

Impact Assessment of Eicher Motors Limited CSR

Projects- Sanitation, Quality
Drinking Water and Hygiene
Education (Habitat for Humanity India Trust)

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Submitted To
Eicher Motors Limited

Submitted By
Sambodhi Research and Communications

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List of Abbreviations

BC – Backward Caste

BCC – Behaviour Change Communication

CAPI – Computer Aided Personal Interview

CSR – Corporate Social Responsibility

EML – Eicher Motors Limited

FGD – Focus Group Discussion

HFH – Habitat for Humanity India Trust

IDI – In-Depth Interview

IHH – Individual Household Toilet

KII – Key Informant Interview

NFHS – National Family Health Survey

OECD-DAC – Organisation for Economic Co-operation and Development - Development Assistance Committee

RO – Reverse Osmosis

RWH – Rainwater Harvesting

RWHS – Roof Water Harvesting System

SBM – Swachh Bharat Mission

SC – Scheduled Caste

SES – Socio-Economic Status

SHG – Self-Help Group

ST – Scheduled Tribe

SurveyCTO – Survey Community Tool for Organizations

WASH – Water, Sanitation and Hygiene

Section- A
Summary Report

1. Brief description of project activities

The Eicher Motors Limited (EML), in partnership with Habitat for Humanity India Trust (HFH), launched a holistic community development project in Oragadam and Appur Panchayats, Tamil Nadu, focusing on improving water, sanitation and hygiene (WASH) facilities. The project aims to enhance living conditions by constructing 150 individual household toilets, setting up two RO plants for clean drinking water and implementing rooftop rainwater harvesting systems in 350 households. A community sanitation unit and solar streetlights were also planned to improve public infrastructure.

The project emphasizes behavior change communication to promote better hygiene practices within the community. School and Anganwadi facilities were also repaired and renovated to create safer and more hygienic environments for children. Through these comprehensive interventions, the project seeks to improve health outcomes, increase access to basic amenities and empower communities with sustainable solutions.

1.2. Key Findings

The WASH intervention in Appur village was implemented to improve access to sanitation, safe drinking water and hygiene infrastructure for marginalized communities. The socio-demographic profile of beneficiaries indicates that 71.2% of respondents were

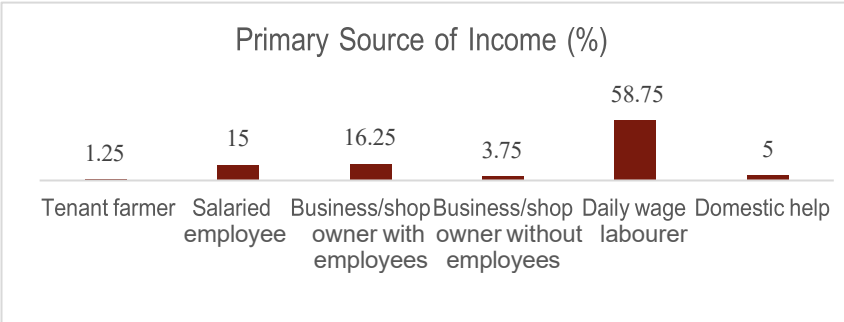


Figure 1: Primary Source of Income (%)

female (n=80) and 80% belonged to the Scheduled

Caste (SC) community. Educational attainment remained low, with 26.2% reporting no formal education and 13.7% having attended only primary school. Economic vulnerabilities were evident, with 92.5% of households (n=74) earning below ₹50,000 annually, relying heavily on daily wage labor and low-income factory jobs. Given these socio-economic constraints, the intervention played a crucial role in enhancing sanitation facilities, drinking water access and school infrastructure to address long-standing public health challenges.

IHH Usage

The construction of Individual Household Toilets (IHHs) had a profound impact on household sanitation. The majority of respondents (96.3%, n=80) were women, highlighting the significant role women play in household sanitation and hygiene management. The project successfully provided toilets to 150 households and with 56.9% installing single-pit latrines and 36.3% opting for pour-flush toilets. Improved sanitation access significantly reduced open defecation, with 53.1% of respondents reporting enhanced safety and dignity, particularly for women and children. The availability of household toilets has had a profound impact on health, hygiene and personal dignity, especially for women. Access to a safe and private sanitation facility is not only crucial in reducing the risk of waterborne diseases but also plays a significant role in enhancing self-esteem and social inclusion. Many community members now wash their hands with soap (50%), use toilets instead of practicing open defecation (35.1%) and drink boiled or treated water (3.7%), marking a critical shift toward better hygiene.

"Women in our village feel safer now that they have toilets at home. Earlier, they had to go outside at night, which was unsafe. This project has changed our daily lives." – Habitat for Humanity India Trust

The installation of individual household toilets (IHHs) has significantly improved family health for 50% (n=32) of respondents, with 43.7% reporting some improvement. Reduced open defecation has led to better hygiene and lower exposure to waterborne diseases, especially for women and children. Additionally, IHHs have enhanced privacy and safety, with 53.1% noting a major improvement and 46.8% experiencing some positive impact.

Rainwater Harvesting Systems

The installation of rooftop water harvesting (RWH) systems further improved household water security. Awareness of the project was high, with 85% (n=85) of users recognizing its benefits. The understanding of the Roof Water Harvesting System (RWHS) among users is generally high, with 62% demonstrating partial comprehension, 29% having full understanding and only 7% remaining unclear about its purpose. The system is being used daily, with 28% (n=19) of households using it every day, but a majority of users (52.2%, n=35) rely on it during specific seasons when water scarcity is more pronounced. The RWHS has significantly improved household water availability, with most users benefiting from a more reliable and accessible water source.

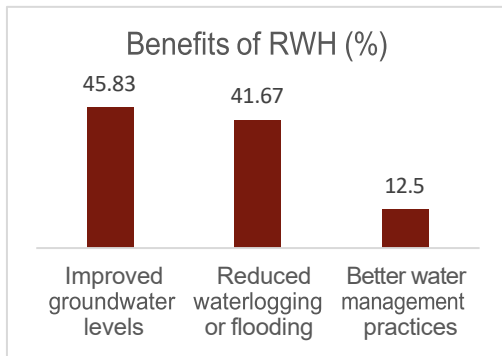


Figure 2: Benefits of RWH (%)

As shown in Figure 2, since the installation of the Roof Water Harvesting System (RWHS), 45.8% (n=11) of users have observed an increase in groundwater levels, indicating a moderate positive impact on recharge. Key contributing factors include increased rainfall (45%) and proper RWHS implementation (25%), ensuring efficient rainwater collection and infiltration. Additionally, awareness efforts have led to improved water conservation practices, enhancing water availability (18%) and environmental benefits (23%). However, some users reported silt accumulation in tanks, highlighting the need for regular maintenance to sustain long-term impact.

RO Plants

The RO plant installation emerged as a significant intervention, with 71.3% (n=57) of households now relying on it as their primary source of drinking water. The system's reliability was reflected in the 75.8% of users collecting water daily and 100% expressing positive perceptions of water quality. The RO water plant has been widely accepted as a reliable and high-quality drinking water source, with 100% of users expressing positive perceptions. A majority (39.4%, n=26) rate the water quality as excellent, while 60.6% consider it good and notably, no negative feedback was reported. Ensuring the long-term sustainability of the RO plants has been a key focus of the project, with structured maintenance and monitoring mechanisms in place. By training local Self-Help Groups (SHGs) to manage the RO plants, the project has empowered community members to take ownership of the system.

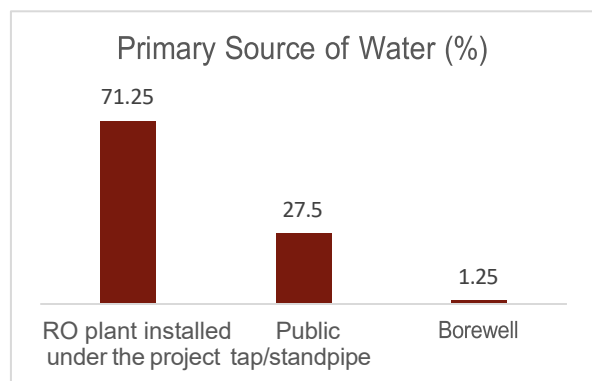


Figure 3: Primary Source of Water (%)

School and Anganwadi

The impact of improved school sanitation facilities was evident in increased student attendance. Among students interviewed (n=32), 63.8% reported attending school daily and only 5% attended once a week, suggesting that the intervention contributed to reducing absenteeism. Teachers have also observed a positive shift in student engagement and academic performance, indicating that good health and a clean school environment directly support learning outcomes. The new hygiene facilities at schools have been well-received, ensuring consistent use and integration into daily routines. 57.1% are very satisfied, reflecting widespread appreciation of these improvements. This increased access to clean water and sanitation has not only enhanced hygiene but also created a more conducive learning environment.

"The construction of toilets has been one of the main reasons for environmental progress. It has improved the living conditions in the village. Before this scheme was launched, people used to defecate in the open, but now it is not like that. We have seen a big change." - Malarkodi, PRI Member

A significant 75% (n=21) of students have attended sessions on the health benefits of using soap, with 47.6% learning about germs, 33.3% understanding proper handwashing techniques and 19% recognizing critical handwashing moments. These sessions have led to better hygiene, fewer illnesses and improved school attendance. Teachers have observed increased student engagement and academic performance, linking good health to better learning outcomes. The new hygiene facilities have been well received, with 57.1% very satisfied, ensuring consistent use. Improved access to clean water and sanitation has reduced lost instructional time, keeping students in school longer and enhancing academic progress.

