

GREEN SCHOOL INITIATIVE



Building Climate-Resilient and WASH-Compliant
Schools in Rangeilunda Block



CLIMATE
RESILIENT



WASH
COMPLIANT



SUSTAINABLE
FUTURE



Students of a Model Green School during a plantation drive



Foreword

It gives me great pleasure to present this report on the Green School Initiative in Rangeilunda Block. Since its inception, Youth for Social Development YSD has been guided by the conviction that children are not merely beneficiaries of development but citizens of today and tomorrow. This initiative puts that conviction into practice.

Coastal Odisha stands on the front line of climate change. Cyclones, floods, heatwaves and water scarcity are no longer occasional events; they determine whether a child can drink safe water, use a functional toilet or learn in a classroom free from heat stress. Schools must therefore be places that protect children from these shocks rather than expose them to further risk.

What distinguishes this initiative is not the scale of new construction but the quality of its process. By assessing all 131 schools through the Climate Resilient-Swachhta Action Plan and carrying that evidence into Gram Sabhas and Gram Panchayat Development Plans, schools secured public resources that were available but rarely accessed. Equally inspiring has been the leadership of children themselves, from the Soap Bank to plantation care and waste segregation.

I extend my sincere gratitude to UNICEF for its continued partnership; to the School & Mass Education Department, Government of Odisha, the Block Education Office and the Gram Panchayats of Rangeilunda for their cooperation; and to the headmasters, teachers, SMC members and students of the Model Green Schools. I commend the YSD implementation team for its dedication, and I hope this report will encourage policymakers and practitioners to adapt and scale this model across Odisha and beyond.

Bibhu Prasad Sahu

Founder & Chief Executive Officer
Youth for Social Development (YSD)



Preface

This report documents the journey of the Green School Initiative implemented by Youth for Social Development (YSD) in Rangeilunda Block of Ganjam district, Odisha, with the support of UNICEF and in coordination with the School & Mass Education Department, Government of Odisha. It is intended for government officials, Panchayati Raj Institutions, development practitioners, educators and researchers concerned with building climate-resilient and WASH-compliant schools.

The report draws on multiple sources of evidence: the Climate Resilient–Swachhta Action Plan (CR-SAP) baseline assessment of 131 government and government-aided schools; school-specific action plans; quarterly monitoring through the digital dashboard; the 2026 follow-up monitoring of Green School and WASH indicators; and field observations and consultations with headmasters, teachers, School Management Committee and Child Cabinet members, and Gram Panchayat representatives. Throughout, we have sought to describe not only what was achieved but how it was achieved, including the difficulties encountered, so that others may adapt the approach to their own contexts.

The report is organised in eight chapters. Chapters 1 to 3 set out the context, the problem and the CR-SAP assessment framework. Chapters 4 and 5 describe the intervention approach and the strategic process. Chapter 6 presents the results, including case studies on the Soap Bank, the restoration of a school solar energy system, and solid waste management through Panchayat convergence. Chapter 7 reflects on challenges and lessons learned, and Chapter 8 offers recommendations for consolidation and scale-up.

This work would not have been possible without the guidance of UNICEF, the cooperation of the Block Education Officer and Assistant Block Education Officer, the support of Gram Panchayat functionaries, and the commitment of headmasters, teachers and SMC members. Above all, we thank the students of the Model Green Schools, whose enthusiasm and ownership made this initiative a living example of change. We also thank our colleagues at YSD for their constant encouragement. Any errors or omissions in this report remain our own.

Implementation Team

Green School Initiative,
Youth for Social Development (YSD)

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Abbreviations and Acronyms

Abbreviation	Full Form
ABEO / BEO	Assistant Block Education Officer / Block Education Officer
CR-SAP	Climate Resilient–Swachhta Action Plan
CSR	Corporate Social Responsibility
CWSN	Children with Special Needs
GP / GPDP	Gram Panchayat / Gram Panchayat Development Plan
IEC	Information, Education and Communication
JJM	Jal Jeevan Mission
MDM	Mid-Day Meal
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MHM	Menstrual Hygiene Management
NEP	National Education Policy
OSEPA	Odisha School Education Programme Authority
OSR	Own Source Revenue
SAPCC	State Action Plan on Climate Change
SBM-G	Swachh Bharat Mission–Gramin
SMC	School Management Committee
WASH	Water, Sanitation and Hygiene
YSD	Youth for Social Development

Executive Summary



With support from UNICEF, and in coordination with the School & Mass Education Department, Government of Odisha, Youth for Social Development (YSD) implemented the Climate Resilient and WASH-Compliant Swachhta Action Plan (CR-SAP) across 131 government and government-aided schools in Rangeilunda Block of Ganjam district, Odisha. The initiative sought to strengthen school Water, Sanitation and Hygiene (WASH) systems while responding to the intensifying effects of climate change on children's health, education and well-being. The block is acutely exposed to cyclones, flooding, salinity intrusion, heatwaves and seasonal water scarcity, hazards that recurrently compromise access to safe water and functional sanitation in schools.

The project followed a participatory and evidence-based methodology. Baseline assessments were conducted to identify gaps in WASH infrastructure, climate risk and environmental sustainability. With the facilitation of the School & Mass Education Department, fifteen (15) schools were designated as Model Green Schools and received focused technical support to demonstrate climate-resilient, child-friendly and environmentally sustainable practices. School authorities, students, School Management Committees (SMCs), Gram Panchayats and line departments participated actively in planning, implementation and monitoring, while a digital monitoring dashboard enabled regular tracking of progress and informed evidence-based decision-making.

