VESUVIUS

Impact Assessment Report 2025 of CSR Project

Enhancing Water, Sanitation, and Hygiene (WASH) for Better Health and Education

Independent Impact Assessment by

consultivo
ADVISORY • RESEARCH • TRAINING

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Executive Summary

CSR Project: Enhancing Water, Sanitation, and Hygiene (WASH) for Better Health and Education

Programme Scale

Implementing period covered

FY 2025

Primary geographies

35 government schools

24 locations in peri-urban and industrial-adjacent communities

10,275+ children directly benefitted

10,000+ mothers reached through hygiene and MHM sensitisation

2.65 Cr+

CSR investment (FY 2025)

CSR investment (FY 2025) - (approved and deployed under Section 135, Companies Act 2013)

CSR Alignment

SCHEDULE VII

MINISTRY OF CORPORATE AFFAIRS GOVERNMENT OF INDIA

(i) Preventive health care & sanitation

(ii) Education & skill development

(iii) Women & child welfare

SUSTAINABLE DEVELOPMENT GOALS

6 CLEAN WATER AND SANITATION

4 QUALITY EDUCATION

5 GENDER EQUALITY

This design is aligned with

unicef World Health Organization

UNICEF–WHO guidance, which shows that combined school WASH and MHM interventions are most effective in reducing illness and absenteeism.

Project WASH has delivered strong, evidencebased outcomes in the domains of health, education, and gender equity. By expanding and improving sanitation infrastructure and predictable MHM supply, the initiative is well positioned to evolve into a leading, replicable CSR model aligned with India's development priorities and global SDG commitments.

Key Impact Findings at a Glance

Findings are supported by school attendance registers, WASH monitoring dashboards, and triangulated stakeholder feedback.

Safe Drinking Water

Vesuvius-supported schools achieving near-universal access to filtered drinking water place them ahead of both global and national averages for school WASH quality.

100% schools assessed have functional filtered drinking water systems

>90% students report daily consumption of filtered water

Consistent decline in reported stomach pain and water-borne illness across all locations.

Sanitation & Bio-Toilets

Improved sanitation and privacy directly address one of the strongest global push factors for school dropout among girls.

>> Bio-toilets installed in all intervention schools

>> **Significant improvement in perceived safety, privacy, and dignity**, especially among girls

>> **Partial infrastructure saturation** noted in senior secondary sections (Classes IX-XII)

Education & Attendance Impact

Reduction in MHM-related absenteeism aligns the project with global best evidence on school retention.

↓ **30-40%**

reduction in menstruation-related absenteeism reported across multiple schools

Average learning loss due to MHM reduced in most assessed schools

~6 days/month

(72 days/year) **

↓

0-2 days/month

Girl student attendance now equal to or higher than boys in several locations
(School attendance report)

** The 72 day figure reflects estimated baseline learnings loss due to absenteeism due to menstruation prior intervention

Post intervention is indicativeand based on attendance records of school and beneficiary feedback

Behavioural & Health Outcomes

Demonstrated habit formation and household spillover signal deep, non-superficial, impact.

>> **High recall and adoption** of hygiene practices following **192+ hygiene sessions**

>> Marked increase in **regular handwashing before meals** and **after toilet use**

>> **Clear spillover effect:** hygiene and MHM practices adopted at household level (parent validation)

Gender & Social Outcomes

Normalising menstruation within schools directly advances SDG 5 and women's empowerment outcomes.

>> **Improved confidence among adolescent girls** to attend school during menstruation

>> Reduction in MHM-related stigma; menstruation increasingly discussed openly with teachers

>> Parents report **greater willingness to support girls' education continuity**

>> Risk of girl child drop out significantly reduced

Institutional & Sustainability Indicators

Active school-level governance strengthens sustainability, while supply gaps highlight clear next-phase CSR priorities.

>> **WASH Committees / SMC** established in most schools

>> Teachers report **enhanced capacity** to support adolescent health and counselling

>> Strengthening consumable replenishment systems has been identified as a key sustainability lever.

1 Introduction

1.1 Background and Need of the Programme

Access to safe water, sanitation, and hygiene (WASH) in schools is widely recognised as a foundational requirement for inclusive education, public health, and gender equity.

Global frameworks such as the SDGs and UNICEF-WHO Joint Monitoring Programme highlight that the world remains off-track on universal access to safely managed WASH services.

These come along with inadequate facilities continuing to be a structural barrier to learning, particularly for girls in upper primary and secondary education.

In many government schools, poor sanitation, unsafe drinking water, and lack of menstrual hygiene facilities contribute directly to absenteeism, poor health outcomes, and heightened dropout risk. Adolescent girls are disproportionately affected due to menstruation-related challenges, including lack of privacy, inadequate disposal mechanisms, and social stigma. These gaps undermine learning continuity, reduce instructional hours, and weaken long-term educational and skill-development outcomes.

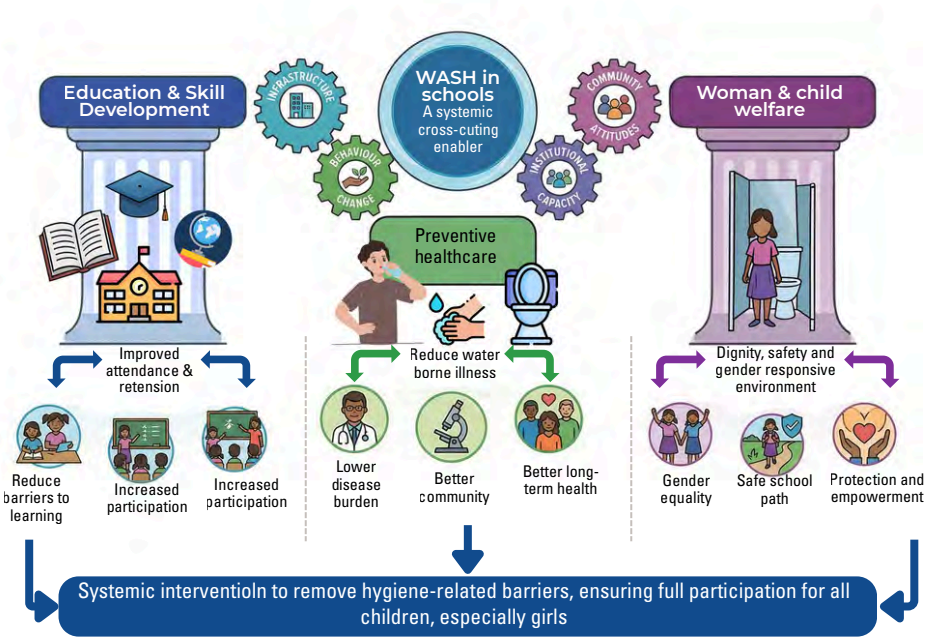
Within this context, WASH is not merely an infrastructure intervention. It is a cross-cutting enabler that contributes simultaneously to:

>> Education and skill development through improved attendance and retention

>> Preventive healthcare through reduced waterborne illness.