5.3. 5. Recommendations

To improve the sustainability and effectiveness of the WASH interventions, a few critical steps should be prioritized. Increasing water storage capacity and better distribution systems is essential, as limited storage often forces households to return to old water sources once the stored water runs out. Expanding storage and adding more tanks in other locations will ensure consistent access, especially during summers. Regular maintenance must be planned clearly, as confusion over who is responsible for tank cleaning could affect long-term use. Drainage improvements are also needed to prevent mosquito breeding near water collection points.

For household toilets (IHH), boosting full-family usage will need more awareness sessions and support for repairs. Although 84.3% of families adopted better hygiene practices like handwashing after BCC sessions,

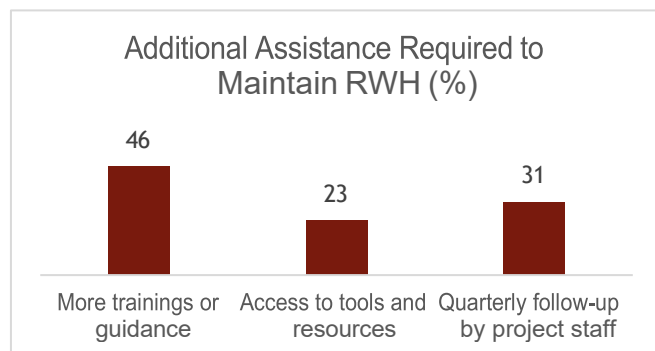


Figure 4: Additional Assistance Required to Maintain RWH (%)

regular follow-up is essential. Learning from Swachh Bharat Mission models, local champions and SHGs should be engaged for household visits, sanitation drives and repair support to improve toilet usage and maintenance.¹ Organizing household visits, sanitation drives and offering repair support has helped drive behaviour change. Small toilet maintenance subsidies have also enabled families to maintain sanitation. Similar grassroots efforts like community repair services and behaviour programs can strengthen sanitation outcomes and long-term toilet use.

¹ https://swachhbharatmission.ddws.gov.in/sites/default/files/communication-material/Swachh_Sujal_Shakti_ki_Abhivyakti_Book_0.pdf

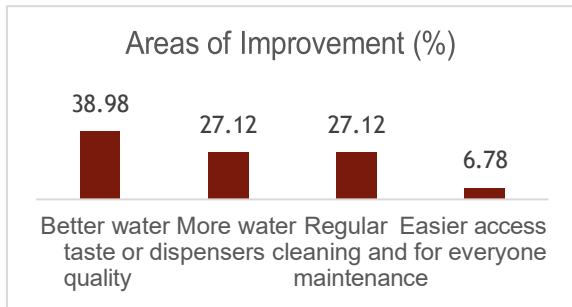


Figure 5: Areas of Improvement (%)

With improved facilities in schools leading to increased student enrollment, expanding infrastructure has become necessary to prevent overcrowding. Additional toilets will ensure that hygiene standards are maintained despite growing student numbers. Regular maintenance is crucial, as 27.1% stressed the need for structured cleaning. Establishing student-led hygiene committees and scheduled cleaning programs can help sustain these improvements. Additionally, 27.1% requested more water dispensers to reduce congestion and 38.9% suggested improving water taste and quality with better filtration (Figure 5).

Sustaining positive hygiene behaviors is critical to ensuring the long-term impact of WASH interventions. While hygiene education programs have led to improvements, continued engagement is necessary to reinforce these behaviors and prevent regression. Students have expressed a strong interest in learning more about environmental hygiene (45.4%), handwashing benefits (30.9%) and oral hygiene (23.6%), underscoring the importance of integrating these topics into school curricula and community awareness sessions (Figure 6). Expanding hygiene education through interactive programs and peer-led initiatives can further reinforce these behaviors, ensuring long-lasting hygiene practices. Long-term sustainability requires structured financial planning, as relying only on external support is not viable. Local governments, schools and communities should budget for WASH maintenance, while public-private partnerships or user contributions can provide additional support. Without action on maintenance, access, behaviour change and finances, progress risks being lost. Addressing these needs will ensure lasting improvements and self-sufficiency.

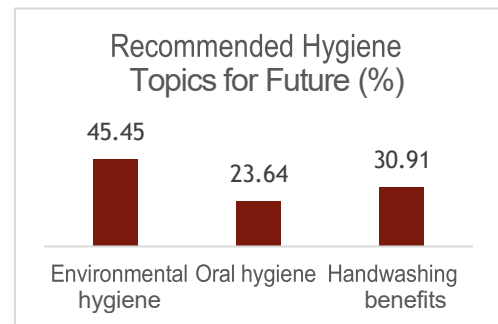


Figure c: Recommended Hygiene Topic for Future (%)

Section- B
Detailed Report

Impact Assessment Study

1. Introduction

1.1. Background

Eicher Motors Limited (EML) is committed to Corporate Social Responsibility (CSR), focusing on long-term, sustainable change in communities across India. Eicher adopts a holistic approach, addressing community-specific needs through well-designed programs that enhance quality of life. By collaborating with local organizations, government agencies and community groups, Eicher ensures its initiatives are impactful and scalable. The company prioritizes self-reliance, creating systems that empower communities rather than offering short-term solutions. Its CSR efforts have led to improved access to essential services, better opportunities and healthier environments. This report covers the key findings for the WASH project implemented in collaboration with Habitat for Humanity India Trust. Through these initiatives, EML aims to continue supporting stronger, healthier and self-sufficient communities.

1.2. Objectives of the impact assessment

The key objectives of conducting this impact assessment are as follows:

1. To quantify the extent to which the projects have been successful in achieving the intended outcomes
2. To establish the effectiveness of program implementation
3. To identify and capture success stories, challenges and areas for improvement
4. To provide actionable recommendations to enhance the effectiveness of future programs

1.3. OECD- DAC framework

Considering the objectives of the project, this evaluation will be based on the **OECD-DAC framework**².

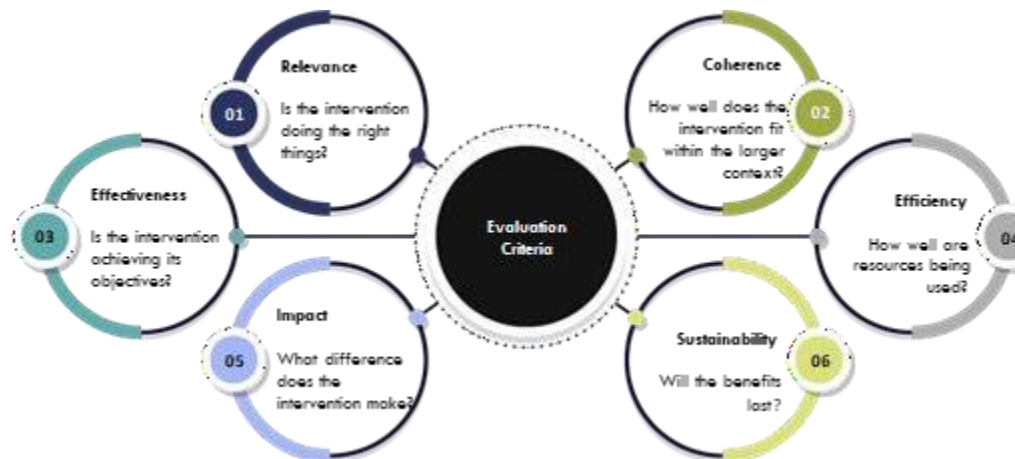


Figure 7: OECD DAC Evaluation Framework

The evaluation will assess the baseline values of various key indicators, against which the impact of the project can be assessed a year after completion. The components of the proposed evaluation framework are –

² <https://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm>

Relevance - The extent to which the objectives of the development intervention are consistent with beneficiary requirements, state needs, institutional priorities, partners and funding stakeholders, as well as mission coherence in achieving its objectives.

Coherence – The extent to which activities can converge with other programs/projects running the geography/sector.

Effectiveness - The extent to which the development project's objectives were achieved or are expected to be achieved considering their specificities (not just physical outputs but also high-level results; explaining factors determining achievements, including change of context; looking at other possible achievements)

Efficiency - A measure of how economically resources/inputs are converted into results, with reference to project benchmarks (include project delays, overruns; technical issues; operational cost ratio, economic rates of return)

Sustainability - The likely continuation of net benefits from a development intervention beyond the phase of funding support. It also includes an assessment of the likelihood that actual and anticipated results will be resilient to risks beyond the mission activities.

Impact - The changes that have occurred or are expected to occur in the lives of the target beneficiaries (direct and indirect).

1.4. Evaluation Matrix

The evaluation matrix for Eicher's CSR projects follows the OECD-DAC framework, assessing projects based on relevance, coherence, effectiveness, efficiency, impact and sustainability. It includes specific questions and indicators for each project, whether in education, health, or livelihoods to measure outcomes and how they were achieved. The assessment uses both primary and secondary data, collecting insights from students, teachers, health workers and community members, while also reviewing project reports and public sources. This ensures reliable and cross-verified findings.

The evaluation matrix is adaptable, considering diverse cultural and social contexts. It allows for flexible tools and indicators, ensuring context-sensitive yet methodical evaluations. By aligning with OECD-DAC criteria, it assesses project efficiency, alignment with development goals and long-term sustainability. This approach provides a comprehensive understanding of project successes and challenges, offering insights into future improvements.

The thematic evaluation matrix is included in the [Annexure](#).

2. Approach and Methodology

2.1. Study Design

This impact assessment will use a pre-post study design, which means it will compare data from before and after the project to measure its impact. To get a complete picture, the assessment will follow a mixed-methods approach, combining both quantitative and qualitative data.