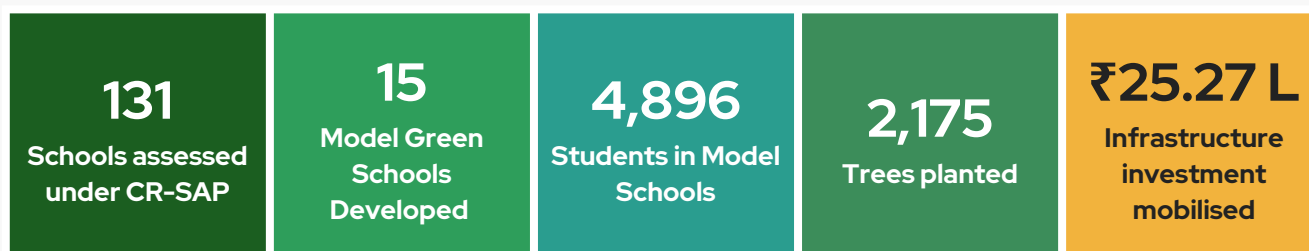


Figure 1: The initiative at a glance



Outcomes were observed at three mutually reinforcing levels. At the infrastructure level, schools gained rainwater harvesting systems, functional toilets, drinking water facilities, ramps for inclusive access, restored solar power systems and water purification units. At the environmental level, 2,175 trees were planted and kitchen gardens and green school spaces were developed. At the behavioural level, students adopted regular handwashing with soap, sustained in part through a student-led Soap Bank, together with improved menstrual hygiene management, waste segregation, plastic-free campus initiatives and student-led WASH actions.

Of particular significance, schools integrated WASH and climate-resilience priorities into Gram Panchayat Development Plans (GPDPs), mobilising resources through GPDP funds, MGNREGA, block-level allocations, Gram Panchayat own-source revenue, School Annual Grants and CSR initiatives. The experience offers a scalable and sustainable model for creating safer, healthier, greener and climate-resilient schools in vulnerable regions through strong collaboration among schools, communities, local governments and development partners.



Kitchen Garden Promoted by Students at Keluapalli High School



1. Introduction

With support from UNICEF, Youth for Social Development (YSD) facilitated the development and implementation of Climate Resilient and WASH-Compliant Swachhta Action Plans (CR-SAP) across schools in Rangeilunda Block, Ganjam district. The initiative adopted a participatory planning approach, strengthened coordination with government line departments, pooled resources and promoted behaviour change among school stakeholders. It contributed to cleaner, greener and climate-resilient school environments, while documenting and disseminating lessons for scale-up and policy integration.

1.1 Geographic and Climatic Context

Rangeilunda Block, a semi-urban coastal area of Ganjam district on the Bay of Bengal, is highly vulnerable to recurrent cyclones, flooding, salinity intrusion, heatwaves and seasonal water scarcity. According to Census 2011, the block had a population of 2.1 lakh, which is estimated to have grown to 5.59 lakh by 2025, reflecting rapid urban expansion and demographic pressure. Summer temperatures frequently exceed 40°C, placing acute stress on water availability and supply. Extreme rainfall and flooding routinely damage school WASH infrastructure, including toilets, pipelines and handwashing facilities. Although sanitation coverage has improved under the Swachh Bharat Mission, functionality, resilience and post-disaster maintenance remain inadequate.

Indicator	Value
Location	Rangeilunda Block : Coastal, semi-urban block on the Bay of Bengal, Ganjam district
Population (Census 2011)	2.1 lakh
Estimated population (2025)	5.59 lakh
Peak summer temperature	Frequently above 40°C
Principal climate hazards	Cyclones, floods, salinity intrusion, heatwaves, water scarcity
Schools covered by CR-SAP	131 government and government-aided schools

1.2 Rationale for the Initiative

Over the past four years, YSD has worked in Rangeilunda Block on child-friendly governance and child participation. Sustained engagement with children, teachers and Panchayati Raj Institutions revealed persistent WASH challenges that adversely affect children's health, comfort and attendance. To establish the scale and nature of these issues, YSD, with UNICEF's support, conducted CR-SAP assessments across all 131 government and government-aided schools in the block, generating a robust evidence base to guide interventions.

CR-SAP is grounded in prevailing government guidelines and designed to converge with key national programmes, including the Swachh Bharat Mission–Gramin (SBM-G), Jal Jeevan Mission, MGNREGA and the 15th Finance Commission grants. All 131 schools in the block completed the CR-SAP process, establishing a comprehensive foundation for climate-resilient and WASH-compliant school planning at block level.

1.3 Policy Alignment

The framework is closely aligned with the National Education Policy (NEP) 2020, which emphasises safe and resilient infrastructure, access to clean water and sanitation, environmental awareness and student responsibility. NEP 2020 recognises schools as critical spaces for promoting hygiene practices, environmental behaviour change and experiential learning through eco-clubs and student-led activities. CR-SAP operationalises these directives by engaging students in daily handwashing, waste segregation, plantation drives and regular monitoring of school cleanliness, thereby strengthening both infrastructure and sustained behaviour change.



Box-1 : The Climate Resilient–Swachhta Action Plan (CR-SAP)

The Climate Resilient–Swachhta Action Plan (CR-SAP) in Odisha integrates climate adaptation principles with sanitation, hygiene, and solid waste management to ensure continuity of essential WASH services during floods, cyclones, heatwaves, and other climate-induced shocks. The framework is anchored in the Odisha State Action Plan on Climate Change (SAPCC 2021–2030) and is supported through climate-tagged budget allocations, reinforcing its alignment with state-level climate governance and financing mechanisms.

CR-SAP mandates institutional convergence across key departments, including Forest, Environment and Climate Change; Odisha School Education Programme Authority (OSEPA); School and Mass Education; and local self-government institutions. Its core components encompass climate risk mapping; development of resilient WASH infrastructure such as flood-resistant toilets, protected water points, and drainage systems; solid waste segregation and management; behaviour change communication; institutional capacity building; and strengthened operation and maintenance systems supported by emergency O&M funds.

