

GAIL (India) Limited

**Impact Assessment Report on Support for
construction of toilets in Government
Schools in Barpeta, Assam (FY 19-20 & 20-
21)**



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1.1 Executive Summary

Being home to one- sixth of the world's population, India has the potential to provide for major impetus required to achieve the 2030 Agenda. India has accelerated its journey to becoming a global leader in thought and action ever since it has attained independence. To further achieve multi-dimensional holistic development in the nation, the government has been focusing on a "whole- of- society" approach¹, engaging with sub- national and local governments, civil society organizations, underserved population, and the private sector. Further, India's alignment with the national development agenda, as exemplified by the slogan "*Sabka Saath Sabka Vikaas*" (collective efforts for inclusive growth), demonstrates the country's dedication to the Sustainable Development Goals (SDGs).

Through economic growth and empowerment, the nation has successfully lifted more than 271 million people out of multidimensional poverty². Inequalities in housing, nutrition, child health, education, sanitation, drinking water, and electricity have all decreased as a result of improved access and reduction in poverty³. Through a cross country drive set off by the Clean India Campaign and the National Nutrition Mission, India accomplished 100 percent rural sanitation and sharp decrease in stunting among children and maternal death rates⁴.

Nevertheless, there is still a significant amount of work to be done on the national front in various areas. India must accelerate and maintain its upward trajectory on key human development indicators in order to unlock its enormous economic potential in the future and strive for inclusive progress. Development, in its true essence, is holistically achieved when all the people are included in the process.

One of the building blocks of development is sanitation. Ancient societies that made investments in sanitary advancements developed into thriving, affluent, and strong nations. Investments in sanitary systems have been followed more recently by modernization and economic expansion.

Sanitation supports human dignity and well-being by preventing disease, making it the ideal way to achieve WHO's definition of health, which is " state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity⁵," as stated in its constitution.

¹ Voluntary National Review: 2020. [Link](#)

² Sashakt Bharat- Sabal Bharat (Empowered and Resilient India)- Voluntary National Disclosure :2020

³ Sashakt Bharat- Sabal Bharat (Empowered and Resilient India)- Voluntary National Disclosure :2020

⁴ Swach Bharat- Swasth Bharat (Clean and Healthy India)- Voluntary National Review: 2020.

⁵ Guidelines on Sanitation and Health: World Health Organization. 2018.



A number of Sustainable Development Goals are built on the principle of the right to sanitation. After years of disregard, the need of universal access to adequate sanitation for everyone, everywhere is being correctly acknowledged as a crucial element of health insurance. The SDGs must be achieved through safe, sustainable, and well-managed systems, not just toilets on their own.

Construction of toilets is a crucial step towards improving sanitation and achieving cleanliness. Lack of proper sanitation facilities is a major contributor to the spread of diseases and impacts public health negatively. Providing access to clean and functional toilets is essential in promoting hygiene and preventing the spread of illness. Availability and usage of toilets will help to reduce open defecation, promote personal hygiene, and contribute to a cleaner and healthier environment for all.

GAIL (India) Limited, being a socially responsible public sector unit, recognizes the necessity of the above- mentioned issue and contribute towards promoting preventive healthcare and sanitation. Thereby, in alignment with the thematic areas as mentioned in the Schedule VII of the Companies Act, 2013, GAIL collaborated with UPSICL to construct toilets in government schools in Barpeta, Assam.

GAIL had supported the programme through a funding of INR two crores, spread over financial years 2020- 21 and 2021- 22.

To evaluate the impact of the project and understand the perception of the stakeholders, GAIL (India) Limited empaneled KPMG to conduct an impact assessment study. Along with stakeholder consultations, review of documents and data provided by the team was undertaken to understand the objective and coverage of the project. Subsequent to the desk review, key performance indicators were identified and finalised, in consultation with the programme team. For the purpose of this study, OECD- DAC (Organisation for Economic Co-operation and Development- Development Assistance Committee) framework was used for developing the research tools (questionnaires for qualitative surveys) and evaluating the impact created.

The study found that safe sanitation is associated with improvements in health, including positive impacts on infectious diseases, nutrition, and well- being in general. Sanitation intervention in the schools were well-coordinated with water and hygiene measures, with the provision of over- head tank, water facility, urinal/ WC, tiles, taps, etc. The programme interventions covered the following aspects of sanitation:



Figure 1: Components of holistic sanitation

1.2 Introduction

1.2.1 CSR at GAIL

GAIL (India) Limited, conferred with the status of Maharatna in 2013, is India's leading natural gas company with diversified interests across the natural gas value chain of trading, transmission, LPG production, LNG-regasification, petrochemicals, city gas, etc. It owns and operates a network of around 14617 km of natural gas pipelines spread across the length and breadth of country. GAIL firmly believes that meeting people's needs, enhancing communities, and safeguarding the environment will ultimately determine how long progress can be sustained.

Pursuant to the provisions of the Companies Act, 2013 and rules made thereunder including the statutory modifications/ amendments from time to time as notified by the Government of India, GAIL (India) Limited earmarks two percent of its average net profit of the preceding three financial years towards achieving its CSR objectives through implementation of meaningful and sustainable CSR programmes.

1.2.2 GAIL CSR Vision

GAIL, through its CSR initiatives, will continue to enhance value creation in the society and in the community in which it operates, through its services, conduct & initiatives, so as to promote sustained growth for the society and community, in fulfillment its role as a Socially Responsible Corporate, with environmental concern.

1.2.3 GAIL CSR Objectives

- Ensure an increased commitment at all levels in the organization, to operate its business in an economically, socially & environmentally sustainable manner, while recognizing the interests of all its stakeholders.
- To directly or indirectly take up programmes that benefit the communities in & around its work centres and results, over a period of time, in enhancing the quality of life & economic well-being of the local populace.
- To generate, through its CSR initiatives, goodwill, and pride for GAIL among stakeholders and help reinforce a positive & socially responsible image of GAIL as a corporate entity.

1.2.4 About the project/ programme

Safe drinking-water, sanitation, and hygiene (WASH) are crucial to human health and well-being. Safe WASH is not only a prerequisite to health, but contributes to livelihoods, school attendance and dignity and helps to create resilient communities living in healthy environments⁶.

Access to water and sanitation is one of the major challenges for the 21st century. World Health Organization (WHO) estimates that still 2.5 billion people- more than one third of the global population – live without basic sanitation facilities⁷. Unsanitary conditions have been linked with stunting, which affects almost one quarter of children under-five globally⁸.

According to the 76th round of the National Sample Survey in 2018, 3.9% of the population in urban and 29.9% in rural areas practiced open defecation⁹. According to the World Health Organization report, 0.7 million deaths have occurred due to diarrhoea¹⁰. It has previously been estimated that as much as 50% of child under nutrition may be attributable to poor WASH practices. Ingestion of high quantities of faecal bacteria from both human and animal sources by infants and young children through mouthing soiled fingers and household items, and the ingestion of soil and poultry faeces are common in many rural low-income environments. This leads to intestinal infections which affect a child's nutritional status. It can also lead to malnutrition and underdeveloped growth among the women and children. Open defecation can lead to water pollution and affecting ground surface water. The faecal pathogens are transmitted to water, and it leads to water borne diseases. Open defecation is one of the most important causes of diarrheal death. Nearly 2,000 children under the age of five die every day, one every 40 seconds, from diarrhoea¹¹.