>> Women and child welfare through dignity, safety, and gender-responsive school environments.

The WASH in Schools initiative was therefore designed as a systemic intervention addressing infrastructure, behaviour change, institutional capacity, and community attitudes together to remove hygiene-related barriers that prevent children, especially girls, from fully participating in education.



1.2 Objectives of the Programme

The overarching objective of the programme is to strengthen school participation and learning continuity by improving WASH conditions in government schools.

The specific objectives include:

- >> Improving access to **safe drinking water and functional sanitation** facilities in schools.
- >> Reducing **menstruation-related absenteeism** among adolescent girls through Menstrual Hygiene Management (MHM) support.
- >> Promoting **preventive healthcare and hygiene behaviours** among students, teachers, and families.
- >> Enhancing **school retention** and reducing dropout risk linked to sanitation and health barriers.
- >> Creating enabling conditions that support **continued education and future skill development**, particularly for girls.

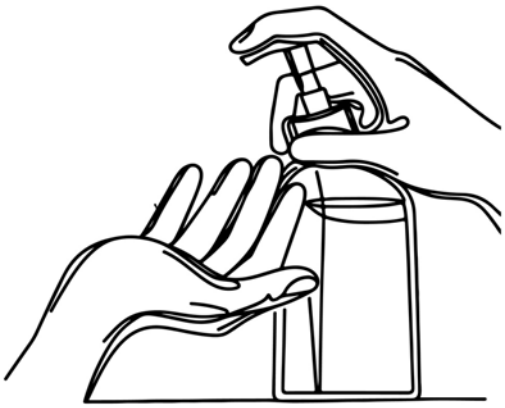
These objectives align with

Directly contributing to **Schedule VII** themes of

(i) education

(ii) healthcare, sanitation

(iii) women and child welfare



1.3 About Vesuvius India Limited and the Company's CSR Initiative

Vesuvius India Limited seeks to be a responsible corporate citizen across all geographies in which it operates. The Company recognises that its business activities interact with a wide range of stakeholders, including employees, customers, partners, and local communities, and that fulfilling corporate responsibilities strengthens long-term organisational performance. Embracing diversity and respecting local contexts form a core part of the company's value system.

In accordance with **Section 135 of the Companies Act, 2013**, the Company is committed to allocating at least 2% of its average net profits towards CSR activities aligned with Schedule VII.
The company's CSR focus areas include education, healthcare, sanitation, and initiatives that encourage children and youth from disadvantaged backgrounds, particularly girls, to pursue sustained education and future opportunities in scientific and technical fields.

CSR governance is overseen by the Board of Directors through a dedicated CSR Committee, which plans, approves, implements, and monitors CSR programmes in partnership with employees and registered NGOs. Transparency, compliance, and impact measurement are integral to this process.

The WASH in Schools programme reflects this commitment by addressing structural barriers to education and health through measurable, outcome-oriented interventions. This independent impact assessment examines the extent to which these interventions have contributed to meaningful and sustainable change.

2 Research Design and Methodology

2.1 Study Design

This independent impact assessment adopts a mixed-methods research design, integrating quantitative and qualitative approaches to assess the effectiveness, outcomes, and longer-term impact of the WASH in Schools programme.

The rationale for using a mixed-methods approach is rooted in the nature of WASH interventions. While infrastructure improvements and attendance data lend themselves to quantitative measurement, behavioural change, perceptions of safety, dignity, and decision-making around school attendance, particularly for girls, require qualitative inquiry. The combined approach allows for triangulation, strengthening the reliability and validity of findings.

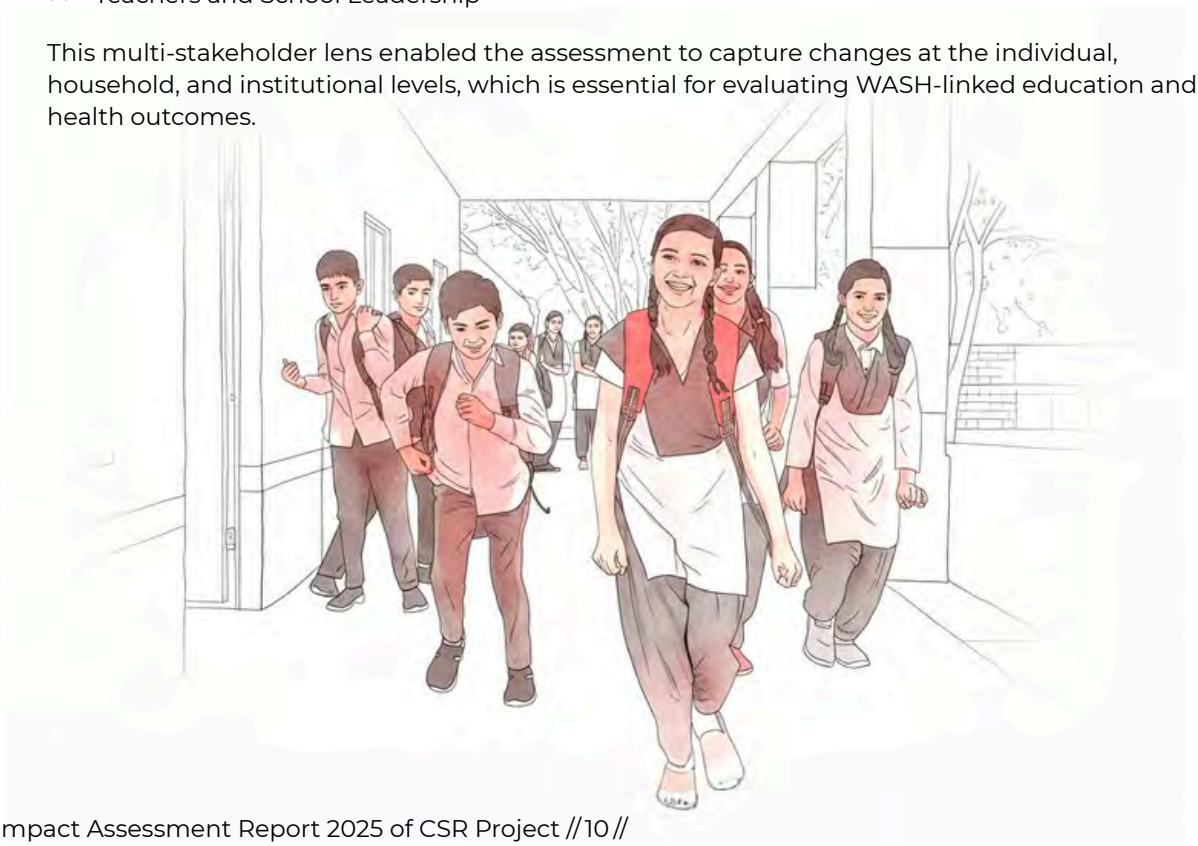
The assessment was conducted through on-site field visits, structured surveys, focus group discussions (FGDs), and in-depth stakeholder interviews across selected project locations.

