hedathalle and

Basavattige, all the respondents reported a positive impact on water accessibility, whereas 86 percent of respondents from Kamahalli shared that there was improvement in access to water.

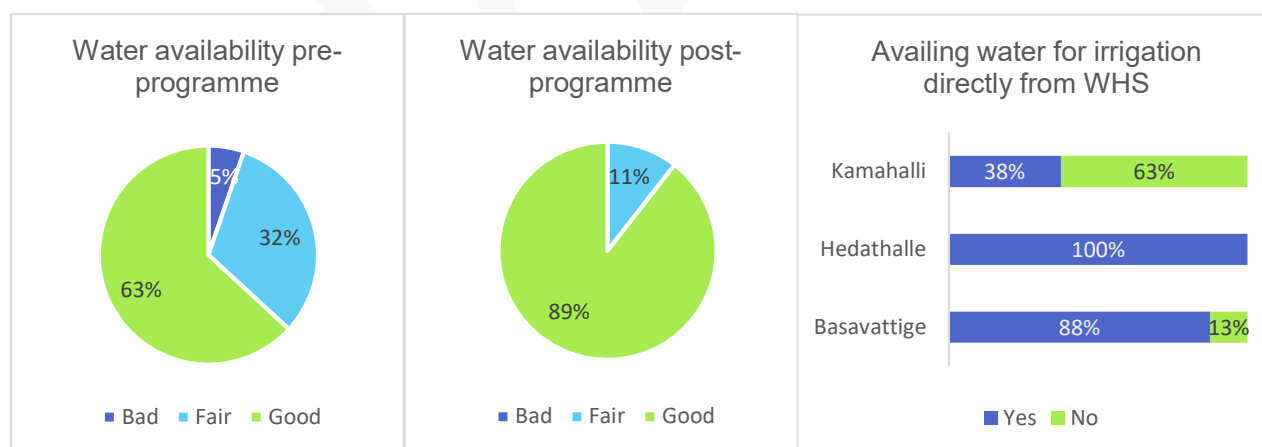


Majority of respondents across three villages reported that the project interventions resulted in increased water availability in their wells/borewells. About 88 percent of the respondents shared that there was an improvement in water availability/retention in wells/borewells for an additional three to four months (pre-post comparison). A smaller fraction of respondents indicated

duration of improved availability of groundwater for either less than a month (6 percent) or more than four months (6 percent).

Availability of water:

Prior to the implementation of the water for livelihood project in their area, 5 percent of respondents from across the region rated the availability of water as bad, and 32 percent rated it as fair. However, after the implementation, 89 percent of respondents rated the availability of water for agricultural purposes as good.

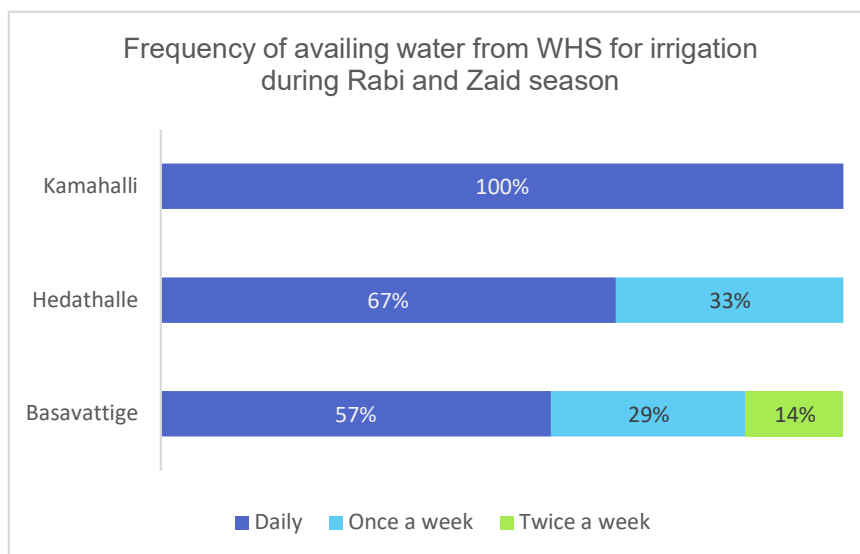


Around 75 percent of the respondents shared that they availed water directly from the water harvesting structures for irrigation purposes. In Kamahalli and Basavattige 38 percent and 88 percent, respectively shared that they directly accessed water from the structures to irrigate their fields whereas, all respondents from Hedathalle avail water from WHS for irrigation purposes. During visit, it was understood in Kamahalli, that the pond is located far from the farm fields. Therefore, only a limited number of community members

use pond water for irrigation. Whereas a significant number of community members use the water for livestock purposes.

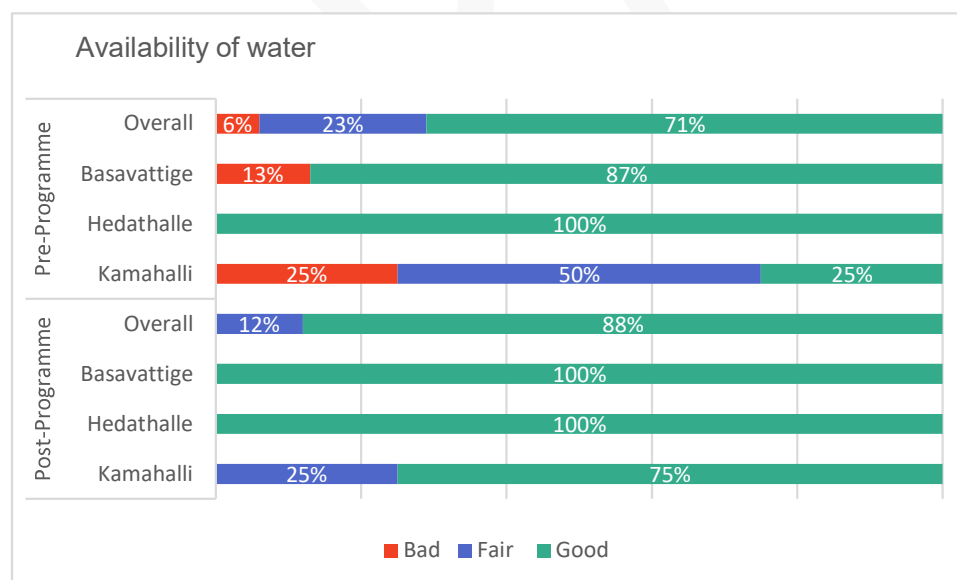
Out of the WHS beneficiaries who shared that they availed water directly from the water harvesting structures for irrigation purposes, most of them reported accessing water from the structure daily.

Similarly, the majority of respondents avail water during Rabi and Zaid seasons from WHS once in a week and once fortnightly in Basavattige.



3.6.2 Impact on potable water

Availability of potable water: On average around 23 percent and 6 percent of respondents rated water

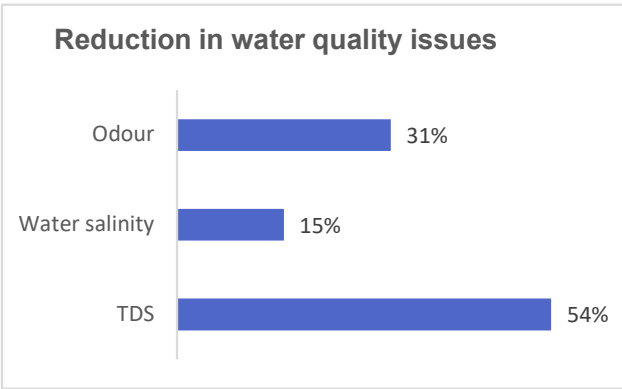


availability prior to the project intervention as fair and bad, respectively. However, around 71 percent of respondents shared good water availability. Additionally, all the respondents reported that there was an improvement in availability of water throughout the year.

Thus, the project interventions helped increase the availability of potable/ drinking water for the beneficiaries. Post project implementation, significant number of respondents (88 percent) indicated good water availability across three villages. A significant change is seen in Kamahalli village, where three-fourth

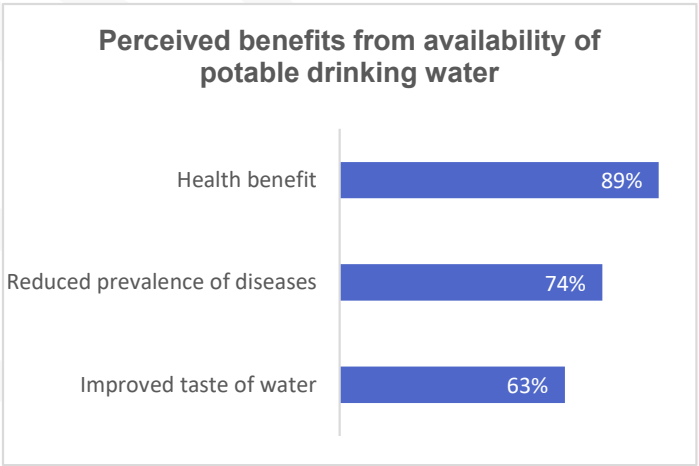
of respondents indicated good availability of water post intervention as compared to one-fourth respondents during pre-intervention period.

Quality of drinking water: All respondents across the three villages shared that there was an improvement in the quality of drinking water post-project intervention. During discussion with the community members, it was shared that the hardness of water has been reduced post-project implementation.



Around 89 percent respondents reported that the water quality has improved post project intervention. Of these, around 54 percent shared that there has been a reduction in TDS, 31 percent reported decrement in unpleasant smell and about 15 percent indicated reduced water salinity. Out of the respondents who shared that there has been a reduction in in TDS levels, majority of them belong to Basavattige and Hedathalle village.

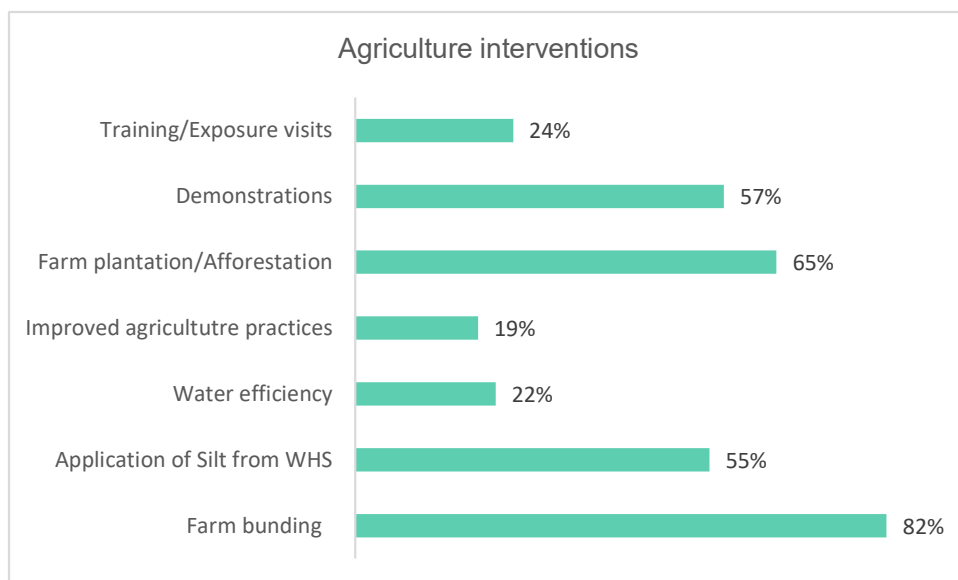
89 percent of respondents shared that the availability of potable drinking water has brought health benefits to the community. 74 percent respondents highlighted reduction in the prevalence of diseases and about 63 percent shared improvement in water taste. Out of the respondents who shared that there has been a reduction in the prevalence of disease due to the availability of potable drinking water, around 64 and 60 percent of beneficiaries belong to Hedathalle and Kamahalli villages, respectively.



During discussion, an average 88 percent of respondents across three villages shared the reduction in health-related expenses due to project intervention. All the respondents from Hedathalle reported on the similar line. Around 75 and 88 percent of respondents from Kamahalli and Basavattige shared reduction in health-related expenditures, respectively. 74 percent respondents shared that there is a reduction in expenses related to drinking water post the intervention.

3.6.3 Impact on Farmer's livelihood

Agriculture interventions: During the discussions, the respondents from villages Handvinahalli and Hullimavu indicated that only Demonstrations and Farm plantation/Afforestation activities have been conducted in their villages. While respondents from other three villages indicated trainings/exposure visits, improved agriculture practices, silt application on field and farm bunding.



The respondents from Basavattige village indicated receiving all these interventions. Majority of respondents from Hedathalle indicated training/exposure visits and water efficiency awareness sessions, while some respondents indicated farm bunding and

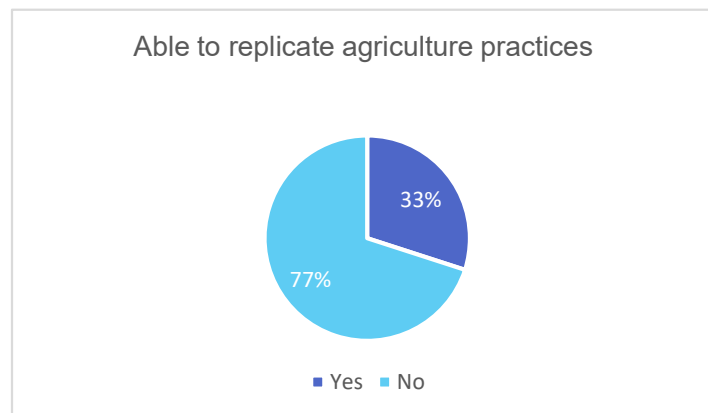
good agricultural practices. Less than one-fourth respondents from Kamahalli indicated trainings/exposure, good agriculture practices and water efficiency. 89 percent respondents indicated increase in agriculture productivity and the delta change in yield varies from 15 to 20 percent.

Impact on farming practices

It was understood that in intervention villages majority of beneficiaries are practicing rain-fed agriculture. 76 percent of respondents indicated increase in area under irrigation and 59 percent reported practicing cropping in multiple seasons due to increased availability of surface water post intervention.

The respondents from Handvinahalli and Hullimavu villages reported that there has been no significant impact on total agriculture production, cost of cultivation and hence income due to the limited agriculture intervention in their villages. However, the respondents from Basavattige, Hedathalle and Kamahalli villages reported increase in income ranging from 15 percent to 25 percent due to increased agriculture production and improved livestock productivity.

Improved knowledge, attitude, and practices:



During the discussions, around 33 percent of respondents shared that they were able to replicate replicate/implement the learnings from training/workshop/demonstrations. Out of which all respondents shared that they initiated application of non-chemical pesticides in agriculture practices as demonstrated by implementation organisation.

During the discussion community members shared their experience of awareness sessions, capacity-building workshops and demonstrations they have attended. Around 33 percent of respondents shared awareness session on integrated pest management to be effective, and 44 percent shared soil testing activity to be effective. Farmers who have rated agriculture interventions shared that they found such sessions very relevant and hoped to adopt the suggested agricultural and irrigation techniques aiming at improving agriculture productivity in the long-run. During discussions with community members, all respondents shared that impact of this project will last more than five years.

Community members shared that the impact on agriculture land practices is most important impact due to 'Water for Livelihoods' programme, followed by impact on farmer livelihood and impact on water.

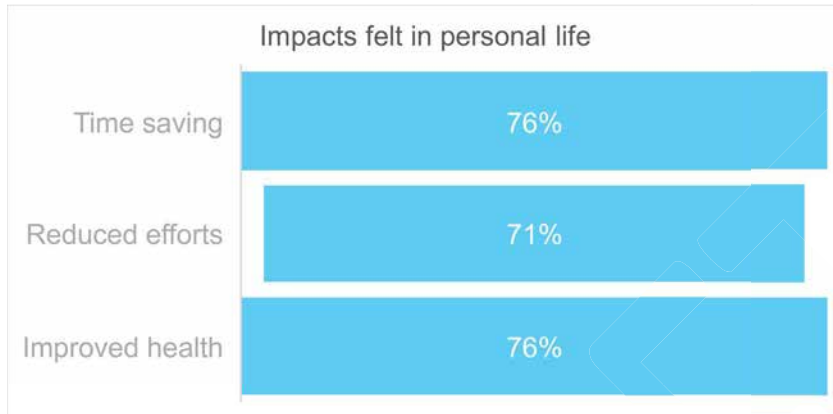
Impact on livestock rearing

From beneficiary interactions, it can be inferred that 'Water for Livelihood' programme had substantial impact on livestock rearing in intervention villages. All respondents indicated improved productivity of livestock due to availability of water. An increase of 72 percent in livestock productivity is observed based on the responses received (increase in mean daily yield from 3.62 litres to 6.2 litres). Additionally, 63 percent of respondents have reported increase in number of livestock with the median number of livestock increasing from 2 (pre intervention) to 3 (post intervention). Few respondents from Basavattige village also emphasized that the animals are less susceptible to illness, owing to veterinary camps held in past.

3.6.4 Other Impact Areas

Impact on health, efforts, and time

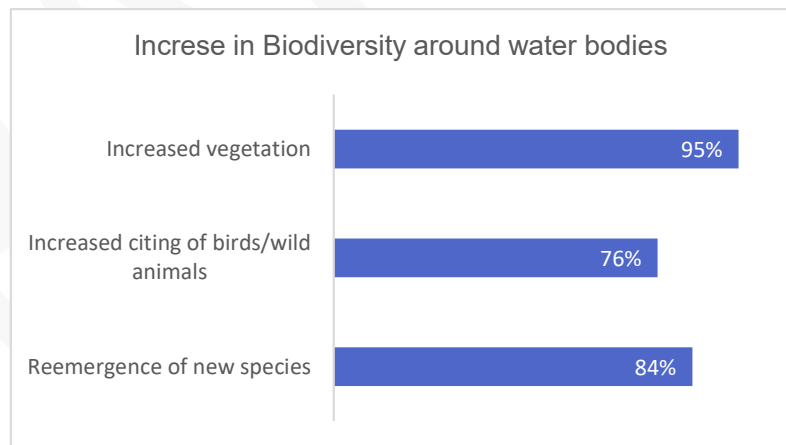
The respondents also shared the impact of the project interventions on their health, time saved, and



efforts. 76 percent respondents shared that there was an increase in the time saved. 71 percent respondents reported reduction in efforts and 76% indicated improvement in their health post-intervention.

Impact on Biodiversity

95 percent of the respondents indicated evidencing increased vegetation around the waterbodies. 76 percent of the respondents reported observing increased citing of birds or wild animals around these water bodies. 84 percent of respondents have observed re-emergence of new species around waterbodies due to the increased availability of water.



3.7 EVALUATION CRITERIA: SUSTAINABILITY

Sustainability assesses how well the programme secures the long-term viability of its outcomes and influence.

The continuation of a positive effect after development or aid has stopped is referred to as sustainability. This evaluation criterion contains key elements concerning the likelihood of continuous long-term benefits and risk tolerance. To achieve sustainability, a governing framework, financial model, and operating system must be established.

100% of the community members rated their overall experience in the 'water for livelihood' project in bringing about positive change in your quality of life as good

Sustainability refers to the sustainability of an intervention's positive effects after development or assistance has ended. This evaluation criterion includes significant elements related to the likelihood of ongoing long-term benefits and risk tolerance. Setting up a governance structure, financial model, and operating system is necessary to ensure sustainability.

Due to programme activities, there was improvement in water availability in the programme areas. However, respondents from two sampled villages indicated only short term awareness sessions conducted, which has led to their dissent from the programme. In other three villages, respondents have observed positive changes due to WHS and farm interventions (farm bunding and soil testing) that has initiated a change in the perception of the people. On similar note, respondents shared their views on the long-lasting impact of the project. As a result, 59 percent of respondents shared that they believe that the project impact can last for up to one year and 35 percent of respondents believe it can last from one to three years.

Governance of Water Harvesting Structures

Water is common pool resource. These resources are not owned or used by a single individual but are shared among multiple actors. the role of local communities in the management of natural resources is undermined in the dominant discourses. Local communities who are the primary stakeholders of natural resources, in many instances, lack the institutional spaces to manage these resources as common property regimes. 47 percent of respondents indicated formation of Water User Association in their village and 44 percent have attended trainings conducted regarding NRM and water governance. Only 29 percent respondents indicated formation of norms/laws for usage of water. Conclusively, during discussions, it was indicated by all respondents that the WUA are not effective in their village and handing over the ownership to Panchayat is the only way of improving effectiveness of WUAs, thereby leading to sustainability of WHS.

WAY FORWARD

Water is a crucial resource and a critical input in nearly all processes of life. Adequate availability of water is important for agriculture and animal husbandry to increase the productivity. As has been mentioned in the introductory chapter, with groundwater being increasingly over-exploited, agriculture is becoming increasingly difficult to pursue; thus, contributing to rural distress and migration. The water resource development initiative aimed to improve the livelihoods of people living in rural areas. One of the objectives of the programme was to revive traditional institutional mechanisms related to water and enable them to function effectively in a water-stressed environment. This includes governing complex and scarce resources like groundwater. Some of the suggestive way forward is outlined below:

Scalability/ Replicability

- An integrated program to bring about a change by leveraging technology in agriculture to move it from subsistence to enterprise-level cultivation can be aimed. the approach can be a mix of sustainable farming approaches (good agriculture practices, creating Agri-entrepreneurs, Input and Output aggregation for small farmer groups, establishing Hitech Farm Demonstrations, Organising Krishi Choupals for specific technical information dissemination), deployment of IoT solutions (installation of weather stations to measure real time in-situ dynamic climatic and edaphic factors; and pest traps) and by improving their access to information through technology use (Missed call facility, phone call consultations, Smart App notifications, WhatsApp groups, SMSs and the Agri-entrepreneur service to provide more personalized and one on one support to farmers.)
- In agriculture intervention, to bring more awareness- soil health card can be introduced. This should contain recommendations regarding chemical characteristics, physical properties and biological attributes essential and suitable for farmers.
- The program may expand the other set of watershed activities in the same geography. It could be around treating other drainage lines, fodder grass seeding, strengthening other rural livelihoods, decreasing anthropogenic pressure and others.

	Enablers	<ul style="list-style-type: none"> • Increased involvement and capacity building can be promoted to ensure greater participation from women in the program implementation and decision-making. This could be achieved through enabling strong institutions, and participation in user groups with acceptance by PRI members. • Improving the program delivery by training and orienting PRI members on the larger objectives, intended outcomes, and the process to be followed. • Convergence opportunities with government and non-government institutions can be explored to scale and replicate the programme. • Establishing village institutions/FPOs/ milk banks led by community members can build support systems for small and marginal farmers. This ensures transparency and fairness in product pricing.
	Community participation	<ul style="list-style-type: none"> • It is essential to explore and implement new and innovative methods for engaging communities. This will help in sharing knowledge among community members, making communities equal partners in the pursuit of water security. • Community participation is the to bring about effective change in challenging common beliefs and guiding them towards recognizing and addressing the water crisis in their community. For instance, the prevailing notion in many communities is that groundwater depletion is solely caused by low rainfall. However, interactive discussions can help the community understand that while rainfall may have become erratic, changes in agricultural practices over the years could also contribute to the fast-depleting groundwater.
	Establishing institutions for community led governance	<ul style="list-style-type: none"> • To ensure the sustainability of the interventions, local governance mechanisms must be further strengthened. This could be achieved through enabling strong community institutions and their acceptance by PRI members. Community institutions may be formed at habitation level

to ensure reaching out to the last mile. These institutions shall draft their byelaws and their capacity building can be done to make them self-reliant over a period of time. Involvement of women in community institutions, program implementation and decision making in future course of action

- In order to establish water stewardship, community driven by-laws would ensure optimum utilisation of water from common resources by all stakeholders. To enable the same, activities like crop-water budgeting exercise shall be carried out at habitation level.
- It is advisable to allocate user rights and collection of user charges formally for usage of the benefits created under common property resources.