The quantitative data will help measure the results in numbers, such as changes in key indicators, while the qualitative data will provide deeper insights into why and how these changes happened. By using both types of data, the study can cross-check findings from different sources, ensuring more accurate and reliable results. The assessment will collect information from both primary sources (like surveys and interviews) and secondary sources (such as existing reports or data) to create a well-rounded understanding of the project's impact.

2.2. Data Collection Methods and Sources

Quantitative Methods

For the quantitative data collection, **structured survey tools** were developed and rigorously pre-tested to ensure their effectiveness in real-field conditions. Pretesting helped identify any issues in the questionnaire, removing ambiguities and minimizing bias and errors. The data was collected using Computer Aided Personal Interview (CAPI) methods to ensure accuracy and efficiency. Our team utilized SurveyCTO, a digital data collection platform that streamlined the entire process—from targeting respondents and survey creation to data entry and visualization. SurveyCTO allowed for real-time data uploads, enhancing efficiency while also offering offline capabilities for data collection in low-connectivity areas. With GPS-based tracking, real-time geo-tagging, multilingual support and validation features, SurveyCTO ensured high data quality and seamless experience for field investigators.

Qualitative Methods

To complement the quantitative data, qualitative methods were employed to gain deeper insights into the impact of the CSR projects. This included **in-depth interviews (IDIs)**, **focus group discussions (FGDs)** and **key informant interviews (KIIs)** with relevant stakeholders such as beneficiaries, project implementers and community leaders. These interactions helped uncover contextual nuances, stakeholder perceptions and the underlying reasons behind quantitative findings. All interviews and discussions were recorded, transcribed and thematically analyzed to identify patterns and insights that contributed to a holistic understanding of the projects' effectiveness, sustainability and impact.

2.3. Data Collection Process

The study was executed strategically in three phases to ensure completion of time:

- **Phase I:** Design Phase begins with consultative meetings to finalize indicators and methodologies based on stakeholder inputs and desk reviews. Sambodhi collaborated with the EML CSR team to ensure alignment with the RfP, documenting the approach in an inception report covering the assessment framework, sampling methodology, analysis plan and work plan. Quantitative and qualitative tools, developed in vernacular languages and referencing standardized underwent pre-testing in non-sample areas for refinement. Tools were translated and training materials developed to ensure uniform data collection.
- **Phase II:** Implementation Phase involves executing the sampling strategy, identifying study geographies and conducting primary data collection as per the established methodology.
- **Phase III:** Dissemination Phase focuses on sharing findings and insights with stakeholders, translating results into actionable recommendations for future initiatives and broader knowledge dissemination.

2.4. Data Analysis

The collected data was analyzed using a convergent mixed-methods approach, integrating quantitative and qualitative data for a comprehensive assessment of the project's impact. Quantitative analysis measured key indicators, while qualitative insights provided context to observed outcomes. Triangulation of findings from diverse sources enhanced the reliability and depth of the analysis. The study assessed endline values of key indicators, comparing pre- and post-intervention data to measure changes over time. This approach ensured a holistic evaluation, capturing both measurable outcomes and the underlying factors influencing the project's effectiveness.

2.5. Limitations

While this impact assessment provides valuable insights into the outcomes of these CSR initiatives, certain considerations must be acknowledged to contextualize the findings appropriately:


- **Selection Bias:** Given the scale of the intervention and the sampling approach, there is a possibility of some selection bias, particularly if certain sub-groups were self-selected into the study. However, concerted efforts were made to ensure diverse participation and capture a wide range of perspectives.
- **Timeframe Constraints:** The assessment reflects outcomes observed within the available study period and while it provides a meaningful snapshot of impact, some long-term effects may emerge over time. Future follow-ups could further enrich the understanding of sustained change.
- **Self-Reported Data:** A significant portion of the data is based on self-reported responses from beneficiaries and stakeholders. While every effort was made to enhance accuracy through careful data collection and validation techniques, minor variations due to recall or interpretation are natural in such studies.

2.6. Structure of the report

This report is structured to provide a holistic analysis of Eicher’s CSR projects, ensuring that insights are embedded within the OECD-DAC evaluation framework to highlight key findings across diverse thematic areas. The framework, encompassing **relevance, coherence, effectiveness, efficiency, impact and sustainability**, enables a multifaceted evaluation that captures both the outcomes achieved and the processes that led to those results. Our presentation of these findings weaves the data seamlessly into each criterion, clarifying how well projects align with broader development goals and how effectively resources are utilized.




To enable meaningful interpretation of the findings, a **two-tiered** benchmarking approach has been employed across the report. The benchmarking has been **limited** to key project-specific outcome and impact indicators. Wherever credible benchmarking data is **available**, project outcomes have been compared against standardized external datasets such as NFHS (for health indicators) and ASER (for learning outcomes), as well as baseline or need assessment figures. In such cases, performance that exceeds these benchmarks is highlighted in **blue**, denoting a positive deviation from established standards.

Table 1: Colour coding - benchmark data is available

Performance Band	Interpretation	Colour
Exceeds benchmark	Performance surpasses credible external benchmark figures/ baseline values	 Blue

Where external benchmarks are **unavailable**, a progressive scoring scale based on project duration, nature and literature review has been applied to assess outcomes. In this scale, scores are categorized as High, Moderate and Low each reflecting the level of performance and potential for scalability.

Table 2: Performance band- colour coding where benchmarking data is unavailable

Performance Band	Score Range	Interpretation	Colour
High	61–100%	Strong performance, scalable potential	 Green
Moderate	31–60%	Average, in line with similar interventions	 Yellow
Low	0–30%	Below average, needs improvement	 Red

Additionally, for indicators where lower values indicate better outcomes (such as *dropout rates* or *disease incidence*), both the desired direction of change and the colour coding have been reversed to reflect positive performance. This structured approach ensures consistency, clarity and contextual relevance in evaluating project impact across varied geographies and interventions.

3. Impact assessment- Sanitation, Quality Drinking Water and Hygiene Education - Habitat for Humanity India Trust

3.3.1. Brief description of project activities

The Eicher Motors Limited (EML), in partnership with Habitat for Humanity India Trust (HFH), launched a holistic community development project in Oragadam and Appur Panchayats, Tamil Nadu, focusing on improving water, sanitation and hygiene (WASH) facilities. The project aims to enhance living conditions by constructing 150 individual household toilets, setting up two RO plants for clean drinking water and implementing rooftop rainwater harvesting systems in 350 households. A community sanitation unit and solar streetlights were also planned to improve public infrastructure.

The project emphasizes behavior change communication to promote better hygiene practices within the community. School and Anganwadi facilities were also repaired and renovated to create safer and more hygienic environments for children. Through these comprehensive interventions, the project seeks to improve health outcomes, increase access to basic amenities and empower communities with sustainable solutions.

3.3.2. Key Findings

3.3.2.1. Relevance and Coherence

Community Sanitation Complex

The socio- demographic profile of the beneficiaries highlights a community with 71.2% female and 28.7% male representation (n=80), reflecting engagement from a broad section of households for the impact assessment educational attainment remains limited, with 26.2% having reported receiving no formal education while an additional 13.7% reported attending only up to primary school, indicating restricted access and opportunities for formal learning in the community. The majority of respondents belong to Scheduled Caste (SC) (80%), followed by Scheduled Tribe (ST) (8.7%) and Backward Caste (BC) (11.2%), situating the intervention geography within historically marginalized communities.

"This is one of the least developed villages in the Chengalpattu district."- Habitat for Humanity India Trust

Livelihood patterns show a heavy reliance on informal labour, with 58.7% (n=47) working as daily wage labourers, supplemented by a smaller segment engaged in salaried jobs (15%) or small businesses. Household earnings largely remain below ₹50,000 annually (92.5%, n=74), suggesting economic constraints that shape access to essential services.

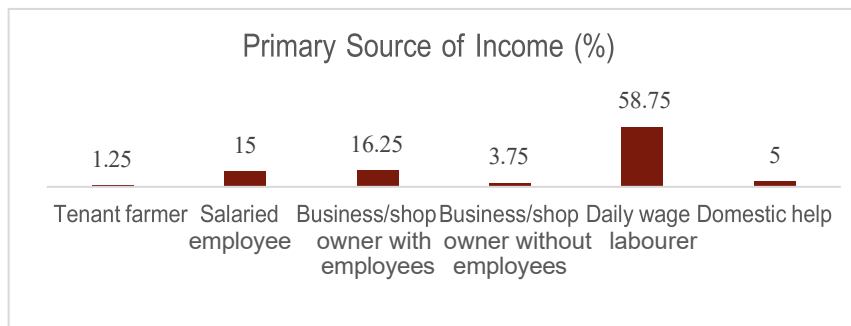


Figure 8: Primary Source of Income (%)

In alignment with the socio-demographic composition of Appur village, which is situated near the automotive and industrial corridor in Chennai, most respondents belong to low socio-economic strata (SES) and are engaged in working at the factories in the neighbouring industrial zones. This economic dependence on low-wage factory labour, combined with marginalized social identities, makes the sample representative of the broader community in the area. With limited financial stability and high dependence on community resources, the provision of clean drinking water, improved sanitation and school infrastructure emerges as a critical intervention, addressing not only WASH-related challenges but also reinforcing overall well-being, particularly for households with at-risk livelihoods.