The guidelines emphasise risk-informed planning and design, standardised technical norms, monitoring indicators, and clearly defined departmental responsibilities. OSEPA provides technical advisories and compliance oversight, while schools are responsible for retrofitting facilities, integrating hygiene and climate awareness into curricular and co-curricular activities, and maintaining rapid response and repair protocols. Complementary mass education campaigns integrate Swachhta messaging with disaster preparedness and climate awareness. Priority actions under CR-SAP include systematic asset audits, climate-responsive budget tagging for infrastructure retrofitting, and targeted capacity-building initiatives to address financing and implementation gaps at district and local levels.

2. Problem and Context Analysis

The CR-SAP assessment across 131 schools revealed systemic WASH and climate challenges linked to high climate vulnerability. While basic infrastructure exists under national programmes, persistent gaps in functionality, maintenance and resilience continue to affect children's health, dignity, attendance and learning outcomes. Figure 2 summarises the magnitude of the principal gaps identified.



Students use Borewell Water for Washing Purposes

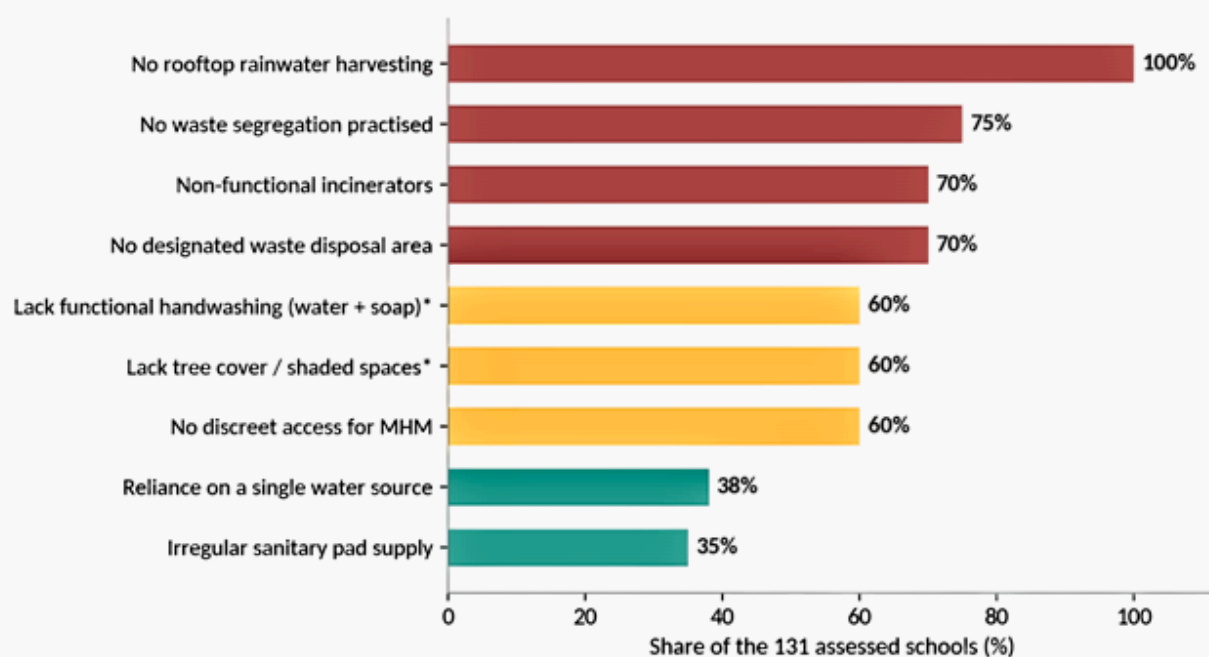


Figure 2 : Key WASH and climate-resilience gaps at baseline (% of 131 schools). Items marked * were reported as “over 60%” and are plotted at the lower bound. Source: CR-SAP baseline assessment.

Domain	Key baseline findings	Implications for children
Hygiene & Handwashing	Over 60% of schools lack functional handwashing stations with reliable water and soap; many are poorly located.	Seasonal shortages and broken infrastructure undermine daily hygiene despite high awareness.
Menstrual Hygiene Management	70% have non-functional incinerators; 35% face irregular pad supply; 60% lack discreet access.	Contributes to absenteeism among adolescent girls.
Solid Waste Management	75% do not practise segregation; 70% lack disposal areas.	Open dumping and exposure to disease vectors.
Water Stress & Climate Resilience	All schools face seasonal scarcity; 38% rely on a single source; none had rainwater harvesting.	WASH facilities become non-functional in summer.
Green Cover & Convergence	Over 60% lack tree cover and shade; most had not integrated WASH needs into GPDPs.	Heat stress and limited access to public resources.

Table 2 : Summary of baseline findings by domain

- **The CR-SAP assessment** across 131 schools in Rangeilunda Block revealed systemic WASH and climate challenges linked to high climate vulnerability. While basic infrastructure exists under national programmes, persistent gaps in functionality, maintenance, and resilience continue to affect children's health, dignity, attendance, and learning outcomes.
- **Hygiene & Handwashing** : Over 60% of schools lack functional handwashing stations with reliable water and soap; many are poorly located, limiting use. Seasonal shortages and broken infrastructure undermine daily hygiene despite high awareness.
- **Menstrual Hygiene Management**: 70% of schools have non-functional incinerators; 35% face irregular pad supplies; 60% lack discreet access, contributing to absenteeism among adolescent girls.
- **Solid Waste Management**: 75% of schools do not practise segregation; 70% lack disposal areas, leading to unhygienic open dumping and exposure to vectors.
- **Water Stress & Climate Resilience**: All schools face seasonal scarcity; 38% rely on a single source. None have rainwater harvesting systems, leaving WASH facilities vulnerable.
- **Green Cover & Convergence**: Over 60% of schools lack tree cover and shaded spaces, worsening heat stress. Most have not integrated WASH and climate priorities into Gram Panchayat Development Plans, limiting access to public resources.
- **Persistent WASH gaps**, compounded by climate stress, demand evidence-based, convergent, and climate-resilient solutions. Without systemic integration into local governance and resource planning, schools remain vulnerable, undermining both infrastructure and student well-being.