MEASURING THE SOCIAL RETURNS

As explained in Chapter 2, this report has used two evaluation frameworks which are OECD-DAC and SRoI. Generally, OECD-DAC helps in gaining a qualitative understanding of the impact. On the other hand, SRoI helps organizations in evaluating changes which are being created by measuring social, environmental, and economic outcomes and providing monetary values to represent them. SRoI also helps in understanding the total value generated for every rupee invested for interventions.

There are two types of SRoI:

- Evaluative, which is conducted retrospectively and based on actual outcomes that have already taken place.
- Forecast, which predicts how much social value will be created if the activities meet their intended outcome.

For this study, both evaluative as well as forecasting SRoI has been considered. SRoI primarily involves six stages which are as follows:

- Stage 1: Establishing Scope and identifying key stakeholders
- Stage 2: Mapping outcomes
- Stage 3: Evidencing outcomes and giving them a value
- Stage 4: Establishing impact
- Stage 5: Calculating the SRoI
- Stage 6: Reporting

Stage 1 and Stage 2 have been discussed in-depth in Chapter 2. Further stages have been elaborated in the ensuing sections.

4.1 Evidencing outcomes

After formulating the impact map, indicators to measure the outcomes were developed based on the evaluation team's interaction with beneficiaries of the interventions and other relevant stakeholders like PRI Members, implementation team members etc. Also, evidence of outcomes was collected using primary and secondary data.

Quantity of Change: The quantity of change for the impact map has been calculated by extrapolating the number of responses from the sample covered to the total population of the beneficiaries. Depending on the responses received during data collection, a proportionate percentage of total beneficiaries is calculated.

The below provides details about the evidence indicators for the outcomes and the quantity of change against each indicator.

Table 1- Quantities of change

Outcome	Outcomes	Indicators and Sources	Quantity (scale)
Construction and refurbishment of Check dams/ Water Harvesting Strcutures (Ponds)	Creation of sustainable water supply through increment in availability and accessibility of water	Increase in water harvesting capacity (Quantum of Water Potential created or Water Harvested in Cubic Metre)	1
		Increased availability of water for irrigation - surface water from WHS (Number of farmers x Avg increase in Irrigated land)	242
		Increased availability of water in wells / borewells (number of farmers/community members x Avg increase in availability of water in months/days)	1210
	Increased access to water for animal husbandry activities	Increase in annual income due to availability of quality potable water for cattles and other animals (Number of households x % increase in milk yield)	968
	Increased agriculture production due to increment in availability of water	Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	484
		Reduction in Cost of Cultivation (Number of farmers x Avg reduction in cost annually)	50
Trainings/ Workshops/ Demonstrations/ Organic farming/ soil health testing	Increased agriculture production due to enhanced agriculture practice through trainings, demonstrations and water conservation & management	Adoption of improved agriculture practices such as usgae of micro nutirnts and organic farmig (% of members indicating adoption of improved agriculture practices)	202
Awareness campaign for community members	Increased awareness on water conservation & management	Increased knowledge on water conservation & management	89
Awareness campaign to school students	Increased awareness on water conservation & management	Increased knowledge on water conservation & management	267
Plantation - Agro forestry and Agro horticulture	Plantation in 560 acres through planting 1790 saplings in Agro forestry and 4000 saplings in Agro horticulture	Increase in the green cover over 560 acres	1
Establishing village-level institutions	Community led governance of water resources at village level	Formation of water committees through VI and traiing for water management (Number of village water user groups formed)	1210

Duration of Outcome: Some outcomes will last through a beneficiary's life, while some will last only till the input activity persists.

For the purpose of this SROI Analysis, outcomes realised due to intervention of infrastructure activities have been considered for a maximum of 5 years for the impacts whereas, for the intangible interventions such as training the duration of impact is restricted to 3 years. These considerations are based on the following assumptions:

- Water Resources Development intervention has long lasting effects, especially the improved accessibility of canal water rise in ground water and surface water level due to the construction of check dams, rejuvenation of existing ponds, etc. This increased duration is also reflected in the resulting economic and social impacts for the community.
- In case of interventions which involve components of training or are related to skill/knowledge training, the beneficiaries will need to upgrade knowledge required for their respective subject due to advancement in technology and rapidly evolving market economy and climatic situations.
- Based on nature of interventions and dynamics of the income generating activities, impact due to the contribution from beneficiaries and other stakeholders will outweigh the impacts due to contribution and support from APL.

Financial Proxy and Value of Financial Proxy: An SROI analysis has used financial proxies in order to establish the value of identified outcomes. As a standard practice, prices are used as a proxy for value of services. Sometimes, the outcomes reported by stakeholders cannot be traded in a market or are intangible. Hence for such outcomes, the closest, comparable value has been identified for that service. Please refer Table 4- Financial proxies for outcome wise proxy details.

4.2 Establishing Impacts

In order to provide credibility to the analysis and prevent over-claiming, the SROI calculation has taken into consideration aspects like attribution, displacement, deadweight, and drop-off into account.

Establishing impact consists of an estimation on how much of the outcome would have happened anyway and what proportion of the outcome can be attributed to the activities that occur during the programme or project. Establishing impact is crucial, as it reduces the risk of over counting. Thus, an important part of SROI is 'measuring impact' by accounting for attribution, deadweight, displacement, and drop-off. The following section details how these were addressed:

Attribution: Attribution is the process of considering impact in exclusivity of any other intervention by other agencies.

There are two ways have been taken to arrive at Attribution. Beneficiaries have been asked to assign / attribute percentage against each stakeholder and against each change. Average of such attribution of beneficiaries helps to arrive at Attribution. In case of lack of sufficient data from beneficiaries, equity-based attribution was also considered.

Here the attribution was collected during data collection from individuals through questionnaire. The same was validated and moderated (if required) through attribution findings from FGDs of the respective interventions. List of stakeholders considered for attribution were as follows:

- Asian Paints Limited along with implementation partner
- Others- Self / Family/ Relatives, Community, Government officials from Agriculture, Animal Husbandry and Water Resources Development Sectors etc.

Deadweight: Deadweight is an estimation of social benefits that would have resulted anyway i.e., without the intervention.

Basis the respondents' assertions, the deadweight has been considered as **3%** and the reasons have been presented below:

- There are no other organisations working in the region on similar issues.
- The focused approach of APL implemented through the support like training, affordable inputs and grant support has led to the increase in agricultural productivity.
- Support provided by APL is aimed at efficient spending and creation of quality infrastructure and is participatory in nature.

Displacement: Displacement is positive impact on one stakeholder at the cost of a negative impact on another stakeholder.

In case of this SRoI study, displacement was assumed as **Nil** percent for agriculture intervention considering no adverse or negative impact reported by any respondents. In case of other interventions, there are no major organisations, private or non-profit working in similar sections.

Drop-off and Duration: Drop-off is the portion of outcomes that are not sustained. The drop-off will vary depending on nature of project interventions and activities involved i. Intervention wise drop-off along with reasons is given below:

- **Intangibles @33 percent:** Acquiring of new skill sets, multi-cropping and other inputs have strengthened the base of agriculture economy in the region. Farmers have also reported a significant rise in self-confidence. Due to these factors, the impact is assumed to last for 3 years.
- **Water Resources Development @20 percent:** Creation of quality infrastructure for water resources development results in long lasting effects. Communities have also observed a significant improvement in ground water and surface water levels. Thus, it is assumed that impacts of these interventions would last over a period of 5 years.

Double Counting: Due to the nature of the identified impacts, there is a potential for double counting when aggregating isolated impact values.

For a detailed view, refer [Table 3- SROI Calculation](#)

Considering the above parameters, the impact of each outcome is calculated with the following formula:

4.3 Calculating Impact

Impact = Quantity of outcome * Financial Proxy Value * Attribution – Deadweight – Displacement – Drop-off for each year

SROI is a ratio of cumulative present value for each outcome against the total investment in the project
i.e., **SROI = Total NPV of social value / NPV of investment**

Total Input Value: The inputs from APL, beneficiaries and other stakeholders are considered for the SROI calculation stage. The assumption being all the inputs have worked together to create the observed impact. Even absence of either one of the inputs from stakeholders other than APL will have not generated the impact observed as a part of the current study. Various inputs considered for this study included financial contribution from APL, beneficiaries and other stakeholders and the cost of time invested by beneficiaries as a part of training / exposure activities. The value of the financial inputs has been provided by the APL and the inputs of programme (other than financial inputs) have been valued in consultation with APL CSR team.

The below table represents the total cumulative investments from all the stakeholders towards the project from the time period 2021- 2022:

Table 2- Inputs calculation

Input Type	Input description	Total input value (INR)
Financial inputs	CSR Funding from APL	2,03,14,581.00
Time input	Time input from beneficiaries	
Total		2,03,14,581.00

Net Present Value: The Impact Value is adjusted to reflect the Net Present Value (NPV) of the projected outcome values. This is to reflect the present-day value of benefits projected into the future.

A discount rate of 4% has been used for the NPV calculations.

$$SRoI = \{ \text{Total present value of impact} / \text{Total present value of input} \}$$

The below table depicts the NPV evaluated as of 2022 and forecasted for 2027 (considering the duration period of 5 years for each outcome):

Table 3- SROI Calculation

Outcome	Outcomes	Indicators and Sources	Quantity (scale)	Amount of change per stakeholder (depth)	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 0	Year 1	Year 2	Year 3	Year 4
Construction and refurbishment of Check dams/ Water Harvesting Structures (Ponds)	Creation of sustainable water supply through increment in availability and accessibility of water	Increase in water harvesting capacity (Quantum of Water Potential created or Water Harvested in Cubic Metre)	1	912	Groundwater abstraction charges for Drinking and Domestic use (Central Water Commission) per cubic metre	2	40 %	0 %	40 %	20 %	657	657	525	420	336	269
		Increased availability of water for irrigation - surface water from WHS (Number of farmers x Avg increase in Irrigated land)	242	1	Irrigation charges by Gujarat government (per hectare)	74.13	40 %	0 %	40 %	20 %	6,458	6,458	5,167	4,133	3,307	2,645

Outcome	Outcomes	Indicators and Sources	Quantity (scale)	Amount of change per stakeholder (depth)	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 0	Year 1	Year 2	Year 3	Year 4
		Increased availability of water in wells / borewells (number of farmers/community members x Avg increase in availability of water in months/days)	1210	4	Average HH requires 220 LPCD daily and using it for a months gets us the water requirement = 6600/HH/month Average charges for purchasing water (One water tanker of 4000 litre capacity) - INR 200/-	330	40 %	0 %	40 %	20 %	5,74,992	5,74,992	4,59,994	3,67,995	2,94,396	2,35,517
	Increased access to water for animal husbandry activities	Increase in annual income due to availability of quality potable water for cattle and other animals (Number of households x % increase in milk yield)	968	2	Average increase in Milk Yield (in Litres per day) x Average amount received by farmers per 1L	40	40 %	0 %	23 %	20 %	35,777	35,777	28,622	22,897	18,318	14,654

Outcome	Outcomes	Indicators and Sources	Quantity (scale)	Amount of change per stakeholder (depth)	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 0	Year 1	Year 2	Year 3	Year 4
	Increased agriculture production due to increment in availability of water	Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	484	3	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in Gujarat- 2203/Q	2203	40 %	0 %	44 %	20 %	8,95,652	8,95,652	7,16,521	5,73,217	4,58,574	3,66,859
		Reduction in Cost of Cultivation (Number of farmers x Avg reduction in cost annually)	50	1	Average reduction in Cost of Cultivation indicated by respondents (INR)	3270.83	40 %	0 %	44 %	20 %	55,390	55,390	44,312	35,449	28,359	22,688
Trainings/ Workshops/ Demonstrations/ Organic farming/ soil health testing	Increased agriculture production due to enhanced agriculture practice through trainings, demonstrations and water conservation & management	Adoption of improved agriculture practices such as usage of micro nutrients and organic farmig (% of members indicating adoption of improved agriculture practices)	202	2	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in Gujarat- 2203/Q	2203	40 %	0 %	44 %	33 %	2,23,839	2,23,839	1,49,972	1,00,481	0	0

Outcome	Outcomes	Indicators and Sources	Quantity (scale)	Amount of change per stakeholder (depth)	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 0	Year 1	Year 2	Year 3	Year 4
Awareness campaign for community members	Increased awareness on water conservation & management	Increased knowledge on water conservation & management	89	5	Cost of online course on water management (https://www.udemy.com/course/water-management/)	500	40 %	0 %	54 %	33 %	61,410	61,410	41,145	27,567	0	0
Awareness campaign to school students	Increased awareness on water conservation & management	Increased knowledge on water conservation & management	267	5	Cost of online course on water management (https://www.udemy.com/course/water-management/)	500	40 %	0 %	54 %	33 %	1,84,230	1,84,230	1,23,434	82,701	0	0
Plantation - Agro forestry and Agro horticulture	Plantation in 560 acres through planting 1790 saplings in Agro forestry and 4000 saplings in Agro horticulture	Increase in the green cover over 560 acres	1	5790	Average cost per sapling in Mysore region is INR 35	35	40 %	0 %	37 %	20 %	76,602	76,602	61,281	49,025	39,220	31,376

Outcome	Outcomes	Indicators and Sources	Quantity (scale)	Amount of change per stakeholder (depth)	Valuation approach (monetary)	Monetary valuation	Deadweight %	Displacement %	Attribution %	Drop off %	Impact calculation	Year 0	Year 1	Year 2	Year 3	Year 4
Establishing village-level institutions	Community led governance of water resources at village level	Formation of water committees through VI and training for water management (Number of village water user groups formed)	1210	1	Subsidy given for training of Farmer Groups under ATMA scheme (NMAET)	5000	40 %	0 %	30 %	20 %	##### #####	25,41,000	20,32,800	16,26,240	13,00,992	10,40,794

4.4 SROI Results

The SROI for this Analysis- evaluative SROI (as on 2022) and evaluative cum forecast SROI (as on 2027) - is derived from dividing the total present value of the impacts by the total input value of the investment. This is considered because the beneficiaries who have received the support in 2022 would realise the impact for the next 5 years i.e., by 2027.

The below table describes the SROI Value and the SROI Ratio before sensitivity analysis:

NPV of Social Value Created • 2,84,29,257	SROI Value • 1.40
Total Investment • 2,03,14,581	SROI ratio • 1 : 1.40

For every INR 1 invested, the programme has generated social impact of INR 1.40

Sensitivity Analysis: Our calculations to arrive at the results provided in this report are relied on a variety of primary and secondary data, but the beneficiary data introduced a higher level of uncertainty. This survey was utilized to estimate the attribution, additionality of APL interventions to specific outcomes, and the duration of time the impact would last.

Sensitivity Analysis was used to test variables and assumptions to ensure that conservative estimates have been used in arriving at the SROI. For each impact area, we tested the impact of using one standard deviation above and below the average response to attribution survey questions. The sensitivity analysis suggests that the estimated SROI value is in between INR 1.32 to 1.64.

Sr. No.	Base case Parameters	Base case SRoI	Test case Parameters	Test case SRoI	Observation
1	Displacement is 0%	1.46	Displacement is 5%	1.39	No significant change
2	Displacement is 0%	1.46	Displacement is 10%	1.32	Significant change
3	Attribution is (avg) 41%	1.46	Attribution is 36%	1.64	Significant change
4	Attribution is (avg) 41%	1.46	Attribution is 46%	1.38	No significant change
5	Deadweight is 30%	1.46	Attribution is 25%	1.57	Significant change
6	Deadweight is 30%	1.46	Attribution is 35%	1.36	No Significant change

4.5 Limitations & assumptions for the SROI study

- The study is limited to the sample of beneficiaries interacted with on-ground during field visits.
- The survey conducted with sample beneficiaries is subjective in nature.
- The study is limited to the recall of the participants in the study.
- The financial proxies are limited to publicly available resources. The financial proxies are representative and based on professional judgement, but it may not be reflective of actual costs incurred due to several considerations. (Refer to Appendix B for details of financial proxies)
- The deadweight, displacement, drop off values are derived from the responses from the stakeholders.
- While information obtained from the public domain or external sources has not been verified for authenticity, accuracy, or completeness, we have obtained information, as far as possible, from sources generally considered to be reliable. However, it must be noted that some of these websites/third party sources may not be updated regularly. We assume no responsibility for the reliability and credibility of such information.

ANNEXURES

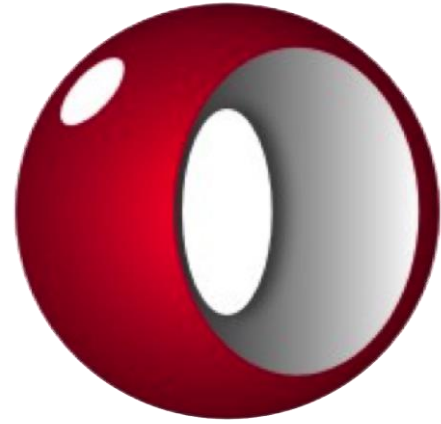
Table 4- Financial proxies

Outcomes	Indicators and Sources	Valuation approach (monetary)	Monetary valuation
Creation of sustainable water supply through increment in availability and accessibility of water	Increase in water harvesting capacity (Quantum of Water Potential created or Water Harvested in Cubic Metre)	Groundwater abstraction charges for Drinking and Domestic use (Central Water Commission) per cubic metre	2
	Increased availability of water for irrigation - surface water from WHS (Number of farmers x Avg increase in Irrigated land)	Irrigation charges by Gujarat government (per hectare)	74.13
	Increased availability of water in wells / borewells (number of farmers/community members x Avg increase in availability of water in months/days)	Average HH requires 220 LPCD daily and using it for a months gets us the water requirement = 6600/HH/month Average charges for purchasing water (One water tanker of 4000 litre capacity) - INR 200/-	330
Increased access to water for animal husbandry activities	Increase in annual income due to availability of quality potable water for cattles and other animals (Number of households x % increase in milk yield)	Average increase in Milk Yield (in Litres per day) x Average amount received by farmers per 1L	40
Increased agriculture production due to increment in availability of water	Increase in agriculture produce (Number of farmers x Avg increase in yield in the year)	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in Gujarat- 2203/Q	2203
	Reduction in Cost of Cultivation (Number of farmers x Avg reduction in cost annually)	Average reduction in Cost of Cultivation indicated by respondents (INR)	3270.83
Increased agriculture production due to enhanced agriculture practice through trainings, demonstrations and water conservation & management	Adoption of improved agriculture practices such as usgae of micro nutrients and organic farming (% of members indicating adoption of improved agriculture practices)	Average increase in Yield indicated by respondents (Quintals) MSP of Paddy in Gujarat- 2203/Q	2203
Increased awareness on water conservation & management	Increased knowledge on water conservation & management	Cost of online course on water management (https://www.udemy.com/course/water-management/)	500

Increased awareness on water conservation & management	Increased knowledge on water conservation & management	Cost of online course on water management (https://www.udemy.com/course/water-management/)	500
Plantation in 560 acres through planting 1790 saplings in Agro forestry and 4000 saplings in Agro horticulture	Increase in the green cover over 560 acres	Average cost per sapling in Mysore region is INR 35	35
Community led governance of water resources at village level	Formation of water committees through VI and training for water management (Number of village water user groups formed)	Subsidy given for training of Farmer Groups under ATMA scheme (NMAET)	5000

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- ^{xiv} [Schedule-VII.pdf \(icai.org\)](#)
- ^{xv} [Ministry of Jal Shakti](#)
- ^{xvi} [Press Information Bureau \(pib.gov.in\)](#)
- ^{xvii} pib.gov.in/PressReleaseFramePage.aspx?PRID=1705798#:~:text=Ministry of Jal Shakti is taking up a,areas of all the districts in the country.



ORMAX



ASIAN PAINTS COLOUR ACADEMY

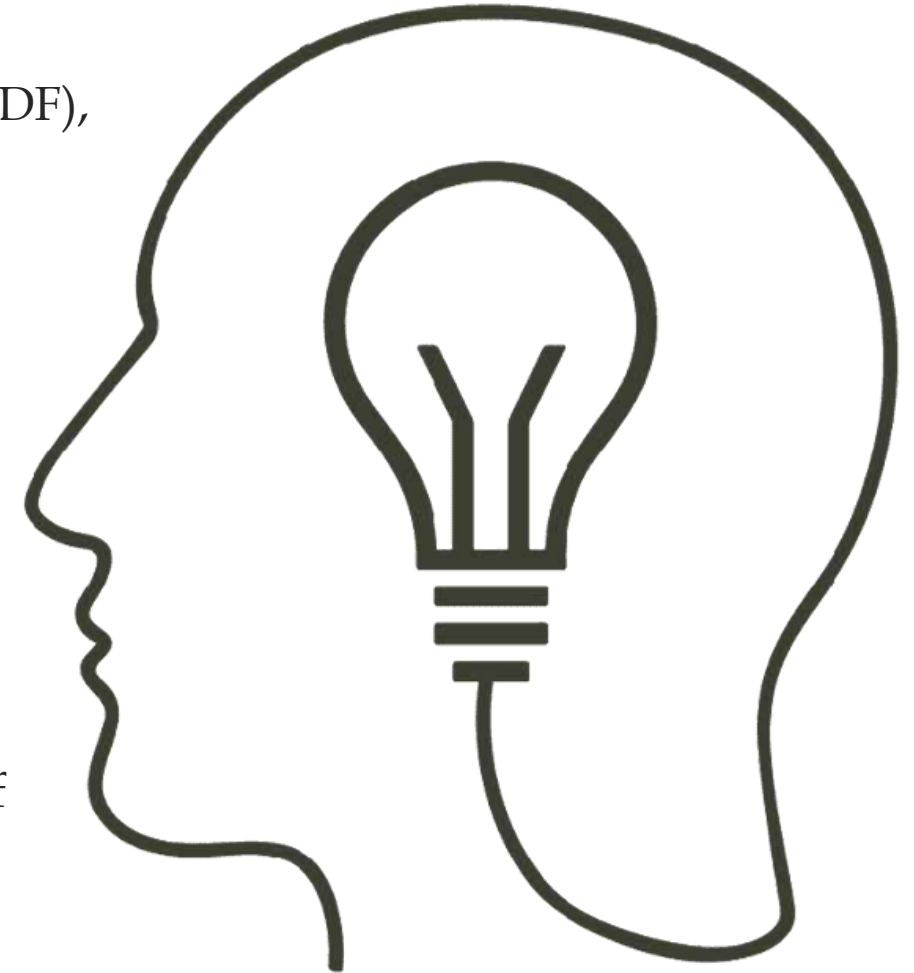
An Impact Assessment Study

December 2023





1. **Impact assessment** of courses offered
 - **Painting Contractors** – Interior Design Finish (IDF), Exterior Design Finish (EDF), Soft Skills (SS)
 - **Plumbers** – advanced & basic
2. Understand the **functional, emotional and social impact** and benefits derived from the course
3. Seek **areas of opportunity** for **enhancement** of the program
4. Understand the **trainer's** perspective towards the course and areas of opportunity for enhancement of the program





Structured Telephonic Questionnaire

QUANTITATIVE MODULE

Interviews were **telephonically** conducted with participants recruited from the **database (participants database from 2022-23)** provided by Asian Paints Team.