⁶ Guidelines on Sanitation and Health: World Health Organization. 2018.

⁷ [\(PDF\) WASH \(Water, Sanitation and Hygiene\) \(researchgate.net\)](#)

⁸ Guidelines on Sanitation and Health: World Health Organization. 2018.

⁹ [Is India really open-defecation-free? Here's what numbers say \(downtoearth.org.in\)](#)

¹⁰ [\(PDF\) OPEN DEFECTION AND THE HEALTH PROBLEMS IN INDIA \(researchgate.net\)](#)

¹¹ [\(PDF\) OPEN DEFECTION AND THE HEALTH PROBLEMS IN INDIA \(researchgate.net\)](#)

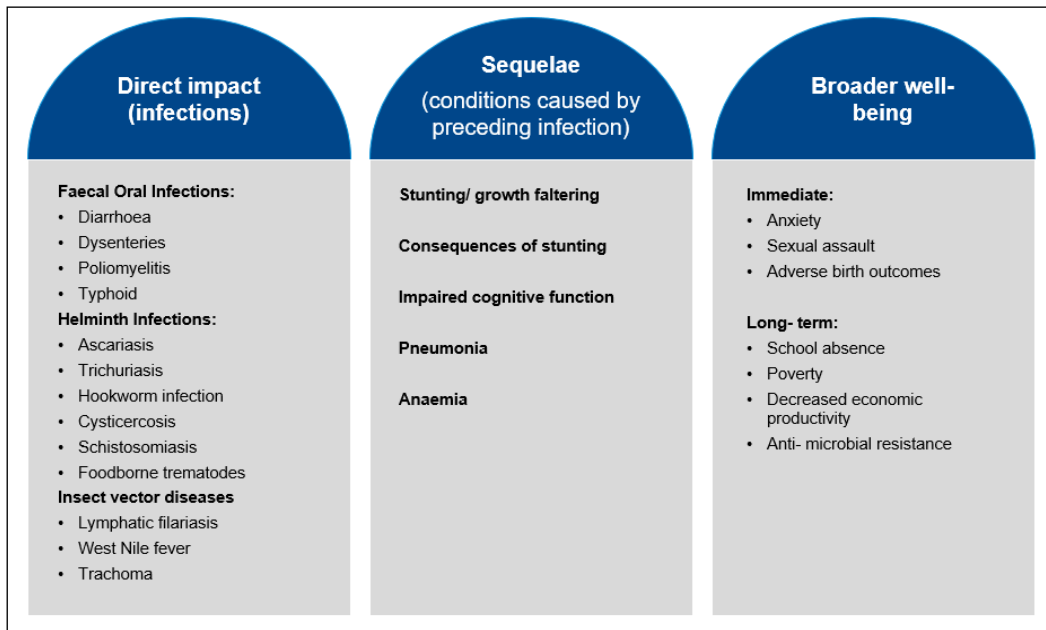


Figure 2: The health impact of unsafe sanitation on children

The first Indian national campaign to target open defecation was the Central Rural Sanitation Program (CRSP-1986). The main objectives of the program, to provide 25% of the rural population with improving the quality of life and also provide privacy and dignity to women improved hygiene amenities, with the focus of latrine construction. In 1999, CRSP was updated as the Total Sanitation Campaign (TSC). To make India open defecation free by 2017, Total Sanitation Campaign also offered financial subsidies for Below Poverty Line (BPL) families for toilet construction. But census 2011, report shows moderate increase of toilets in India. In 2012, the TSC was replaced by Nirmal Bharat Abhiyan (NBA) with the new target to improved sanitation facilities for rural households. The eventual aim is to achieve the complete sanitation service chain in all parts of the country.



Figure 3: Sanitation service chain

In 2014, Prime Minister Narendra Modi launched the Swachh Bharat Abhiyan or Clean India Mission. The objectives of the initiative were to increase public awareness and enhance the nation's infrastructure in order to assist the growth of sustainable sanitation, hygiene, and waste management systems. One of the key goals of the programme was to make the country open defecation free through the construction of

public and household level toilets. Under Swachh Bharat Mission (Gramin), 10.28 crore toilets have been constructed in 36 states/ UTs. 603,175 villages were declared open defecation free in five years¹².

As per the 13th Annual Status of Education Report (ASER) Rural, in spite of some progress, around 22.8% rural government schools surveyed had unusable toilets in 2018. The study also found that bad infrastructural development, ownership issues, lack of motivation or lack of maintenance are the reasons why these toilets were unusable. According to a 2020 CAG report, 72% of the toilets in the government schools had no running water and around 55% schools did not have hand-washing facilities¹³.

When it comes to providing proper sanitation facilities to girl students, schools in rural India still have a lot to do. Despite the government launching Swachh Vidyalaya initiative under Swachh Bharat Abhiyan, 11.5% of rural schools have no separate toilets for girls. While some schools had separate girls' toilets, 10.5% of them were locked and 11.7% were locked and unusable.

Given the above scenario, GAIL India Limited collaborated with Uttar Pradesh Small Industries Corporation Limited (UPSICL) in Barpeta district of Assam for the construction of toilets in government schools across the district. The objective of the programme was to provide sanitation services so as to maintain cleanliness.

1.3 About the Implementing Agency

For the purpose of comprehensive development of small industrial units of the state, Uttar Pradesh Small Industries Corporation Limited (UPSICL) was established in June 1958 as a wholly Government owned company. To fulfill its objectives, the corporation is providing assistance to the small-scale industrial units of the state. The main objective of the organization is to provide various raw materials like iron, steel, coal etc. to small scale units.

Additionally, the organization is also involved in establishment and maintenance of the industrial establishments of the Directorate, providing marketing assistance to small scale entrepreneurs, establishing industrial estates and clusters in backward areas etc.

U.P. Small Industries Corporation Limited is the only corporation of the state government which is responsible for the MSME of the state. For the comprehensive development of the industrial units, UPSICL has been established by the Government of Uttar Pradesh. This has aided in enhancing the industrial development of the state. For the purpose of

¹² [Factsheet Details: \(pib.gov.in\)](https://pib.gov.in)

¹³ [Focus on toilets key to reducing school dropout rate among girls \(news18.com\)](https://news18.com)

this project, GAIL collaborated with UPSICL for construction of toilets in government schools of Barpeta, Assam.

1.4 Methodology and Approach

GAIL has been implementing successful CSR initiatives based on community needs. A third-party evaluation of the results attained is essential given the dynamic nature of the social development programmes deployed. This impact assessment aims to explain what has been done well and what can be done moving forward. It will not only assist in determining the significance of the project, including the efficiency of project design and interventions, sustainability of results, and impact of the intervention on the target community, but it will also provide guidance for expanding or replicating the successful initiatives while redesigning or ending the projects/initiatives that were unable to have the intended impact.