These persistent gaps, compounded by climate stress, call for evidence-based, convergent and climate-resilient solutions. Without systemic integration into local governance and resource planning, schools remain vulnerable, undermining both infrastructure and student well-being.



Students Demonstrate Waste Segregation at Source

3. CR-SAP Assessment Framework



The CR-SAP assessment applies twelve parameters spanning infrastructure, climate resilience, behaviour and governance. Each indicator is rated on a three-point functionality scale (1 = Functional, 2 = Partially functional, 3 = Non-functional), enabling comparison across schools and over time.

CR-SAP Parameter	What is Assessed	Key Indicators Covered	Why it Matters for Children & Climate Resilience
Drinking Water	Availability, quality, and reliability of drinking water	Source of water, water quality (Biological and Chemical contamination)	Ensures safe drinking water, to ensure water security and safety part.
Handwashing & Hygiene	Functionality and usability of handwashing facilities	Presence of handwashing stations, water and soap availability, location near toilets & MDM areas	Promotes daily hygiene habits and reduces communicable diseases
Sanitation & Toilets	Adequacy, condition, and accessibility of toilets	Number of toilets vs enrolment, maintenance status, CWSN-friendly features	Ensures dignity, comfort, and regular toilet use for all children
Menstrual Hygiene Management (MHM)	Support systems for adolescent girls	Sanitary pad availability, disposal facilities (incinerators), privacy and water inside toilets	Enables girls to manage menstruation with dignity and attend school regularly
Solid Waste Management	Waste handling and disposal systems	Waste segregation (wet/dry), availability of bins, safe disposal arrangements	Keeps school campuses clean and prevents vector-borne diseases
Climate Resilience – Water	Preparedness for water scarcity and climate stress	Rainwater harvesting systems, water storage, alternative water sources	Reduces dependence on external water sources during droughts and heatwaves
Climate Resilience – Infrastructure	Protection of WASH facilities from climate impacts	Drainage systems, flood protection, location of water points	Prevents damage during floods, cyclones, and heavy rainfall
Green & Child-Friendly Spaces	Availability of green cover and shaded areas	Tree plantation, green patches, shaded sitting/play areas	Reduces heat stress and creates safe, comfortable learning spaces

CR-SAP Parameter	What is Assessed	Key Indicators Covered	Why it Matters for Children & Climate Resilience
Nutrition & Kitchen Gardens	Use of school gardens for learning and nutrition	Kitchen gardens, composting, use of produce in MDM	Improves nutrition, promotes climate-friendly food practices
Behaviour Change & Child Participation	Involvement of children in WASH practices	Handwashing routines, eco-clubs, child cabinets, peer monitoring	Builds lifelong habits and ownership among children
Governance & Convergence	Linkage with local planning and schemes	Inclusion in GPDP, SMC participation, scheme convergence	Ensures sustainability through Panchayat ownership and funding
Monitoring & Functionality Status	Performance tracking of facilities	Functionality scale (1-Functional, 2-Partial, 3-Non-functional)	Enables evidence-based decision-making and follow-up

Table 3: Parameters of the Climate Resilient-Swachhta Action Plan (CR-SAP)



Girls are using incinerators for the safe and hygienic disposal of menstrual waste

4. Intervention Approach



The intervention was designed on the evidence generated through the CR-SAP assessment of all 131 government and government-aided schools in the block, comprising 64 primary schools, 28 upper primary schools and 39 high and higher secondary schools (Figure 3). Rather than focusing solely on new construction, the intervention prioritised the functionality, climate resilience and institutional integration of existing school WASH systems through a systems-strengthening approach.

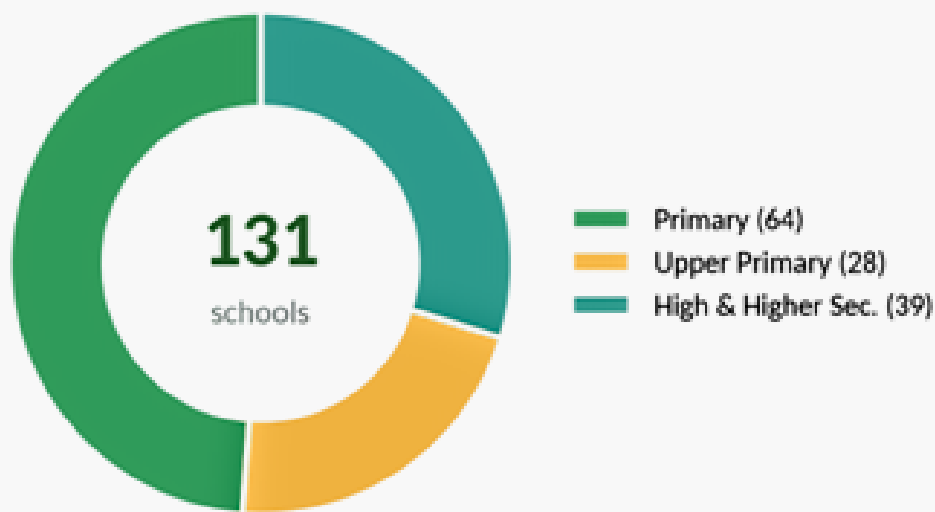


Figure 3 : Composition of the 131 schools assessed under CR-SAP

4.1 Selection of Model Green Schools

Drawing on CR-SAP findings, and with the facilitation of the School & Mass Education Department, 15 schools were identified as Model Green Schools for intensive support. Selection was guided by clearly defined criteria:

- High student enrolment combined with inadequate WASH facilities;
- Acute water scarcity and climate vulnerability;
- Poor functionality of toilets, handwashing and drinking water systems;
- Absence of waste management practices and green cover; and
- Demonstrated willingness of SMCs and Gram Panchayats to engage.