Cued Depth Interviews

QUALITATIVE MODULE

Depth interviews conducted **face-to-face, post 50% of the Quant findings, to nuance the data**

Depth interviews were also conducted additionally, with **trainers**

- The questionnaire and discussion guides was administered in the **local languages**.
- Interviewers and moderators with experience in **similar category of study** conducted the interviews and interactions.

Target Group and Sample Size



- Painting contractors, plumbers, and trainers
- Across 15 cities.
- Field work across October and November 2023.

NOTE –

- Sample size for the study being small, only directional inferences on some KPIs have been provided
- Any sample less than 30 should be read with caution
- Due to shortfall in the databases for some markets, the required sample was completed in other markets within the same zone.
- In the Soft Skills' category, our efforts were focussed on achieving the total sample, irrespective of specific markets, due to shortfall in databases.

Sample Achieved

ZONE	Cities	Structured Telephonic Questionnaire		Cued Depth Interviews		
		Painting Contractors	Plumbers	Painting Contractors	Plumbers	Trainers
North	Delhi	7	4	7	3	1
North	Lucknow	7	5	-	-	-
Central	Indore	7	4	-	-	-
Central	Jaipur	5	2	7	3	1
Central	Ahmedabad	10	3	-	-	-
East	Kolkata	8	6	7	3	1
East	Patna	6	-	-	-	-
West	Mumbai	5	-	3	2	1
West	Pune	7	2	-	-	-
West	Nagpur	6	8	-	-	-
South 2	Cochin	6	-	-	-	-
South 1	Bangalore	11	13	3	2	1
South 1	Chennai	7	-	-	-	-
South 1	Coimbatore	5	-	-	-	-
South 2	Hyderabad	9	-	7	3	1
Total		106	50	34	16	6

*Margin of error on sample of 106 is $\pm 10\%$

Margin of error on sample of 50 is $\pm 14\%$

01

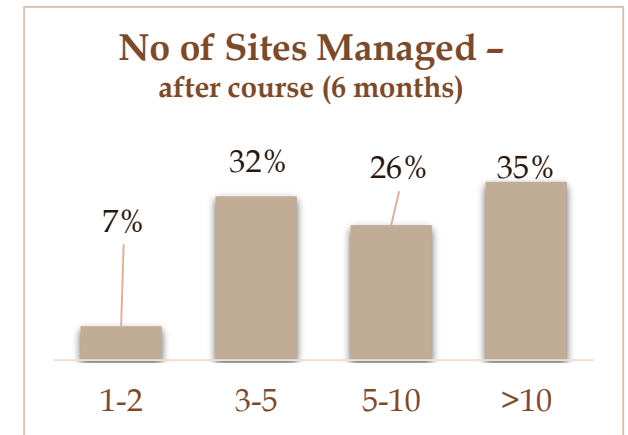
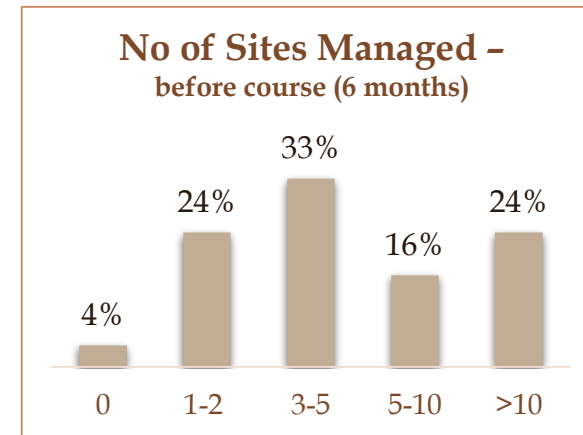
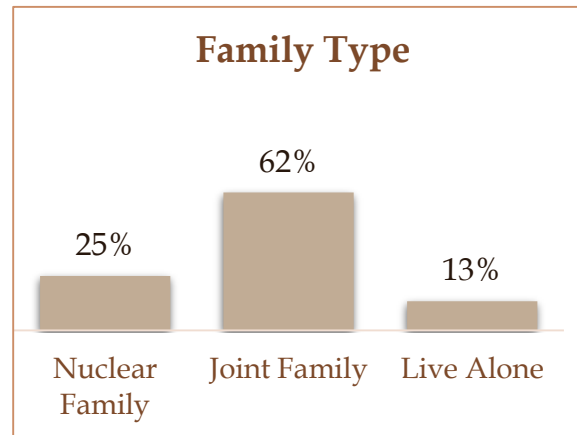
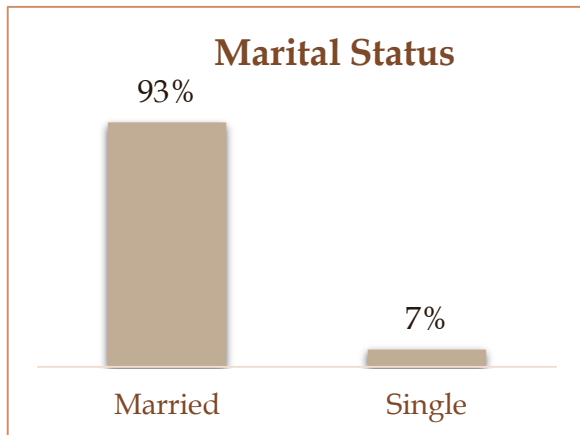
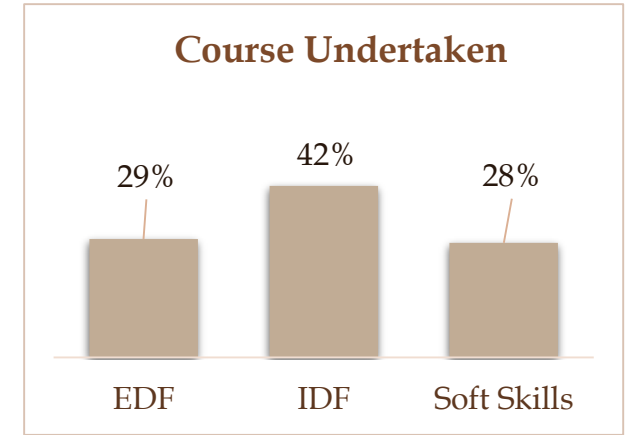
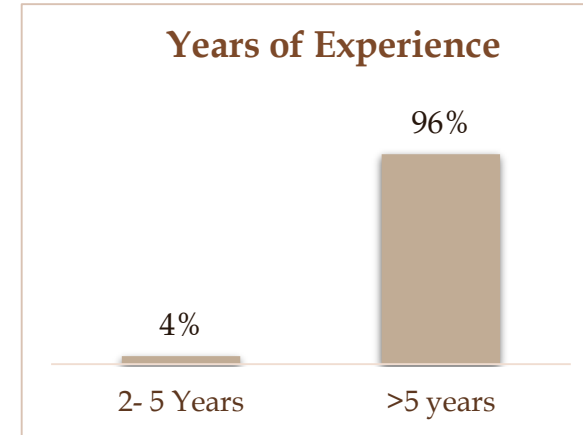
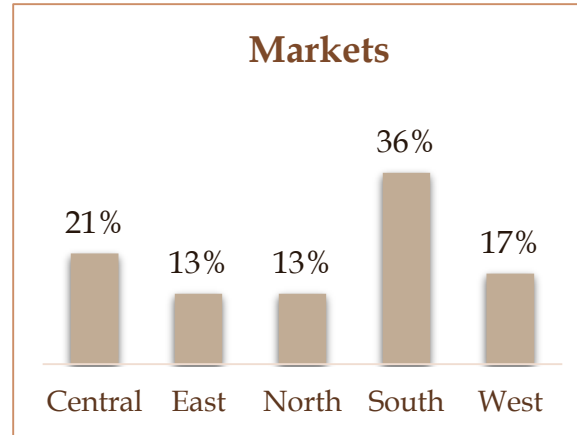
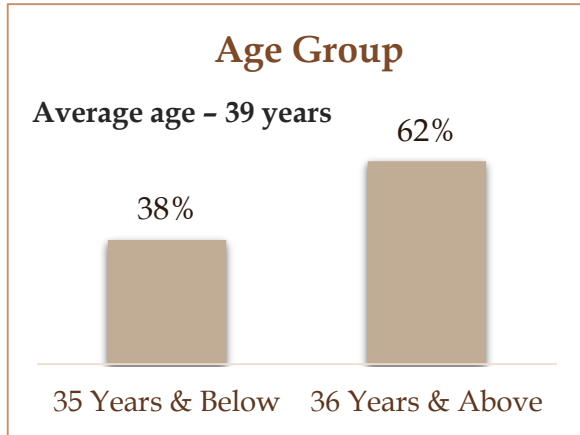
Research Findings – Painting Contractors

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- 01 Respondents' Profile
- 02 Net Promoter Score
- 03 Drivers for the course & course association
- 04 Impact Assessment on various Metrics
- 05 Understand Kamyabi
- 06 Improvement Areas & Opportunities
- 07 Ormax Observations & Recommendations

Profile of the Respondents



Base- all respondents - 106

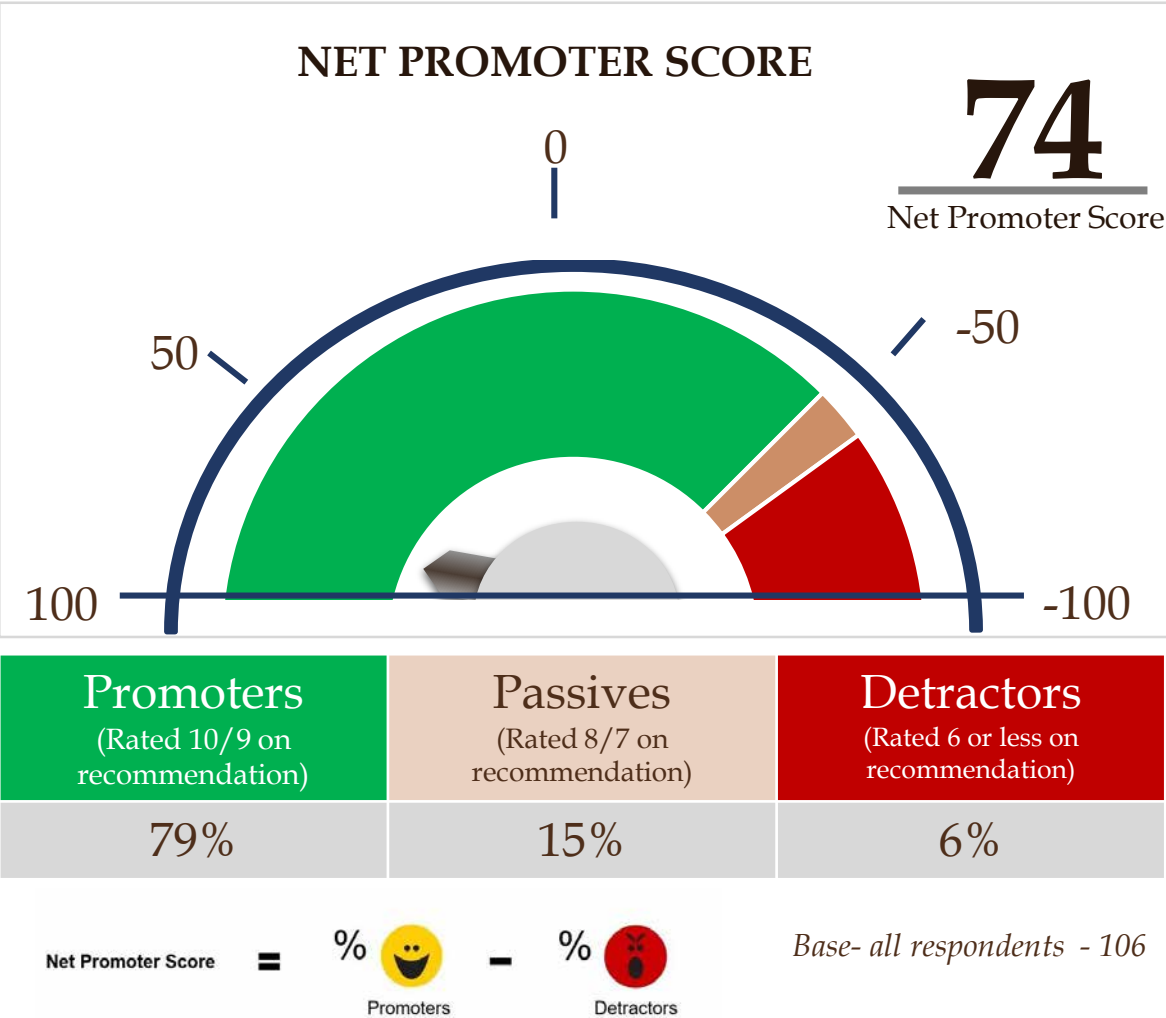
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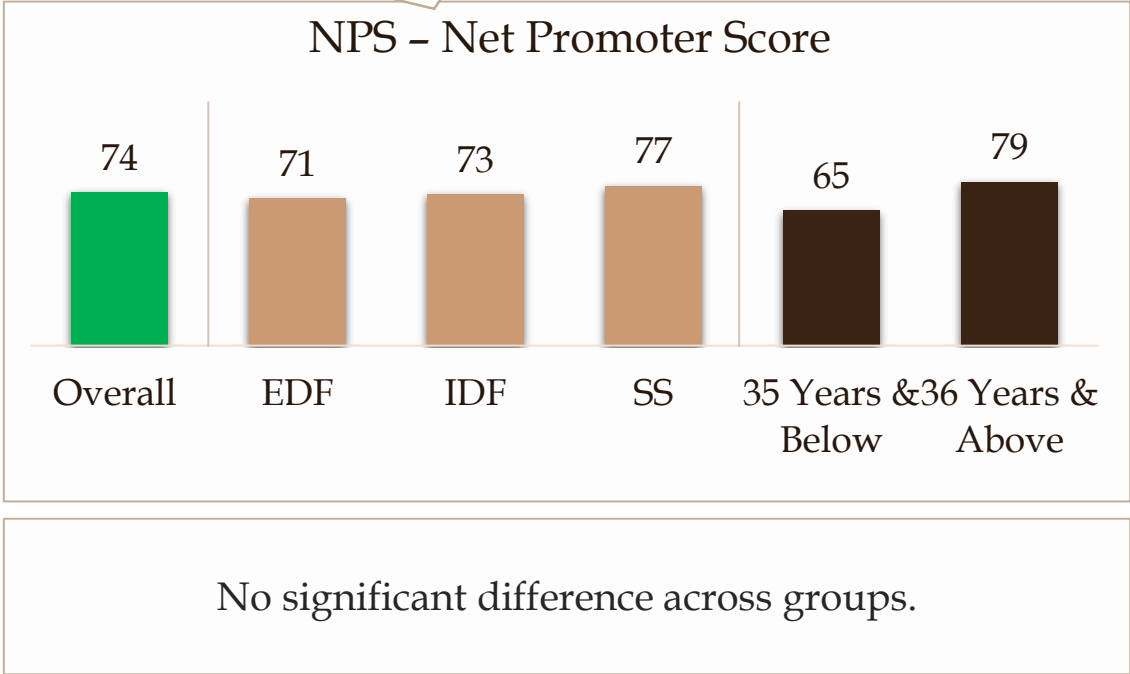


8 out of 10 participants were willing to recommend the course to others.



Training in Effective Customer Communication Skills

“Workers often struggle to handle customers, resulting in strained work relationships. Training addresses this by teaching essential skills, including effective customer communication.” - Cochin





Who are these Promoters and Non-Promoters?

Profile of the Promoters and Non Promoters	Overall	EDF	IDF	Soft Skill	35 Years & Below	36 Years & Above
Base	106	31	45	30	40	66
Promoters	79%	77%	78%	83%	73%	83%
Non Promoters	21%	23%	22%	17%	28%	17%

Promoters were higher among those who attended the **Soft Skills** course

Practical part of the course is superficial
“Jo practical sikhate hain, vo 10*10 ke wall pe sikhana chahiye. Otherwise fayada nahin hota” - Patna

It was beneficial to me so I would recommend to others
“Mere liye course kafi achcha raha isiliye dusron ko bhi salah deta hoon ki kar le” - Delhi

No significant difference amongst group noticed at 95% CI
NOTE - Promoters- those coded 9 or more for the course recommendation ; Non Promoters- those coded 8 and less for the recommendation



25% of Promoters found the course to be beneficial and therefore inclined to endorse it to others.
Almost 1/5th of them believed the course was crucial for maintaining a competitive edge in the market.

Reasons for Recommendations	Promoters	Reasons for Non Recommendations (Base-22*)	
Base: promoters for the course	84		Superficial training sessions
It was beneficial to me so I would recommend others	25%	<ul style="list-style-type: none">Training Inefficiency: Complexity and surface level ExperienceStrategic Confidentiality: Balancing Training Awareness and Market Competition	“Maine kabhi paitning ka kaam nahin kiya hai. Socha training le ke shuru karun. Unlogo ne ye maan liya ki basics toh mujhe aata hi hoga.” – Delhi
It is crucial to stay competitive	18%		Reducing competition by withholding information
The course is from a reputed company	15%		
The course ensures better future	12%		
I will have a pool of skilled workers	10%		
It will provide better earning opportunities	8%		
It would be great learning opportunity	8%		
I don’t want to force the course on anyone	4%		
I want to be in good books of APA	2%		
It ensures better future for my family	2%		

*low base – read with caution
Q3b. You have rated _____ (pick coding from Q3a) in recommendation? Why have you rated this? Probe - benefits received or program not adding any value



Some participants found the training inefficient and superficial

1

Assumption of fundamental knowledge by trainers

“Maine kabhi painting ka kaam nahin kiya hai. Socha training le ke shuru karun. Un logo ne ye maan liya ki basic toh mujhe aata hi hoga.” – Delhi

2

Practical training is inefficient

“Jo practical sikhate hain, vo 10*10 ke wall pe sikhana chahiye otherwise fayada nahin hota” – Patna

3

Short duration of practical training

“Theory bahut der tak padhate hain, aur practical turant hi khatam kar dete hain.” – Indore



Around two-fifths of the participants heard about the course from retailers; one-third were approached by the Asian Paints team

Source of Awareness	Overall	Promoters	Non Promoters	EDF	IDF	SS
Base	106	84	22*	31	45	30
Retailers where I buy products from	39%	36%	50%	32%	42%	40%
Asian Paint people came in my locality	25%	30%	5%	29%	27%	17%
Colleagues, other co-workers, contractors	16%	17%	14%	16%	11%	23%
Call From Company	9%	7%	18%	10%	11%	7%
Friends and family	8%	8%	9%	10%	7%	10%
Social media advertisement	3%	2%	5%	3%	2%	3%

There is a correlation between the individuals personally approached by the Asian Paints team and the promoters of the training.

Significantly higher at 95% CI

*low base – read with caution
Q2b. How did you come to know about the course?

- 01 Respondents' Profile
- 02 Net Promoter Score
- 03 Drivers for the course & course association
- 04 Impact Assessment on various Metrics
- 05 Understand Kamyabi
- 06 Improvement Areas & Opportunities
- 07 Ormax Observations & Recommendations



The primary association with the course was of **Knowledge**. It is noteworthy that approximately one out of ten participants associated the course with **High-quality Work** and **Happiness**.



Size of the text is indicative of frequency

Top 5 Associations
Knowledge (31%)
Quality Work (13%)
Happy (12%)
More Work (12%)
Designs (10%)

Base- all respondents - 106



~1/3rd associated the course with knowledge;
around a tenth with quality work and happiness.

Asian Paints Course Associations			
Course Associations	Overall	Promoters	Non Promoter
Base: All	106	84	22*
Knowledge	31%	32%	27%
Quality Work	13%	11%	23%
Happy	12%	13%	9%
More Work	12%	11%	18%
Design	10%	7%	23%
Income	8%	11%	-
Skills	5%	6%	-
Training	5%	6%	-
Learning	4%	2%	9%
Networking	4%	4%	5%
Benefits	3%	4%	-
Better Future	3%	2%	5%
Satisfied Customers	3%	2%	5%
Texture	3%	4%	-
Connectivity	2%	2%	-
Techniques	2%	2%	-

Amongst non-promoters, the association with **designs** is significant.
Happiness, on the other hand, received a comparatively lower association.

Knowledge : A Pathway to Quality Work and Happiness

“I attend training sessions to acquire knowledge, which I then apply to produce high-quality work. I strive to innovate upon the learned designs and this enhances my overall work experience”. –
Kolkata

Significantly higher at 95% CI

NOTE – Promoters- those coded 9 or more for the course recommendation ; Non Promoters – those coded 8 and less for the recommendation

*low base – read with caution

Q1. What comes to your mind when you think of the course that you did with Asian Paints color academy?