The impact assessment is intended to provide key insights on the following questions:

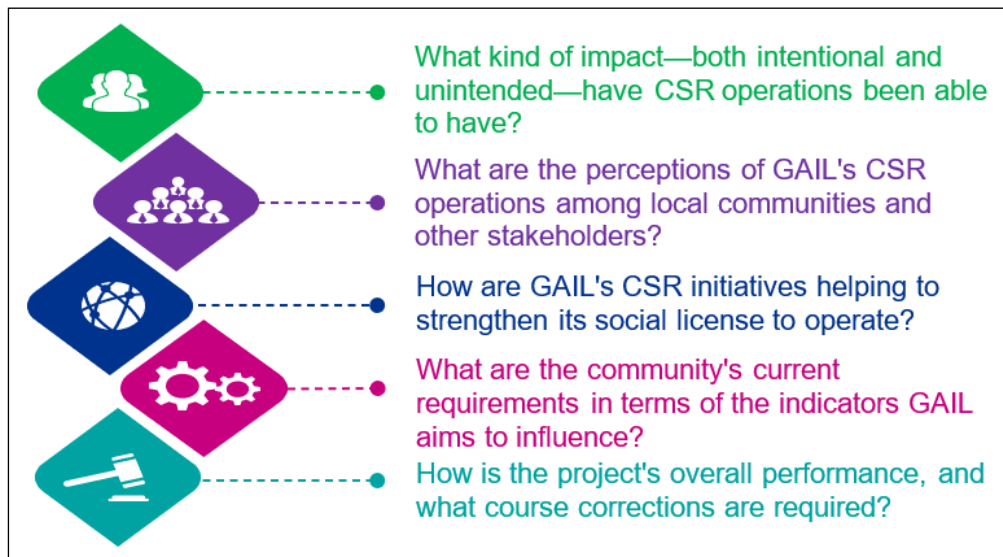


Figure 4: Research questions

The study was conducted through qualitative data collection techniques. This includes in-depth interviews with key stakeholders, as well as secondary research in the multiple thematic areas for a baseline perspective.

1.4.1 OECD DAC: Evaluation Criteria

Given the fundamental approach for conducting an impact study, the OECD-DAC (Development Assistance Committee) Evaluation Network's framework is well regarded for assessing the efficacy of

development programmes. In response to the need for a method through which bilateral development agencies could monitor the financing supplied to multilateral organisations for various development initiatives, the DAC Evaluation Network developed a set of evaluation criteria for measuring the performance of any development project (UNICEF, 2012).

In 1991, the OECD Development Assistance Committee (DAC) devised the criteria for assessing international development cooperation. They are now widely used beyond the DAC and have established themselves as a cornerstone of evaluation methodology. These standards have routinely been used for international donors, including UN agencies (OECD, 2020).

The OECD DAC Network has identified five evaluation criteria and two principles for their application: relevance, coherence, effectiveness, efficiency, impact, and sustainability. These criteria are meant to help facilitate evaluations. They were revised in 2019 to improve the accuracy and utility of assessment and to strengthen the evaluation's contribution to sustainable development (OECD, 2020).

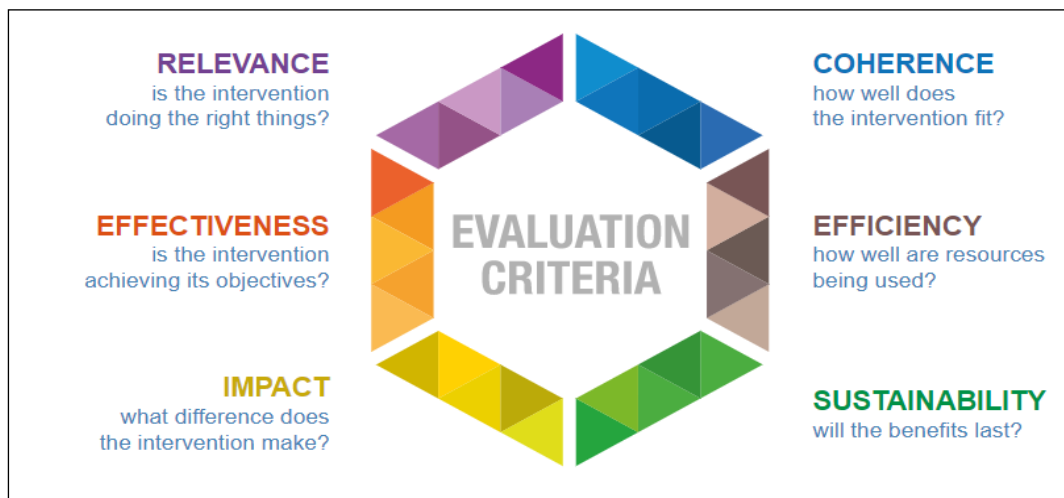


Figure 5: OECD-DAC Framework

1.4.2 Geographical Coverage

The impact assessment for this programme involved one district in Assam.

Table 1: Geographical coverage

	State	Districts
Under GAIL's CSR initiative	Assam	Barpeta

1.4.3 Sampling Strategy

The sample size for this study has been calculated using purposive sampling methodology. A sample size of 57 was chosen for the study. This was done keeping in mind the beneficiary spread as well as collecting data from diverse stakeholders covering 6 schools.

Duplication of responses were also avoided to ensure opinion of all stakeholders is covered adequately.

1.4.4 Data Collection and Analysis

To conduct impact assessment, KPMG carried out the data collection exercise on field with assistance from UPSICL.

With the help of pre-designed questionnaires, in-depth interviews were conducted with the relevant stakeholders, through questionnaires and focused group discussions. The data was later updated and translated into excel sheets. Following data collection and cleaning, the data was analysed, and the outcomes were utilised to assess the project's impact.

1.4.5 Stakeholder Map

Stakeholders play an imperative role in project implementation on the ground. Stakeholder involvement can offer insightful information that aids in making critical decisions for the organisation. They can aid in designing improved guidelines, processes, and systems, as well as future communications and plans. Institutions and stakeholders taking part in the exercise include:

Project	Type of Stakeholder	Number of stakeholders
Support for construction of toilets in Government Schools in Barpeta, Assam (FY 19-20 & 20-21)	GAIL CSR Project SPoC	1
	Implementation agency	2
	Teachers/ Principals	6
	Beneficiaries/ students	48

Table 2: Stakeholder map

1.4.6 Impact Map

Table 3: Impact Map

Thematic Area	Location	Project Name	Implementing Agency	Overall Objective	Key Activities	Key Outputs	Key Outcomes	Impact
Promoting preventive healthcare and sanitation [item no. (i), Schedule VII of Companies Act]	Barpeta, Assam	Project 14: Support for construction of toilets in Government Schools in Barpeta, Assam (FY 19-20 & 20-21)	UPSICL (Uttar Pradesh Small Industries Corporation Limited)	To provide sanitation facility in Government Schools to maintain cleanliness	<ul style="list-style-type: none"> Construction of toilets for girls and boys Construction of basic facilities like overhead tank, water facility, etc. Awareness sessions on importance of sanitation & hygiene. Handing-over the facilities to School authorities/District authorities as applicable for all upkeep & maintenance. 	<ul style="list-style-type: none"> No. of students with access to toilets No. of students attending school regularly due to provision of toilets 	<ul style="list-style-type: none"> Increased cleanliness Easy access to toilets Increased/ improved attendance. Increased interest towards learning Improved health Increased attendance of girls 	<ul style="list-style-type: none"> Improved health Improved attendance and academic performance Improved facilities in toilets constructed

1.5 Scoring Matrix

A scoring guideline was designed where OECD DAC parameters were scored and bundled basis our understanding of the project and availability of information. Weights were assigned to the bundled OECD DAC parameters. Also, a parameter on branding was included to understand the community's awareness on the project. Various components within the parameters have been assigned scores. Weights and scores have been used to compute the overall score for each district.

