

Centre for Science and Environment (CSE)

Webinar Proceedings

Understanding WASH Challenges at the Urban Fringe

Date: April 17, 2026

Time: 03:00 – 04:30 PM (IST)

Mode: Online (Zoom)

In collaboration with: Tata Trusts

Background and Context

Peri-urban areas—situated at the interface of rural and urban systems—are undergoing rapid transformation due to expanding urban boundaries. Despite their growing population and significance, these areas often remain outside the purview of structured planning frameworks, resulting in gaps in infrastructure, governance, and service delivery.

In the context of water, sanitation, and hygiene (WASH), these challenges are particularly pronounced. While cities may report improved overall coverage, peri-urban populations frequently experience limited access to safe water, inadequate sanitation systems, and weak service delivery mechanisms.

To deliberate on these emerging concerns, the Centre for Science and Environment (CSE), in collaboration with Tata Trusts, organized a webinar titled “*Understanding WASH Challenges at the Urban Fringe*” on April 17, 2026. The session brought together experts, practitioners, and policymakers to discuss the complexities of peri-urban systems, drawing insights from a case study conducted in Bijnor, Uttar Pradesh, and to explore pathways for more inclusive and resilient WASH services.

The session was moderated by **Dr. Sumita Singhal, Programme Manager, Water Programme, CSE**, who also welcomed participants and briefly introduced CSE’s work in the water and sanitation sector.

Session Highlights

Understanding Peri-Urban Dynamics and the Underlying Hypotheses

Dr. Sumita Singhal, Programme Manager, Water Programme, CSE

Dr. Sumita Singhal initiated the session by establishing a conceptual understanding of peri-urban areas as dynamic socio-economic spaces shaped by rapid land-use change, population influx, and institutional ambiguity. She highlighted that these areas are often inadequately addressed within existing planning frameworks, leading to fragmented governance and service delivery.

She emphasized the need to recognize peri-urban areas as distinct planning units and integrate them into formal urban development processes. The session also introduced key hypotheses, underscoring that peri-urban areas are systematically under-prioritized despite their increasing vulnerability and importance in the urban transition.

Findings from CSE’s Study on Recently Transitioned Peri-Urban Areas of Bijnor

Mr. Jyoti Parsad Dadhich, Deputy Programme Manager, Water Programme, CSE

Presenting findings from CSE’s field-based study, Mr. Jyoti Parsad Dadhich highlighted the ground realities of WASH service delivery in recently transitioned peri-urban settlements of Bijnor.

The study revealed significant gaps, including limited access to safe water supply, absence or inadequacy of sewerage systems, and heavy reliance on on-site sanitation systems with poor management. The lack of structured faecal sludge management (FSM) services further exacerbates environmental and public health risks.

The findings also pointed to stark intra-settlement inequalities, with some areas receiving partial services while others remain completely underserved. Institutional ambiguity—particularly unclear roles between rural and urban local bodies—was identified as a key factor contributing to fragmented service delivery and weak accountability.

The study underscored the need for targeted interventions and improved planning mechanisms tailored to peri-urban contexts.

Governance Shifts in Peri-Urban Areas: Implications for WASH Service Delivery

Dr. M. N. Roy, Founder President, Sigma Foundation

Dr. M. N. Roy provided insights into the evolving governance landscape in peri-urban areas. He highlighted that as settlements transition from rural to urban jurisdictions, governance systems often fail to adapt effectively, resulting in institutional gaps and coordination challenges.

He identified key issues including lack of baseline data, weak institutional capacity, fragmented governance structures, and limited community engagement. He also pointed to policy and regulatory gaps, noting the absence of frameworks specifically designed for peri-urban contexts.

Dr. Roy emphasized that strengthening institutional frameworks, clearly defining roles and responsibilities, and integrating peri-urban concerns into policy and planning processes are essential for improving WASH outcomes. He stressed that without governance reforms, infrastructure investments alone will not deliver sustainable results.