Decoding Happiness

Happiness is mostly derived from three sources

CUSTOMERS

“When customers see our work, and they feel very satisfied and happy, we feel good.” – Kolkata

“We follow all the procedures, So when the customer see the entire set up we create before work, they feel good that they have hired a good contractor who has the knowledge. It make us feel good.” - Delhi

BUSINESS

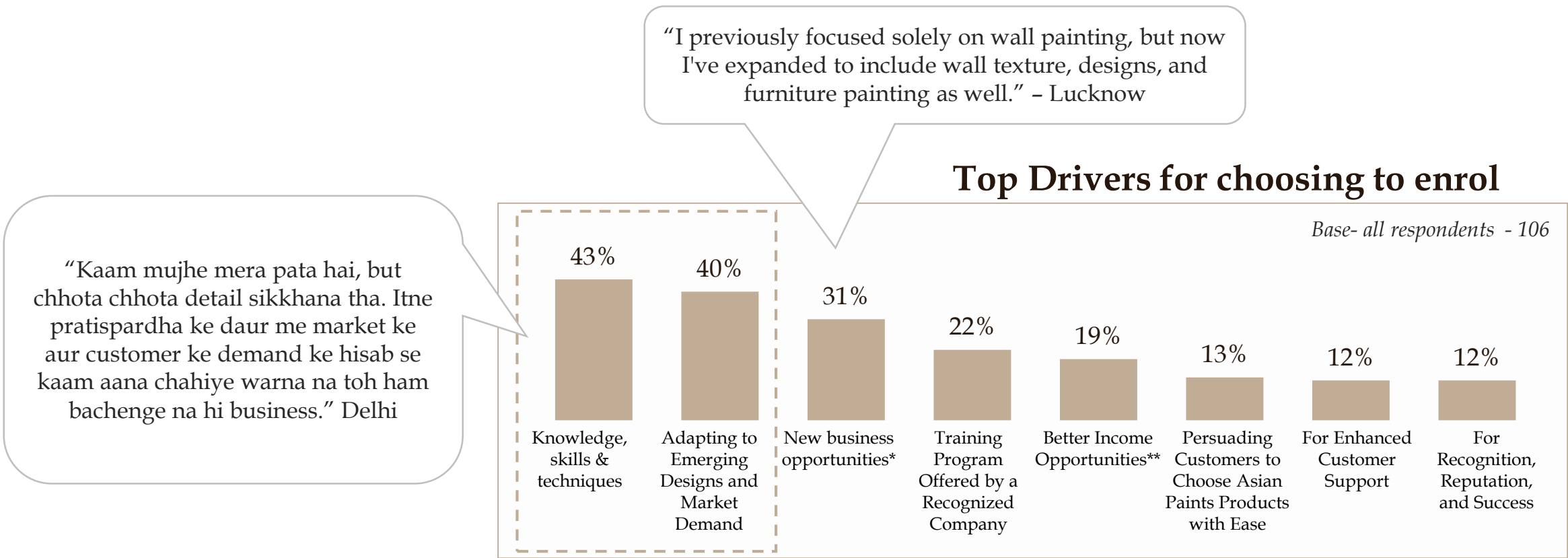
"Originally, the price for 3 coats of putty with primer was Rs.12/- per square foot. Now, charging Rs.18 to 20 per square foot is acceptable to customers, and they willingly pay this amount. This is beneficial for my business, and I am happy that this is happening because of the course."– Nagpur

FAMILY

"I serve as the sole provider for my family. Recently, I've made investments in LIC for the benefit of my wife and daughter. It brings me joy and contentment to contribute to their well-being in this way."– Mumbai



Key drivers : Acquiring knowledge to keep up with the growing demand for new designs and finishes



Need to Understand - what knowledge means?

*New Business Opportunities - to be able to enhance work scope
**Better Income Opportunities - to be able to procure more business and projects
Q2.Great! So, what are the top 3 reasons that made you decide on taking up the course?
Classification: Internal



Acquiring knowledge remained a top driver, closely followed by the desire to stay updated with market trends and to explore new business opportunities. Nearly 30% of IDF trainees joined the course to seek better income opportunities.

Top Drivers to Choose Asian Paints Course						
Top Drivers	Overall	Promoters	Non Promoters	EDF	IDF	SS
Base: All	106	84	22*	31	45	30
Knowledge, skills & new techniques	43%	46%	32%	32%	47%	50%
Adapting to Emerging Designs and Market Demand	40%	42%	32%	52%	36%	33%
New Business Opportunities	31%	31%	32%	29%	33%	30%
Training Program Offered by a Recognized Company	22%	24%	14%	26%	18%	23%
Better Income Opportunities	19%	19%	18%	19%	27%	7%
Persuading Customers to choose AP Products with Ease	13%	13%	14%	19%	13%	7%
For Enhanced Customer Support	12%	10%	23%	3%	16%	17%
For Recognition, Reputation, and Success	12%	10%	23%	13%	11%	13%
To gain practical experience	8%	10%	5%	16%	4%	7%
To learn innovation	6%	4%	14%	6%	7%	3%
To learn how to handle clients	5%	6%	-	3%	-	13%
I was recommended the course	3%	4%	-	-	7%	-
To learn Leadership	2%	-	9%	-	4%	-

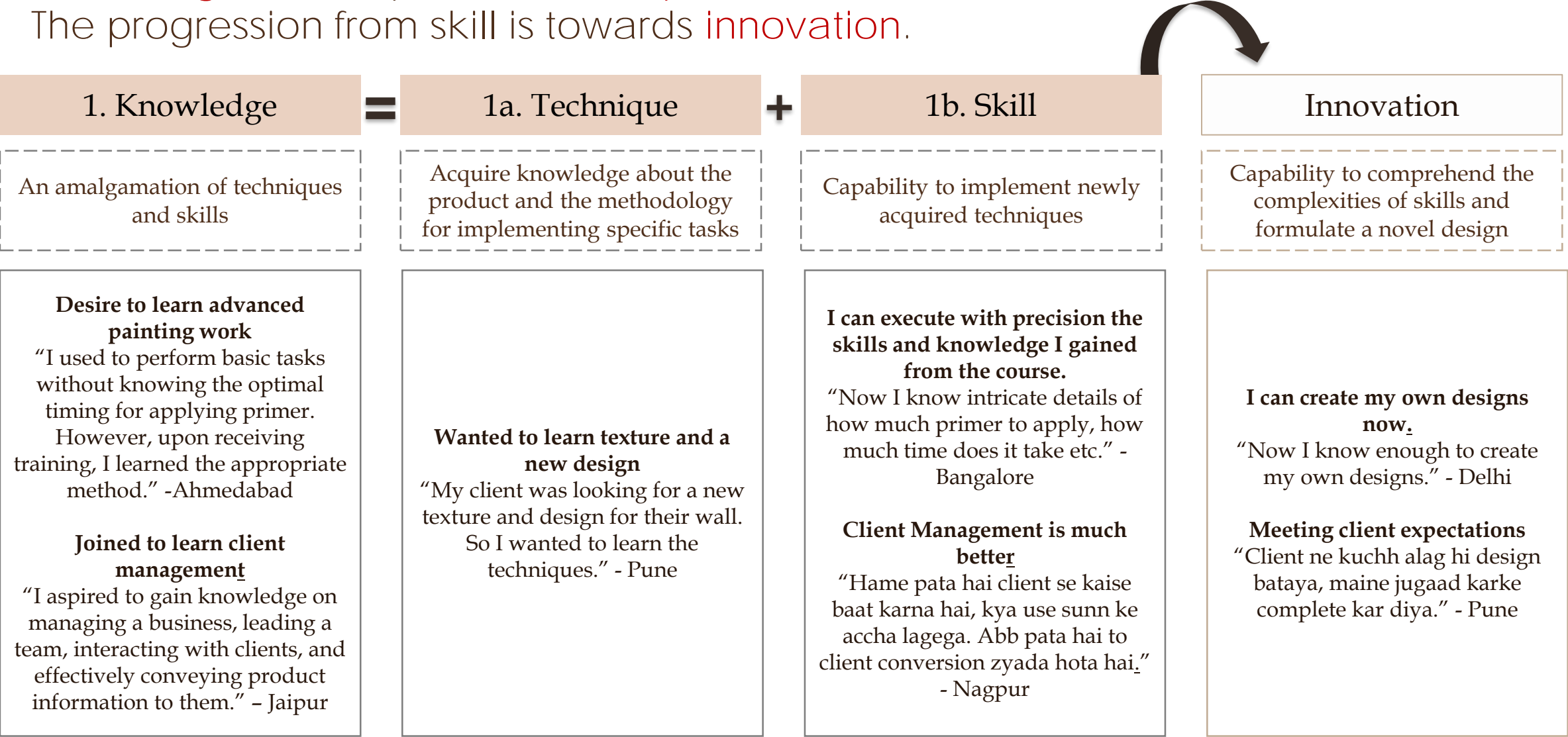
Significantly higher at 95% CI

*low base – read with caution

NOTE – Promoters- those coded 9 or more for the course recommendation ; Non Promoters – those coded 8 and less for the recommendation
Q2.Great! So, what are the top 3 reasons that made you decide on taking up the course with Asian paints color academy?



Knowledge encompasses techniques and skills.
The progression from skill is towards innovation.





Examples of Innovation

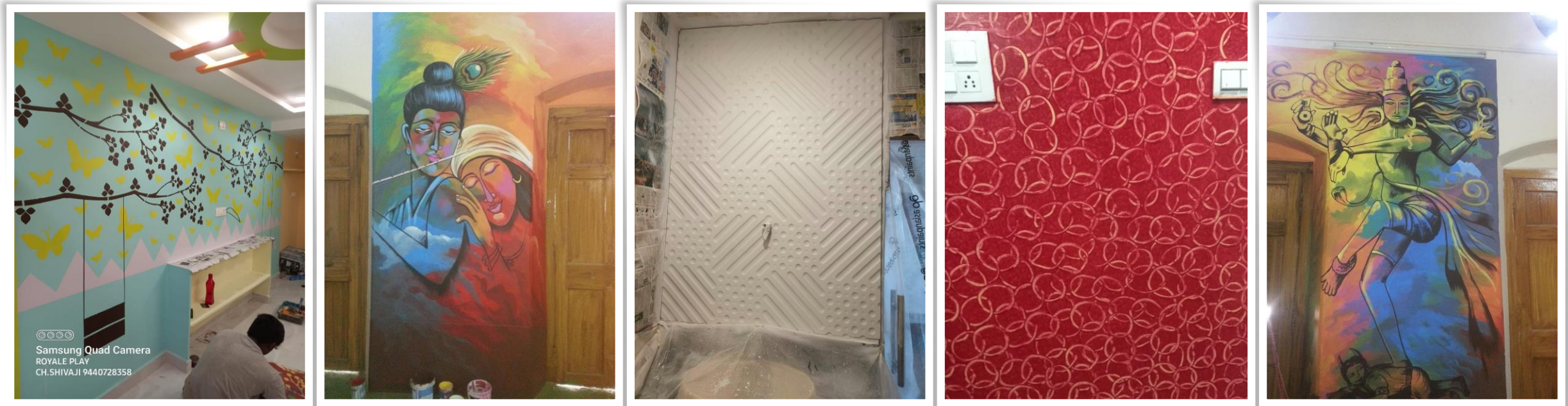


Image Source – shared by respondents
Source – qualitative module

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Highest impact was observed on the **intra-personal** aspect. The **financial** impact, in contrast, was relatively lower than the other parameters. This trend remained consistent across all groups.

Wider scope of work

“Pahale PU ya melamine ka kaam aata tha toh chhodna padta tha. Ab poora project utha leta hoon.” **Delhi**

- Recommendations from clients – 4.63
- Differentiate my work from others – 4.61
- Increased team size – 4.49

4.46

Professional Impact

- Arranged social function – 3.58
- Bought digital items – 3.49
- Bought Two-Wheeler – 3.45

3.51

Financial Impact

Saving for children’s future
“Bachchon ke naam par savings shuru ki hain maine.” **Lucknow**

Higher education for children
“Sochta tha ki kaise bachchon ko padhaunga, abhi mere bachche aage ki padhai kar paa rahe hain” **Varanasi**

“Maine aise logon ko bhi dekha hai jinhe padhna likhna nahin aata but vo calculator use kar ke budget batate hain client ko” **Indore**

Use of calculator

Intra-Personal Impact

4.57

- Enhanced respect for profession– 4.71
- Value addition to work – 4.64
- Confident – 4.58

Inter-Personal Impact

4.46

- Enhanced respect – 4.52
- Increased influence – 4.50
- Providing opinions/ solutions – 4.35

“Now we can handle bigger projects. Earlier we had doubts in mind before taking bigger project but now we feel confident.” **Ahmedabad**

Increased confidence

“People notice my prosperity in health, attire, and income. Consequently, we receive better treatment from others..” **Kolkata**

Thriving in life and enjoying better treatment from others

Base- all respondents - 106

Q4a. I will now read out few statements in regards to how the course might have changed your life and work. Please let us know how much do you agree or disagree from the statements on scale of 1 to 5 where 5 is highest and it means you completely agree and 1 is lowest which means you do not agree at all

Significantly lower financial impact



PROFESSIONAL

FINANCIAL

INTRA PERSONAL

INTERPERSONAL

An **increase in the number of jobs** that I took up after finishing the course
Able to **charge more per assignment** after finishing the course.
Receive more **recommendations from existing clients** with betterment in quality of work
Increased my team size to handle larger scope of work in recent times.
Invested in more equipment's or tools to handle new kind of work since last few months.
Able to **differentiate myself from others in my work** with the certification earned after course

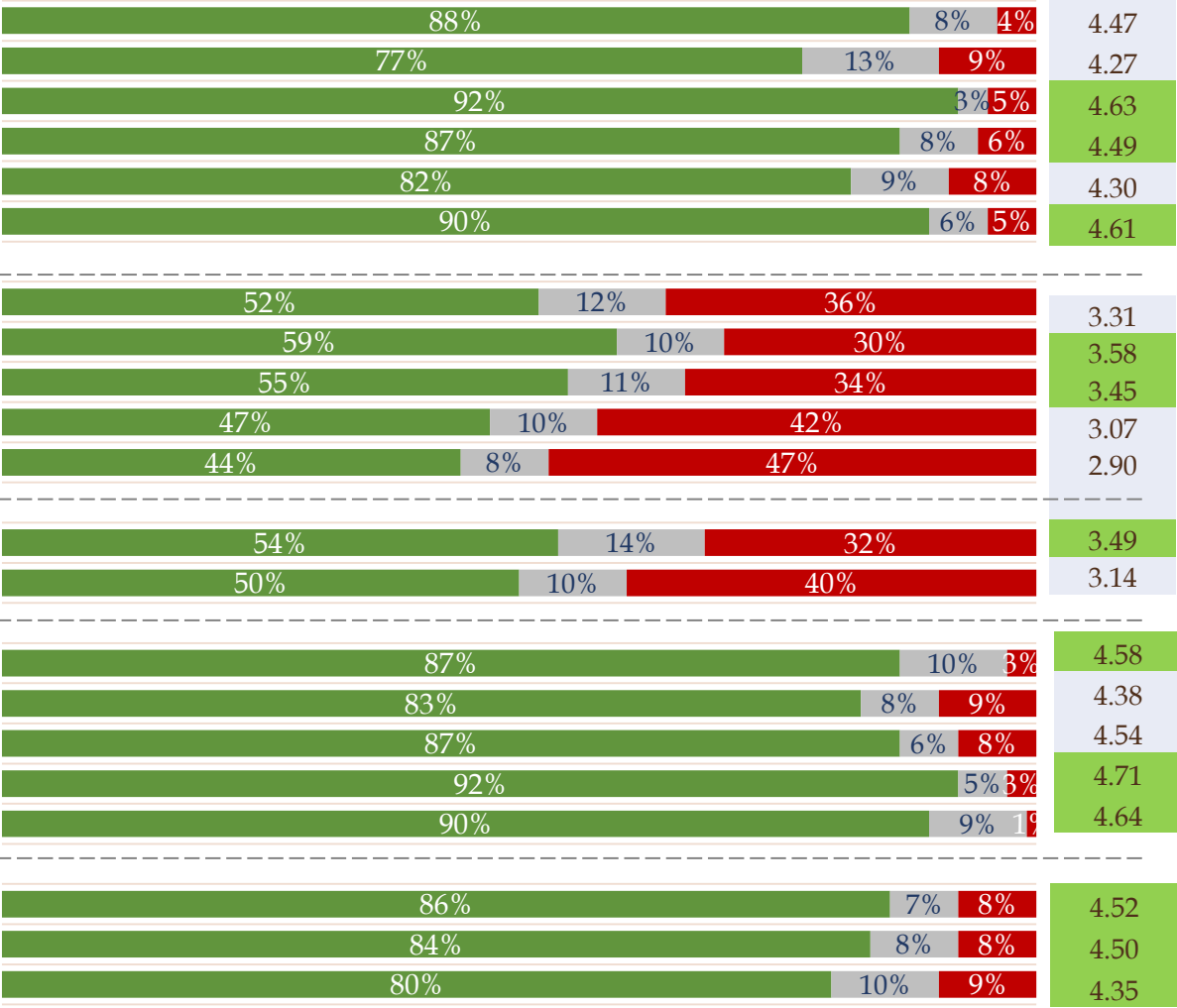
High Value Purchases
Recently **bought a home / property** for myself or the family.
Did **marriage or some other social function** in the family since it was pending.*
Recently **bought 2 / 4-wheeler** for myself or the family.*
Bought some white goods for home like washing machine, fridge or TV
Shifted to a new place with my family.

Low Value Purchases
Bought some digital items like a Smart phone, Laptop & other accessories*
Started going out more often with me or my loved ones

Feel more confident in my professional capabilities after doing this course.
Course has contributed in my success over the last few months
Upgraded with new learnings from this course.
Respect for my profession has increased after doing this course.
Able to add more value in the customers life after gaining expert guidance on

Respect increased among family, society & fellow colleague.
Influence among the work community has significantly increased.
Fellow colleagues & friends have started **seeking my opinion** on their work & life

Impact on Various Aspects



Base- all respondents - 106

■ Top 2 Box ■ Mid Point ■ Bottom 2 Box

* Contributing to overall financial impact
Note - Top 2 Box - those coded 4/5, Mid Point - those coded 3, Bottom 2 Box - those coded 2/1

Q4a. I will now read out few statements in regards to how the course might have changed your life and work. Please let us know how much do you agree or disagree from the statements on scale of 1 to 5 where 5 is highest and it means you completely agree and 1 is lowest which means you do not agree at all

Those who completed for the soft skills' course experienced a significantly elevated impact across aspects



Impact of Course on Various Aspects	Overall	35 Years or Less	36 Years or More	EDF	IDF`	Soft Skill Promoters	Non Promoters	
Base: All	106	40	66	31	45	30	84	22*
Professional	4.46	4.39	4.51	4.24	4.49	4.66	4.55	4.12
Financial	3.51	3.55	3.48	3.30	3.47	3.79	3.65	2.97
Intra-Personal	4.57	4.51	4.61	4.45	4.52	4.77	4.66	4.21
Inter-Personal	4.46	4.31	4.55	4.19	4.51	4.64	4.58	3.97

There was a significantly higher inter personal impact observed among older respondents.

significantly higher at 95%CI

*low base – read with caution

NOTE – Promoters- those coded 9 or more for the course recommendation ; Non Promoters – those coded 8 and less for the recommendation

Q4a. I will now read out few statements in regards to how the course might have changed your life and work. Please let us know how much do you agree or disagree from the statements on scale of 1 to 5 where 5 is highest and it means you completely agree and 1 is lowest which means you do not agree at all

Classifications Internal



Reasons for lower financial impact

DESIRE FOR MORE

Desiring additional wealth

“I am earning enough, but I still have potential to earn more and do better” – Hyderabad

“Pahle se behtar kamata hoon, par manushya ki icchaon ka ant kahan hain” – Varanasi

INFLATION

Eroding purchasing power

“Kamaa toh raha hoon lekin pura nahin padta. Mahangai itni ho gayee hai. Jo chiz pahale 5 rupaye ki milti thi, abb 10 rupaye ke mil rahe.” – Bangalore

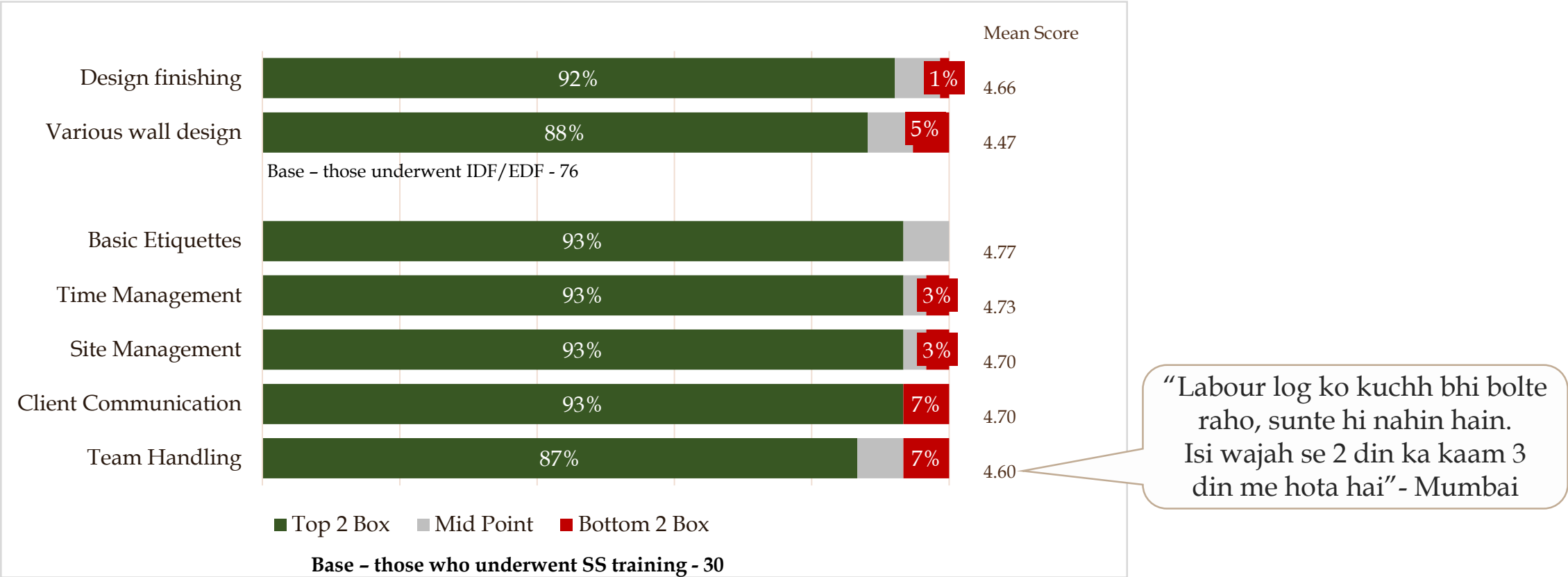
Increased cost of living

“Har Saaman ka daam bahut badh gaya hai. Petrol se le ke ration tak.” – Jaipur

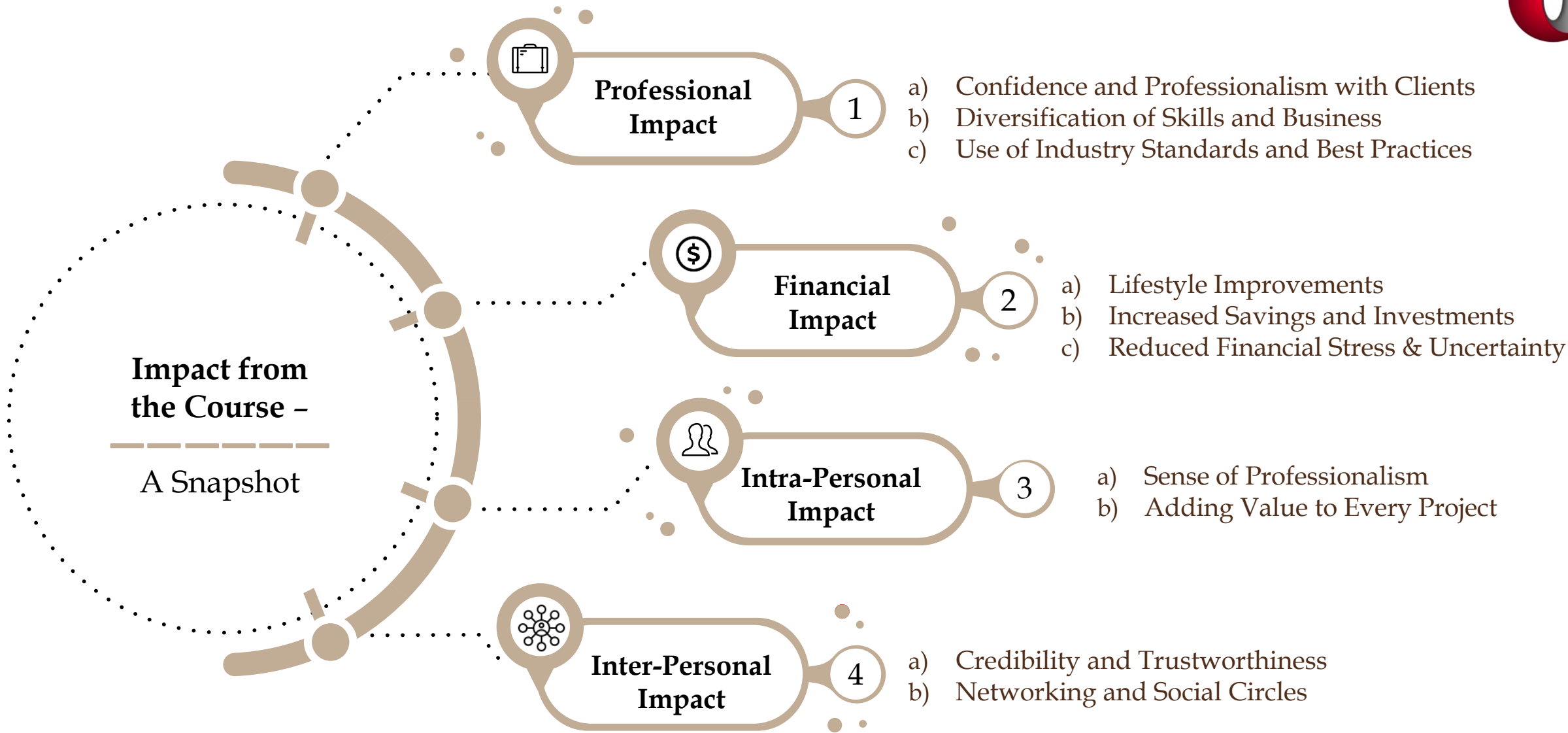


90% of participants found the program components easy to understand.
Team handling section has an opportunity to improve

Learning & Understanding of Course Components



Note - Top 2 Box – those coded 4/5, Mid Point – those coded 3, Bottom 2 Box – those coded 2/1
Q4b. You learned some very specific skills in the course at Asian Paints Colour Academy. How would you rate your learning and understanding on the below parameters. You need to rate between 1 to 5. 5 means you learned and understood everything and 1 means you did not learn or understood everything in the academy during your course





Professional impact is evident in **client interactions**, **business expansion**, and the adoption of **industry standards and best practices**.