The following scoring matrix was developed to rate the performance of the projects across districts:

Table 4: Scoring matrix

OECD Parameters	Indicators	Weightage	Combined Weightage
Relevance	Needs Assessment Report	20%	W1: 40%
	Relevance to target beneficiaries	50%	
	Alignment to SDGs	30%	
Coherence	Alignment with national policy	50%	
	Alignment with GAIL CSR policy	50%	
Efficiency	Timeline Adherence: Project Completion	40%	
	Duplication	20%	
	Adherence: Budget	40%	
Effectiveness	Identification of problem	25%	
	Process driven implementation strategy	25%	
	Qualified implementation team	25%	
	Targeted beneficiaries	25%	
Impact	Improved health	25%	
	Improved attendance and academic performance	25%	
	Improved facilities in the toilets constructed	25%	
	Improved community perception	25%	
Branding	Visibility (visible/word of mouth)	100%	W3: 10%
Sustainability	Sustainability Mechanism, Convergence	100%	W4: 10%
Score= W1*Average (Relevance, Coherence) + W2*Average (Efficiency, Effectiveness, Impact) + W3* (Branding) + W4* (Sustainability)			

1.6 Impact Assessment

1.6.1 Relevance of Intervention

Relevance is a measure of how much the intervention objectives and design respond to the needs, beliefs, and priorities of the beneficiaries and continue to do so even if circumstances change.

Relevance measures how effectively a programme is aligned with the goals and policies of the government in which it is implemented. It also aims to know if 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 linkages to existing government operations.

WASH is important in its own right and is also necessary for the attainment of better health, education, nutrition, and other indices of human development¹⁴. WASH also aids in achieving other development objectives, especially those that have to do with poverty alleviation, economic development, urban and rural services, gender equality, resilience, and climate change. A number of other important concerns are interconnected with access to water and sanitation, and this has a significant impact on children's life as well as their capacity to grow and thrive.

Children benefit from improved academic performance, gender equity, and a more pleasant and healthy learning environment when schools provide them with WASH services that are dependable, dignified, inclusive, and safe. In large part, it helps girls and children from disadvantaged communities overcome exclusion from and discrimination in education. Providing children with high-quality hygiene education, on the other hand, lays the groundwork for healthy and productive lives and generates demand for safe water and sanitation services in the future.

The Indian hygiene and sanitation are troubled with the double burden of lack of toilet infrastructure on one hand, and restricted behavioral capacity to access the toilets, on the other. The schools were already equipped with toilets even before the intervention. Whereby it was observed that some toilets were not in a usable condition, those that were usable were also not being utilized by the children. Around 18% of the students reported open urination/ defecation in spite of some form of toilets available in the school vicinity.

Additionally, obstacles primarily affecting adolescent girls during puberty were also being caused by the appalling state of school WASH services. Due to a lack of improved sanitation facilities, lack of privacy and dignity has a particularly negative impact on health and safety, self-esteem, education, and well-being of the girls. Out of a total 21 female beneficiaries, approximately 81% highlighted safety concerns, hygiene, and lack of awareness as primary issues/ challenges due to lack of toilet facilities in the school. This further added to their stress, shame, embarrassment, confusion, and fear that arose due to lack of knowledge

¹⁴ Relevance of Human Development Index: UN.

around menstrual hygiene, that is, changing in a private space and discreetly dispose of menstrual hygiene materials, inadequate knowledge about menstruation, and inadequate access to menstrual hygiene materials.

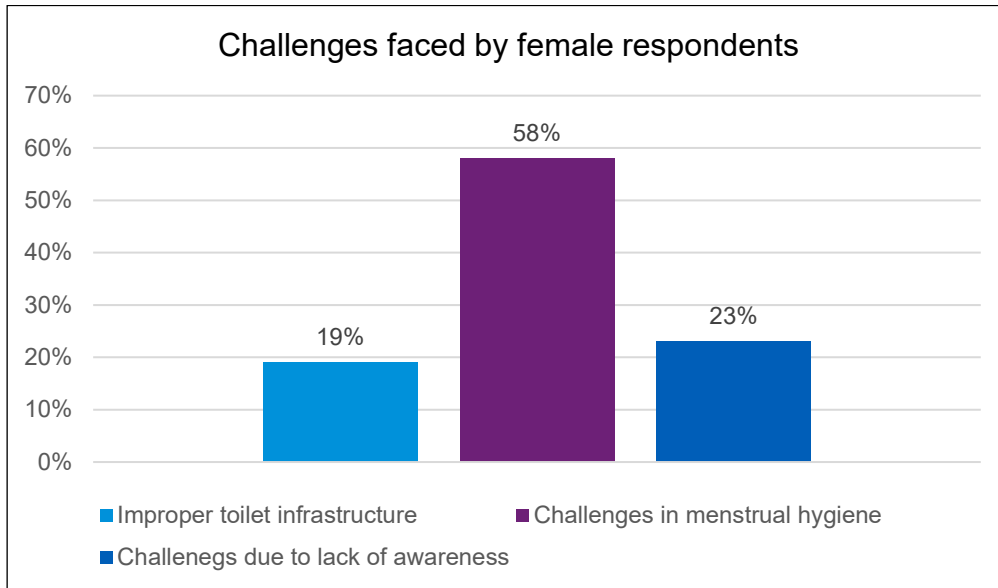


Figure 6: Challenges faced by female respondents

The study found that the major challenge was not the lack of toilet infrastructure in the school premises. Instead, it was the lack of awareness around importance of using toilets for cleanliness and personal hygiene. Lack of awareness can have serious consequences on health, hygiene, as well as the environment.

Hence, it was observed that basic toilet infrastructure was already available in the schools. However, there existed challenges around a greater number of students using only 2-3 existing toilets and lack awareness on importance of using the toilets. Therefore, the construction of more toilets reduced the waiting time of students who were using toilets. However, lack of awareness was a major impediment in accessing toilets.

Hence, the programme was partially relevant to the needs of the students.



Figure 7: Student respondents at Bhalukabari Navamilan School

1.6.2 Coherence of Intervention

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.

I. Alignment of the programme with Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs), commonly recognized as the global goals, were established in 2015 by all United Nations members with the purpose of eradicating poverty, protecting the environment, and ensuring that everyone lives in peace and prosperity by 2030. India was a significant contributor to the development of the SDGs and is committed to achieving them by 2030.



Table 5: Coherence with SDGs

SDG Goal	Target	Sub-targets ¹⁵	Coherence
GOAL 3	Good Health and Well-Being	3.9 By 2030, substantially reduce the number of deaths and illnesses from	Lack of provision of toilets leads to increased open defecation which in turn contaminates the soil and water due to getting mixed leading to

¹⁵ <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>

		<i>hazardous chemicals and air, water and soil pollution and contamination</i>	pollution and spread of illnesses. The project aimed at providing toilets to prevent open defecation and maintain proper sanitation, cleanliness and hygiene in the community and surrounding areas.
GOAL 4	Quality Education	4.a.1 <i>Increase the proportion of schools with access to: (a) electricity, (b) the Internet for pedagogical purposes, (c) computers for pedagogical purposes, (d) adapted infrastructure and materials for students with disabilities, (e) basic drinking water, (f) single-sex basic sanitation facilities, and (g) basic handwashing facilities (as per the WASH indicator definitions)</i>	So as to promote inclusive and quality education, the programme interventions were aimed at constructing toilets in government schools at Barpeta. The aim was to promote cleanliness, sanitation, and hygiene on one hand, and also encourage students to go to school regularly, on the other.
GOAL 6	Clean water and sanitation	6.2 <i>By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations</i>	The project's interventions were aimed at providing toilets in Government schools of Barpeta for girls and boys to ensure access to proper sanitation facilities and reduce open defecation. Provision of toilets for girls led to safe access to sanitation facilities and ensured proper health and hygiene for all.