Individual Household Toilets (IHH)

Data was collected from households that received support from Eicher for the construction of individual household toilets (IHHs). Based on the total number of respondents (n=80), the majority of respondents were female (96.3%), highlighting the significant role women play in household sanitation and hygiene management. The education profile of respondents indicates that 61% have no formal education, 15% have attended primary school, 10% middle school, 7% high school, 5% matriculate (10th grade) and only 2% are postgraduates. This underscores the project's relevance in addressing the community's critical needs for improved sanitation, access to clean drinking water and better school infrastructure, ensuring a holistic approach to community well-being.

The social composition of the surveyed households indicates that a majority (93.7%, n=75) belong to the Scheduled Caste (SC) community, while 6.2% belong to the Scheduled Tribe (ST) community. This distribution aligns with the broader socio-demographic trends of the region, where SC and ST populations form a significant portion of the local community. According to NFHS-5 data for Tamil Nadu, Scheduled Castes make up around 20% of the state's population, while Scheduled Tribes constitute approximately 1.1%³. These communities have historically faced social and economic vulnerabilities, highlighting the importance of inclusive development initiatives that cater to their specific needs.

In addition to most respondents relying on blue-collar jobs in nearby factories, one-third depend on small-scale agriculture (less than 2 acres), while only 20% farm on areas larger than 2 acres. Tenant farming is practiced by nearly 12% of respondents and smaller segments- each at 6.3%- are engaged in permanent salaried work, pensions, self-employment, business ownership, daily wage labour, or domestic help. However, despite these economic limitations, housing ownership presents a positive trend. A significant 75% (n=54) of families reside in pucca houses, while only 18.8% live in kuccha houses and 6.3% in semi-pucca houses. This suggests that while incomes remain modest, many households have been able to secure stable housing.

Rooftop Water Harvesting (RWH)

The Roof Water Harvesting (RWH) system installed in households has demonstrated high efficiency, with **85%** (n=100) of residents aware of the project, reflecting robust outreach efforts. Given that Chengalpattu district experiences a tropical wet and dry climate, with long dry periods and an average annual rainfall of approximately 1,130 mm, water availability remains a pressing concern. The region is particularly vulnerable to droughts, especially when monsoons fail, leading to severe water scarcity⁴.

In this context, the RWH initiative plays a critical role in enhancing water security, allowing households to collect and store rainwater to sustain them through the dry months.

³ https://nhsrcindia.org/sites/default/files/practice_image/HealthDossier2021/Tamil%20Nadu.pdf

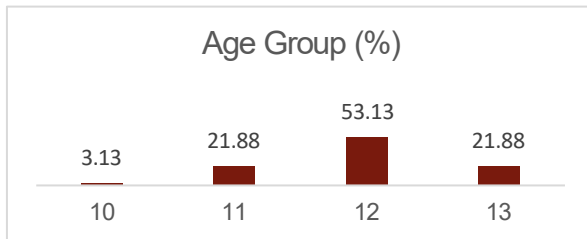
⁴ https://nomadseason.com/climate/india/tamil-nadu/chengalpattu.html?utm_source=chatgpt.com

The understanding of the Roof Water Harvesting System (RWHS) among users is generally high, with 62% demonstrating partial comprehension, 29% having full understanding and only 7% remaining unclear about its purpose. This indicates that while the majority recognize the system's significance, there is still a need for further awareness efforts to ensure complete understanding across all households.

"After the rainwater harvesting system was installed, we noticed that our wells have water throughout the year and there is more greenery around our houses. Even cows have access to clean water, which was not the case before." - FGD with Community Beneficiaries

When asked about the primary function of RWHS, the users had varying perceptions- 40% (n= 40) believe its main purpose is to recharge groundwater, 32% see it as a solution for preventing waterlogging and flooding, while 28% consider it a means to collect rainwater for household use. Thus, the emphasis on groundwater recharge aligns with the region's semi-arid climate and frequent water shortages, highlighting the system's relevance in addressing long-term water security.

School Children and Anganwadi



Based on the data collected from students at the Government Middle School in the village, specifically those in grades 5 to 8 (n=32), through direct interviews. These interactions aimed to understand the impact of improved sanitation facilities on school attendance and student well-being.

Figure 5: Age Group (%)

"The renovated Anganwadi now looks welcoming. Earlier, the walls were dull, and the children did not feel like staying inside. Now, with colourful paintings and a better environment, more parents are willing to send their children." – Habitat for Humanity India Trust

Based on the findings, the school sanitation project operates with notable efficiency and effectiveness, which can be further corroborated by the high attendance reported by most students, with **63.8%** attending school every day and only 5% attending once a week, reflecting consistent use of the facilities and how it has been useful in motivating children to attend school. This trend suggests that by creating a comfortable and dignified learning environment, the project has helped improve student's willingness to attend school, particularly in a rural setting where inadequate school infrastructure often leads to absenteeism.

"Earlier, students used to go home to use the restroom, which disrupted their studies. Now, since toilets are clean and well-maintained in schools, they stay the whole day and focus on their studies. This has also increased the student attendance rate." Habitat for Humanity India Trust

"Before, students had to bring drinking water from home. Now, with the installation of the RO plant in schools, they have access to clean drinking water throughout the day, reducing their need to leave school premises." – FGD with Community Beneficiaries

3.3.2.2. Efficiency and Effectiveness

RO Plant Usage

The installation of the RO water plant under the project has significantly improved access to safe drinking water, reducing reliance on less reliable sources. A majority of households (**71.3%**, n=57) now depend on

the RO plant as their primary source of drinking water⁵, while 27.5% continue using public taps/standpipes and a small fraction (1.3%) still rely on borewells. This shift highlights the growing trust in the RO system and its role in enhancing water security in the community.

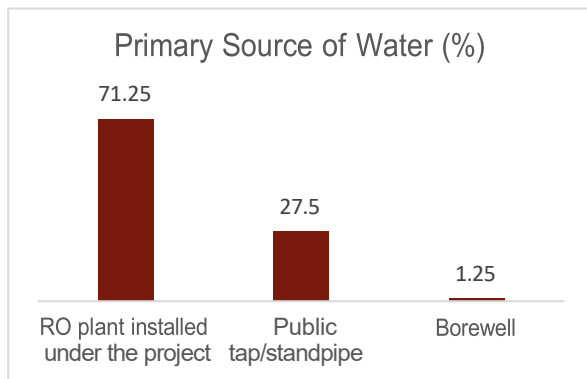


Figure 10: Primary Source of Water (%)

Beyond availability, accessibility has also been a key success factor, with **82.5%** (n=66) reported direct access to the RO plant. More importantly, high frequency of usage indicates that the facility is meeting daily household needs- 75.8% of users collect water every day, 21.2% do so several times a week and only 3% collect once a week. This consistent usage pattern reinforces the community's dependence on the RO plant, not just as a supplementary option but as an essential and trusted water source. By providing a reliable and safe alternative to traditional water sources, the project has directly contributed to reducing health risks associated with waterborne diseases.

The RO water plant has been widely accepted as a reliable and high-quality drinking water source, with **100%** of users expressing positive perceptions. A majority (39.4%, n=26) rate the water quality as excellent, while 60.6% consider it good and notably, no negative feedback was reported. This strong approval highlights the plant's effectiveness in providing clean and safe drinking water, fostering greater confidence in its usage.

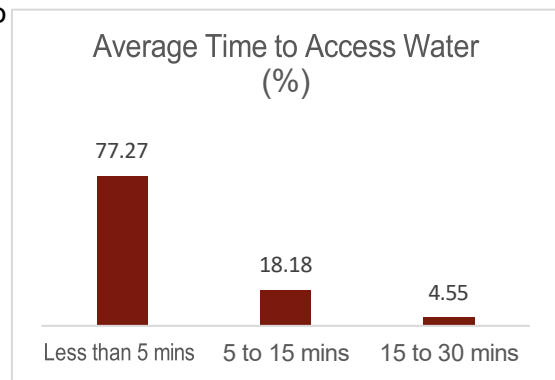


Figure 11: Average Time to Access Water (%)

Beyond quality, consistent availability has further reinforced the plant's value within the community. 59.1% (n=39) of users report that RO water is always available, while 37.8% find it mostly available, indicating minimal disruptions in supply. Additionally, the efficient operation of the facility is reflected in short waiting times, with 77.3% (n=51) of users accessing water within five minutes, 18.2% waiting between 5 to 15 minutes and only 4.5% experiencing delays of 15 to 30 minutes.

These findings highlight the tangible impact of the RO plant- not only does it provide high-quality drinking water, but it also ensures steady availability and quick access, reducing the time burden on households. As a result, the project plays a crucial role in enhancing community well-being by addressing water security concerns with efficiency and reliability.

RWH System Usage

"Before, we had to depend on borewell water, which had a salty taste. Now, with the RO plant, our children drink more water because it tastes better and is safer." - Habitat for Humanity India Trust

Based on the data gathered, 85% (n=85) are aware of the intervention and benefits of the installation of the Rooftop Water Harvesting (RWH), indicating strong outreach efforts that have effectively engaged the

⁵ [This finding is in alignment with other impact assessment studies conducted on RO plant usage, which have similarly reported increased household reliance on RO systems and improved access to safe drinking water following installation.](#)

community, while 15% are not aware, suggesting a need for broader communication to close this gap. Among those aware, 86% (n=86) have reported the RWH being installed in their homes, with only 15% not having it. It is evident that while a majority of users have a clear understanding of the system's purpose, there is still room for improvement in outreach efforts to ensure greater awareness. Currently, 29% fully understand the system, while 62% have a partial understanding and 7% remain unclear about its purpose. Strengthening community engagement and information-sharing initiatives can further enhance understanding, helping more households recognize the importance of the system and its benefits for long-term water security.