PROFESSIONAL IMPACT

Confidence and Professionalism with Clients

- Confidence in decision-making
- Communication skills

Trust building - "I have a heightened sense of confidence. When we exude confidence and produce our certificate, it instils assurance in customers, leading to trust in our abilities." - Hyderabad

Proactive documentation- "We ensure essential documentation. This precautionary measure minimizes potential payment issues with clients and reflects professionalism." - Jaipur

Know-How with clients- "Course me sikhate hain ki client se kaise baat karni hai, kaise handle karna hai toh ye bada fayademand rahta hai hamare liye." - Kolkata

Diversification of Skills and Business

- Enhanced profile of services
- Businesses from references
- Higher value assignments

Business expansion - "Pahale sirf painting ka kaam tha. 2 lakh ke kareeb milta tha, abb pura interior ka kaam lene laga hoon. 10 lakh tak ek project ke mil jate hain" - Jaipur

Work from reference- "Abb toh logon ne mera kaam dekh kar mere se kaam karwana shuru kar diya hai. Purane clients ke through hi kitane sare kaam mil jate hain." - Mumbai

Venturing into larger projects- "I work not only in 25 square yard houses but also undertake projects in larger spaces, including 500 square yard bungalows, malls, and hotels." - Bangalore

Use of Industry Standards and Best Practices

- Ethical conduct & documentation
- Following safety protocols
- Specialization

Ethical conduct - "Jo quality aur brand client ko commit karate hain, wahin use karte hain. Thodi thodi imandari future me kafi help karti hain" - Kolkata

Use of safety measures - "We prioritize personal and material safety by using protective gear like goggles, masks, gloves for chemical tasks, and appropriate footwear to prevent hazards" - Delhi

Striving specialization - "I specialize exclusively in design. My work is so meticulous that other contractors seek my design services. I cater to approximately 80% of contractors in the area, focusing solely on design projects." - Jaipur



Financial impact reflects in **lifestyle enhancements**, increased savings and **investments**, leading to **decreased financial stress and uncertainty**.

FINANCIAL IMPACT

Lifestyle Improvements

- Changes in dietary habits
- Pursuing better housing solutions
- Investing in children's education

Dietary habits - "Ab ham kabhi kabhi hotel se khana mangwa ke khate hain. Bachche kuchh khane ki zid karte hain to utna sochate nahin hai." - Jaipur

Newly renovated home - "Maine mere gaaon ka ghar abhi fir se banwaya hai. Purane type ka tha, toh paint design maine kiya." - Delhi

Education for children - "We ensure our children receive an English-medium education, with our youngest daughter currently attending college." - Hyderabad

Increased Savings and Investments

- Strategic and high value investment
- Boosted savings

Invested in land - "Mera gaaon Bareilly me hain, wahan do beegha zameen khareedi hain." - Mumbai

Boosted savings - "Currently, I can set aside funds for my daughter's education and future. I am saving money for my future as well." - Kolkata

Health insurance - "I hold life insurance and accidental benefit insurance in case anything happens to me" - Jaipur

Reduced Financial Stress & Uncertainty

- Debt management
- Retirement planning

Debt management - "Previously, I had to borrow money from others; however, I no longer need to do so. Although the current inflationary conditions make saving more challenging, I find myself in a much improved financial position now." - Bangalore

Aspiring to achieve early retirement goals - "Dilli pasand nahin hai mujhe. Thoda kamaa loon taki budhape ke liye rahe paisa, fir gaaon me jaa ke kheti karunga. Bhechne ke liye nahin, sirf apana khana peena chale. Toh retirement ke liye bhi paisa jod raha hoon" - Delhi



The intrapersonal impacts translate to a heightened sense of professionalism and added value to projects.

INTRA-PERSONAL IMPACT

Sense of Professionalism

- Continuous learning mindset
- Adaptability

Continuous learning mindset - "I am in this profession past 24 years so I thought I knew everything until I did one course with Asian Paint. It broaden my horizon that there are so many things to learn." - Hyderabad

Adaptability - "I have completed approximately 10-12 courses. Staying not only updated but also adaptable to the evolving demands from customers is crucial in our field." - Delhi

Adding Value to Every Project

- Change in the mindset
- Innovation in projects
- Commitment to excellence

Self worth - "Main khud ko ek artist manta hoon. Sirf painter nahin." - Jaipur

Design innovation- "Nayi nayi design khud bhi banate hain aur client ko suggest karte hain." - Kolkata

Focus on quality work - "Kaam sirf khatam karane ke liye nahin karte hain. Har Baar achcha kaam kar ke dena hamara Lakshya hota hai" - Delhi



Inter-personal impacts build credibility, trustworthiness, and provide networking opportunities

INTER-PERSONAL IMPACT

Credibility and Trustworthiness

- Professional advice and career guidance

Provide suggestions - “Even small contractors seek my advice now. Whether it's about polish, texture work, Royale, or Shine work, they reach out to me when they need assistance. They also seek my guidance on how to execute specific tasks, and I provide insights on the proper methods. They trust me with this” - Mumbai

Networking and Social Circles

- Influence in work community
- Respect in community

Respect from customers - “Yes, my social standing has elevated. Previously, customers would casually inquire or exchange greetings, but now they treat me with greater respect – offering water and inviting me to sit on the sofa.” - Kolkata

Respect in community - “Jab gaaon jaata hoon toh abb log acche se baat karte hain kyonki abb ham acche kapade pahante hain, gaadi le ke gaaon jate hain.” - Delhi

Networking - “I get to meet many reputed and bigger carpenters, plumbers, designers etc. and this helps me with my business.” - Delhi



Intellectual Impact - Creative Thinking

ANALYTICAL SKILLS

- Critical Thinking
- Secondary Research



Reassigning jobs

“If someone from our team is not fit for certain job, we re-assign them to something else. And AP training is always an option.”
- Bangalore

Research on YouTube

“Sirf academy me hi nahin sikhate hai. agar client koi design dikhata hai to, YouTube pe search kar lete hain” - Nagpur

INNOVATION

- Risk Taking
- Design Development



Increased risk appetite

“I used to get scared to take up big projects as materials are expensive and ruining one project means ruining future projects. Will skilled team, I am confident to take up these projects now” - Kolkata

Innovation in designs/ techniques

“Sometimes clients go to internet and just show us some designs to make. I confidently take up those projects. I know I will figure out.” - Lucknow

COLLABORATION

- Active Listening
- Collaboration with Other Teams

Listen & record client requirement

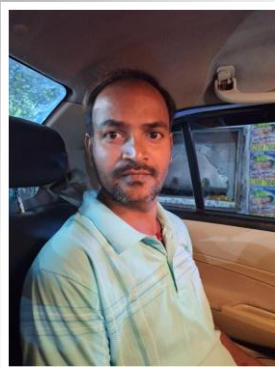
“Ham client se milate hain to pad leke jate hain, unki sari requirement likhate hain. Samajhte hain ki unhe exactly kya chahiye”
- Delhi

Strategic professional collaborations

“Pahale ghar ka kaam aata tha toh furniture, electrical, ye sab kaam nahin karte the. Ab do char logo ke sath mil ke poora project le lete hain” - Indore



Success Stories



From Kolkata

Coming from a **modest financial background**, I aimed for a better life for my kids while toiling as a laborer, earning a meager 300-500 per day. The **aspiration for a stable home, a vehicle, and quality education felt distant**.

Then, I found an opportunity in Asian Paints' training, resembling a quality **government school education without the cost**.

Learning about designs and textures not only turned me into a **skilled painter** but also **paved the way for my success**.

Now, leading a team, I earn significantly more. My kids receive an English medium education, and I've secured savings in their names.

Asian Paints has been the catalyst for this transformative journey, and my gratitude knows no bounds.



From Bangalore

Uneducated and married young, my early years were marked by laborious work with limited financial capacity. My family harbored dreams and expectations beyond my means.

The turning point came with the Asian Paints course - a catalyst for transformative change.

Now, I proudly invest in my **wife's well-being, providing nutritious meals and regular fruits** for my children. We've progressed to cooking **non veg meals twice a week** and achieved milestones like **purchasing land** in my village and acquiring a **four-wheeler**.

Asian Paints not only enhanced my skills but also **uplifted my family's quality of life**, turning aspirations into tangible accomplishments.

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Decoding “**Kamyaabi**”

In essence, the term **Kamyaabi*** is linked to **income, standard of living**, and **social status** - without any specific hierarchy

New additions to this pool are “**Leadership**” and “**Negotiation Power**”

Image Source - Respondents

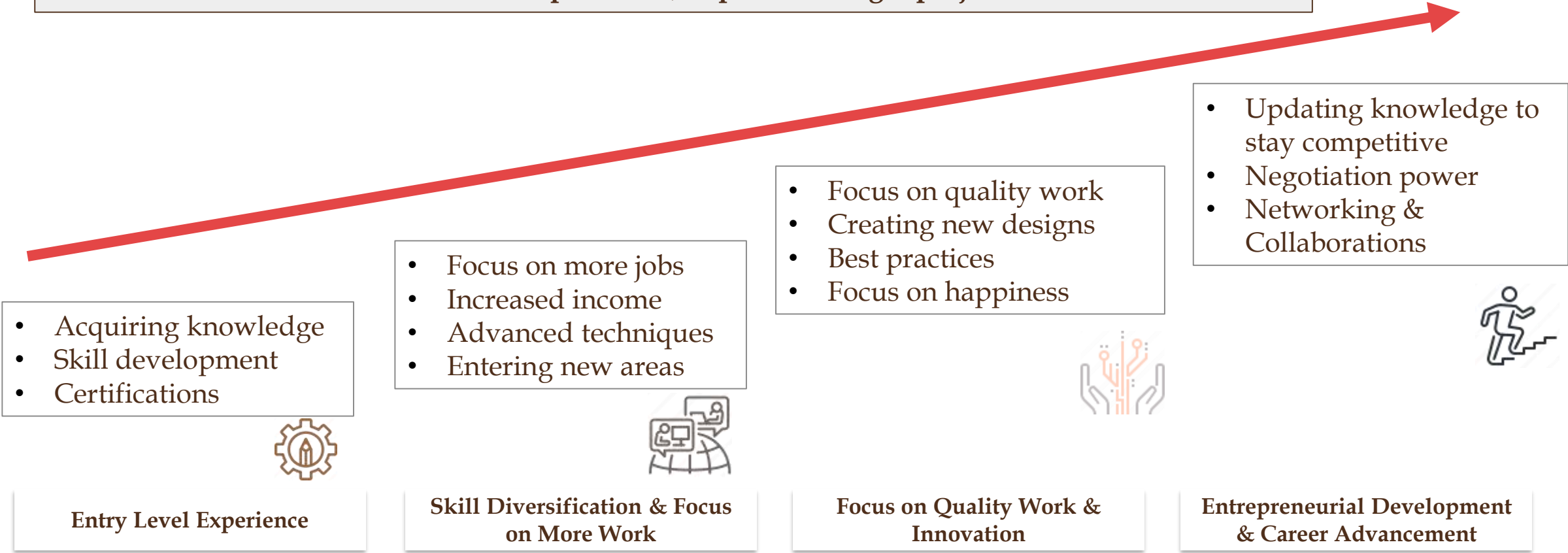
*Kamyaabi -success

Source - qualitative module



Evolution of Painting Contractors - aided by the course training

Participants are transitioning from a laborer mindset to a business-oriented approach. They are gaining confidence and are now capable of engaging in discussions / negotiations with their customers. An additional manifestation of this evolution is evident in their networking and collaborative efforts with other service providers, to pitch for larger projects.





How is Income driving Kamyabi?

1. INCOME

Improved Project Volume	Improved Project Value	Professional Collaboration
<p>Capability to handle larger projects achieved</p> <p>“Yes this has helped me grow as I am able to take bigger projects now. ” – Jaipur</p>	<p>Increased project size</p> <p>“Pahale sirf chhote mote kaam leta tha. Abb teen manzila building, aise bade bade kaam leta hoon.” – Mumbai</p>	<p>Fostering success through partnership</p> <p>“Bahut se baar client ko ek ghar ka kaam bahut sare logon ko nahin dena hota, to electricity wale se, furniture wale se, plumbing walon ke saath milkar project utha leta hoon. Paise ki baat mere pas rahati hai” - Kolkata</p>

Source – qualitative module

QH. Interesting. Are you happy with your earnings on quarterly or yearly basis since last few months? So, do you believe that you have seen an increase in your quarterly earnings after having done the course from Asian Paints Colour Academy?

Classification Internal



How is Standard of Living driving Kamyaabi?

2. STANDARD OF LIVING

Investment in higher children’s education	Investment in home decor	Not hesitant to spend money
<p>Higher education for children “I have four daughters and my eldest daughter did masters and she is now preparing for IAS.” - Delhi</p>	<p>Striving to improve the appearance of the house “Initially, when we considered getting furniture, we simply placed a mat and sat on it. As financial circumstances improved, there was a natural inclination to enhance our living conditions. Subsequently, I made significant changes in the house, including installing a modular kitchen and acquiring a sofa set.”- Bangalore</p>	<p>Change in perspective towards money “Pahale 100 rupaye ki chappal lene ke pahale sochana padta tha, abb 500 ki lene se pahale hichakta nahin hoon”, Mumbai</p>

Source – qualitative module
QH. Interesting. Are you happy with your earnings on quarterly or yearly basis since last few months? So, do you believe that you have seen an increase in your quarterly earnings after having done the course from Asian Paints Colour Academy?
Classification Internal 40/88



How is Social Status driving Kamyabi?

3. SOCIAL STATUS

Consideration as an Intellectual	Respect in Community
<p>Newcomers seeking professional guidance</p> <p>“Naye Naye bacche jo iss kaam me aate hain, vo aate hain mere pass poochhnae ke liye ki kya karna hai. Guide karta hoon unhe.” – Hyderabad</p>	<p>Esteem among villagers</p> <p>“I arrived in Mumbai in 2008, and when I return to my village, people inquire about the transformations. I am respected for the changes they observe.” – Mumbai</p>

Source – qualitative module

QH. Interesting. Are you happy with your earnings on quarterly or yearly basis since last few months? So, do you believe that you have seen an increase in your quarterly earnings after having done the course from Asian Paints Colour Academy?



How is Leadership driving Kamyaabi?

4. LEADERSHIP SKILLS

Learning opportunities	Confident and Competent
<p>Promoting newcomers “I am not just learning myself. Since I am successful, I can guide the newcomers to learn and advance in their careers as well” -Ahmedabad</p>	<p>Confident professional “Now, with practiced skills learned from the course, I confidently commit to tasks. My heightened confidence is evident when clients refer me, as they've seen the quality of my previous work.” - Mumbai</p>

Source – qualitative module

QH. Interesting. Are you happy with your earnings on quarterly or yearly basis since last few months? So, do you believe that you have seen an increase in your quarterly earnings after having done the course from Asian Paints Colour Academy?



How is Negotiation Power driving Kamyaabi?

5. NEGOTIATION POWER

Maximized Value	Competitive Advantage
“I proudly display my licence, highlighting our association with Asian Paints and specialized training. This positive impression often leads to reduced pricing negotiations with clients.” – Mumbai	“My pricing has a significant gap, nearly double that of competitors. Clients are willing to pay this premium, recognizing the value due to my certification from Asian Paints, which establishes expertise and quality assurance.” – Delhi

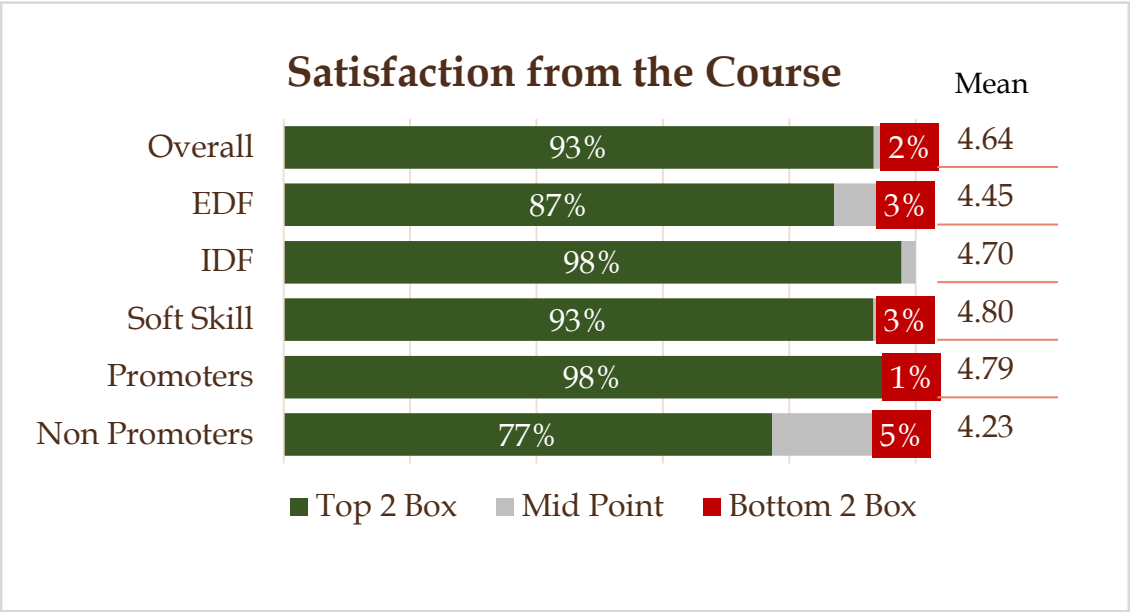
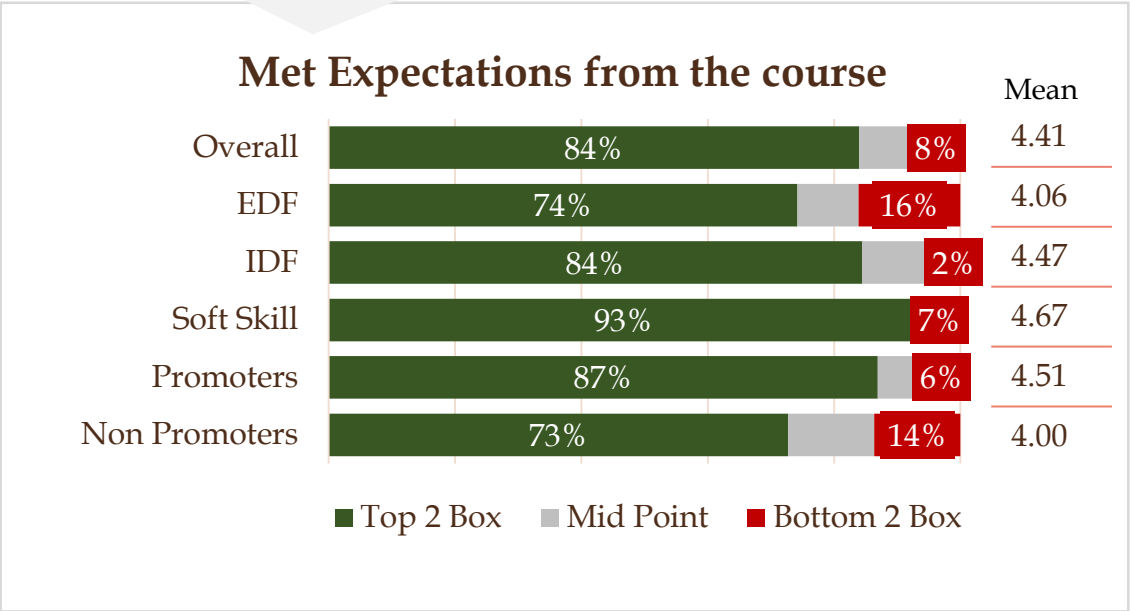
Source – qualitative module

QH. Interesting. Are you happy with your earnings on quarterly or yearly basis since last few months? So, do you believe that you have seen an increase in your quarterly earnings after having done the course from Asian Paints Colour Academy?