II. Coherence with national priorities:

The project is further aligned with the national and state government goals, policies, and initiatives, as listed below:

Table 6: Coherence with national priorities

Project	Description	Coherence
Swachh Bharat Abhiyan	The Swachh Bharat Abhiyan was launched in 2014 to address the country's substantial WASH sector	In line with the vision and objectives of the scheme, the project activities aim

	<p>components that require attention for improvement. The objectives of the initiative were to increase public awareness and enhance the nation's infrastructure in order to assist the growth of sustainable sanitation, hygiene, and waste management systems. One of the key goals of the programme was to make the country open defecation free through the construction of toilets.</p>	<p>at contributing towards provision of toilets to school children in order to prevent open defecation and provide access to sanitation facilities for all</p>
<p>Swachh Vidyalaya Initiative</p>	<p>Swachh Vidyalaya is the national campaign driving 'Clean India: Clean Schools'. A key feature of the campaign is to ensure that every school in India has a set of functioning and well-maintained water, sanitation, and hygiene facilities. The technical components include drinking water, handwashing, toilet, and soap facilities in the school compound for use by children and teachers. The human development components are the activities that promote conditions within the school and the practices of children that help to prevent water, hygiene, and sanitation related diseases.</p>	<p>In line with the vision and objectives of the initiative, the project activities aim at contributing towards provision of toilets to school children in order to prevent open defecation and provide access to sanitation and hygiene facilities for all.</p>
<p>Sarva Shiksha Abhiyan & Rashtriya Madhyamik Shiksha Abhiyan</p>	<p>Sarva Shiksha Abhiyan (SSA) is Government of India's flagship programme for achievement of Universalization of Elementary Education (UEE) in a time bound manner.</p> <p>Rashtriya Madhyamik Shiksha Abhiyan is Government of India's flagship programme for achievement of secondary education in a time bound manner.</p> <p>One of the main aims of the schemes is to provide proper infrastructure support in the schools for children. As part of infrastructure support, schools have been provided with toilets for girls and boys, incinerators for girls and drinking water facility</p>	<p>In line with the vision and objectives of the scheme, the project activities aim at contributing towards provision of toilets to school children in order to prevent open defecation and ensure access to adequate infrastructure facilities in the school so that the children are able to attend school on a daily basis.</p>

1.6.3 Effectiveness of Intervention

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 in order to achieve the greatest possible social impact. The efficacy of the programme is established by examining how well the program's activities were carried out as well as the efficiency with which the program's systems and processes were implemented.

Access to adequate sanitation for every individual is a basic human right. It focuses on providing facilities and services that reduce adverse effects on users and other people by ensuring safe management of human excrement from the toilet to containment, storage, safe use, and disposal. Due to the differing needs of girls and boys in terms of privacy, dignity, and safety, improved sanitation services have an important gendered component. This is because improved sanitation services play an important role in ensuring dignity and achieving the human right to sanitation. Infectious diseases like dysentery, cholera, and typhoid are all exacerbated by inadequate sanitation. It affects students' well-being in terms of safety, anxiety, and attendance at school, particularly for girls.

The programme interventions were aimed at resolving the challenges faces by students due to lack of toilet infrastructure and inadequate sanitation facilities in the school premises. To effectively achieve the this, the programme adopted the following measures:

- I. **Professional and qualified team of vendors:** To effectively implement the programme, the construction contract was given over to a professional team of vendors. The toilets were constructed with all the basic level facilities for access to sanitation.
- II. **Children- friendly infrastructure:** Separate toilets were constructed for girls and boys, with walls painted in a child- friendly manner.



Figure 8: Toilet walls painted with cartoons

1.6.4 Efficiency of Intervention

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.

The project has been efficiently implemented in the target districts with the support of key stakeholders.

- I. ***Timeliness of delivery or implementation of project interventions***
The programme was implemented within the given time period by UPSICL with support from GAIL CSR team in the target schools.
- II. ***Cost efficiency of project activities***
Interaction with the GAIL CSR and UPSICL team members also revealed that there was no budget overflow and that all the activities were successfully carried out within the allotted budget. Payment

milestones were clearly defined as such, and interventions were implemented in the districts in consultation with the key stakeholders.

III. **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.

In the case of this programme, it was discovered that basic toilet facilities already existed in the school premises. These toilets were constructed under Sarva Shiksha Abhiyaan. However, the toilets did not have sufficient facilities and were not being used due to existence of gaps in infrastructure. Hence, there were no duplications.

1.6.5 Branding/GAIL visibility:



Each of the toilets constructed had clearly visible GAIL branding done with the GAIL logo. The children, teachers and staff at the school were aware that the toilet construction support was provided by GAIL.

Figure 9: GAIL branding at the toilet wall of Maricha ME School

1.6.6 Sustainability of Intervention

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.

The availability of functional, clean, and private toilets at schools can positively impact the health and learning outcomes, particularly for the girls. The programme interventions provided basic services to the schools to access toilets.

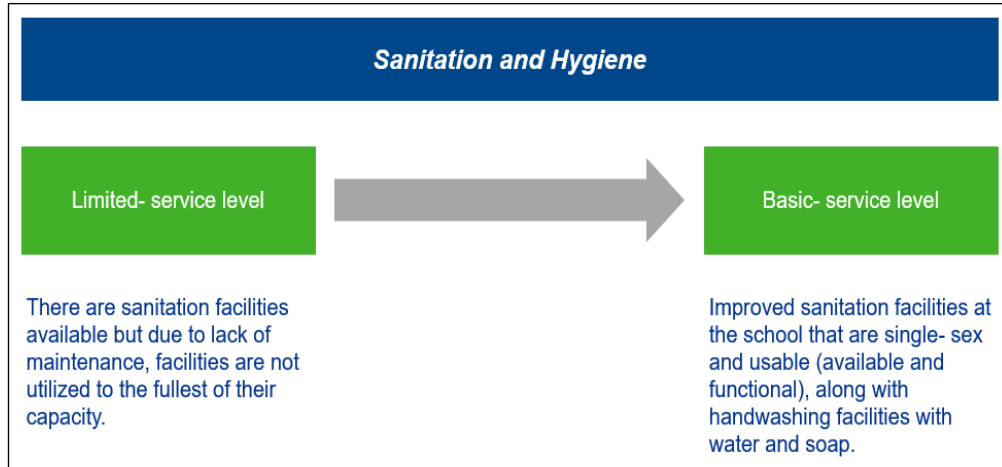


Figure 10: Pathway towards sustainable programme implementation

Sustainability, in this project, could be achieved in two ways:

- Planned and convenience maintenance with readily available services and funds at disposal.
- Behavioral adaptation in using the toilets by understanding the importance of clean, healthy, and hygienic practices

However, both the components could only be achieved partially. While all the infrastructure was functional at the time of installation, issues were being faced of only related to maintenance part from the school authorities due the lack of funds as informed by school Principal or Headmaster. Further, for a sustainable exit strategy, it is necessary to conduct awareness sessions at regular intervals by school authorities to better inform students and community at large about using toilet infrastructure.