The RWHS has significantly improved household water availability, with most users benefiting from a more reliable and accessible water source. The system is being used daily, with 28% (n=19) of households using it every day, but a majority of users (52.2%, n=35) rely on it during specific seasons (shown in figure 12) when water scarcity is more pronounced. However, a small percentage (2.9%) rarely use the system, indicating that some households may face challenges in maintenance, storage capacity, or accessibility, which could affect long-term adoption.

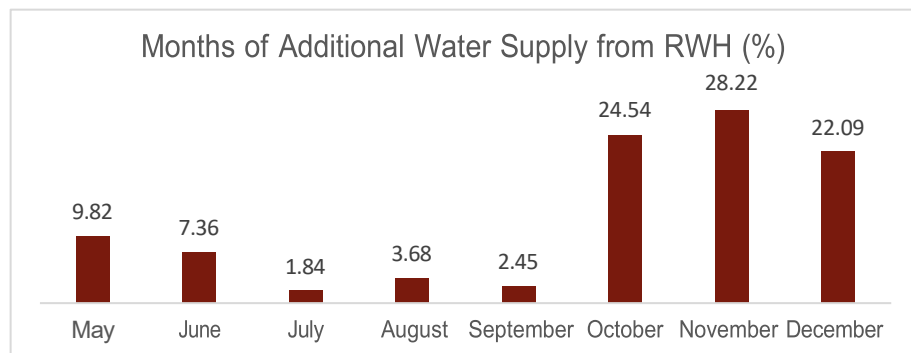


Figure 12: Months of Additional Water Supply from RWH (%)

While the primary benefit of RWHS lies in improving water security, its impact on household water expenses varies. For some families, significant cost reductions have been observed, particularly for those who previously relied on purchased water or tanker supplies. Additionally, 84.2% (n=16) of users report only a significant decrease and only 15.7% reported a slight/no change in expenses, likely due to differences in initial installation costs, maintenance needs and existing water consumption patterns.

IHH Usage

Based on the baseline assessment, approximately 30% of households did not have access to any toilet facilities. However, following the intervention, a significant improvement was observed, with 100% of beneficiaries receiving toilets and 98.8% of households (n=79) recalling it a benefit received from Eicher/Royal Enfield. The type of toilet constructed includes pit latrine single pit (56.9%, n=45), pour-flush toilet with a single pit (36.3%), pit latrine-double pit (3.8%) and bio-toilet/Bio-digester (2.5%). Satisfaction with toilet quality and construction is high, with 45.5% very satisfied, 51% satisfied, 2.5% neutral.

Beyond just infrastructure, the availability of household toilets has had a profound impact on health, hygiene and personal dignity, especially for women. Access to a safe and private sanitation facility is not only crucial in reducing the risk of waterborne diseases but also plays a significant role in enhancing self-esteem and social inclusion. In some cases, the absence of a toilet has even led women to leave their homes due to discomfort and inconvenience. However, with the construction of toilets under this initiative, many women have felt more secure and empowered to continue living in their villages, reinforcing the importance of sanitation in shaping daily life and well-being.

Such cases underscore the critical role sanitation plays in shaping individuals' choices and reinforcing their sense of identity and dignity. Having access to a household toilet not only encourages the continued use of safe sanitation practices but also serves as a motivator for adopting other essential hygiene behaviors, such as handwashing and maintaining cleanliness.

3.3.2.3. Impact

Community Sanitation Complex

The availability of safe drinking water has had a clear and measurable impact on community health, with 46.9% of households (n=31) reporting a significant reduction in waterborne illnesses since the project's implementation. One of the most notable improvements has been the decline in stomach infections and diarrhea, particularly among children, who are the most vulnerable to contaminated water sources. By ensuring consistent access to clean water, the project has helped reduce health risks associated with unsafe drinking water, leading to better overall well-being for families.

This positive outcome aligns with broader public health data indicating that access to safe drinking water is crucial in reducing waterborne diseases. For instance, it is estimated that around 37.7 million Indians are affected by waterborne diseases annually⁶. The significant reduction in illnesses observed in the project area underscores the importance of providing safe drinking water to improve health outcomes

"Earlier, we had to boil water before drinking, but now we are confident that the RO water is safe. Our children have fewer stomach problems, and we don't have to spend as much on medicines." – FGD with Community Members

RWH System

Since the installation of the Roof Water Harvesting System (RWHS), 45.8% (n=11) users have observed an increase in groundwater levels, indicating a moderate positive impact on groundwater recharge. Several key factors contributed to this trend.

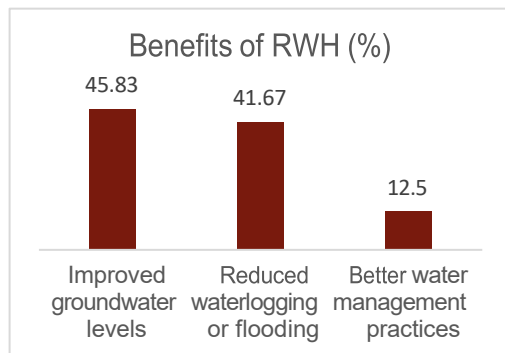


Figure 13: Benefits of RWH (%)

The primary driver was increased rainfall during the project period (45%), which naturally enhanced groundwater infiltration. Additionally, the proper implementation of the RWHS (25%) played a crucial role in ensuring that rainwater was efficiently collected and directed for recharge rather than being lost as runoff.

Beyond infrastructure-related aspects, behavioural and awareness-driven changes have also influenced groundwater availability. The project's outreach efforts and Behaviour Change Communication (BCC) activities have played a significant role in improving water conservation practices, with

24% of users reporting a significant impact on water quality and 40% noting partial improvements. With better awareness, many households have become more cautious in their water usage, ensuring that available resources are managed efficiently. This shift in mindset- promoting responsible water consumption and community-led maintenance efforts- has further reinforced water security, particularly during dry periods. A significant increase has been observed in environmental benefits (23%) and water availability (18%). While many households benefit from increased groundwater availability, some have pointed out that silt and debris accumulate in tanks over time, requiring more regular cleaning and maintenance.

"Before the project, we struggled to get water in the dry months. Now, even when it doesn't rain for weeks, the water in our area remains stable." – FDG with Community Beneficiaries

⁶ <https://tinyurl.com/3m6fytyt>

IHH Usage and Health

The individual household toilets (IHH) have had a significant impact on the health of the families by 50% of respondents (n=32), while 43.7% reported some improvement. The reduction in open defecation has led to better hygiene practices, particularly among women and children, reducing their exposure to waterborne diseases.

The installation of IHHs has played a critical role in enhancing the privacy and safety of women and girls within the community. A significant 53.1% reported that the presence of IHHs has greatly improved their sense of security⁷, while an additional 46.8% acknowledged some level of improvement.

"Women in our village feel safer now that they have toilets at home. Earlier, they had to go outside at night, which was unsafe. This project has changed our daily lives." – Habitat for Humanity India Trust

The provision of private and hygienic sanitation facilities has contributed to greater dignity and comfort for women, addressing long-standing concerns about sanitation access in rural households.

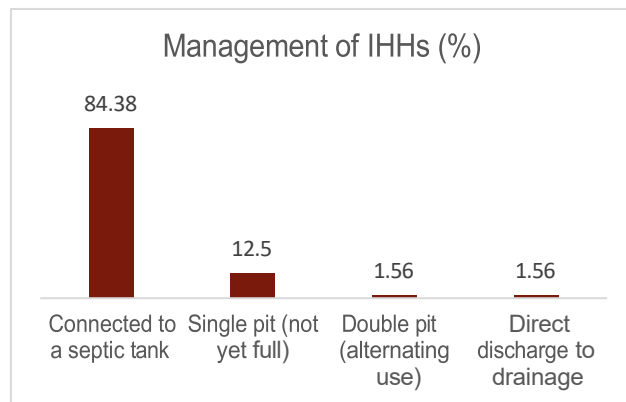


Figure 14: Management of IHHs (%)

As shown in figure 14, waste from IHHs is primarily managed through septic tanks (84.3%), single pits (15.5%) and alternative systems (3.1%), indicating a shift toward structured sanitation solutions. However, 1.6% reported direct discharge into drains, raising concerns about environmental contamination and public health risks. While access to sanitation has improved, effective waste management is essential to sustaining these benefits and preventing issues such as groundwater contamination and the spread of waterborne diseases.

To address this, the adoption of long-term waste management solutions is necessary such as regular desludging of septic tanks, proper maintenance of single pits and the use of decentralized treatment systems like twin-pit technology and bio-digesters. Strengthening awareness on safe waste disposal, ensuring accessible desludging services and engaging local authorities to improve sanitation infrastructure will be key to preventing public health risks and maximizing the project's impact.

3.3.2.4. Sustainability

RWH Maintenance and Sustainability

Satisfaction with the RWH system remains high (68%). Some of the key satisfaction aspects are mentioned in figure 15.