The selected schools represent a mix of upper primary and secondary schools across 15 Gram Panchayats, ensuring that tested approaches could be replicated and scaled across the block. Together they enrol 4,896 students (2,320 girls and 2,576 boys) and are served by 220 teachers.

Sl.	Gram Panchayat	Name of the School	Girls	Boys	Total	Teachers
1	Sasanapadar	Nodal Sasanapadar High School	201	170	371	15
2	Mantridi	GUGHS Pallur Mantridi	83	59	142	10
3	Kanisi	Balaji Bidyapitha	58	433	491	30
4	Chikarada	GUGH Chikarada	151	174	325	16
5	Kotharasingi	Bhalliagada UGHS	107	94	201	13
6	Randha	Panchama UGHS	250	265	515	18
7	Dura	National High School	265	293	570	21
8	Narayanpur	Panchayat High School	33	36	69	7
9	Badakusasthali	Nodal HS Badakusasthali	125	163	288	11
10	Rangeilunda	University Higher Secondary School	70	67	139	4
11	Karapalli	OAV Karapalli	348	196	544	18
12	Keluapalli	K.S.H.S Keluapalli	195	180	375	15
13	Golabandha	Vivekananda High School	71	75	146	12
14	Markandi	Markandi UGHS	210	226	436	15
15	Padmapur	Padmapur UGHS	153	145	298	15
Total		15 Schools	2,32	2,576	4,91	220

Table 4: Selected Model Green Schools

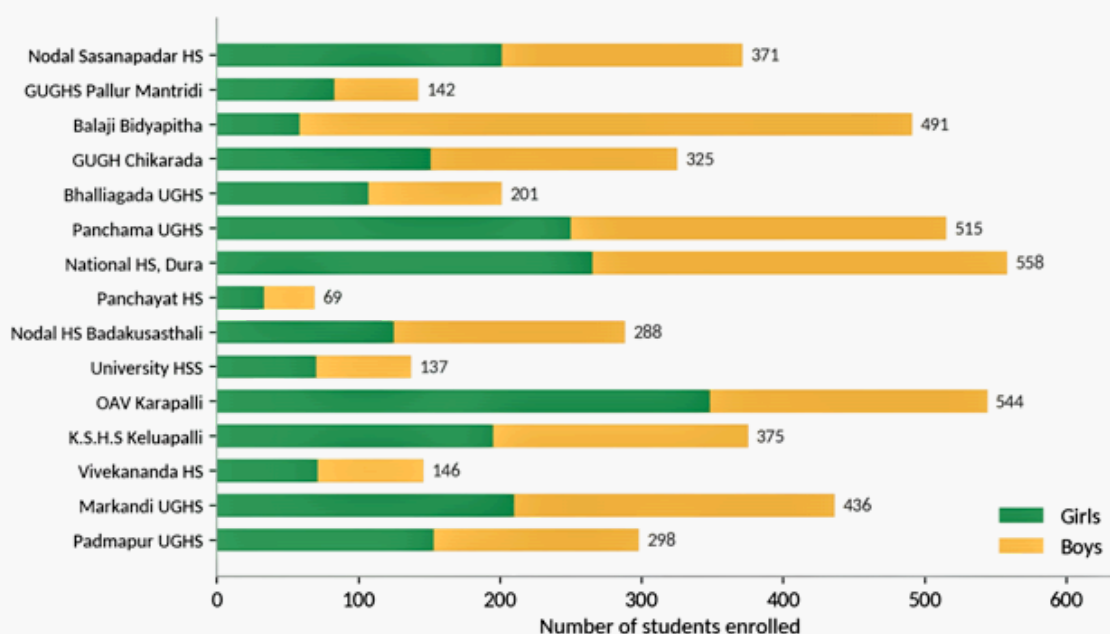


Figure 4: Enrolment by gender in the 15 Model Green Schools

5. Strategic Process

The CR-SAP intervention adopted a structured, evidence-based and governance-linked process to strengthen school WASH and climate resilience. The six stages are summarised in Figure 5 and described below.

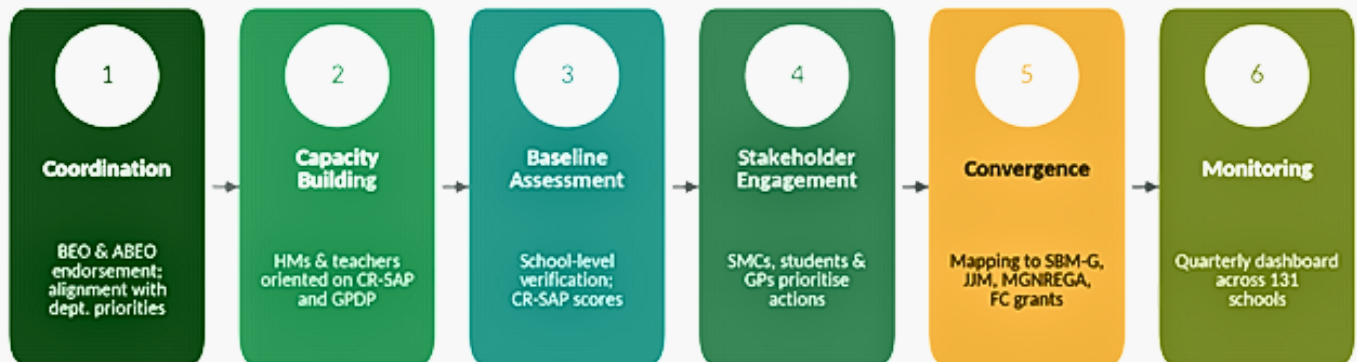


Figure 5 : The six-stage CR-SAP implementation process

- 1. Coordination:** YSD secured formal endorsement from the Block Education Officer and Assistant Block Education Officer, ensuring school participation, teacher cooperation and alignment with departmental priorities.
- 2. Capacity Building:** Headmasters and teachers of the 15 Model Green Schools were oriented on CR-SAP indicators, assessment findings and the integration of WASH and climate needs into Gram Sabha and GPDP processes.
- 3. Baseline Assessment:** Each model school underwent detailed verification of infrastructure, hygiene practices and climate risks, resulting in context-specific CR-SAP scores and action plans.
- 4. Multi-Stakeholder Engagement:** Findings were shared with school leaders, SMCs, students and Gram Panchayats, leading to joint prioritisation of interventions such as toilet repairs, rainwater harvesting, waste segregation and MHM facilities.
- 5. Institutional Convergence:** Requirements were mapped to SBM-G, Jal Jeevan Mission, MGNREGA and Finance Commission grants, enabling resource pooling and financial approvals.
- 6. Learning and Monitoring:** Good practices were disseminated to non-model schools, while a dashboard tracked quarterly progress across all 131 schools, strengthening accountability and replication.