1.6.7 Impact of Intervention

Impact has been measured in terms of the futuristic vision to address the issue and significant changes observed.

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.

Under the programme interventions, toilets were constructed in 28 government schools in Barpeta, Assam.

Table 7: List of schools where toilets were constructed

S.No.	School	S.No.	School
1	601 No. Banbahar LP School	15	2 No. Garehari Habi LP School
2	1626 No. Bhalukabari Navamilan	16	705 No. Kandapara LP School
3	1617 No. Pub Kujarpith Girl's LP	17	1413 No. Maurigaon Girls' LP School
4	1283 No. Uttar Putlartari LP School	18	1627 No. Paschim LP School
5	Dakshin Mini Simla LP School	19	990 No. Baisya LP School
6	1026 Guliza Char LP School	20	1890 No. Dakshin Baragdia LP School
7	1436 No. Pub Galia LP School	21	1453 No. Dabadubi LP School
8	Paschim Char Galia LP School	22	Janakalyan HP School
9	1684 No. Chanmama Pathar LP School	23	Maricha M School
10	1922 No. Pub Mahia LP School	24	1430 No. Dakshin Kadamguri Girls' LP School
11	1678 No. Madhya Barbhita LP School	25	752 No. Khndarpar LP School
12	Pub Gunialguri MEM	26	1634 No. Uttar Naligaon LP School
13	1160 No. Bala Pathar LP School	27	Naligaon H. Pre-Senior Madrassa
14	1512 No. Garehari Gaon LP School	28	1354/9 No. Block Kawaimari LP School

The impact assessment study covered 48 students, over 43% of whom were females. The survey sample had respondents from various social categories such as OBC (29%) and SC (71%).

I. Improved health

Access to WASH services in schools remains a serious issue worldwide that necessitates coordinated efforts and immediate attention. The safe disposal of human excrement and sanitation measures have the potential to affect the transmission of a wide variety of microbial dangers.

Toilets have a significant effect on children's health and nutrition; access to toilets can help children reach their full physical and mental potential. The inverse, however, is also true and the absence of a toilet can have profound implications. According to the World Health Organization (WHO), roughly 58% of diarrhea in children is associated with poor water, sanitation and hygiene. Children who suffer from repeated bouts of diarrhea have permanent changes in the structure of their intestines which causes trouble absorbing nutrients, leading to stunting, a form of chronic malnutrition¹⁶.

As part of the intervention, separate toilets were constructed for girls and boys.

- i. The boy's washroom had 3 urinals and one Indian toilet in each school
- ii. The girl's washroom had 3 Indian toilets in each school.

100% of the respondents reported a positive impact on their health and sanitation practices post the construction of toilets by GAIL.

¹⁶ [Better together: Toilets and nutrition \(worldbank.org\)](https://www.worldbank.org/ru/better-together-toilets-and-nutrition)



Figure 12: Boy's toilet in Maricha ME School



Figure 11: Girl's toilet in Maricha ME School

The toilets were well- equipped with overhead water tanks and washbasins with water connectivity. 100% of the respondents reported that the programme was

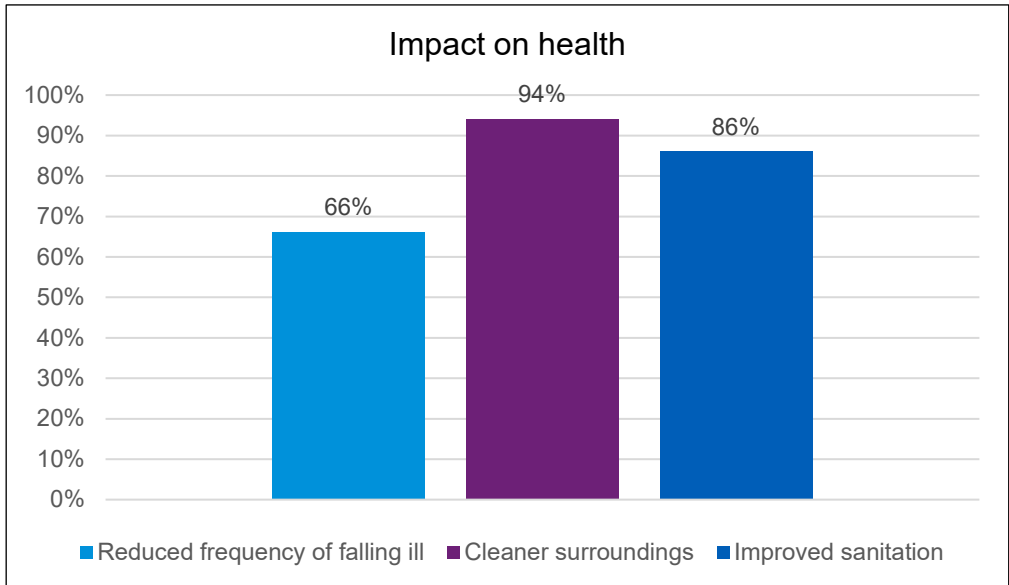


Figure 13: Reported benefits by children

As mentioned in the table, around 66% of the respondents reported reduced frequency of falling ill. However, the other 34% of the respondents highlighted issue in the quality of water. During FGDs with school principals, teachers, and students, it was reported that ground water in Barpeta is contaminated with iron. Therefore, to purify the groundwater before utilization, a motorized pump had been installed by various schools. Owing to lack of school funds in some schools, this motor was not installed. Hence, a few students highlighted the need for intervention for increased access to cleaner water to further the impact on health.

II. Improved attendance and academic performance

A lack of access to proper sanitation facilities poses a huge barrier to education as children frequently miss school due to hygiene-related diseases. It is often observed that lack of proper usable toilets in schools located in rural areas is the prime reason responsible for increase in school drop out rates as well as poor academic performance. Providing hygiene and sanitation facilities in schools creates an enabling school environment and children's regularity to school also gets improved, awareness of hygiene and sanitation increases and children have fewer illnesses due to water borne infections.

100% of the beneficiaries reported a positive impact on their academic performance post the construction of toilets by GAIL.

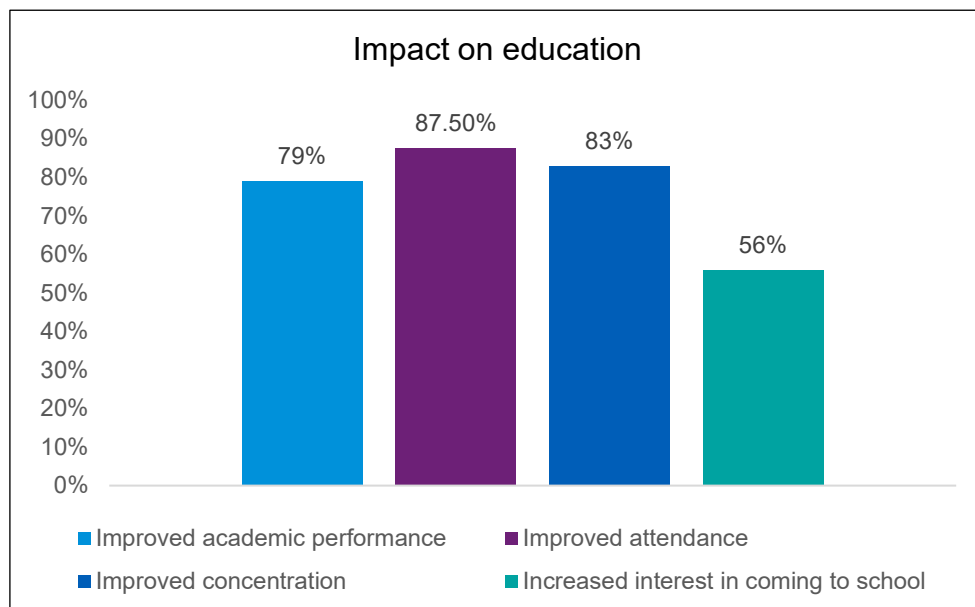


Figure 14: Reported benefits on education

For a majority of respondents, frequency of attending the school has increased which had led to an improvement in their attendance, as well as improved academic performance. Around 56% of the respondents also reported an increased interest in coming to the school. Other respondents highlighted that they were interested in attending school even prior to the intervention because of general interest in studies.