While most participants were satisfied with the course itself, they felt the benefits they expected post completion, were not completely met.

“Aisa nahin hai ki jo chaha tha waisa ho nahin rha, Dheere Dheere ho hi raha hai. Thoda time lagega, waise main course se poori tarah se santush hoon” Delhi



Base- all respondents - 106

Source – qualitative module

Q5.On a scale of 1 to 5, with 1 being very dissatisfied and 5 being very satisfied, how satisfied are you with the overall impact of the course?

Q6. How did the course met with your expectation on a scale of 1 to 5, with 1 being not at all met my expectations and 5 being met my expectations completely?

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Around one-third of the participants felt that the course material was outdated and not aligned with current market expectations.

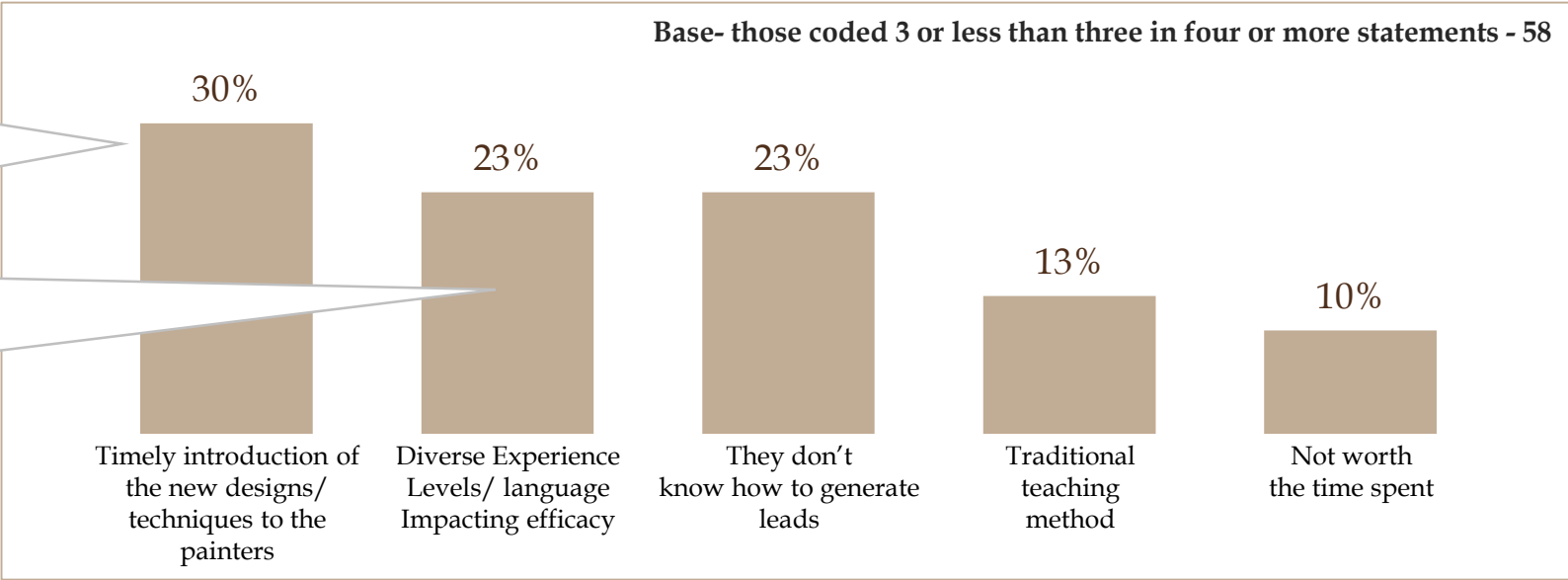
Information sharing and pro-activeness

“It is no more like previous. Now they don’t share information on new products and design on time. They are quite laid back.” Coimbatore

“The class comprised individuals with varying levels of experience, both experienced and inexperienced. This diversity extended the duration of the session, as everyone had their own preferences.” – Pune

Balancing experience levels and preferences

Limitations with the course





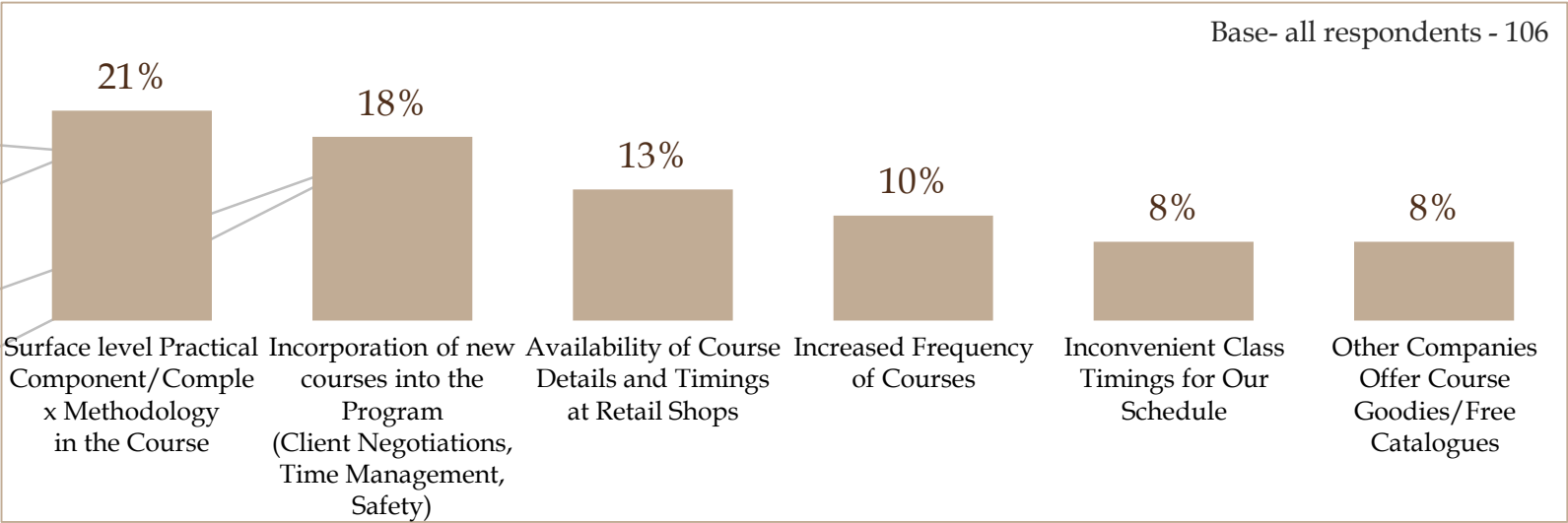
~ 1/5th felt that the practical component of the course is superficial.
A similar percentage suggested the introduction of new courses.

Emphasizing on comprehensive training

“Designing is completed quickly, but comprehensive finishing is essential. Training should be provided for the complete finishing of a 10x10 space.”
Coimbatore

“People complete tasks at their own convenience. We should be instructed in time management, negotiation skills, and safety measures. The scope of the course should be broadened.” –
Delhi

Improvement Areas



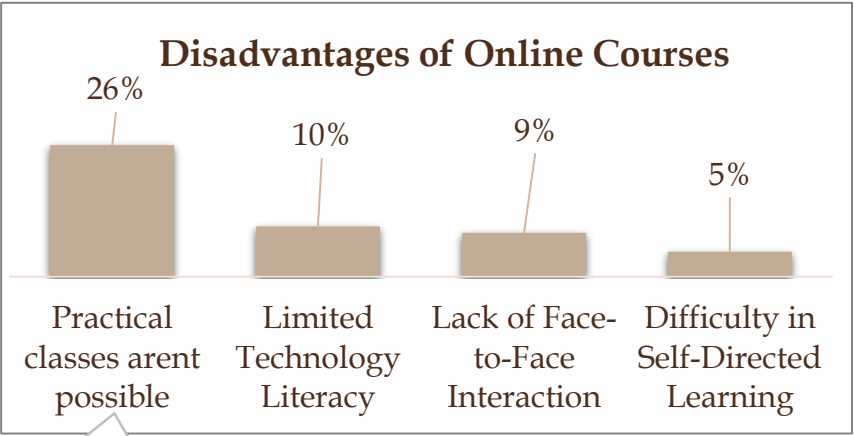
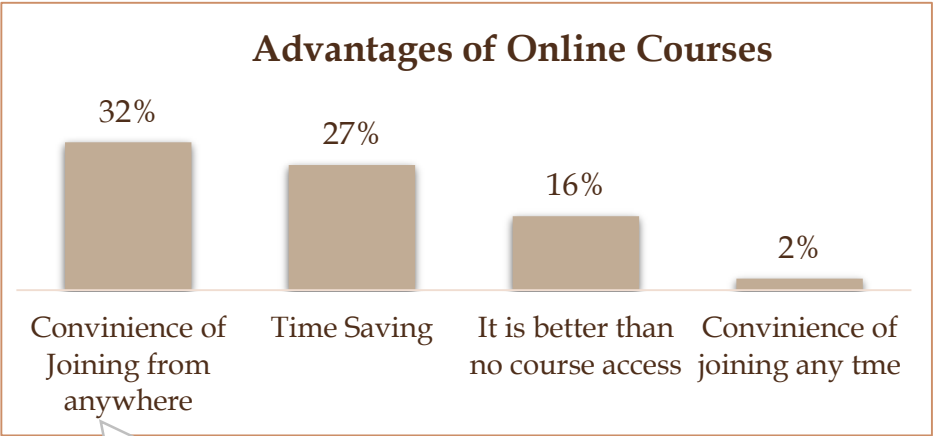
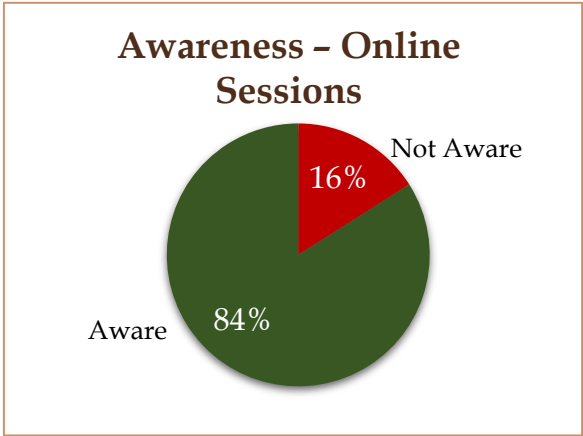
Advocating for time management, negotiation, and safety training in course curriculum



Online Courses :

A majority were aware of the option, with 32% appreciating the convenience of joining from anywhere.

However, 25% were disappointed by the lack of practical sessions.



Base- all respondents - 82

Remote participation in classes from anywhere

“A positive aspect is that physical presence in the class is not mandatory. We can participate from home, during travel, or while working on-site.” – Nagpur

A shift towards theoretical instruction with no practical learning

“The training becomes more focused on theory, lacking practical learning, which is not advantageous.” – Mumbai

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Ormax Observations

- Acquiring knowledge, leading to quality work were the top drivers for pursuing the course
- **Knowledge, quality work and happiness** are the top three terms associated with the course
- Around **80%** participants expressed a **willingness to recommend** the course to others - primarily due to the tangible benefits they derived from the course.
- **Leadership** and **Negotiation Power** are recent additions to the concept of 'Kamyaabi,' alongside its existing associations with **Income, Standard of Living, and Social Status**.
- The most significant impact is observed in the intra-personal aspect, followed by interpersonal and professional aspects sharing the second position.
- A lower financial impact is observed due to a combination of rising inflation and a heightened desire for greater wealth.
- Upon analyzing the course's impact, a transformation is evident among the painting contractors. The emphasis is transitioning **from quantity of work to the quality of work**, with a growing focus on **happiness and innovation**.
- **Improvement Areas** – A majority recommended increasing **the practical aspect** of the course. Suggestions were also made for incorporating courses on **Negotiations, Time Management, and dedicated course to Safety**.

Ormax Recommendations



Categories	Recommendation
Course Content	<p>Course Inclusion Suggestions</p> <ul style="list-style-type: none">• Time Management• Client Negotiation• Safety Training <p>Teaching new designs more frequently</p> <ul style="list-style-type: none">• Meeting Customer Expectations• Keeping up with trends to retain Competitive Edge
Course Efficiency	<p>Course Efficacy</p> <ul style="list-style-type: none">• Have separate sessions for new comers and experienced painters <p>Aspects to Improve</p> <ul style="list-style-type: none">• Enhanced practical training• Offer full-sized walls for practice instead of smaller patches <p>Incorporate engaging training methods -</p> <ul style="list-style-type: none">• Integrate interactive elements, real-world examples, gamification, and Q&A sessions.
Course Awareness	<p>Course Awareness</p> <ul style="list-style-type: none">• Availability of course details and timings at retail shops

02

Research Findings – Plumbers

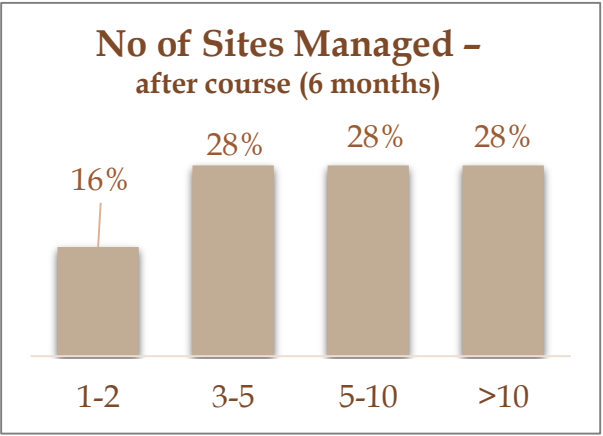
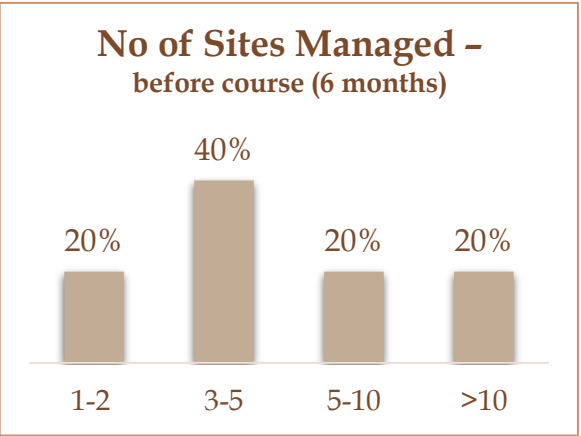
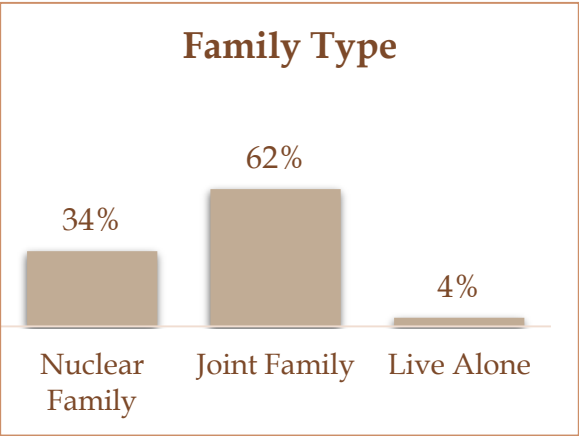
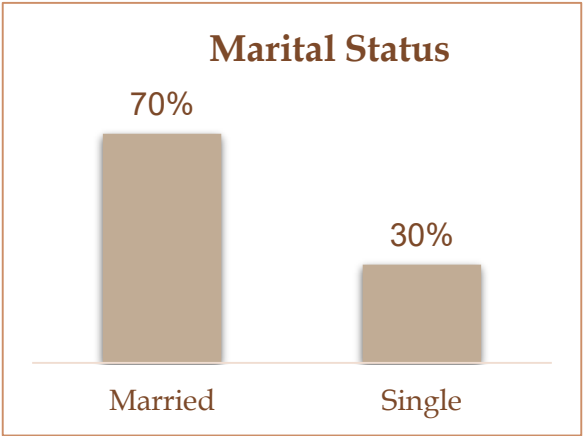
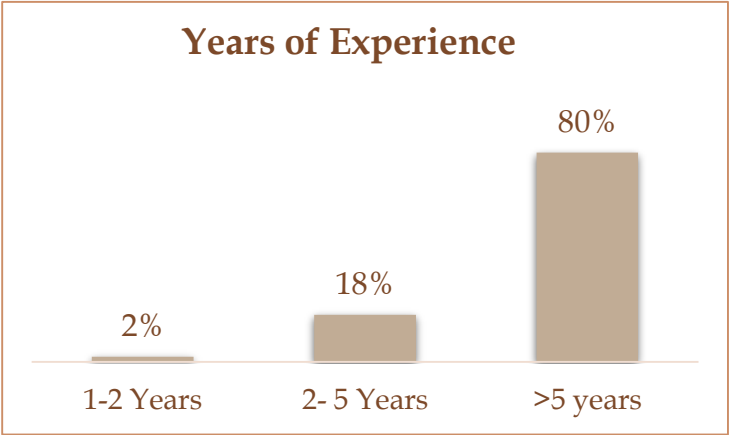
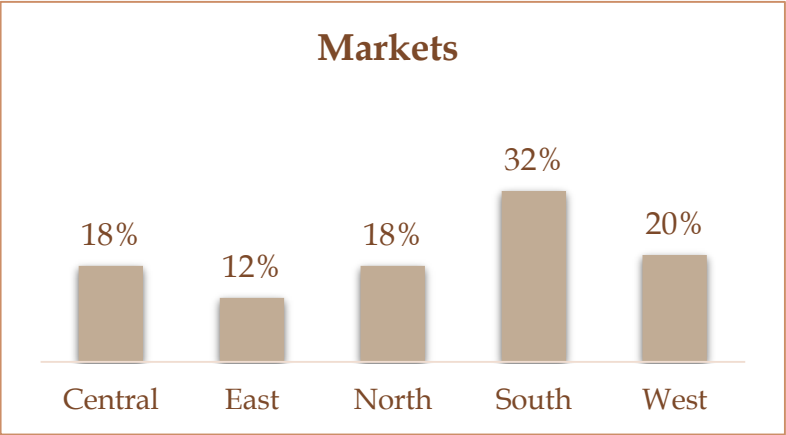
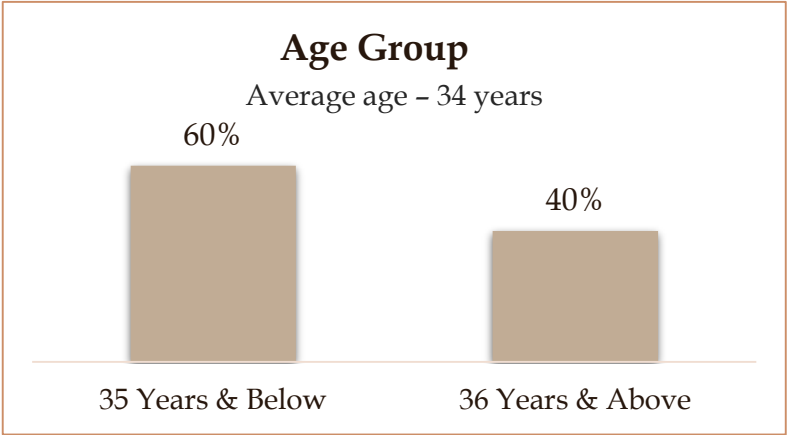
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Profile of the Respondents



Base- all respondents - 50

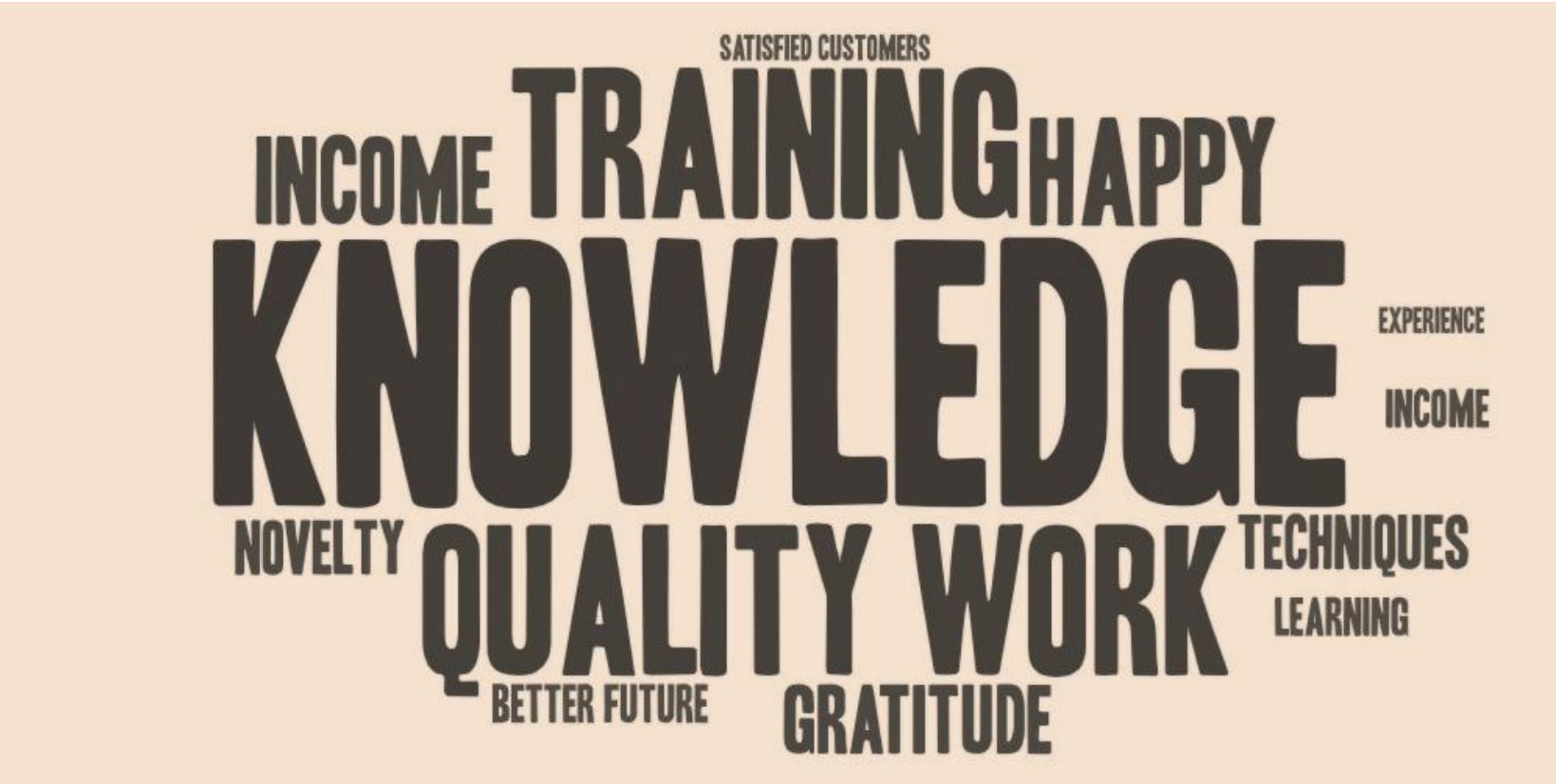
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Main association was knowledge.
Around two-fifths of the participants associated the course with producing high-quality work and training.