By combining coordination, capacity building, evidence-based planning and institutional convergence, the process addressed systemic WASH and climate gaps while reinforcing ownership at school and Gram Panchayat levels.

6. Results and Impact



The Green School Initiative achieved measurable improvements in planning, infrastructure, behaviour change and governance convergence across the 15 Model Green Schools, while also influencing practice in the wider set of 131 schools assessed through CR-SAP. The results demonstrate how evidence-based planning, participatory implementation and multi-stakeholder convergence can produce sustainable improvements in school WASH and climate resilience.

6.1 Climate-Resilient Planning and Budgeting

A major outcome was the institutionalisation of CR-SAP as a formal tool for school planning and budgeting. School-specific action plans were developed collaboratively and presented in Gram Sabha and GPDP meetings. For the first time, school WASH and climate priorities were formally integrated into Panchayat plans, leading to direct financial approvals from GPDP funds, MGNREGA allocations and block-level education funds, and shifting WASH provision from ad-hoc repairs to planned, sustainable investment.

6.2 Infrastructure Improvements

School	Intervention	Amount (₹)	Funding Source	Status
GUHS Markandi	Rooftop rainwater	56	MGNREGA	Functional
National High School, Dura	Rooftop rainwater	72,000 (56,000 + 16,000)	MGNREGA + GP OSR	Functional
Kiaphula High School	Rainwater harvesting (large)	2,50,000	MGNREGA + GP	Partially functional
Twelve Model Schools	Rainwater harvesting	6,72,000 (56,000 × 12)	MGNREGA	Under construction
National H.S., Dura	6 new toilets	7,00,000	GPDP Fund	Completed
University H.S., Rangeilunda	New toilets & urinals	7,00,000	Block Education Office	Under construction
Balaji Bidyapitha	Ramp & railings (CWSN)	75	Block Education Office	Completed
UGHS Paluru	Solar panel wiring repair	2	School Annual Grant	Functional
Total		25,27,000		

Table 5: Infrastructure development in Model Green Schools (total documented investment: ₹25.27 lakh)

Rainwater harvesting. Prior to CR-SAP, none of the 131 schools had rooftop rainwater harvesting. Following the assessment, structures were approved for all 15 model schools through MGNREGA and Panchayat funds. GUHS Markandi and National High School, Dura now have fully functional systems costing ₹56,000 each, while Kiaphula High School's larger system was approved at ₹2.5 lakh. Systems in the remaining 12 schools are under construction.

Sanitation. National High School, Dura received ₹7 lakh for six additional toilets serving 570 students; University Higher Secondary School, Rangeilunda received ₹7 lakh for new toilets and urinals; and Balaji Bidyapitha received ₹75,000 for ramps and railings to improve access for children with special needs.

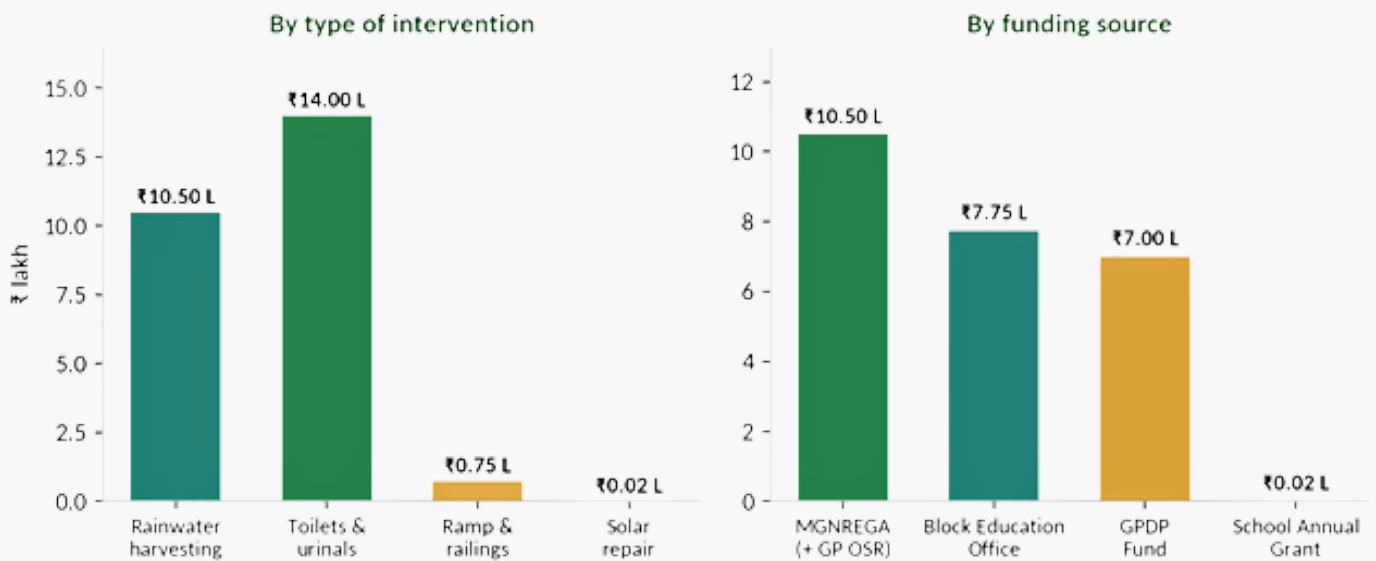


Figure 6: Documented infrastructure investment by intervention type and funding source (₹ lakh)



6.3 Energy : Restoration of the Solar Energy System

During the 2024 CR-SAP assessment, YSD found that the rooftop solar energy system at UGHS Paluru was non-functional owing to damaged electrical wiring. The school was consequently unable to use solar backup during electricity outages, disrupting classroom activities and overall school functioning.