Figure 15: Female respondents

III. Improved facilities in the toilets constructed

The Swachh Vidyalaya Abhiyan was launched by the Ministry of Human Resource Development in September 2014 to meet the Right to Education Act's mandate that all schools must have separate toilets for boys and girls. Despite efforts by the state and central governments, many government schools in Assam lacked basic toilet facilities required for maintaining sanitation and hygiene of students.

Water, sanitation, and hygiene (WASH) in schools has been widely recognized for its significant contributions to achieving the ambitious Sustainable Development Goals (SDG) – particularly those related to providing access to primary education, reducing child mortality, improving water and sanitation, and promoting gender equality.

When schools have clean, age-appropriate toilets for both boys and girls, access to clean water, and handwashing facilities and hygienic behaviours, it not only prevents the transmission of communicable diseases, it contributes to more children attending school and learning.

Some of the schools that were surveyed had access to toilets for the students, but they were either not sufficient in number or lacked the basic facilities required for ensuring effective usage of the toilets. Access to toilets away from the schools resulted in increased duration of time spent in going and coming back which led to loss of learning hours for the students. Lack of sufficient number of toilets also led to longer queues outside the toilets which was time consuming for the students.

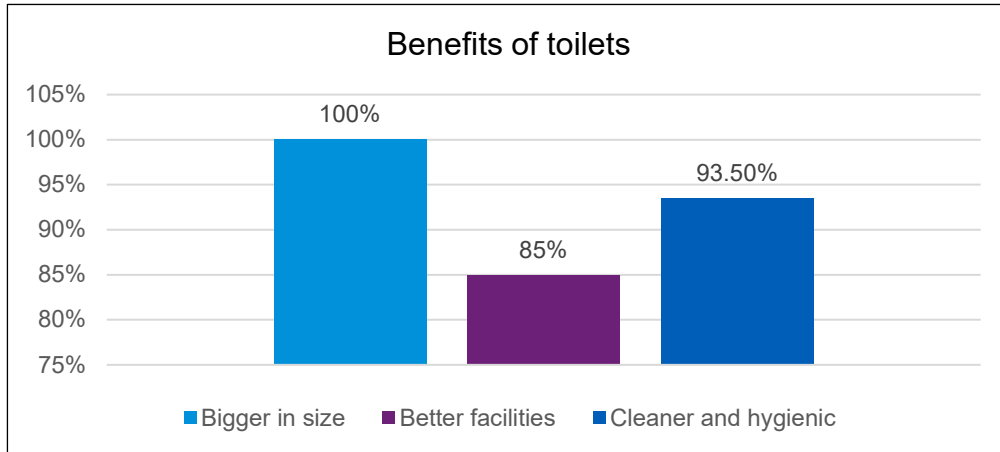


Figure 16: Overall benefits of the programme

IV. Improved community perception

Functioning and well- maintained toilets at the schools have served to improve the health and overall perception of the children at school. Children in the school have adapted to the habit of using toilets, which has been well accepted by the parents and community in general.

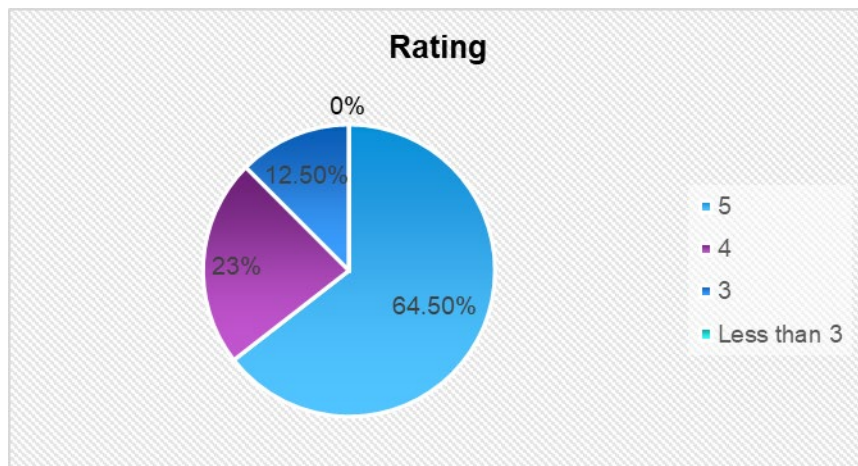


Figure 17: Rating provided by students

Overall, on a scale of 1-5 where 1 is the lowest and 5 is the highest in terms of satisfaction level, more than half the respondents (64.5%) rated the toilet facility by GAIL as 5, that is, **extremely satisfactory**.

1.6.8 Overall rating of the project

The scoring matrix was used to evaluate and score performance of the project across sampled schools in Barpeta, Assam. The following table provides the district-wise rating across the defined parameters:

Table 8: Overall scoring of the programme

Location	Relevance	Coherence	Efficiency	Effectiveness	Impact	Sustainability	Branding	Total Score
Barpeta, Assam	80%	100%	100%	100%	95%	100%	100%	96%

The programme on construction of toilets in Barpeta district of Assam was given a total score of 96%. This attributes a highly impactful ranking to the programme interventions.

During the ranking, it was also found that the programme is aligned to Sustainable Development Goals, as well as national priorities to provide sanitation facilities in schools, thereby creating a clean and hygienic surrounding. The completion rate for the programme was 100% and 100% of the beneficiaries surveyed were satisfied with the support being provided. However, the relevance is at 80% since need assessment hasn't been undertaken for this project.

It was observed that the sustainability of the project was weighed at 100%. Even though the rating is 100%, but there is lack of proper monitoring and maintenance mechanism in place from the school side as GAIL had already handed over the facilities to School authorities.

The school had access to limited funding post the programme completion. Hence, maintenance of the toilet facilities was reported to be a challenge.

1.7 Case Studies

Case Study I: Margina Ahmed, class VII



Figure 18: Margina during discussion

Margina is a class VII student of 1283 No. Uttar Putlartari LP School, Barpeta. She is an ambitious student, and hails from a below poverty line family. She is the eldest sister in the family and has one younger sister and three younger brothers. She aspires to get into fashion industry and aims to design clothes for women.

Aged thirteen years, Margina started menstruating one and a half years ago. While she was embracing adulthood, she was also trying to adjust with the challenges that came along.

Prior the construction of GAIL toilets in her school, there was presence of toilets constructed under Sarva Shiksha Abhiyaan. Against almost 180 children in the school, there were only 2 toilets for girls. This resulted in long queues outside the toilets which led to longer waiting time.