Top 5 Associations

Knowledge (44%)

Quality Work (18%)

Training (18%)

Happiness (12%)

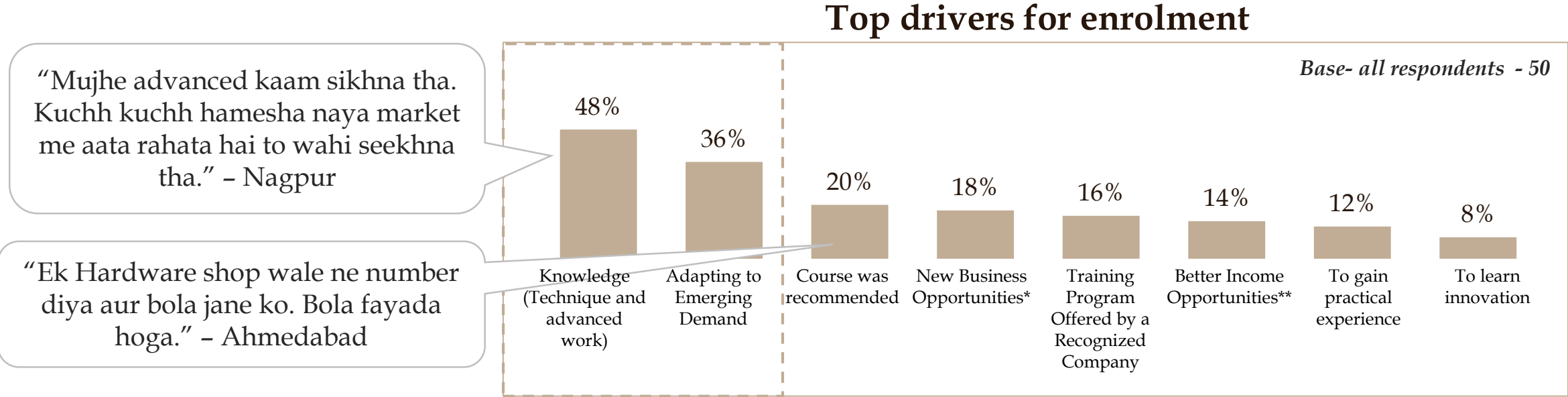
Gratitude (6%)

Base- all respondents - 50

Size of the text is indicative of frequency
Q1. What comes to your mind when you think of the course that you did with Asian paints color academy?
Classification Internal 56/88



Plumbers enrolled for the course mainly to gain knowledge to stay up-to-date with the growing demands of the market.

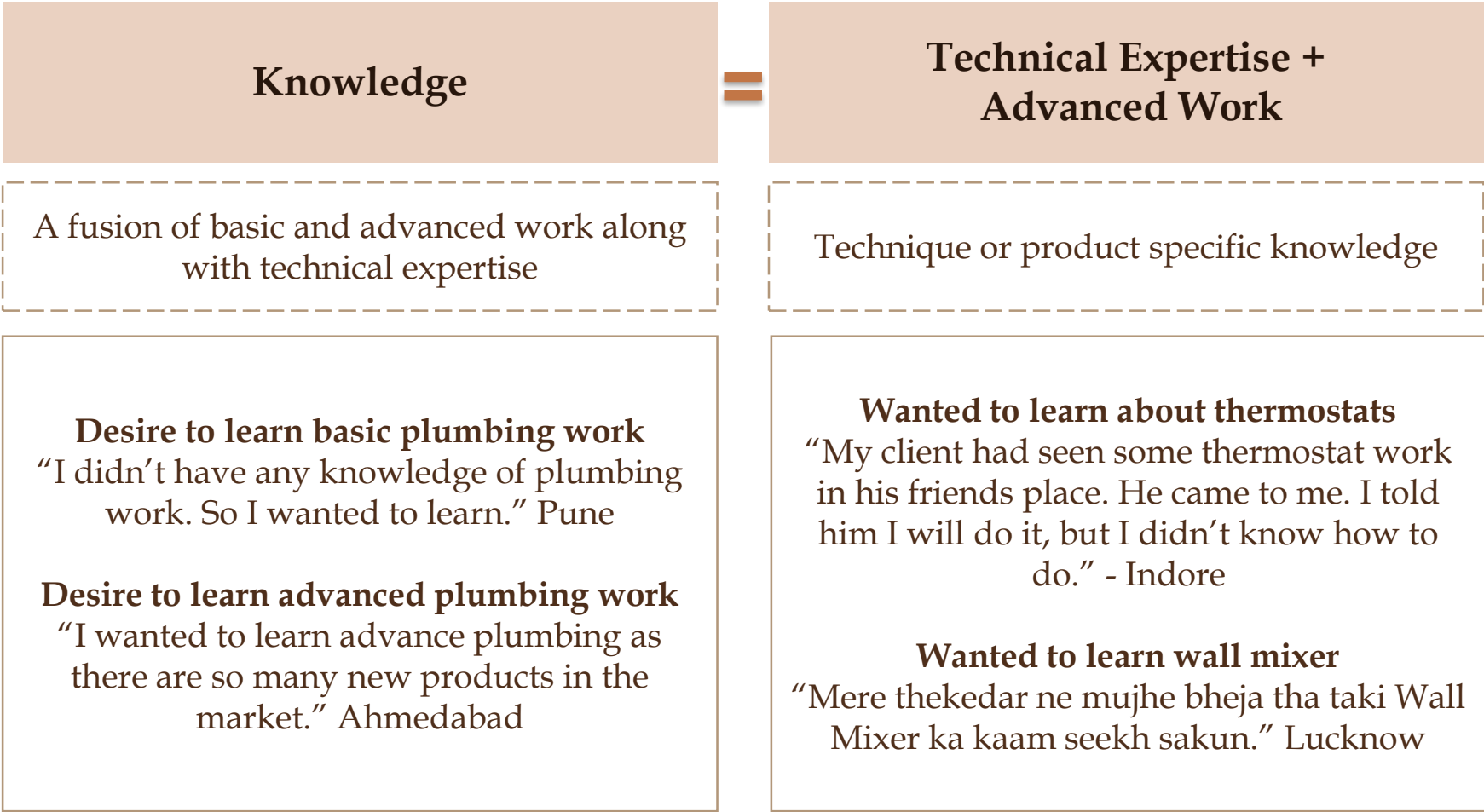


Need to Understand – what does knowledge mean to plumbers?

*New Business Opportunities – to be able to enhance work scope
**Better Income Opportunities – to be able to procure more business and projects
Q2.Great! So, what are the top 3 reasons that made you decide on taking up the course?
Classification Internal



Knowledge includes an understanding of both fundamental and advanced aspects of plumbing.





Approximately two-fifths learned about the training sessions from their retailers, while one-third came to know from their friends / family

Source of Awareness	Overall
Base	50
Retailers where I buy products from	38%
Friends and family	30%
Colleagues, other co-workers, contractors	18%
Call From company	8%
Asian Paint people came in my locality	6%

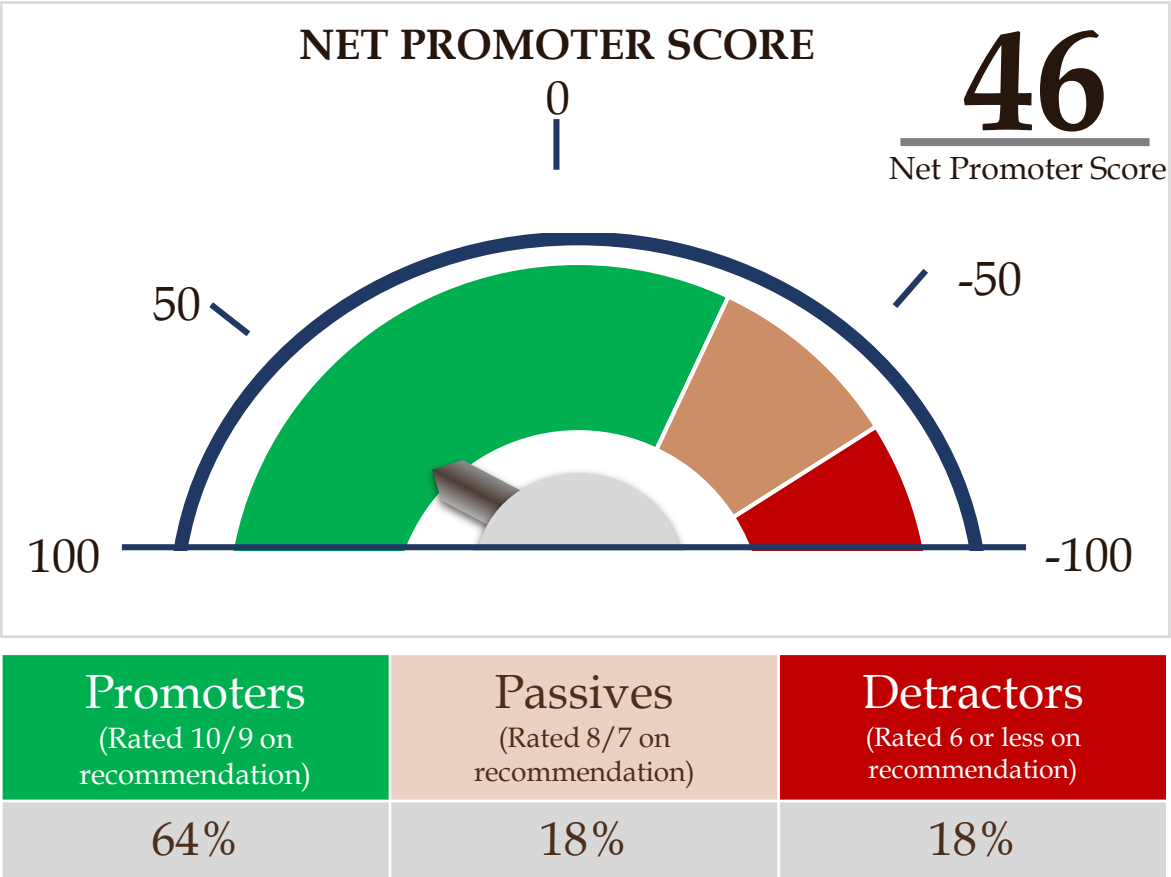
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64% expressed a willingness to recommend the course to others



Reasons for Recommendations	
Reasons	Promoters
Base: promoters for the course	32
It was beneficial to me so I would recommend others	44%
The course is from a reputed company	16%
It will provide better earning opportunities	16%
The training method is very easy to follow	9%
It is crucial to stay competitive	6%

Reasons for Non Recommendations (Base-18*)	
<ul style="list-style-type: none">Strategic Confidentiality: Balancing Training Awareness and Market Competition	

“Itne dher sare plumbers kya karenge market me, fir kisi ki kaam nahin milega, koi nahin kamayega.” – Lucknow

Net Promoter Score = % - %

Promoters Detractors

Base- all respondents - 50

*low base- read with caution
Q3a. So, would you like to recommend this course from Asian Paints Colour Academy to your family, friends, fellow colleagues & well-wishers?

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Highest impact noticed on the intra-personal aspect.
The financial impact was relatively lower.

Reduced outsourcing

“Pani pass karwane wala kaam pahale kisi aur se karwa lete the. Abb aisa nahin hai. Water proofing seekh li hai, khud karate hain.” **Nagpur**

Differentiate my work from others – 4.38
Increased team size – 4.36
Increase in number of jobs – 4.12

4.17
Professional Impact

Bought digital items – 3.54
Bought Two-Wheeler – 3.52
Bought some white good – 3.36

3.43
Financial Impact

Bought insurance
“I bought a life insurance. This will help my children in future.” – **Jaipur**

Cant charge extra for work
“Customers are hesitant when they hear the my rates. They compare it to someone offering the same service for 50 rupees and question why they should pay me 100” – **Lucknow**

“I am able to interact with client better. I am able to answer their questions. My client wanted something else, I suggested them to go for panel shower.” **Indore**

Value addition in work

Enhanced respect for profession– 4.36
Upgraded with new learning – 4.34
Confident – 4.30

Intra-Personal Impact
4.29

Inter-Personal Impact

4.11
Enhanced respect – 4.12
Increased influence – 4.12
Providing opinions/ solutions – 4.10

“Certificate se kafi change aaya hain. Customer ko kaam me confidence aata hai aur hame khud me..” **Ahmedabad**

Increased confidence

Base- all respondents - 50

Q4a. I will now read out few statements in regards to how the course might have changed your life and work. Please let us know how much do you agree or disagree from the statements on scale of 1 to 5 where 5 is highest and it means you completely agree and 1 is lowest which means you do not agree at all



Significantly lower financial impact

PROFESSIONAL

An **increase in the number of jobs** that I took up after finishing the course

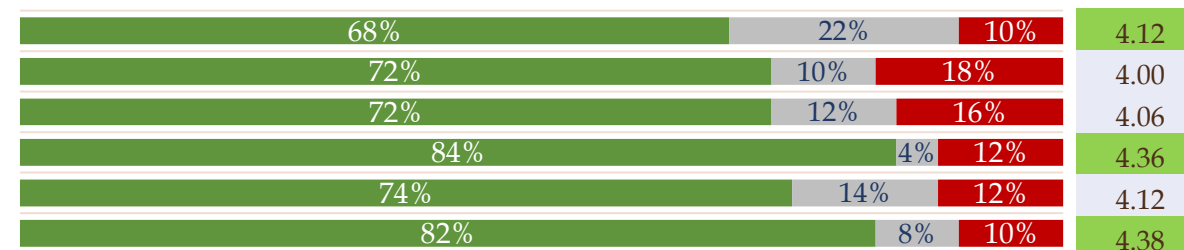
Able to **charge more per assignment** after finishing the course.

Receive more **recommendations from existing clients** with betterment in quality of work

Increased my team size to handle larger scope of work in recent times.

Invested in more equipment's or tools to handle new kind of work since last few months.

Able to **differentiate myself from others in my work** with the certification earned after course



FINANCIAL

High Value Purchases

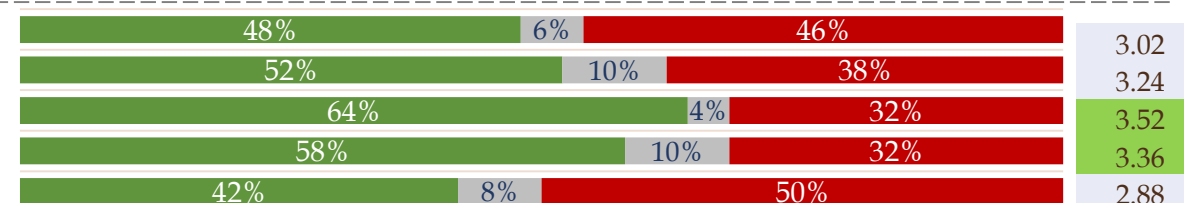
Recently **bought a home / property** for myself or the family.

Did **marriage or some other social function** in the family since it was pending.*

Recently **bought 2 / 4-wheeler** for myself or the family.*

Bought some white goods for home like washing machine, fridge or TV

Shifted to a new place with my family.



Low Value Purchases

Bought some digital items like a Smart phone, Laptop & other accessories. *

Started going out more often with me or my loved ones.



INTRA PERSONAL

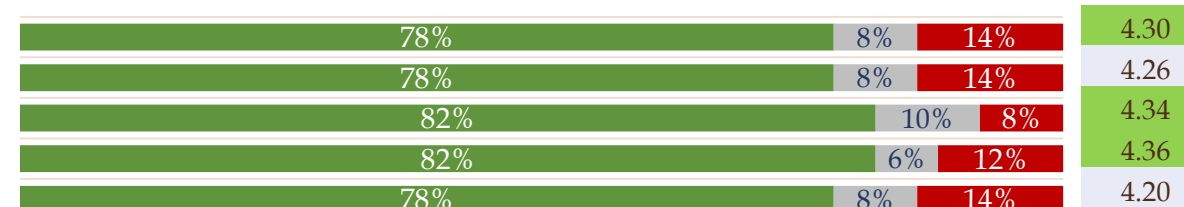
Feel more confident in my professional capabilities after doing this course.

Course has contributed in my success over the last few months

Upgraded with new learnings from this course.

Respect for my profession has increased after doing this course.

Able to add more value in the customers life after gaining expert guidance on

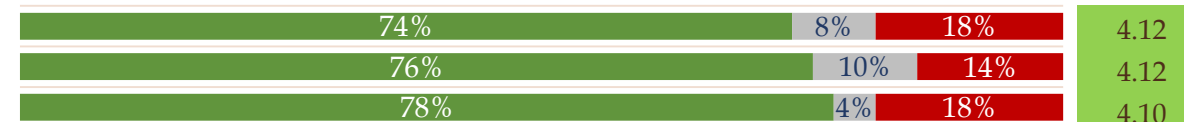


INTER PERSONAL

Respect increased among family, society & fellow colleague.

Influence among the work community has significantly increased.

Fellow colleagues & friends have started **seeking my opinion** on their work & life



Base- all respondents - 50

■ Top 2 Box ■ Mid Point ■ Bottom 2 Box

* Contributing to overall financial impact

Note - Top 2 Box - those coded 4/5, Mid Point - those coded 3, Bottom 2 Box - those coded 2/1

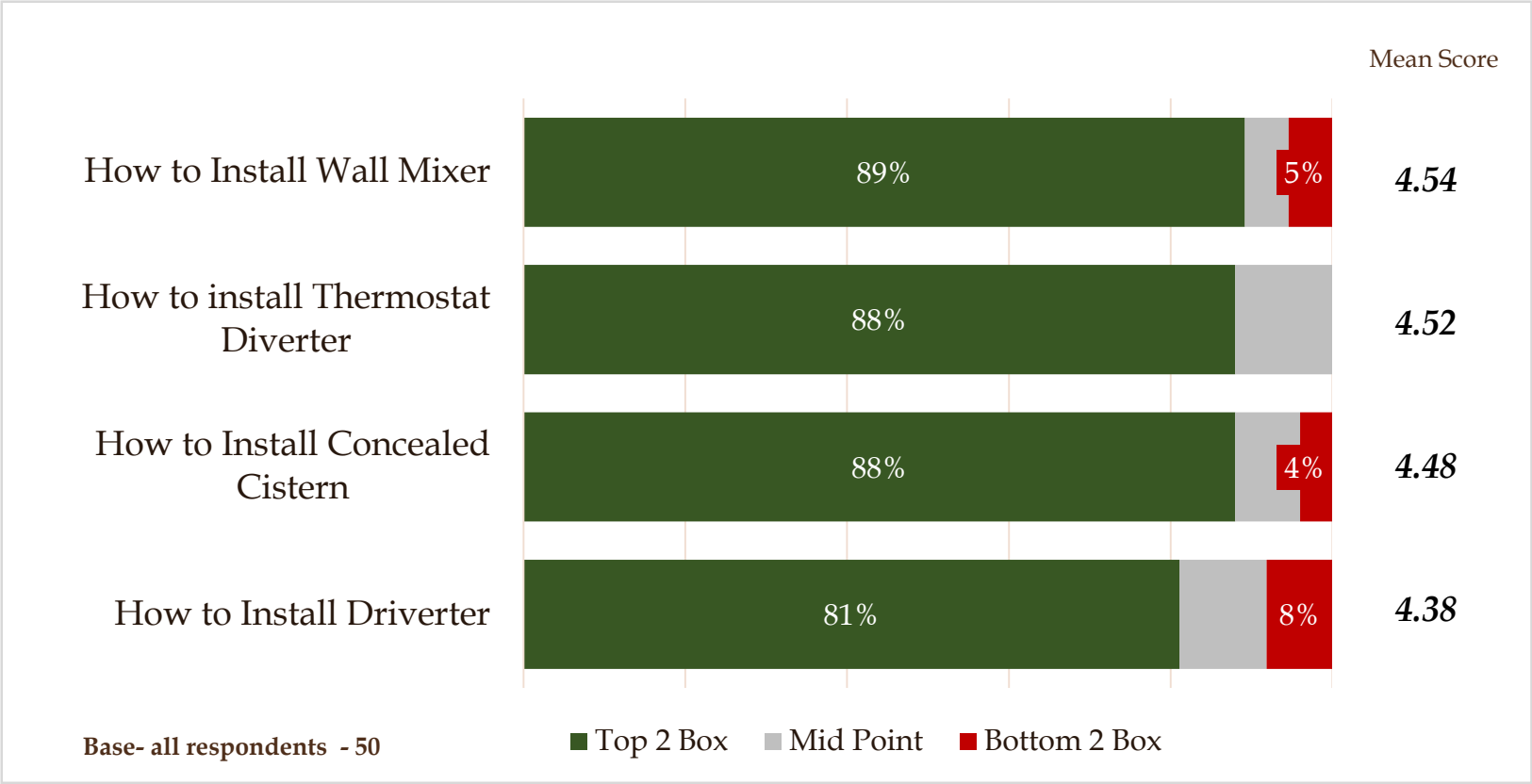
Q4a. I will now read out few statements in regards to how the course might have changed your life and work. Please let us know how much do you agree or disagree from the statements on scale of 1 to 5 where 5 is highest and it means you completely agree and 1 is lowest which means you do not agree at all

Classification Internal



Majority believed that comprehending the program and its components was clear and straightforward.