During the 2026 follow-up monitoring of Green School and WASH climate-resilience indicators, YSD revisited the issue with the Headmaster, the SMC, Child Cabinet members and teachers. After reviewing the assessment findings, the school decided to use its Annual School Grant to repair the wiring, investing approximately ₹2,000. The repaired system now supplies backup electricity during power cuts, sustaining classroom lighting, ceiling fans, digital teaching equipment and public announcement systems. The case illustrates how evidence-based assessment and modest local resource mobilisation can restore existing infrastructure without dependence on external funding.



Rooftop rainwater harvesting system installed at Dura High School



Rooftop solar energy system at UGHS, Paluru

6.4 Drinking Water

Drinking water provision was strengthened at National High School, Dura, Badakusasthali High School and Kiaphula High School through water purifiers supplied via IOCL CSR and IDBI Bank CSR.

6.5 Afforestation and Greenery

Between June 2023 and August 2024, 2,175 trees were planted across the model schools, creating shaded spaces that reduce heat stress. Students were assigned watering and protection duties through class-wise duty charts, fostering ownership and environmental stewardship.

6.6 Kitchen Gardens and Sustainable Practices

Six model schools established kitchen gardens, five of which use the produce in Mid-Day Meals. Tomato, brinjal, leafy greens, drumstick and pumpkin were cultivated using compost prepared from biodegradable waste, linking nutrition with environmental learning.

6.7 Behaviour Change and Hygiene Practices

Daily handwashing before Mid-Day Meals was institutionalised. Waste segregation using blue and green bins became fully functional in seven schools and partially functional in eight (Figure 7). Schools adopted plastic-free and litter-free campus practices, while IEC activities promoted hygiene, menstrual health, water conservation, heatwave safety and climate resilience. Functional incinerators improved menstrual hygiene management for adolescent girls, enhancing dignity and confidence.

Waste segregation status



Kitchen gardens

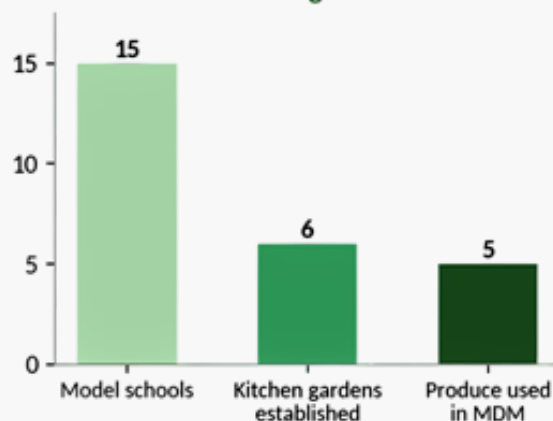


Figure 7: Waste segregation status and kitchen garden adoption in the 15 Model Green Schools

Case Study 1: The Soap Bank – A Student-Led Model for Hygiene Promotion

The Soap Bank is a student-led initiative under the Green School Initiative in which each student donates a bar of soap on his or her birthday. The pooled donations ensure a continuous supply of soap for handwashing before the Mid-Day Meal and after toilet use, addressing a gap identified at baseline, where over 60% of schools lacked handwashing stations with reliable water and soap.

Process. The model operates as a simple cycle. Students pledge and donate a bar of soap on their birthday; donations are recorded and stored centrally as the school's "soap bank"; soap is placed at handwashing points near the MDM area and toilets; and Child Cabinet members, guided by teachers, monitor stock and replenish stations as soap is used. Because supply is linked to a recurring personal event rather than to a budget line, the system is low-cost, self-renewing and reinforces handwashing as a daily, collectively owned habit. Beyond ensuring supply, the initiative cultivates hand hygiene, social responsibility and sustainable behaviour change, positioning students as active custodians of school hygiene rather than passive beneficiaries



Students pledge and donate a bar of soap on their birthday

Case Study 2: Solid Waste Management and Panchayat Convergence

YSD strengthened solid waste management by educating students on wet and dry waste segregation through practical demonstrations and awareness sessions. Separate bins were introduced to encourage segregation at source, while teachers and student leaders regularly monitor disposal practices.

To ensure environmentally safe disposal, YSD facilitated coordination between the school and the Gram Panchayat. The Panchayat's garbage collection vehicle now visits the school regularly to collect segregated waste, preventing open dumping and helping to maintain a clean, green and child-friendly environment. This convergence demonstrates how local institutions can jointly sustain WASH and environmental initiatives.

6.8 Coordination and Resource Convergence

CR-SAP facilitated convergence of MGNREGA (now VB-G RAM-G), GPDP, Block Education Office funds, OSR and CSR support. Systematic coordination between schools, Gram Panchayats and line departments ensured that school needs were addressed comprehensively rather than through one-off repairs. Overall, the results show that evidence-based planning through CR-SAP can drive tangible infrastructure improvements, embed sustainable behaviour change and strengthen governance ownership, resulting in cleaner, safer and climate-resilient schools across Rangeilunda Block.



