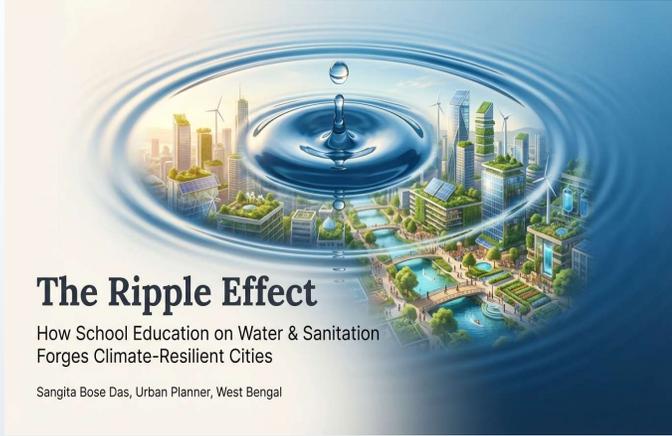


Urban Water, Sanitation & Climate Change: The Role of School Education

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The Ripple Effect

How School Education on Water & Sanitation Forges Climate-Resilient Cities

Sangita Bose Das, Urban Planner, West Bengal

Proof of Concept: Success Stories from the Ground



- Nationwide Scale (Swachh Vidyalaya Initiative)**
Significantly increased access to sanitation, equipping approximately 2.61 lakh schools with new or functional toilets.
- Practical Innovation (Agra & Mangaluru)**
 - Agra:** Government schools collect tens of thousands of litres of rainwater annually, teaching practical conservation.
 - Mangaluru:** At Carmel High School, students lead hands-on projects to build percolation pits, directly linking science curriculum to water conservation.
- Recognized Excellence (Kolkata)**
Army Public School, Ballygunge, received a National Water Award for its innovative, student-led water conservation and eco-friendly practices.

The Urban Dilemma: A Collision of Growth and Climate Stress

Rapid urbanization and extreme climate events are creating a dual threat to urban Water, Sanitation, and Hygiene (WASH) systems.

- Floods:** Contaminate precious water sources, overwhelming infrastructure and creating immediate health risks.
- Droughts & Heat Stress:** Lead to severe water scarcity, impacting supply for millions and threatening public health resilience.



The Multiplier Effect: How One Student Influences a Thousand Homes



- SCHOOL EDUCATION**
Students learn about water conservation, hygiene, and waste segregation through curriculum and hands-on projects.
- STUDENT BEHAVIOR CHANGE**
They adopt new habits like turning off taps, practicing proper hygiene, and sorting waste.
- COMMUNITY & HOUSEHOLD PRACTICES**
Students become "WASH Messengers," influencing their families and neighbors to fix leaks, reduce water waste, and maintain clean surroundings.
- SUSTAINABLE & RESILIENT CITIES**
The cumulative effect is enhanced water security, improved public health, greater climate awareness, and stronger community resilience.

An Untapped Resource: The Power of 1.5 Million Schools

While infrastructure is critical, our greatest asset for building resilience is behavioral change. India's ~1.5 million schools are the most effective incubators for this transformation.

Students are not just learners; they are active agents of change and powerful community messengers who can reshape household practices from the ground up.

Total Schools: ~1.5 lakh
Government Schools: ~10.32 lakh

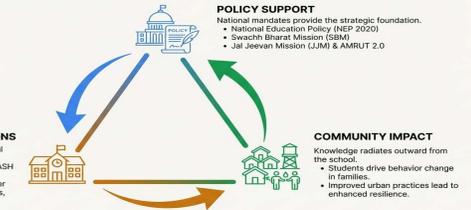


Recommendations: The Way Forward



- Mandate & Integrate Curriculum**
Make WASH and climate education a mandatory, core component of the school curriculum, not an optional extra-curricular activity.
- Invest in Hands-On Infrastructure**
Equip schools with the necessary tools for practical learning, such as rainwater harvesting systems, water recycling facilities, and waste segregation stations.
- Formalize Student & Community Engagement**
Create official platforms for student-led eco-clubs to interact with and present their findings to Urban Local Bodies (ULBs), turning their projects into recognized contributions to city planning.

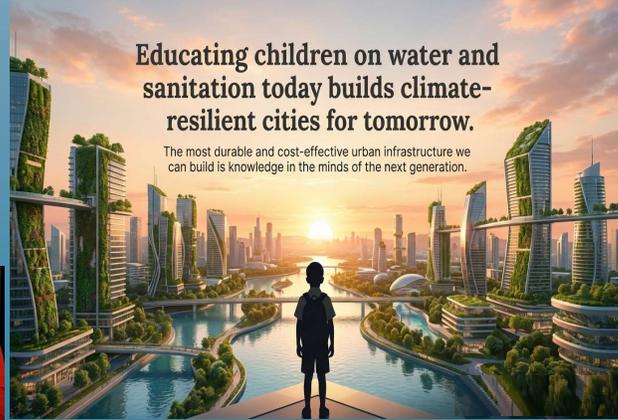
The Framework for Change: From National Policy to Neighborhood Practice



- POLICY SUPPORT**
National mandates provide the strategic foundation.
 - National Education Policy (NEP 2020)
 - Swachh Bharat Mission (SBM)
 - Jal Jeevan Mission (JJM) & AMRUT 2.0
- SCHOOL INTERVENTIONS**
Schools act as hubs for practical application.
 - Curriculum integration of WASH education.
 - Hands-on learning: Rainwater Harvesting (RWH), eco-clubs, student projects.
- COMMUNITY IMPACT**
Knowledge radiates outward from the school.
 - Students drive behavior change in families.
 - Improved urban practices lead to enhanced resilience.

Educating children on water and sanitation today builds climate-resilient cities for tomorrow.

The most durable and cost-effective urban infrastructure we can build is knowledge in the minds of the next generation.



- Nationwide Scale**
Swachh Vidyalaya Puroskar recognizes schools excelling in hygiene, with tens of thousands registering annually, like 44,440 schools registering in one state (Jharkhand) in 2025 alone.
- Practical Innovation**
'Swachh Jal Se Suraksha' Govt. initiatives taken by schools in India
- Recognized Excellence**
Out of 9.59 lakh schools, more than 8.23 lakh schools submitted their applications for SVP 2021-22



Reference: Press release by Ministry of Jal Shakti
Press release by Ministry of Finance
Press release by Ministry of Education

All images were taken from web for representation purpose