Margina used to avoid the usage of the existing toilets as they were not properly maintained. Lack of handwashing facilities and soaps, which is a prerequisite while using a toilet, kept her from attending schools during menstruation. This led to increased absenteeism during a fixed period of time each month. This not only impacted her academic performance but also led to lack of interest and motivation to attend school regularly.

Post the GAIL intervention, three additional toilets for girls have been constructed in the school. This has improved access to toilets for the girls. The toilet also has water facility available. Due to the intervention, Margina is now able to visit school on a regular basis and her academic performance has also improved. She feels safer using the GAIL toilets as they have doors that can be shut.

Case Study II: Saddam Hussain, Headmaster

Mr. Saddam Hussain resident of Putlartari, Barpeta, Assam is working as the headmaster of 1283, Uttar Putlartari LP school in Putlartari, Barpeta. He had been serving as headmaster of the school for four years now.

Barpeta is a flood- prone district. Every year, floods destroy infrastructure and agricultural fields, takes a toll on animal life and natural surroundings, and hamper the daily lives of people living in the district. In spite of annual occurrence of such disruptions, he had noticed students being motivated to attend school and complete their education. In his experience, he had seen many students completing college and working in Guwahati in various government offices. Two of his students had also become local musicians.

However, more than the disruptions caused by natural disasters, what brought more plight to him was children in the schools getting demotivated to attend the schools because of lack of proper infrastructure. He was very gloomy and disheartened as the number of dropouts were increasing in the school.

He expressed, and strongly felt, that there is nothing as depressing and saddening as losing the students from the school. While talking to the community members and parents of the students, he interrogated the reason for a high drop-out rates. This is when he realized that because of lack of safe, clean, and hygienic toilets, children were feeling demotivated to attend the school. He recognized that the issue needs to be addressed otherwise it will impact the education of hundreds of students in the community.

It is when he discussed the challenges with Panchayat office, BEEO and Jr. Engineer, and applied for funds to construct toilets in the school. The funds provided by GAIL supported his cause to retain students, provide them an inclusive environment to study, and encourage them to attend school regularly. As a result, separate toilets were constructed for girls and boys.

Due to lack of facilities, four students also left the school and took admission in private school in a nearby area. Post the construction of toilets, those four students, namely Ikbal Hussain, Abu Nasir, Kulchuma Khatun, Shahina Akhtat, joined the Putlartari LP School back.

1.8 Conclusion and Way Forward

Every child has the right to a quality education, which includes access to drinking water, sanitation, and hygiene (WASH) services while at school. Children spend a significant portion of their day at school, where WASH services can impact student learning, health, and dignity, particularly for girls.

According to UNICEF, the availability of functional and private school toilets can positively impact health and learning outcomes, particularly for girls. In 2021, nearly 539 million children worldwide (29 per cent) lacked a basic sanitation service at their school. Among them nearly 240 million (13 per cent) had no sanitation service at their school. Global coverage of basic sanitation services in schools increased by 1.14 percentage points from 2015 to 2021.

When it comes to WASH in schools, clean drinking water, and a safe place to use the bathroom are just as important as teachers, classrooms, and books. When these crucial tools aren't readily available, students spend less time learning because of sickness or time spent collecting water.

A holistic and collective approach is required to ensure proper WASH & sanitation facilities to be available in schools which lack its access. In order to achieve this goal, GAIL (India) Limited provided toilet facilities to 28 government schools in Barpeta, Assam. Although the beneficiaries and stakeholders were satisfied with the support provided by GAIL, going forward, GAIL can consider the following points of action to make such projects more effective and long term sustainable:

I. Promotion of WASH in schools:

Combining components of WASH programme in schools like building toilet, drinking facilities, inclusion of WASH curriculum in school, which covers basics of handwashing, personal hygiene and more is an imperative step towards holistic development of children. These are necessary to produce a healthy school environment and to develop or support appropriate health and hygiene behaviours¹⁷.

¹⁷ [#SwasthBharat: How WASH \(Water, Sanitation & Hygiene\) Programmes In Schools Are Improving Lives Of Children. One Lesson At A Time | Hygiene and Sanitation \(ndtv.com\)](#)

Highlighting the health outcomes of inclusion of proper WASH arrangements in schools, a study carried out in Kerala in collaboration with UNICEF revealed that after WASH programme intervention in schools, regularity in attendance increased with children no longer feeling the need to go home in case they needed to defecate¹⁸. Studies also show that WASH in schools helps in curbing incidences of diarrhoea, soil-transmitted helminths, acute respiratory infections, and other WASH-related diseases in children¹⁹.

II. Organizing awareness sessions in schools

Changing behaviours by itself, is a mammoth task and it necessitates as much investment and time as building infrastructure. Hence organizing awareness sessions in schools to educate children on importance of using toilets and benefits of proper sanitation is important. The sessions should also cover the impending danger of water borne diseases that can grapple children due to consumption from a polluted source of water. Awareness sessions play an important role in changing behaviors, as it is the first step towards forming the base of knowledge and translating it into behaviour change.

III. Convergence with local administration:

One of the core objectives of the Swachh Bharat Abhiyan is to provide household toilets and toilets in the schools for proper WASH and hygiene in India. Achieving this target single-handedly may be a gargantuan task for the government. Therefore, the participation of private entities, through their CSR interventions, can provide much-needed support to the government in meeting the ambitious target. Some of the major reasons for fostering private partnerships in implementing government schemes are enlisted below:

- a. **Increased Investment:** Private sector involvement can bring in additional financial resources and expertise, increasing investment in the mission.
- b. **Improved Efficiency:** Private companies bring in technical know-how and efficient management practices, leading to improved water supply systems.
- c. **Encourages Innovation:** Competition among private companies can drive innovation and lead to the development of new and improved water supply solutions.
- d. **Increases Access:** Private sector involvement can help expand access to water supply in underserved areas, especially in rural areas.
- e. **Supports Sustainability:** Private sector involvement can help ensure the sustainability of such WASH initiatives by promoting cost recovery

¹⁸ Ibid

¹⁹ Ibid

mechanisms and long-term maintenance planning. This further helps ensure access of toilets for all.

Therefore, it is suggested that GAIL explore synergies with the local administration to provide such toilets for households under the mission.

IV. Fostering multi-stakeholder collaboration

In continuation with the above recommendation, sensitization can bring together different community members, organizations, and local authorities to work together towards a common goal of providing clean drinking water. This will not only ensure continued momentum for the purpose, but also lead to newer avenues for innovation and community participation. The Swachh Bharat Mission through the Swachh Vidyalaya Abhiyan in schools changed the narrative and brought attention to sanitation, drinking water and handwashing in educational institutions, and incorporated hygiene education into the curriculum. Thereby, collaborating and converging with the government stakeholders and aligning to the appropriate schemes can create a ripple effect as well.

V. Ensuring regular maintenance and follow – ups with the stakeholders

While the involvement of stakeholders is of utmost importance in ensuring regular maintenance and upkeep of the WASH provisions such as toilets, GAIL along with the implementing agency may ensure follow – ups even post handing over to ensure proper usage of the toilets. In the schools visited for the study, it was observed that the schools required certain additional fixtures such as wash basins, ventilation, proper lights, handwash and soap facility etc. in the toilets to make them more usable. Such points can be taken to consideration to identify the needs of the schools and make additional provisions as per requirement.

Thank you



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