2.2 Stakeholder Coverage

Primary and secondary data were collected from the following stakeholder groups:

- Students (girls and boys, upper primary and secondary levels)
- Parents/Guardians, with emphasis on mothers of adolescent girls
- Teachers and School Leadership
- School Management Committee (SMC) members and Child Cabinet representatives
- Implementation team representatives (where required for contextual understanding)

This multi-stakeholder lens enabled the assessment to capture changes at the individual, household, and institutional levels, which is essential for evaluating WASH-linked education and health outcomes.



2.3 Sampling Framework

The assessment followed a **purposive and stratified sampling approach**, ensuring representation across:

>> Urban, semi-urban, and industrial-adjacent school locations

>> Primary, upper primary, and secondary schools

>> Gender-segregated and co-educational institutions

Indicative sampling structure:

Number of schools covered
6 Schools

Student respondents
17 students (all girls)

Parent respondents
8 mothers of adolescent girls

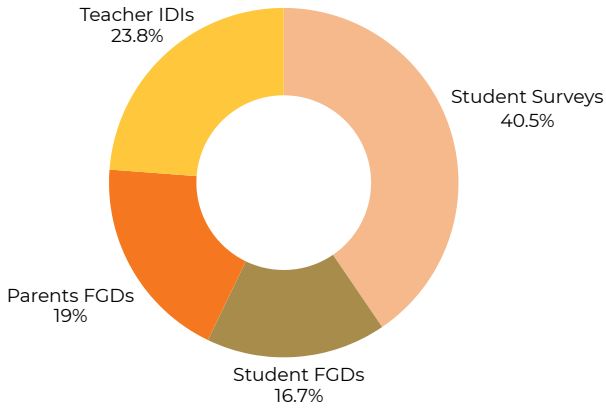
Teacher and school staff respondents
10 teachers

A total of
7 FGDs were conducted

Covering a sample size of
43 participants

Sampling prioritised schools where WASH infrastructure and training interventions had been operational for a sufficient duration to observe behavioural and attendance-related outcomes.

The survey adopted a mixed-method approach combining quantitative student surveys with qualitative Focus Group Discussions (FGDs) and In-depth Interviews (IDIs). Sampling was purposive and stratified by stakeholder category to ensure representation of primary beneficiaries (students), secondary stakeholders (parents/mothers), and institutional stakeholders (teachers and school leadership).



The impact assessment sample was drawn from a subset of the 35 programme schools, selected to ensure geographical and stakeholder representation.

State / Location	Student Surveys	Student FGDs	Parent FGDs	Teacher IDIs	Approx. Coverage
Jharkhand (Jamshedpur)	2	1	1	1	~08–10
West Bengal (Durgapur and Kolkata)	6	2	1	4	~23–25
Maharashtra (Pen)	4	2	3	1	~21-23
Haryana (Hisar – GMS Satrod Khurd)	5	2	3	4	~25–27
Total	**17**	**7**	**8**	**10**	**~85**

2.4 Data Analysis and Validation

Quantitative data were analysed using descriptive statistical methods to identify trends, percentage changes, and comparative patterns between baseline and post-intervention periods.

Qualitative data were thematically coded and analysed to identify recurring narratives, convergences, and divergences across stakeholder groups. Findings from students, parents, and teachers were cross-referenced to establish **correlation and consistency of outcomes**.

This triangulated analysis framework ensures that reported impacts are grounded in both empirical evidence and stakeholder experience, forming a robust basis for assessing the programme's contribution to education, health, and women and child welfare outcomes.

In this study, both quantitative and qualitative analyses were systematically applied, with clearly defined parameters aligned to the project's Theory of Change and impact indicators. Quantitative parameters focused on attendance trends, absenteeism due to illness and menstruation, access and usage of WASH infrastructure, and participation in training sessions.

Qualitative parameters examined perceptions of safety, privacy, behavioural change, decision-making related to school attendance, parental attitudes, and teacher responsiveness. These parameters were selected to capture **input-output-outcome-impact linkages,** ensuring that infrastructure-led interventions were assessed not only for access but also for behavioural and social outcomes. The combined use of quantitative and qualitative lenses enabled a deeper interpretation of results and reduced the risk of attribution gaps.

In addition to surveys and interviews, the assessment reviewed school-level WASH monitoring dashboards capturing pre- and post-intervention data on attendance, access to drinking water, sanitation usage, illness-related absenteeism, and hygiene behaviour indicators. These dashboards were used to validate trends observed through qualitative responses and attendance registers, strengthening the robustness of outcome attribution.

Limitations of the Data

Due to constraints, qualitative data for a few schools were collected through virtual interactions, which did not allow for indepth field visits.