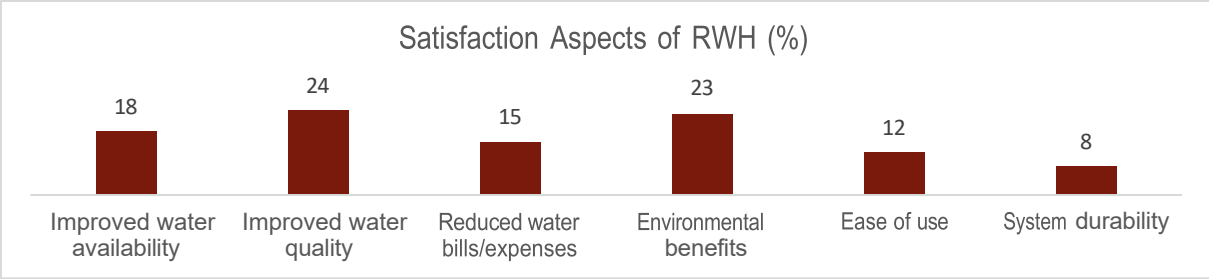


Figure 15: Satisfaction Aspects of RWH (%)

RO Plants

Ensuring the long-term sustainability of the RO plants has been a key focus of the project, with structured maintenance and monitoring mechanisms in place. Regular quarterly checks are conducted to assess whether the systems are being used correctly, if any repairs are needed and whether the facilities continue to function efficiently. This proactive approach helps prevent breakdowns, ensuring that communities have continued access to safe drinking water. Additionally, by training local Self-Help Groups (SHGs) to manage the RO plants, the project has empowered community members to take ownership of the system. The SHGs now oversee maintenance, supported by funds collected from users, which cover electricity costs, filter replacements and routine upkeep. This community-led model enhances sustainability, reducing dependency on external interventions.

Beyond infrastructure, the project’s sustainability strategy ensures that water access remains reliable and financially viable. The involvement of SHGs not only strengthens local capacity but also fosters a sense of responsibility among users, making the system self-sufficient over time. However, as basic water and sanitation needs are now being met, the community is beginning to shift its focus to other critical areas, such as housing improvements. This highlights the evolving nature of development needs, where sustainability is not just about maintaining existing systems but also about addressing future challenges in a structured and strategic manner.

Rainwater Harvesting System

The rainwater harvesting (RWH) systems introduced in the project showed positive signs of sustainability, driven by community participation and training support. Among households with RWH systems, 45% actively maintain them, with many taking proactive steps such as cleaning gutters and downpipes (46.6%, n= 21), cleaning filters or screens (20%) and checking storage tanks (20%) to ensure efficiency. These habits indicate that nearly half the community is adopting responsible water management practices, helping to extend the lifespan of the systems. Many residents acknowledge the difference the RWH systems have made, especially during dry seasons when water availability becomes a pressing concern. This reflects not only the project’s value but also the community’s willingness to sustain and integrate these practices into their daily lives. However, some challenges remain- issues like water stagnation leading to mosquito breeding highlight the need for better drainage solutions to complement the existing system and ensure a more holistic approach to water conservation.

Beyond infrastructure, training has played a critical role in building confidence for long-term system maintenance. 45% (n=45) received formal training, covering essential topics such as regular cleaning (35.5%), water quality testing (40%) and fixing common issues (24.4%). As a result, 30% users now feel confident in maintaining their systems, a promising step toward community-led sustainability. However, with 70% still feeling only somewhat confident, there is a growing need for more hands-on sessions (46.6%) and better access to tools (42.2%) to further enhance the effectiveness of these trainings (Figure 16).

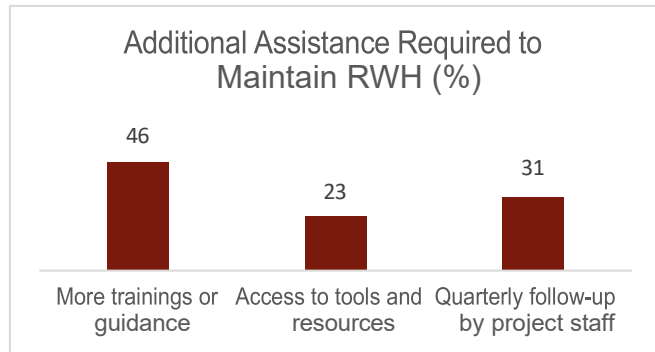


Figure 1c: Additional Assistance Required to Maintain RWH (%)

Despite these gaps, the community remains hopeful, recognizing that if the systems are properly maintained, they will not have to worry as much about water shortages during summer months. Strengthening maintenance strategies and addressing emerging concerns such as drainage issues will further ensure that the benefits of the project continue well into the future, making the RWH systems an integral and lasting solution for water security.

Individual Household Toilets

The Individual Household toilets have significantly enhanced health, hygiene and dignity for families. One of the key successes is the adoption of healthier sanitation and hygiene behaviours, with 84.3% (n=54) of households implementing new practices after attending Behaviour Change Communication (BCC) sessions. As mentioned in figure 17, many community members now wash hands with soap (50%), use toilets instead of practicing open defecation (35.1%) and drink boiled or treated water (3.7%), marking a critical shift toward better hygiene. Residents acknowledge this transformation, noting how open defecation has significantly reduced since the introduction of IHHs, ensuring cleaner surroundings and improved overall well-being. These behavioural changes indicate that the project is not only addressing immediate sanitation challenges but also creating lasting improvements in daily hygiene habits, reinforcing the long-term sustainability of the intervention.

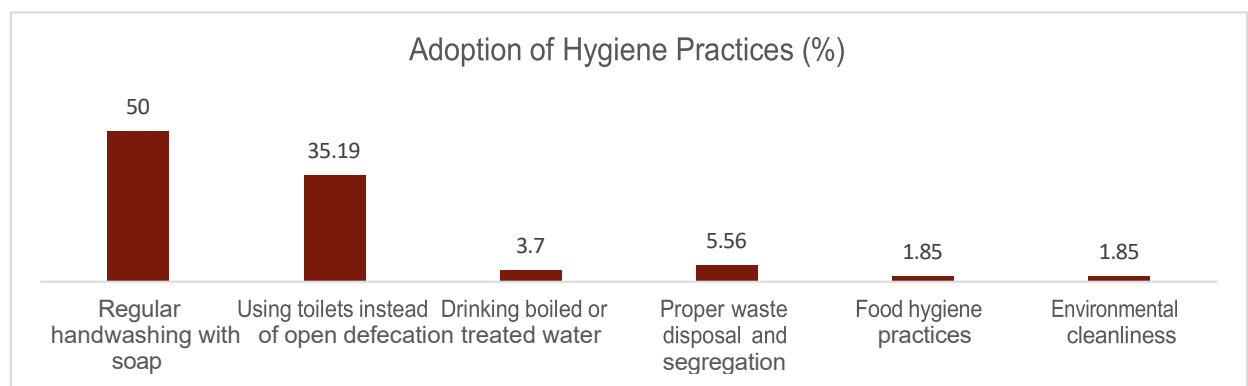


Figure 17: Adoption of Hygiene Practices (%)

The durability and proper maintenance of IHHs further contribute to their sustainability. The data shows that 50% (n=32) of families have reported better health outcomes, while 28.1% have experienced a significant reduction in medical expenses, further proving the project's direct impact on well-being and financial stability.

For many low-income households, constructing a toilet was previously financially unattainable, making this intervention deeply meaningful. The gratitude expressed by beneficiaries reflects their strong sense of ownership and appreciation, increasing the likelihood that they will maintain and sustain these facilities. However, with only 80% (n=64) of households having attended training sessions, integrating periodic awareness sessions on proper maintenance could further reinforce long-term usage and preservation of sanitation infrastructure. By combining infrastructure with continuous education and support, the project can ensure lasting health benefits, dignity and improved quality of life for generations to come.

School and Anganwadi

"The construction of toilets has been one of the main reasons for environmental progress. It has improved the living conditions in the village. Before this scheme was launched, people used to defecate in the open, but now it is not like that. We have seen a big change." - Malarkodi, PRI Member

A significant 75% (n=21) of students have attended sessions on the health benefits of using soap, with 47.6% learning about germs and disease prevention, 33.3% understanding proper handwashing techniques and 19% becoming aware of critical handwashing moments, such as before and after meals. These sessions have contributed to visible improvements in student well-being, as better hygiene practices have led to fewer illnesses and improved school attendance. Teachers have also observed a positive shift in student engagement and academic performance, indicating that good health and a clean school environment directly support learning outcomes.

The new hygiene facilities at schools have been well-received, ensuring consistent use and integration into daily routines. 57.1% are very satisfied, reflecting widespread appreciation of these improvements. This increased access to clean water and sanitation has not only enhanced hygiene but also created a more conducive learning environment. Previously, students had to leave school premises to fetch water, leading to lost instructional time and reduced focus in class. With better facilities in place, students remain in school longer, participate more actively and show greater curiosity in learning, contributing to stronger academic progress.

"Since the intervention, we have seen a positive transformation in both students and parents. Hygiene habits have improved, and academic performance has increased. This project has made a lasting impact and we are grateful for these much-needed facilities." – Rooba, Teacher

3.3.3. Success Stories and Best Practices

Enhancing Education and Hygiene: A School Transformation Story from Chengalpattu

Introduction

In Chengalpattu district, the Royal Enfield Foundation, through its WASH (Water, Sanitation and Hygiene) intervention, has successfully transformed government middle schools by providing essential infrastructure—RO water plants and sanitation facilities. These schools, serving predominantly marginalized communities with limited educational and economic resources, faced significant challenges in ensuring student health, hygiene and consistent school attendance. The intervention addressed these gaps and fostered an environment that improved learning outcomes and instilled hygiene practices among students.

Project Implementation

Before the project, schools faced severe drinking water shortages and poor toilet facilities, causing many students, especially girls, to skip school or leave early. With Royal Enfield Foundation's support, schools received RO water plants, well-constructed toilets and compound painting, creating a safer, healthier environment. Teachers shared how the Foundation involved them in planning and implementation, while Behavior Change Communication (BCC) sessions promoted hygiene, environmental care and healthy habits. Students were also given maintenance responsibilities, managing water points and sanitation facilities daily, which empowered them and ensured sustainability.