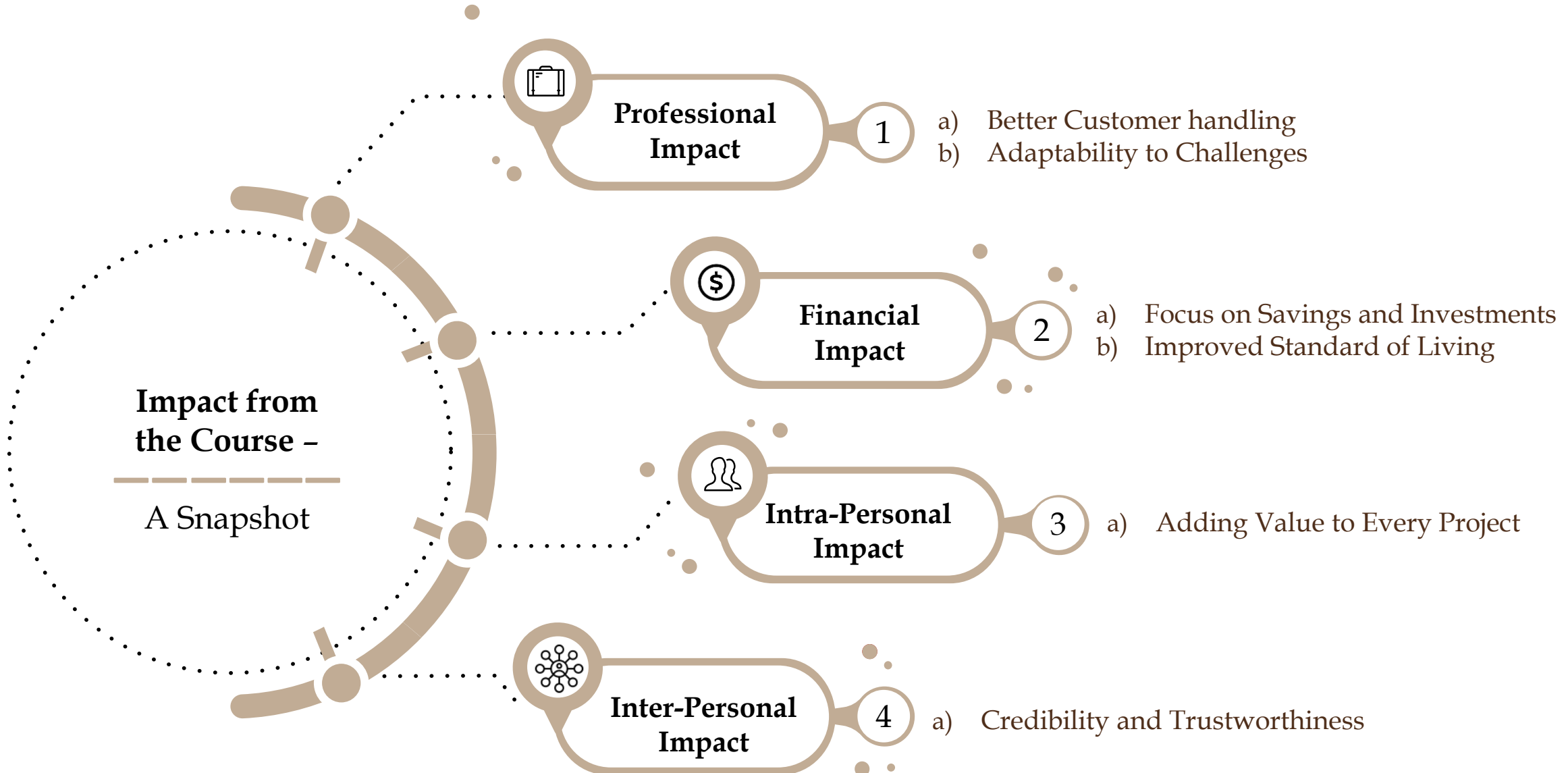
Learning & Understanding of Course Components



Note - Top 2 Box – those coded 4/5, Mid Point – those coded 3, Bottom 2 Box – those coded 2/1
Q4b.You learned some very specific skills in the course at Asian Paints Colour Academy. How would you rate your learning and understanding on the below parameters. You need to rate between 1 to 5. 5 means you learned and understood everything and 1 means you did not learn or understood everything in the academy during your course



The course's impact among plumbers is in its early stages yet.





Professional impacts evident in **client interactions**, **business expansion**, and their **adaptability to challenges**

PROFESSIONAL IMPACT

Better Customer handling

- Communication skills
- Confidence in charging extra

Client knowledge and interaction-

“Abb samajhata hai ki client ko kya pasand aayega, toh han me han milate hain. Kaam toh mil jata hai isase.” - Indore

Confidence to charge extra_ - “Vo certificate dikhate hain toh extra charge karane ka mauka milata hai. Sab utna paisa nahin dete hain but fir bhi thik hai.” - Hyderabad

Adaptability to Challenges

- Building emotional resilience through supportive training

Business expansion - “pahale water proofing ka kaam dusaron ke karwa lete the, ab khud karate hain.” - Mumbai

Confidence to take up complex projects- “Agar koi bada project ho aur atak jaate hain toh apane Guru ko call karate hain. Vo sab samjhate hai for se call pe.” - Ahmedabad



Financial impacts reflect in lifestyle enhancements, and increased savings and investments

FINANCIAL IMPACT

Improved Standard of Living

- Investing in children's education
- Better housing

Dietary changes - "I was staying in a rented house, now I have own plot and house." - Indore

Better education for children "My daughter is studying photography now. Never thought this would happen" - Delhi

Prioritizing Savings and Investments Amidst Unchanged Income

- Boosted savings and investments

Boosted savings- "My income hasn't increased much but I am more in to saving, bank FD, Post office RD, bank RD etc." - Lucknow

Life insurance - "Bachche hain mere, to abhi life insurance khareeda hai, taki unhe kaam aa sake," - Jaipur



Reasons for low financial impact

No Display Value as Customers don't Understand the Technique	Highly Competitive Market	Credit for Aesthetics Goes to Brands, Not the Skills of Plumbers
<p>"Customers ko technique ka toh pata toh nahin hota hai. To certificate hi hai jo hai. Kya kaam dikhaye unhe." - Jaipur</p> <p>"Obviously I have learnt which reflect in my work. But how to communicate this to client. They will have to experience my work." - Delhi</p>	<p>"Main 100 रुपये bolun aur koi 70 bole, toh log kaam use de dete hain. Kuchh farak nahin padta ki kisko badhiyan kaam aata hai" - Bangalore</p>	<p>"Client bhi kisi ki kaam dikhata hai toh brand ki baat hoti hai. Hamari baat nahin" - Indore</p>





The intra personal impact allows them to add value to their projects;
the inter personal impact builds credibility with customers

INTRA-PERSONAL IMPACT

Adding Value to Every Project

Value addition - "I am able to interact with client better. I am able to answer their questions. My client wanted something else, I suggested them to go for panel shower." Indore

INTER-PERSONAL IMPACT

Credibility and Trustworthiness

Credibility - "Certificate se kafi change aaya hain. Customer ko kaam me confidence aata hai aur hame khud me.."
Ahmedabad

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Decoding “Kamyaabi”

In essence, the term **Kamyaabi*** is linked to **Confidence, Income, People skills** - without any specific hierarchy

Source – qualitative module
*Kamyaabi –success





How are different factors driving Kamyaaabi?

Confidence	Income	People Skills
<p>“The course has boosted my confidence, and as I continue with more courses, they will delve into more advanced topics, guiding me toward success.” - Nagpur</p> <p>“You can see my work and figure out how good I have become” - Delhi</p>	<p>“Han main khud ko kaamyab manata hoon. Pahale se 5 se 7 hazaar extra hi kamata hoon” - Jaipur</p> <p>“Certainly, I am successful. I've begun saving money for my children's future.” - Bangalore</p>	<p>“One thing is certain - when I communicate with clients, they are likely to convert.” - Ahmedabad</p> <p>“I speak to the customer very politely and I feel the number of jobs has increased because of this. ” - Lucknow</p>

Source - qualitative module

QH. Interesting. Are you happy with your earnings on quarterly or yearly basis since last few months? So, do you believe that you have seen an increase in your quarterly earnings after having done the course from Asian Paints Colour Academy?

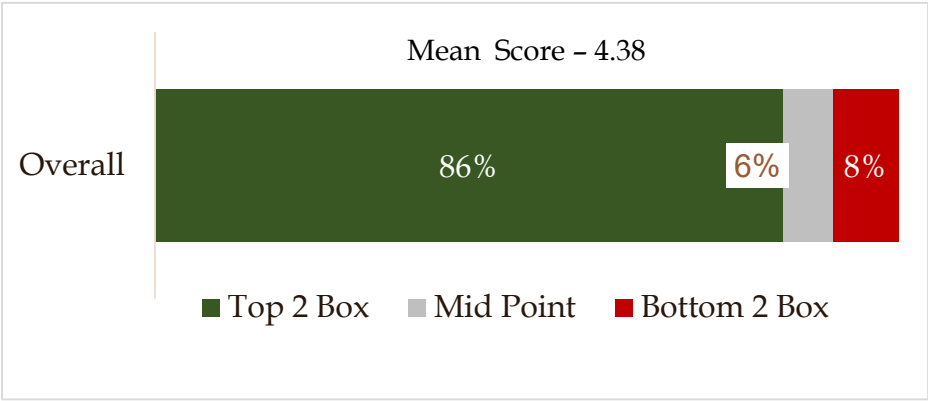
Classification Internal



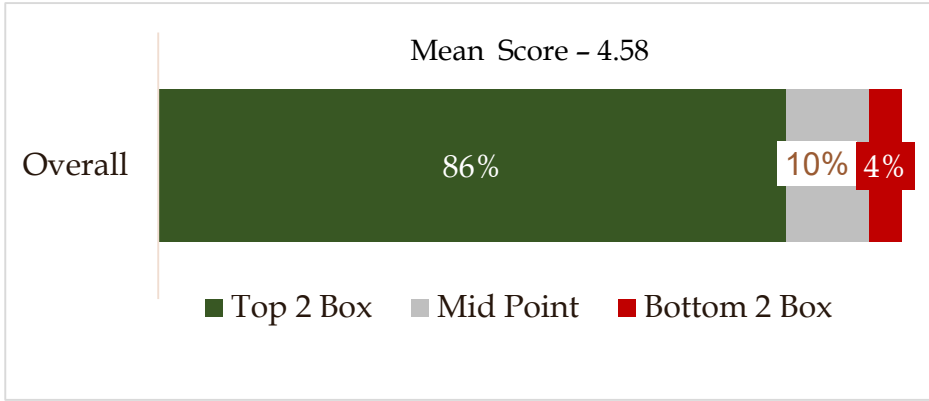
Though people are satisfied with the course, their expectations in terms of benefits were not met.

“jitni ummed thi utni tarakki nahin huyee, but jitni bhi huee hai, khush hoon.” - Delhi

Met Expectations from the course



Satisfaction from the Course



Base- all respondents - 50

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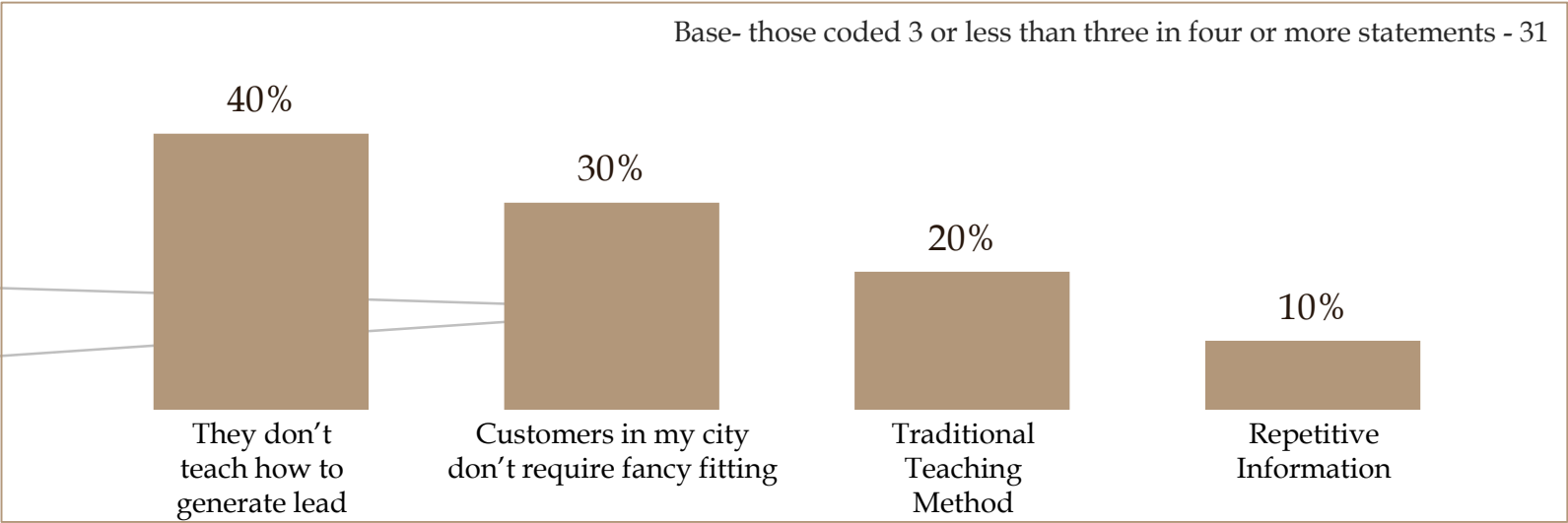
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40% felt unable to practically apply the knowledge gained.
Around one-third felt the course material was outdated and not up-to-date with current market expectations.

Limitations with the course

Base- those coded 3 or less than three in four or more statements - 31



“The area I work in, people are poor and they don’t want fancy things. Simple bathroom is good enough.”- Kolkata



~25% wanted the courses to be held more often.

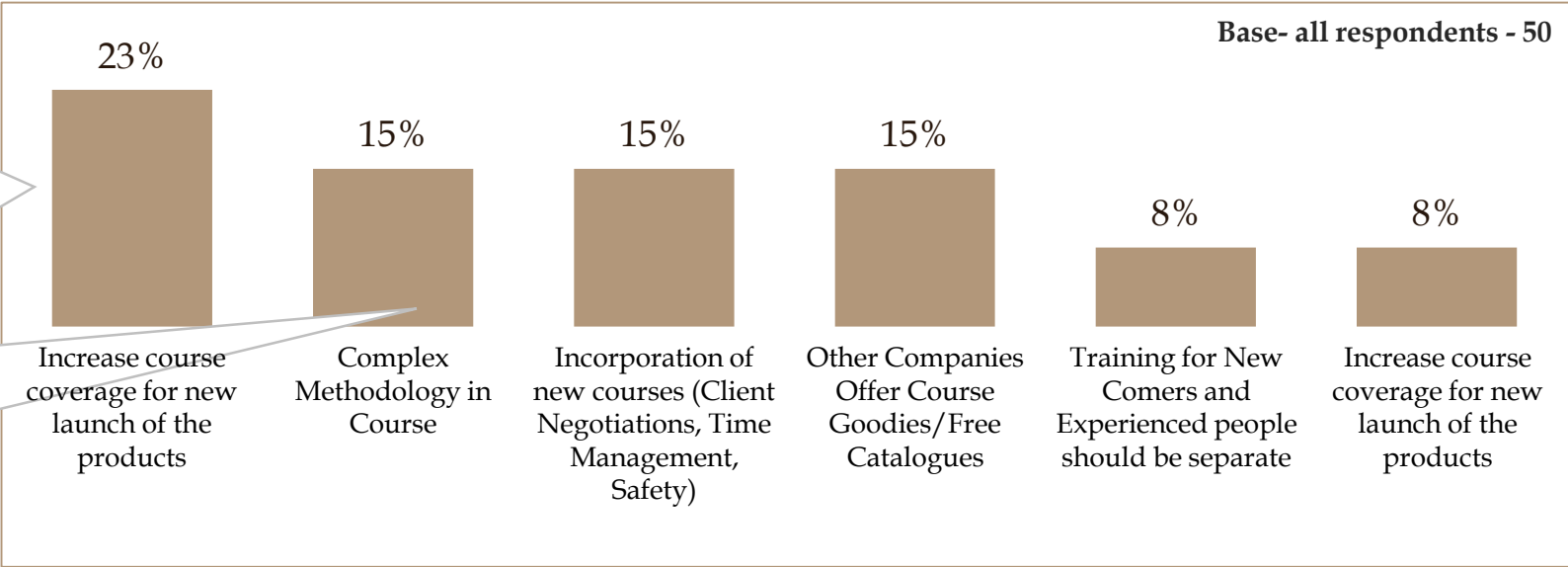
More frequent trainings

“Every day, there are new things happening with WC, and we don't always understand how they work. That's why we need more training sessions often.” Nagpur

“Aise sikhate hain jaise sabko basic aata hain. Koi fark nahin padta unhe ki kisko kya aata nahin ya nahin aata hai.”
-Delhi

Mixing up experienced and the new comers in the same class

Improvement Areas





Understanding their business

- Almost 90% of a plumber's job involves **maintenance work** rather than installing new fittings.
- The primary sources of jobs are **referrals** from past clients or collaborations with other contractors.
- Majority of plumbers are engaged in **residential projects** - working on individual houses, bungalows, and apartments.
- Most of them hire extra workers when necessary, but they maintain a **core team with at least two skilled workers**.
- **Challenges** in their business include:
 - Delays in client payments
 - Difficulty in keeping up with the mechanics of new product launches
 - Competition in the market



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Ormax Observations

- Acquiring knowledge that helps them adapt to the emerging market demands were the top drivers for pursuing the course
- Knowledge, quality jobs and training were the top three associated terms with the course
- Nearly 6 out of 10 are willing to recommend the course to others. The main reason for suggesting the course was that these individuals had personally experienced its benefits.
- 'Kamyaabi*', is mostly associated with **confidence, income, people skills**
- The most significant impact was observed on the intra-personal aspect, followed by professional and inter-personal impacts. The financial impact, however, was relatively modest. The course's influence among plumbers is still in its early stages and is expected to evolve over time.
- The course's financial outcomes were influenced as plumbers faced challenges in effectively conveying the quality of their work to customers, exacerbated by the competitive nature of the market.
- **Improvement Areas** – Most individuals stated that courses should be held more frequently due to the frequent launch of new products with updated mechanics. Additionally, they believe that individuals with different levels of experience should not be mixed in the same class.



Ormax Recommendations

Categories	Recommendation
Course Frequency	Increase course coverage for new launch of the products <ul style="list-style-type: none">• Update their knowledge to keep up with the mechanics of new launches
Business Efficiency	Effective Invoicing and Payment Management <ul style="list-style-type: none">• Training on invoicing, payment terms and policies, record keeping and legal aspects with the help of case studies
Course Suggestion	How to Display their Work <ul style="list-style-type: none">• Importance of client testimonials, professional branding (business card, uniform etc.)
Course Efficacy	Incorporate engaging training methods – <ul style="list-style-type: none">• Integrate interactive elements, real-world examples, gamification, and Q&A sessions.

03

Research Findings – Trainers



Profile of the Trainers

Total Years of
Experience -
7 Months to 4
Years

Teaching Experience
- Majority lacked
any prior teaching
experience

Relevant Education -
Completed technical
courses, but teaching
courses were not
widespread

Last Training
Attended for
Trainers -
Not in the recent
past,



Trainers find **motivation** from the **respect** received from participants; in helping them gain **confidence**, and recognizing their potential for **increased earnings**.

Additionally, they find fulfillment in being **integral to their success stories**.

Feel Respected

"I derive great **satisfaction** from my work, as everyone **addresses me with the title "SIR,"** even individuals older than me. This makes me proud."

Trainer, Jaipur

"Jab unhe kaam achcha milta hai, vo hamein phone karke batate hain. Thank You dete hain. **Achcha lagata ki hamari itni izzat karte hain.**"

Trainer, Bangalore

From Novices to Confident Professionals: A Gratifying Transformation

"Prior to the course, plumbers were limited to basic tasks. However, following the training and acquiring new skills, **they transitioned to handling more sophisticated projects** without apprehension about potential damage or breakage of materials, even when working with expensive materials. It's **gratifying to witness** their learning and application of knowledge for an improved quality of life.

Trainer, Hyderabad

Empowering Artisans with Trainings for Enhanced Potential Earnings

"His fortunes improved significantly after the course. He started earning well, upgraded his kids' school, bought a Splendor bike, and even painted his own home. Touched by his transformation, he invited me for breakfast, leaving me deeply moved. Their commitment to hard work for the family's well-being is truly inspiring. **I am delighted to have played a role in his financial transformation.**"

Trainer, Delhi



The primary advantage lies in offering emotional support. The training provides a networking opportunity, enabling attendees to learn from each other and expand their businesses further.

Emotional Support



“if they feel stuck or pitching a complicated project to a client, **they call us**. Sometimes to gain some information and sometimes, just for moral support.” - Trainer - Delhi

“ham log **SIR** ko call karke pooch lete hain, agar kuchh baad me samajh me nahin aata hai. **Lagata hai ki koi hai jo saath me hai.**” - Painting Contractor - Delhi

Image Source - shared by respondents
Source - qualitative module

Networking



“They come here in the institute and meet different painters and contractors. It expands their world view and sometime come together to work on different projects.” - Trainer - Delhi

“We contractors have united as 'The Wall Decorz' group, collaborating on various projects and traveling together annually.” - Painting Contractor - Bangalore

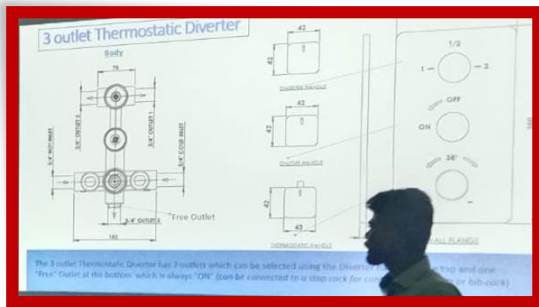
Classification 85/88 Internal

Business Expansion



“I've observed individuals who, after undergoing training, enthusiastically embrace more extensive and significant projects. It's a positive experience to see.” - Trainer - Hyderabad

“Mujhe sirf painting ka kaam aata hai, toh kuchh bada aata hai jisme customer to sab kuchh karwana hai, jaise pipeline, electricity, furniture, toh dusare logo ke sath milkar kaam kar lete hain.” - Painting Contractor - Delhi



A few suggested areas for improvement were the need for course materials in regional languages; providing training for the trainers; and introducing dedicated courses on safety.

Study Material in Regional languages

Course material in regional language

“Kuchh Kuchh videos jo aate hain vo english me hote hain, toh hamae use alag se explain karna padta hai.”

Trainer - Delhi

“Bahut se log jo aate hain, vo anpadh hote hain, toh unhe sikhana chunautipurn hota hai kyonki hamare adhikansh PPTs english me hote hain.” Trainer - Jaipur

Image Source – shared by respondents

Source – qualitative module

Annual Training for Trainers

Technical and Trainers' training

“It would be beneficial if they could offer us **yearly training sessions**, encompassing **technical courses**, and including guidance **on effective teaching methods.**”

Trainer - Bangalore

Soft Skill training for trainers

“We should also be provided with basic soft skill trainings. It will help us help participants learn better”

Trainer - Hyderabad

Course Dedicated to Safety Measures

Course suggestion – safety measures

“While some painters can afford to purchase safety gear like safety belts, shoes, others may not or may choose not to because they lack an understanding of the benefits. It's essential to **conduct separate training sessions** to educate them” - Trainer - Delhi

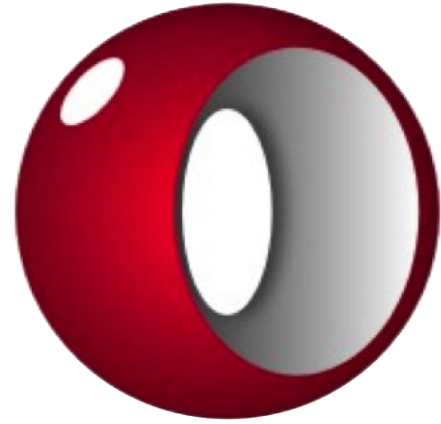
Areas of Improvements specific to Hyderabad - Plumbers Category



The classes frequently start later than the scheduled time.

Having people with different language backgrounds in the same class leads to sessions that take up more time.

The Hyderabad Academy lacks simulated bathrooms for instructional purposes.



O R M A X