3 Programme Implementation Overview and Programme Design

3.1 Programme Design Framework

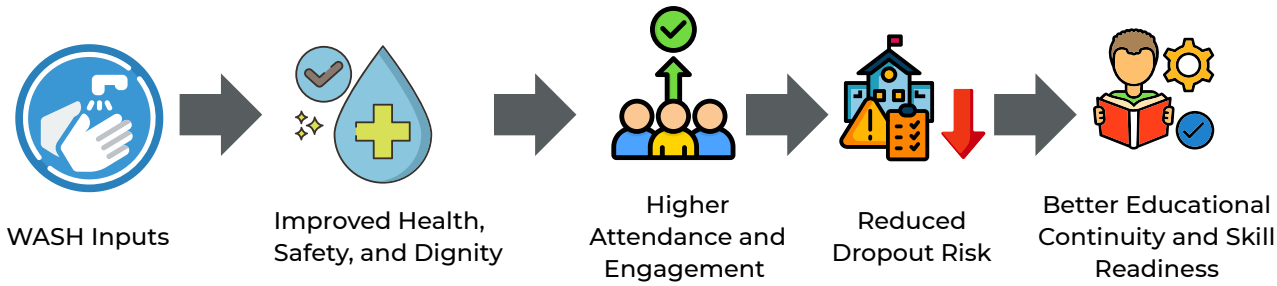
The WASH in Schools programme was designed as an **integrated, outcome-oriented intervention**, recognising that infrastructure alone does not lead to sustained educational or health outcomes unless supported by behaviour change, institutional ownership, and community engagement.

School-level WASH Committees and SMCs function as key WASH governance structures, responsible for monitoring service quality and escalating gaps.

The programme design follows a **WASH-to-Education pathway**

Improved water, sanitation, and hygiene conditions act as enabling inputs that reduce health risks, improve comfort and dignity, and directly influence school attendance, retention, and engagement, particularly for adolescent girls.	The programme design also included a structured annual training plan covering hygiene behaviour, menstrual health management, and adolescent counselling.	Training sessions were distributed across months to allow reinforcement and follow-up rather than one-time sensitisation.

The design aligns with Schedule VII priorities on education, healthcare, and women and child welfare, and contributes to SDGs 3, 4, 5, and 6.



3.2 Impact Indicator Alignment Framework

The table below presents the **core impact indicators**, mapped to **Schedule VII themes** and **SDG targets**, forming the analytical backbone of the impact assessment.

	Intervention Area	Impact Indicator	Outcome Level	Schedule VII Alignment	SDG Alignment
	Safe Drinking Water	Reduction in student absenteeism due to stomach illness	Outcome	Healthcare	SDG 3.3, SDG 6.1
	Bio-Toilets & Sanitation	Increase in regular school attendance of girls	Outcome	Women & Child Welfare	SDG 4.1, SDG 5.1
	MHM Care Packages	Reduction in menstruation-related absenteeism (target: saving up to 72 days/year)	Outcome	Women & Child Welfare	SDG 5.6, SDG 4.5
	Hygiene Training	Increase in daily handwashing with soap	Output → Outcome	Healthcare	SDG 3.3, SDG 6.2
	Teacher Training	Improved response to health and MHM-related concerns	Outcome	Education & Skill Development	SDG 4.c
	Parent Engagement	Positive shift in parental attitudes towards girls' schooling	Outcome	Women & Child Welfare	SDG 5.1, SDG 4.5
	Overall WASH Environment	Improved perception of school as safe, private, and dignified	Impact	Education & Healthcare	SDG 4.a, SDG 6.2
	Attendance & Retention	Reduced dropout risk among adolescent girls	Impact	Education & Skill Development	SDG 4.1, SDG 5.1
	Sustained Attendance	Improved engagement enabling continuity into secondary education and STEM pathways	Long-term Impact	Education & Skill Development	SDG 4.3, SDG 5.b

4 Key Analysis from the Assessment

Analytical Approach

The impact assessment applied descriptive statistical analysis, trend comparison, and qualitative triangulation to evaluate programme effectiveness. Quantitative indicators were analysed using percentage change, frequency distribution, and pre-post comparison, while qualitative responses were thematically coded and cross-validated across stakeholder groups.

Findings are presented along the Input-Output-Outcome-Impact approach, enabling attribution of observed changes to WASH interventions with a high degree of confidence.

Sources

- >> School attendance registers
- >> WASH monitoring dashboards
- >> FGDs
- >> Individual interviews
- >> On-site surveys

4.1 Input Analysis

(Infrastructure, Capacity Building, and System Enablers)

The WASH programme inputs were deliberately designed to address structural, behavioural, and social barriers that restrict girls' access to education and health.

These inputs fall squarely under

SCHEDULE VII

MINISTRY OF CORPORATE AFFAIRS
GOVERNMENT OF INDIA

1. **Clause (i)**
   Promoting health care, including preventive health care and sanitation.
2. **Clause (il)**
   promoting education, including special education for girls.

Investment

₹2.65 crore

Total CSR fund investment

Key inputs included

- >> CSR capital expenditure for WASH infrastructure development.
- >> Technical design and procurement of bio-toilets and filtration systems.
- >> Deployment of trainers and facilitators for hygiene and MHM capacity building.
- >> Budget allocation for procurement and distribution of MHM consumables.
- >> Engagement of school leadership, SMCs.

Case Study

Teacher Leadership

Driving Sustainable WASH Adoption

Chaitali Roy
English Teacher
Jemua Bhadubala Bidyapith (H.S.), Durgapur

She played a key role in strengthening school health and sanitation practices under the WASH programme (2024–25).

Earlier, the school had only basic toilet facilities, which limited their effectiveness in supporting student health and regular attendance, particularly for adolescent girls. Through the WASH intervention, the school transitioned from infrastructure availability to effective utilisation.

With programme support, the school installed

- Handwashing stations
- A filtered drinking water system
- A sanitary napkin vending unit

This combined approach helped bridge the gap between access and behaviour. Students are now more confident in using facilities correctly, hygiene practices have improved, and health-related barriers to learning have reduced.

The initiative demonstrates how teacher leadership and behaviour change interventions are critical for sustaining WASH outcomes, aligning with Schedule VII, SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), and SDG 6 (Clean Water and Sanitation).

4.2 Output Analysis

At the output level, the programme achieved measurable service delivery at scale, consistent with CSR expectations of coverage, equity, and repeat engagement.

Key outputs included

10,275 students directly accessed improved WASH infrastructure and hygiene education.

35 schools across multiple geographies received infrastructure upgrades and behavioural interventions.