Students care for school plantations and green spaces



Students Demonstrate Waste Segregation at Source

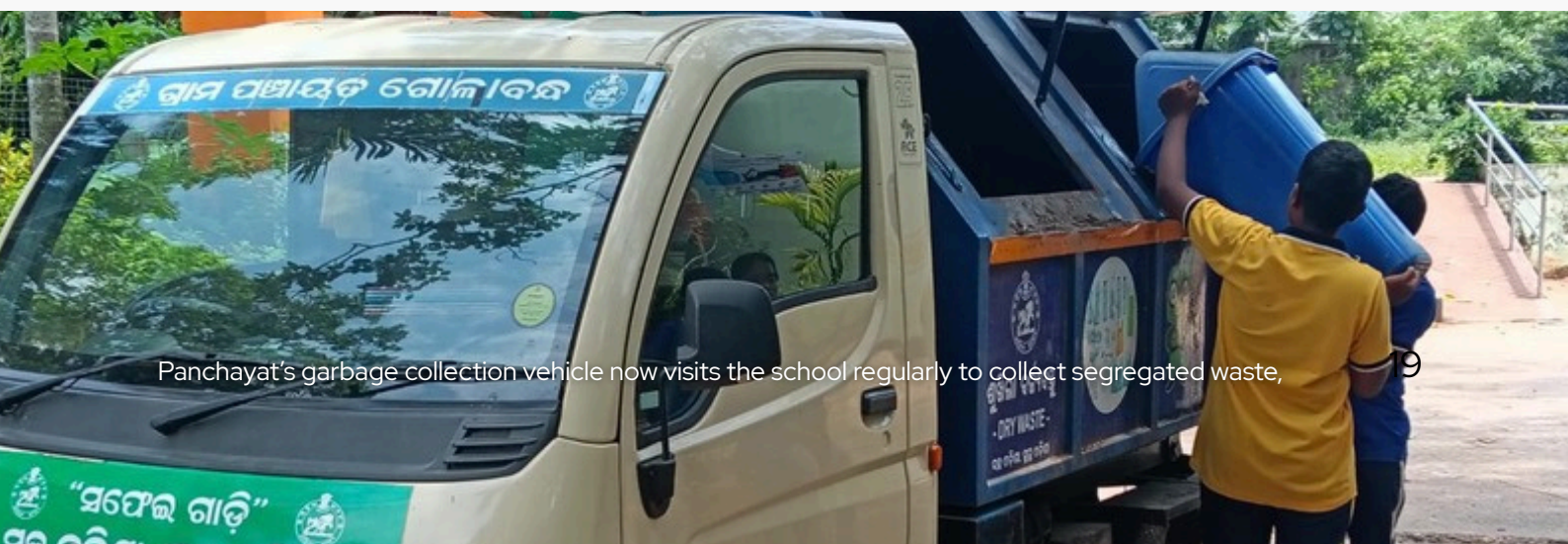
7. Challenges and Key Lessons Learned



7.1 Challenges

Challenge	Description
Seasonal water scarcity	Disrupted school operations, rendering drinking water, toilets and handwashing facilities non-functional during summer months.
Reliance on a single water source	Left schools vulnerable to pump breakdowns, power outages and groundwater depletion.
Delays in fund approvals	Slow approvals and releases from Gram Panchayats and line departments delayed rainwater harvesting, sanitation and repair works.
Limited technical capacity	Hindered installation and operation of incinerators, solar systems and rainwater harvesting structures.
Maintenance gaps	Persisted owing to the absence of dedicated caretakers and regular repair mechanisms.
Sustaining behaviour change	Difficult when facilities became temporarily unusable due to water shortages or damage.
Low awareness of GPDP processes	Among teachers and SMCs, initially delaying integration of school WASH needs into Panchayat plans.
Climate impacts	Floods and heatwaves repeatedly damaged infrastructure, increasing repair needs and costs.

Table 6: Implementation challenges



Panchayat's garbage collection vehicle now visits the school regularly to collect segregated waste,

7.2 Key Lessons Learned

1. **Evidence-based planning accelerates decision-making:** Panchayats respond more effectively when school needs are supported by data and clear action plans.
2. **Functionality and maintenance matter more than new construction:** repairing and sustaining existing WASH infrastructure often yields greater impact.
3. **Children are powerful agents of change:** their participation in handwashing, the Soap Bank, waste segregation and plantation fosters ownership and continuity.
4. **GPDP integration is essential:** embedding school needs in Gram Panchayat Development Plans secures funds and long-term sustainability.
5. **Proactive climate-resilient planning:** solutions such as rainwater harvesting are critical in water-stressed regions to avoid reactive responses.
6. **Converging funding sources:** MGNREGA, GPDP, CSR and block-level funds together enable significant improvements within limited school budgets.
7. **Continuous dashboard monitoring:** enables early identification of gaps and timely corrective action, strengthening accountability and governance.



Students sowing seeds and actively promoting kitchen gardening.

8. Conclusion and Way Forward

The Green School Initiative in Rangeilunda Block demonstrates that climate-resilient and WASH-compliant schools can be achieved primarily by strengthening existing systems, generating credible evidence and embedding school priorities within local governance, rather than by relying on stand-alone external investment. The convergence of MGNREGA, GPDP, block-level and school-level resources, combined with low-cost, student-led practices such as the Soap Bank, offers a model that is both affordable and replicable.

Building on these lessons, the following priorities are recommended for consolidation and scale-up:

- Complete the rainwater harvesting systems under construction in the remaining 12 model schools and extend CR-SAP-based planning to non-model schools;
- Institutionalise routine operation and maintenance through dedicated caretaker arrangements and earmarked school-level O&M funds;
- Sustain annual inclusion of school WASH and climate priorities in GPDPs through continued orientation of SMCs, teachers and Panchayat functionaries;
- Scale student-led practices, including the Soap Bank, waste segregation and plantation care, across all 131 schools; and
- Continue dashboard-based monitoring to track functionality and inform block- and district-level policy integration.



Schoolchildren participate in a Bal Sabha meeting during the Gram Sabha to discuss the Green School Initiative.

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Building a Greener Future

for Every Child, Every School,
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Students preparing seed balls for a greener environment.

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