Impact and Achievements

The intervention brought significant improvements to schools and the community. Over 71% of teachers reported better student attendance, with children staying through the day instead of leaving for water or toilets. One school even gained district and state recognition for improved attendance. Health outcomes also improved, with fewer cases of waterborne diseases and 84.3% of households adopting hygiene practices like handwashing with soap.

Teachers observed a more engaging learning environment, with students becoming curious, attentive and performing better academically. Parents also showed greater involvement in school activities and their children's education.

Teachers expressed deep satisfaction with the initiative, especially the quality of the infrastructure provided. Requests for additional toilets were common, reflecting the demand and success of the intervention in boosting enrollment and school participation. As a teacher, shared, "*Because of this project, students stopped going home during intervals. Our school was listed among the successful schools in the district.*"

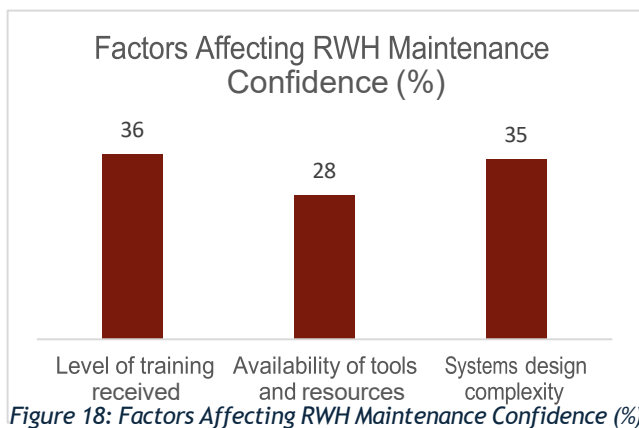


3.3.4. Challenges

Community Sanitation Complex

Community sanitation remains underutilized, with only 2.5% using the available facilities. While infrastructure has been developed, reliance on household-based sanitation and open defecation practices suggests that behavioural patterns, concerns regarding hygiene and maintenance and accessibility issues may limit usage. Low adoption rates indicate a need for targeted engagement strategies, improved maintenance schedules and behavioural nudges to promote sustained use.

Access to clean drinking water has improved significantly, yet 17.5% still do not access the RO plant and continue to rely on public taps (27.5%) or borewells (1.3%). Water quality is rated positively by most, but 3% report occasional shortages. Additionally, while 85% noticed some reduction in waterborne illnesses, 15.2% reported no change, highlighting the need for complementary hygiene and health awareness programs to maximize health benefits.

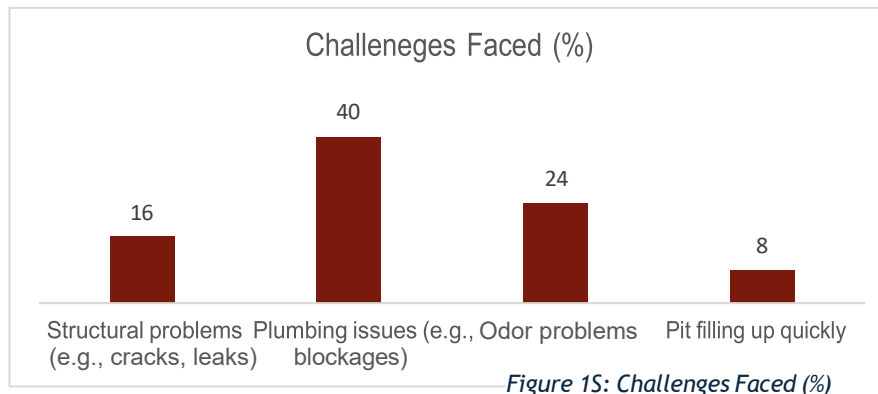


RWH System

The RWH has been installed in 85% of households, but 55% do not perform regular maintenance, citing lack of time (37%), lack of knowledge (33%) and inaccessibility (30%). Several factors influence the regular maintenance of the Roof Water Harvesting System (RWHS), as shown in figure 18.

As 46% reported some increase in groundwater recharge, sustained upkeep will be essential for long-term environmental benefits. A structured approach to maintenance, including refresher training and community-led monitoring, could help sustain system functionality.

"Many of us didn't know how to maintain the rainwater harvesting system at first. The training sessions helped, but more follow-ups would ensure that the system works efficiently." – FGD with Community Beneficiaries



IHH Toilets

For household toilets (IHH), 98.8% of households now have a unit, but only 56.3% report all family members using it regularly. 41.3% state that only some members use it, indicating cultural resistance and concerns over maintenance.

Additionally, 40% report plumbing issues, 24% face odour problems and structural (16%) and pit filling issues (8%), all of which could affect long-term adoption (Figure 19). The absence of financial resources for repairs and reluctance to use the facility due to cultural beliefs further compound this issue.

School Sanitation Facilities

The school sanitation facilities have enhanced access to clean and safe spaces for students, but challenges in cleanliness, maintenance and water availability persist. While 43.8% rated the sanitation facilities as very clean, the remaining percentage indicates room for improvement in upkeep and hygiene standards. Encouragingly, 87.5% of students report using the facilities regularly, highlighting their importance in daily routines. However, issues such as overcrowding, inconsistent maintenance and inadequate water supply continue to hinder optimal usage and long-term sustainability. These barriers need to be addressed to maximize the impact of improved sanitation on student health and learning conditions.

Additionally, challenges in accessing the water dispenser have been identified as key concern, shown in figure 20. 50% reported frequent overcrowding, making it difficult to access water when needed, while 45.8% cited limited availability of water, further restricting usage. To ensure consistent and equitable access to clean optimize dispenser placement, improve water supply consistency and implement better crowd management strategies. Addressing these challenges can enhance the effectiveness of the water dispensers, ensuring that students remain hydrated throughout the school day and reinforcing the project's broader goals of health and well-being.

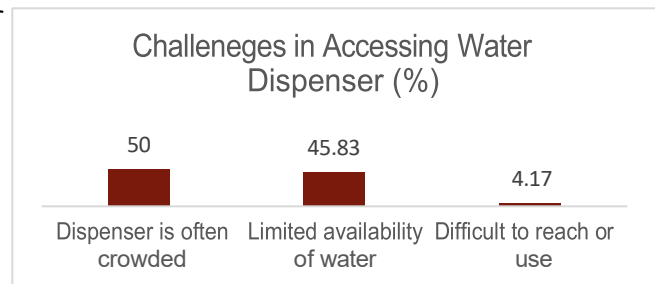


Figure 20: Challenges in Accessing Water Dispenser (%)

To further improve sanitation and water access, regular maintenance schedules, timely refilling of water dispensers and awareness sessions on hygiene etiquette can help sustain facility usage and cleanliness. Given that a significant number of students rely on these facilities daily, investing in better infrastructure upkeep and equitable access measures will be crucial in making these improvements long-lasting and impactful. By tackling these issues, the project can fully realize its potential in creating a healthier and more conducive learning environment for students.

3.3.5. Recommendations

To enhance the sustainability and effectiveness of WASH interventions, targeted recommendations have been identified across key areas, including sanitation facility adoption, water access improvements, maintenance structures, behavioural engagement and long-term capacity building: The water system has been well received by the community, with many recognizing its benefits in providing easier access to clean water. However, concerns remain regarding maintenance responsibilities, as uncertainty about who is responsible for cleaning the tanks regularly could impact the long-term effectiveness of the system. While households near the facility benefit the most, some residents still need to walk a considerable distance to collect water, highlighting the need for better distribution mechanisms. Additionally, while the tank fills up quickly, the current storage capacity is limited, meaning that once the stored water is used up, households return to previous struggles with water availability. Expanding storage could ensure a more consistent supply, particularly during summer months when water scarcity is a pressing issue.

Looking ahead, the community hopes for continued maintenance and possible expansion of the project. Residents acknowledge that proper upkeep will determine the system's longevity, as many similar initiatives have failed due to neglect. Some also suggest scaling up the initiative by installing additional storage tanks in other locations, ensuring that more households benefit without overcrowding the existing system. Another area for improvement is drainage infrastructure, as stagnant water near collection points has led to mosquito breeding, creating new health concerns.

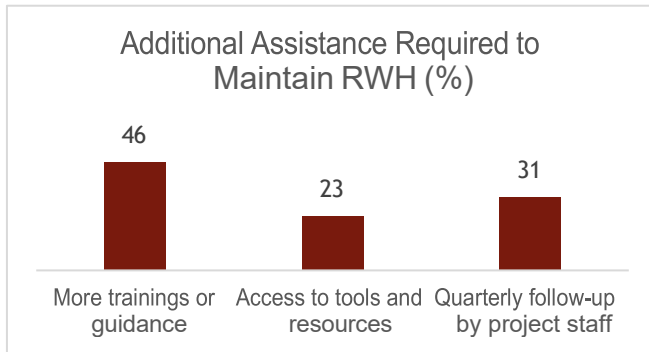


Figure 21: Additional Assistance Required to Maintain RWH (%)

As given in figure 21, strengthening RWH maintenance requires structured community engagement initiatives, hands-on maintenance workshops and financial incentives for regular upkeep. Developing a household maintenance checklist, providing access to technical support and implementing a reward system for well-maintained systems could encourage sustained maintenance practices.