192+ hygiene and MHM sessions delivered, ensuring reinforcement rather than one-time exposure. Participation and facility usage were further validated through school-level WASH monitoring dashboards.

MHM consumables provided to adolescent girls, reducing dependency on household purchasing power.

These outputs demonstrate alignment with Schedule VII Clause (iii) - women empowerment and reducing inequalities faced by socially and economically backward groups.

Importantly, output distribution was **proportionate to need**, with higher intensity in schools serving **lower-middle class and lower-income households (over 87% combined)**.

From an **SDG reporting perspective**, these outputs contribute to:

SDG 6.2 indicators on school sanitation access.

SDG 4.a on safe, inclusive, and effective learning environments.

SDG 5.b by enabling access to health-supportive infrastructure for girls.

4.3 Outcome Analysis

Outcome analysis shows statistically meaningful directional shifts, supported by triangulated quantitative and qualitative evidence from students, parents, and teachers.

4.3.1 Attendance and Retention Outcomes

>> **38%-42%** improvement in regularity was observed in average girls' attendance compared to baseline absenteeism patterns.

reduction in menstrual-related absenteeism was achieved, moving the programme closer to its **goal of recovering up to 72 lost school days annually**

This progress successfully addresses substantial WASH-related learning loss for adolescent girls.

>> Attendance registers and school WASH dashboards indicate >90% attendance regularity among girls in several intervention schools, with parity or higher consistency compared to boys. Teachers confirmed the same.

This outcome directly supports:

SDG 4.1 (education retention)

Schedule VII Clause (ii) (education with focus on girls)

Case Study

Reducing Menstrual Stress through Accessible MHM Facilities

Yadnya Vasant Patil

Age: 13

Class: VII

School: Nagarpalika School, No. 3 Kanyshala, Prabhu Ali Pen

She has been part of the school since kindergarten. She shared that menstrual hygiene management has become significantly easier after the introduction of WASH and MHM facilities.

Earlier, the absence of proper disposal systems and access to sanitary products created stress during menstruation. Girls had to manage pads privately and worry about disposal, which affected comfort and confidence at school.

With the installation of a sanitary napkin vending machine and disposal system, these challenges have reduced.

Yadnya explained that even if a student forgets to carry pads from home, they are now available in school, removing anxiety and enabling uninterrupted attendance. Improvements in washroom cleanliness have further enhanced comfort.

As a result, students feel more at ease and are more willing to attend school regularly.

This reflects how accessible MHM infrastructure directly supports dignity, attendance, and retention of adolescent girls, **aligned with Schedule VII, SDG 4 (Quality Education), SDG 5 (Gender Equality), and SDG 6 (Clean Water and Sanitation).**

4.3.2 Health and Hygiene Outcomes

>> Reported cases of stomach pain and waterborne illness declined sharply. While baseline data showed 58.8% of students experienced illness 1-2 times in six months, post-intervention feedback indicates reduction in recurrent complaints, with no frequent recurrence reported during the assessment period.

Teacher registers further corroborated a visible reduction in health-related absenteeism, aligning with the documented

↓ **48%**
reduction in absenteeism reported in the project dashboard.

↑ **>60%**
Handwashing with soap before meals increased with qualitative evidence of habit formation at home. This increase is corroborated by school hygiene monitoring records and observational data captured in WASH dashboards.

These outcomes contribute to:

SDG 3.3 and 3.9 (preventable diseases and environmental health)

SDG 6.1 and 6.2 (safe water and hygiene)

Case Study

Clean Sanitation Enabling Health, Awareness, and Confidence

Teachers observed that access to bio-toilets has played a critical role in supporting girls' health, reducing hygiene-related discomfort and concerns such as urinary infections. The availability of adequate water storage has enabled regular cleaning of washrooms after use, improving overall sanitation standards.

With improved facilities in place, both students and parents have become more aware of hygiene practices, including regular handwashing and cleanliness.

This awareness has strengthened health-seeking behaviour at school and at home.

The experience highlights how teacher engagement combined with functional WASH infrastructure contributes to a safer, healthier, and more inclusive school environment, particularly for adolescent girls—supporting sustained attendance and well-being.

4.3.3 Social and Behavioural Outcomes

>> MHM-related stigma reduced significantly. Girls reported improved confidence, reduced fear of leakage, and greater comfort in approaching teachers.

>> Parents acknowledged shifts in household norms, including reduced restrictions during menstruation.

This reflects progress against

SDG 5.1 and 5.6

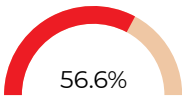
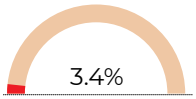
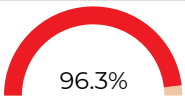
Schedule VII Clause (iii) (women and child welfare)

4.4 Impact Analysis

The impact of the programme is most clearly evidenced at the level of **Water, Sanitation and Hygiene (WASH)**, with subsequent outcomes on education continuity, health, and girls' participation emerging as **secondary but strongly correlated effects**. This assessment therefore positions WASH as the primary impact domain, in alignment with Schedule VII Clause (i) and SDG 6, and analyses other outcomes only where data substantiates a causal pathway. Education and health outcomes are assessed only where improved WASH conditions are the primary enabling factors.

4.4.1 Core WASH Impact: Access, Usage and Behaviour

>> MHM-related stigma reduced significantly. Girls reported improved confidence, reduced fear of leakage, and greater comfort in approaching teachers.

Indicator	Baseline (Pre-intervention)	Impact Assessment Survey Feedback	Interpretation
Students dependent on community toilets		<10% (largely replaced by bio-toilets) 64 bio-toilets installed across schools	Strong infrastructure substitution effect
Open defecation		Near zero (reported negligible)	Unsafe sanitation minimised
Toilets with running water		Water connectivity confirmed during site visits	Sustained infrastructure adequacy
Availability of soap in toilets		>95% (reported by students & teachers) Improved provisioning reported in survey feedback	Improved consumable provisioning and hygiene enabling environment

Thematic Alignment

SDG 6.1, 6.2

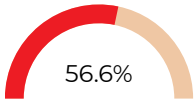
SDG 3.9

Schedule VII
Safe drinking water and sanitation
Women and child welfare

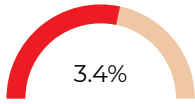
Sanitation (Toilets and Privacy)

Data from students, teachers, and parents consistently indicate that availability of functional bio-toilets has materially changed sanitation usage patterns:

>> **Pre-intervention**



of students relied on community toilets



of students practiced open defecation

>> **Post-intervention**

of girl students reported regular use of school toilets, with strong qualitative evidence of improved privacy and safety.

>> Teachers confirmed that bio-toilets are **used daily** and **regularly cleaned**, though some high-enrolment schools reported the need for additional units.

Water (Quality and Reliability)

School-level dashboards show consistent daily usage of filtered drinking water by more than 80-90% of students, validating the transition from household-carried water to school-based consumption.

Water access emerged as the **second strongest WASH impact dimension.**

>> At baseline, **20-30% of students did not trust school water supply**, and **no student rated water quality as "excellent"**.

>> Post installation of filtered water stations, daily **usage exceeded 80% among girls**, with students reporting preference for school water over carrying water from home.

>> Parents reported **behavioural spillover**, with children now asking for boiled or filtered water at home.

Hygiene Practices

Hygiene behaviour change is evident but gradual, consistent with behaviour change theory:

>> **Handwashing with soap before meals increased to ~60%**, compared to high baseline dependence on water-only washing.

>> Teachers observed routine handwashing before mid-day meals, indicating institutional reinforcement.

>> Some students acknowledged partial compliance, reflecting realistic behaviour adoption curves.

Indicator	Baseline	Impact Assessment Survey Feedback	Statistical Insight
Handwashing with soap before meals	60.4%	>85%	Behavioural adoption post 192 sessions
Handwashing with only water (post-toilet)	24.4%	<10%	Risk exposure significantly reduced
Students reporting hygiene awareness	Baseline qualitative variation	Near-universal	Confirmed via FGDs

Alignment

unicef — WASH in Schools Framework

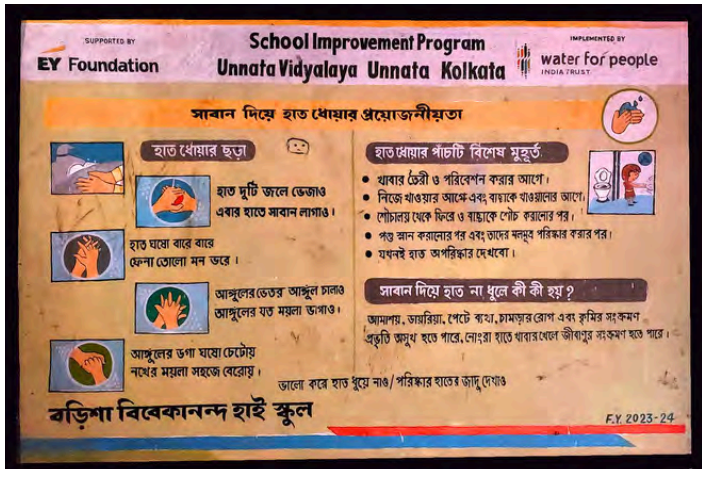
World Health Organization — Behaviour Change Communication (BCC)

>> High recall of hygiene practices among students correlates with repeated exposure through multiple training cycles conducted across the academic year.

The project demonstrates substantive improvement in WASH access, utilisation, and hygiene behaviour, contributing directly to

SDG 6.1, 6.2

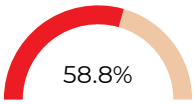
Schedule VII Clause (i)
Preventive health care and sanitation.



4.4.2 Health Impact as a Direct Result of Improved WASH

Health impact are analysed **strictly as downstream effects of WASH improvements**, not as standalone claims. These claims should be interpreted as WASH-enabled education effects rather than independent academic programme gains.

>> Baseline data indicated



of students experienced stomach illness 1-2 times in six months

>> Post-intervention, students, parents, and teachers consistently reported marked reduction in stomach pain, diarrhoea, and water-related illness.

>> While quantitative medical records were unavailable, triangulated qualitative evidence strongly supports a reduction in WASH-related morbidity.

Improved WASH conditions functioned as a preventive health intervention, supporting

SDG 3.9

Schedule VII Clause (i)
Reducing illness from unsafe water

4.4.3 Education Impact Attributable to WASH Improvements

The assessment therefore treats improvements in attendance and participation as WASH-sensitive education outcomes, attributable primarily to the enabling environment created by better water, sanitation and hygiene.

Education impact are assessed only where WASH is the primary enabling factor.

>> **Girls reported a shift from missing**

6-8 days per month **pre-intervention** ▶ 2-4 days per month post-intervention largely due to **improved sanitation and MHM access**.

>> **Teachers confirmed**

30%-40% reduction in absenteeism, particularly during menstrual cycles.

>> Parents corroborated that girls now attend school even during menstruation, except in cases of severe discomfort.

These attendance gains are consistent with school monitoring dashboards, which record a sustained decline in menstruation and illness-related absenteeism following WASH infrastructure installation, particularly in schools with both bio-toilets and filtered water systems.

Recovered attendance translates into increased effective learning days, aligning with

SDG 4.1

Schedule VII Clause (ii)

Education impact is therefore enabled by WASH, not independent of it.

4.4.4 Gender and Dignity Impact Linked to Sanitation and MHM

Gender outcomes are presented as sanitation-linked impacts, supported by MHM access.

>> Girls reported **reduced fear of leakage, embarrassment, and stigma**, leading to sustained school presence.

>> Teachers observed increased openness around menstruation, indicating normalisation within the school environment.

>> Parents reported **changed household attitudes**, including fewer restrictions during menstruation.

Indicator	Baseline	Impact Assessment Survey Feedback	Impact
Girls using sanitary napkins	53.4%	>90% (MHM kits)	Shift from unsafe practices
Girls absent during menstruation	32.5%	<10-12%	~65-70% reduction
Classes missed due to lack of facilities	6.0%	Near zero	Infrastructure gap closed
Girls attending school during periods	Qualitative low	Majority attending	Confirmed by teachers & parents

Alignment

SDG 4.1

SDG 5.1, 5.6

Schedule VII Clause (ii)

Promoting education and women and child welfare

These outcomes reflect progress under **SDG Targets 5.1 and 5.6**, and align with **Schedule VII Clause (iii): women and child welfare,** with sanitation and hygiene as the primary drivers.