For household toilets (IHH), increasing full-family adoption will require community-led awareness sessions, financial support for repairs and improved maintenance guidance. Evidence from successful sanitation programs under the Swachh Bharat Mission (SBM) has demonstrated that sustained behavioral change and community-driven approaches are key to ensuring continued toilet usage beyond mere construction. In several villages, local champions have played a crucial role in influencing households to shift towards consistent toilet use by addressing deep-rooted habits and misconceptions.⁸

For instance, in some rural communities, self-help groups (SHGs) have been trained to conduct household visits, organize sanitation drives and provide financial assistance for toilet repairs, leading to increased adoption and maintenance of sanitation infrastructure. Additionally, some districts have implemented small-scale toilet maintenance subsidy programs, ensuring that families lacking resources can sustain proper sanitation practices.

By incorporating similar grassroots interventions, such as community-based repair services and structured behavioral change programs, long-term toilet adoption and maintenance can be significantly improved.

To ensure the continued success and sustainability of the project, several key recommendations should be considered based on community feedback and observed challenges. While the project has been well-received and no major security or coordination issues have been reported, long-term sustainability will depend on structured maintenance, expansion and strategic planning.

"If more people adopted rainwater harvesting, our entire village could benefit. But many are hesitant because they don't fully understand how it works or how to maintain it." – FGD with Community Beneficiaries

One important recommendation is to enhance sanitation infrastructure in response to increased school attendance. As more students are enrolling due to improved facilities, there is a growing need for additional toilet rooms to accommodate the rising numbers. Expanding sanitation infrastructure will prevent overcrowding, ensuring that students can continue to access hygienic and well-maintained facilities without constraints. Additionally, regular cleaning and maintenance of sanitation facilities (27.1%) is critical to maintaining hygiene standards. Establishing student-led hygiene committees and scheduled cleaning programs can help sustain these improvements.

⁸ https://swachhbharatmission.ddws.gov.in/sites/default/files/communication-material/Swachh_Sujal_Shakti_ki_Abhivyakti_Book_0.pdf

Another critical factor is ensuring access to clean and safe drinking water. While the existing water dispensers have been beneficial, 27.1% expressed the need for additional dispensers to reduce congestion and improve accessibility. Additionally, 38.9% suggested improving water taste and quality, indicating the need for enhanced filtration or treatment solutions (Figure 22). Strengthening regular cleaning and maintenance protocols for these dispensers will further support hygiene and health outcomes in schools.

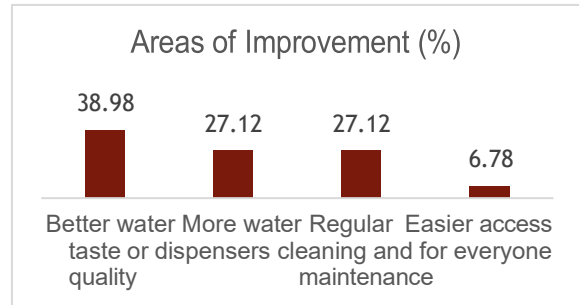


Figure 22: Areas of Improvement (%)

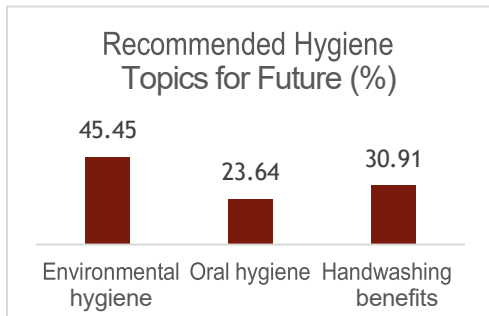


Figure 23: Recommended Hygiene Topics for Future (%)

Beyond infrastructure, hygiene education should be expanded to reinforce long-term behavioural changes. As given in figure 23, students have expressed interest in learning more about environmental hygiene (45.4%), handwashing benefits (30.9%) and oral hygiene (23.6%). Integrating these topics into school health programs and awareness sessions can help promote better hygiene practices, complementing the improvements in sanitation infrastructure.

Ensuring the long-term sustainability of WASH infrastructure requires a holistic approach that goes beyond initial implementation. While the project has made significant progress, its continued success depends on addressing emerging needs related to maintenance, accessibility, behavioural reinforcement and financial sustainability. Without proactive interventions in these areas, the risk of infrastructure deterioration and behavioural regression could undermine the positive impact achieved so far.

A structured maintenance system is essential to ensure that facilities remain functional over time. Without clear responsibilities for upkeep and timely repairs, water and sanitation facilities may gradually fall into disrepair, reducing their effectiveness and discouraging usage. Establishing community-led monitoring systems, periodic inspections and designated personnel for regular cleaning and repairs will help sustain these improvements. At the same time, as sanitation and drinking water facilities are increasingly being used, expanding access has become a growing necessity. Additional water dispensers, increased storage capacity and the construction of more sanitation units will help prevent overcrowding and ensure that all users benefit equally.

Beyond infrastructure, sustained behaviour change is key to long-term success. While hygiene education has led to positive habits, continued engagement is necessary to reinforce these behaviours and prevent a return to old practices. Strengthening awareness programs, integrating hygiene education into school curricula and involving local school committees and household leaders in promoting safe practices will create a culture of collective responsibility for health and hygiene.

Financial sustainability is another critical factor in ensuring long-term functionality. Maintenance and repairs require ongoing funding and relying solely on external sources is not viable. Encouraging local governments, school authorities and communities to integrate WASH facility upkeep into their budgets can help establish a self-sufficient financial model. Exploring public-private partnerships or user contribution models can further strengthen sustainability, ensuring that maintenance is not neglected due to financial constraints.

By addressing these emerging needs through a combination of structured maintenance, expanded access, continuous education and financial planning, the project can transition toward self-sufficiency and long-lasting improvements in sanitation, hygiene and water accessibility.

3.3.6. Annexures

3.3.6.1. Sample distribution

Table 3: Sample Distribution

Beneficiaries across key tools	Sample
Structured Survey	
IHH survey	80
RWH survey	100
Children survey	32
Semi structured Interviews	
Community beneficiaries	80
In-depth Interviews	
PRI members	2
Teachers	3
Implementing Partner	2
FGD	
Primary users of community	1

3.3.6.2. Evaluation Matrix

Table 4: Evaluation Matrix

Study Population	Key Area of Enquiry	Tool Type	Planned Analysis	Evaluation Dimension (OECD -DAC)
Families/households benefiting from individual toilets	<ul style="list-style-type: none"> Changes in household hygiene practices and sanitation behaviour Impact on health and well-being Maintenance of infrastructure 	<ul style="list-style-type: none"> Structured Interviews Semi-structured Interviews Focus Group Discussion 	<ul style="list-style-type: none"> Descriptive analysis of changes in hygiene practices and infrastructure maintenance. 	<ul style="list-style-type: none"> Effectiveness Sustainability

	<ul style="list-style-type: none"> • Awareness and practice among women and children on hygiene practices 			
Students, teachers and Anganwadi staff of schools	<ul style="list-style-type: none"> • Awareness among children and Anganwadi workers on hygiene practices • Cleaning of toilets – frequency and use of toilet cleaner • Impact on enrollment of adolescent girls in schools • Prevalence of communicable diseases • Impact on teacher motivation and job satisfaction 	<ul style="list-style-type: none"> • Students-Structured Interviews • Teachers- In-depth Interviews 	<ul style="list-style-type: none"> • Descriptive analysis of hygiene practices and toilet cleaning frequency. 	<ul style="list-style-type: none"> • Effectiveness • Impact
Community beneficiaries from Roof Top Rainwater Harvesting (RWH) structures	<ul style="list-style-type: none"> • Economic benefits • Impact on livelihoods and agricultural productivity • Changes in water consumption practices • Community participation in maintenance and upkeep of RWH structures 	<ul style="list-style-type: none"> • Structured Interviews • Semi-structured Interviews • Focus Group Discussion 	<ul style="list-style-type: none"> • Descriptive analysis of economic benefits, agricultural productivity and community participation. 	<ul style="list-style-type: none"> • Relevance • Sustainability
Community beneficiaries from community RO system	<ul style="list-style-type: none"> • Changes in health outcomes, related to water-borne diseases • Adoption of water conservation practices • Accessibility of drinking water from RO plants 	<ul style="list-style-type: none"> • Focus Group Discussion • Semi-structured Interviews 	<ul style="list-style-type: none"> • Descriptive analysis of health outcomes and water conservation practices. 	<ul style="list-style-type: none"> • Effectiveness • Impact
Community members benefiting from Solar Streetlights	<ul style="list-style-type: none"> • Crime reduction and safety of children and women • Economic benefits 	<ul style="list-style-type: none"> • Focus Group Discussion • Semi-structured Interviews 	<ul style="list-style-type: none"> • Thematic analysis to explore community perceptions of safety and economic benefits. 	<ul style="list-style-type: none"> • Impact • Sustainability

Implementation partners	<ul style="list-style-type: none"> • Details about program implementation and implementation strategies • Challenges and barriers • Success stories – Stories of change 	<ul style="list-style-type: none"> • In-depth Interviews 	<ul style="list-style-type: none"> • Thematic analysis of implementation strategies, challenges and success stories. 	<ul style="list-style-type: none"> • Efficiency • Sustainability
Key Stakeholders	<ul style="list-style-type: none"> • Roles and responsibilities • New strategies introduced. • Challenges and barriers • Success stories – Stories of change 	<ul style="list-style-type: none"> • In-depth Interviews 	<ul style="list-style-type: none"> • Thematic analysis of stakeholder roles, strategies and barriers to effective implementation. 	<ul style="list-style-type: none"> • Relevance • Effectiveness