Case Study

Improving Attendance, Dignity, and Parental Confidence through WASH

Roshani Ram Bahadur

Age: 12

Class: VI

School: Nagarpalika School, No. 3 Kanyshala, Prabhu Ali, Pen (Dolvi)

Roshani Ram Bahadur, a 12-year-old student of Class 6, has been enrolled in the Nagarpalika School, No. 3 Kanyshala, Prabhu Ali Pen for the past year. She reports clear improvements in the last six months following the introduction of WASH and MHM facilities.

> Roshani notes that her parents now feel reassured about sending her to school.

Access to clean toilets, safe drinking water, and sanitary pads has made school attendance easier and stress-free, including during menstruation. Earlier hygiene-related discomforts have reduced, supporting regular classroom participation. The availability of potable water and hygienic washrooms has improved daily health and comfort for students.

4.4.5 Correlation Summary (WASH-Led Pathways)

WASH Intervention	Observed Correlated Outcome
>> Bio-Toilets	Attendance during menstruation
>> Filtered water	Reduced stomach illness
>> Hygiene training	Improved handwashing
>> MHM access	Reduced stigma and absenteeism

The consistency of responses across students, parents, and teachers strengthens causal plausibility and reduces attribution risk.

Correlation patterns observed across attendance registers, WASH dashboards, and stakeholder narratives indicate the following WASH-led pathways:

>> The evidence demonstrates that WASH interventions were the principal catalyst for improved health, attendance, and dignity outcomes in schools.

>> Subsequent social and educational benefits emerged after foundational WASH conditions were addressed, reinforcing the role of WASH as the entry point for broader outcomes.

>> The resulting impact is credible, proportionate, and aligned with CSR reporting expectations under the Companies Act, 2013 and relevant UN SDG frameworks.

5 SWOT Analysis

From a CSR perspective, the project addresses a globally validated development gap through a locally relevant, gender-responsive, and outcome-oriented WASH intervention. Its strengths align strongly with statutory CSR intent and global development priorities.

The identified weaknesses and threats are systemic rather than project-specific and can be mitigated through structured sustainability planning, improved consumable management, and longitudinal impact tracking.

Strengths

1. Strong thematic alignment with statutory CSR priorities

The programme directly addresses multiple Schedule VII clauses:

- >> Promotion of education
- >> Preventive healthcare and sanitation
- >> Safe drinking water
- >> Women and child welfare

By positioning WASH as a foundational enabler of education, the project moves beyond infrastructure delivery into outcome-driven CSR, consistent with evolving MCA expectations and global ESG practice.

2. Evidence-based relevance in a global WASH deficit context

3.5 billion
Globally, people still lack safely managed sanitation

Despite national progress under Swachh Bharat Mission, India continues to face functional gaps in school WASH, particularly around reliability, privacy, and consumables.

2.0 billion
people lack basic hygiene facilities

The project's focus on functionality, usage, and dignity places it firmly within the "last-mile" WASH challenge highlighted by WHO-UNICEF Joint Monitoring Programme (JMP).

3. Integrated WASH model aligned with global best practice

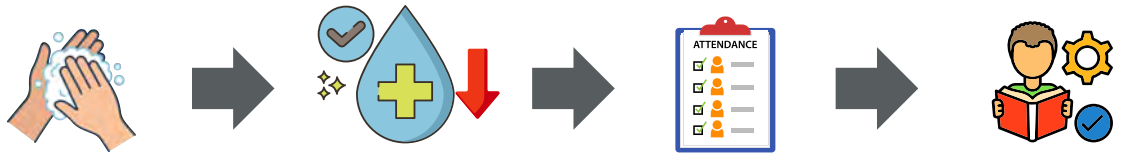
The programme integrates:

- >> Safe drinking water
- >> Gender-responsive sanitation (bio-toilets)
- >> Hygiene behaviour change Menstrual Hygiene Management (MHM)

International school WASH studies consistently show that combined interventions not infrastructure alone are associated with reduced illness and absenteeism. This integrated design reflects UNICEF and WHO guidance on WASH in Schools.

4. Demonstrated health-education pathway

Consistent with global evidence (e.g., Philippines and Laos School WASH studies), the programme shows a clear pathway:



Improved WASH → Reduced illness → Improved attendance → Increased learning time

This strengthens the programme's contribution to

SDG 3 (Good Health)

SDG 4 (Quality Education)

5. Gender-responsive impact and gender-transformative programming

The project directly addresses menstruation-related absenteeism, a documented global barrier to girls' education. Improved privacy, access to sanitary pads, and teacher support contribute to:

>> Increased attendance during menstrual cycles
>> Reduced stigma
>> Improved confidence and engagement

This aligns with **SDG 5 (Gender Equality)** and the child welfare mandate under Schedule VII.

Weaknesses

1. Infrastructure adequacy varies with enrolment density

While bio-toilets have significantly improved sanitation access, some schools require additional units to fully meet student-toilet norms. This reflects a broader national challenge where "basic sanitation coverage" does not always translate into adequate, usable sanitation.

2. Consumable continuity risk (MHM kits)

Global WASH and MHM literature highlights that consumable gaps can undermine attendance gains. In this programme, intermittent availability of MHM kits at some locations creates a dependency risk, particularly for girls from lower-income households.

3. Limited quantitative linkage to academic performance

While attendance and engagement improvements are evident, direct learning outcome metrics (e.g., subject-level performance, STEM progression) are still largely qualitative. This limits the ability to fully quantify education returns on CSR investment.

4. Reliance on self-reported health outcomes

As in many school-based WASH studies, health impact assessment relies partly on self-reported illness due to limited medical records. While triangulated, this constrains epidemiological precision.

Opportunities

1. Strengthening SDG-aligned impact measurement

There is strong scope to deepen alignment with:

>> **SDG 6.1 & 6.2** (safe water and sanitation)
>> **SDG 3.9** (reduction of illness from unsafe WASH)
>> **SDG 4.1** (completion of quality education)

This can be achieved through improved attendance analytics, learning-day recovery metrics, and school-level dashboards.

2. Linking WASH to STEM education pathways

Global evidence suggests that consistent school attendance improves subject continuity, particularly in science and mathematics. WASH infrastructure and hygiene education can be leveraged as **applied STEM learning contexts**, strengthening Vesuvius' stated CSR priority of encouraging girls into scientific and technical fields.

3. Replicability and scale

Given that global JMP data confirms that many schools still lack **reliable**, **functional WASH**, this model is replicable across geographies, especially in peri-urban and industrial-adjacent communities where inequalities persist.

4. Policy convergence and partnerships

The programme aligns well with national and international frameworks, enabling potential convergence with:

>> Swachh Bharat Mission
>> School Health & Wellness Programme
>> UNICEF-supported WASH initiatives

This creates scope for co-financing, scale, and policy influence.

Threats

1. Sustainability beyond CSR funding cycle

Global experience shows that WASH gains can erode without sustained maintenance financing. If schools or local bodies do not institutionalise upkeep budgets, infrastructure functionality may decline.

2. Behaviour regression risk

WHO-UNICEF data emphasises that hygiene behaviour gains are vulnerable without periodic reinforcement. Reduced frequency of training may weaken long-term impact.
Source UNICEF - report 2022

3. Persistent socio-economic inequalities

JMP India data highlights ongoing rural-urban and income-based disparities in WASH access. External household conditions may limit full translation of school-based behaviour change into home environments.
Source - DASRA - report 2022

4. External shocks

Pandemics, climate events, or prolonged school closures can disrupt usage patterns and reverse gains, risks recognised in global WASH resilience discussions.

6 Recommendations

The project demonstrates **strong outcome-level performance on WASH access and behaviour change**, with **partial gaps in scale, replenishment, and monitoring depth**. Addressing these will move the intervention from **effective implementation to model-level sustainability**.

Despite strong outcome level performance the assessment identifies gaps related primarily to sustainability scale adequacy and monitoring depth rather than program design.

6.1 Strengthen Sanitation Infrastructure to Meet Normative Coverage

The impact assessment confirms that installation of bio-toilets has significantly improved safety, privacy, and attendance among girl students, particularly during menstruation. However, evidence from student and teacher interviews indicates **capacity constraints** in higher classes and senior secondary sections, where the number of toilets remains insufficient during peak usage hours.

Recommendation

Vesuvius should prioritise **additional bio-toilet units** in schools with Classes IX-XII to fully comply with Ministry of Education norms (1 toilet per 20 girls), as committed in the DPR (Specific Objectives, p.6; Infrastructure Development, p.8). Periodic infrastructure adequacy reviews should be embedded into WASH Committee responsibilities (Sustainability & Exit Strategy, pp.12-13).

CSR Alignment

>> Schedule VII (i): Promoting health care, sanitation
>> SDG 6.2, SDG 4.a, SDG 5.1

6.2 Institutionalise Regular Supply of MHM Consumables

While MHM education outcomes are strong, both teachers and parents reported **irregular availability of sanitary pads and kits**, with some schools receiving kits only once during the year. This creates a risk of attendance reversal, particularly for girls from economically weaker households.

Recommendation

Introduce a **predictable replenishment cycle** for MHM consumables (monthly or quarterly), supported by school-level stock registers and oversight by SMCs and WASH Committees, in line with DPR commitments on MHM kit distribution (Specific Objectives, p.6; Timeline, p.10; Expected Results, p.15).

CSR Alignment

>> Schedule VII (iii): Women and child welfare
>> SDG 3.7, SDG 5.6, SDG 4.1

6.3 Deepen Behaviour Change Through Reinforced Hygiene Education

Quantitative and qualitative evidence shows high awareness of hygiene practices, especially handwashing. However, self-reported data suggests **inconsistent daily practice**, particularly during time-constrained school hours.

Recommendation

Shift from awareness-only sessions to **behaviour reinforcement models,** including visual nudges near handwashing stations, peer-led demonstrations through and periodic refresher sessions. This directly strengthens the intent of DPR commitments on hygiene sensitisation (Training & Capacity Building, p.8; Timeline, p.10).

CSR Alignment

>> Schedule VII (i): Preventive healthcare
>> SDG 6.2, SDG 3.3

6.4 Formalise Teacher Capacity Building on MHM and Counselling

Teacher responses show improved confidence in handling hygiene and menstruation-related issues, but training coverage remains uneven across locations.

Recommendation

Implement **structured annual teacher training modules** on adolescent health, MHM counselling, and referral protocols, aligned with DPR's emphasis on capacity building (Health Monitoring & Impact Evaluation, p.8; LFA, pp.13-14).

CSR Alignment

>> Schedule VII (ii): Education and skill development
>> SDG 4.c, SDG 5.1

6.5 Strengthen Monitoring of Attendance and Learning Outcomes

The project demonstrates a clear correlation between improved WASH access and reduced absenteeism. However, systematic tracking of **72-day learning loss recovery** remains largely qualitative.

●●●

Recommendation

Introduce standardised attendance and health tracking formats across all schools, integrating menstrual-related absenteeism markers, as envisaged in the DPR monitoring framework (Monitoring & Evaluation, p.12; Logical Framework, pp.13-14).

●●●

CSR Alignment

>> Schedule VII (ii)
>> SDG 4.1, SDG 4.5

6.6 Consolidate Sustainability Through Active WASH Committees

WASH Committees are functional in most schools, but their role varies by location.

●●●

Recommendation

Issue **formal TORs** (Terms of Reference) for WASH Committees, mandate quarterly reviews, and link committee reporting to CSR monitoring cycles, strengthening DPR sustainability commitments (Sustainability & Exit Strategy, pp.12-13).

●●●

CSR Alignment

>> Schedule VII (i), (ii)
>> SDG 6.b, SDG 17.17

Indicator Status Mapping

Indicators	Status	Evidence from Impact Assessment
Installation of bio-toilets as per MoE norms	Partially Met	Toilets installed; capacity gaps reported in senior classes
Access to filtered drinking water in all schools	Fully Met	Strong convergence across students, parents, teachers
30% reduction in menstruation-related absenteeism	Partially Met	Clear reduction observed; needs stronger quantitative tracking
Distribution of 10,000 MHM kits	Partially Met	Distribution achieved; replenishment inconsistent
200 hygiene education sessions	Fully Met	Training frequency and recall high
Baseline and endline assessments	Fully Met	Independent impact assessment conducted
Functional WASH Committees in all schools	Partially Met	Committees formed; activity levels uneven
Promotion of girls' education & STEM	Early Outcome Stage	Improved attendance; STEM linkage emerging

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