Panel Discussion: Bridging Gaps in Peri-Urban WASH

Moderator: Dr. Sumita Singhal, Programme Manager, CSE

Panelists:

- Dr. M. N. Roy, Founder President, Sigma Foundation
- Dr. Rumi Aijaz, Senior Fellow, Observer Research Foundation (ORF)
- Prof. Chetan Vaidya, Former Director, School of Planning and Architecture (SPA), New Delhi

The panel discussion brought together diverse perspectives from policy, governance, and planning domains to examine systemic challenges and identify practical pathways for improving WASH service delivery in peri-urban areas.

Planning Gaps and the Invisibility of Peri-Urban Areas

Addressing the question of why peri-urban areas remain underrepresented in planning frameworks, **Prof. Chetan Vaidya** highlighted that these regions fall within an administrative grey zone, neither fully governed by rural institutions nor adequately integrated into urban systems.

He outlined three critical levels of planning—city-level (master planning), neighbourhood-level (town planning schemes), and building-level planning—and emphasized that peri-urban areas must be incorporated across all levels. Drawing from examples such as Gujarat, he noted that planning must extend beyond municipal boundaries to effectively manage urban expansion.

Dr. Rumi Aijaz added that planning frameworks remain territorially rigid, whereas peri-urbanization is dynamic and fluid. This mismatch results in reactive planning and unregulated growth, reinforcing the need for more adaptive and inclusive planning systems.

Service Delivery Challenges and Need for Context-Specific Solutions

Building on field insights, panelists emphasized that WASH challenges in peri-urban areas are not isolated but systemic. Many households rely on poorly designed on-site sanitation systems, with limited access to desludging and treatment services.

Prof. Vaidya highlighted that conventional centralized sewerage systems are often impractical in such contexts due to cost and spatial constraints. He advocated for decentralized and hybrid approaches, including faecal sludge and septage management (FSSM), as more viable solutions.

Panelists collectively emphasized the need to shift from infrastructure-centric approaches to service delivery models that prioritize long-term functionality, maintenance, and equity.

Deep Dive: Accountability, Participation, and Institutional Gaps

Dr. M. N. Roy

Dr. Roy emphasized that accountability is central to effective governance and must be actively designed at the local level. He highlighted the importance of strengthening the relationship between duty-bearers and citizens to ensure responsive service delivery.

He drew a critical distinction between tokenistic and meaningful participation, noting that genuine engagement must prioritize marginalized groups, including women and the urban poor. He emphasized that participatory processes should begin with those most affected, as this shapes more inclusive and effective solutions.

Drawing from field experiences, he highlighted the importance of community-led approaches, where communities are involved in identifying challenges, co-designing solutions, and managing assets. He stressed that development is inherently process-driven and requires continuous engagement rather than one-time interventions.

He also highlighted institutional weaknesses, particularly in District Planning Committees (DPCs), which often lack technical capacity and continuity. He recommended establishing dedicated technical support systems to strengthen planning processes and improve evidence-based decision-making.

Deep Dive: Policy Blind Spots and the Challenge of Peri-Urban Integration

Dr. Rumi Aijaz

Dr. Aijaz highlighted that peri-urban areas remain structurally invisible within existing policy frameworks due to the rigid rural–urban divide. He noted that rapid urban expansion is not adequately captured in planning systems, resulting in gaps between administrative boundaries and functional realities.

He emphasized that the lack of reliable and disaggregated data further exacerbates these challenges, leading to underestimation of service needs and inadequate resource allocation.

Dr. Aijaz stressed the importance of integrating peri-urban areas into policy frameworks and ensuring convergence across sectors such as urban development, rural development, and WASH services. He called for more flexible and adaptive planning approaches that reflect the dynamic nature of peri-urban growth.

Deep Dive: Rethinking Infrastructure and Service Delivery Models

Prof. Chetan Vaidya

Prof. Vaidya emphasized that conventional urban infrastructure models are often unsuitable for peri-urban contexts. He highlighted the need for decentralized, cost-effective, and scalable solutions that align with local conditions.

He stressed the importance of shifting focus from infrastructure creation to service delivery, ensuring that systems are supported by adequate operation and maintenance mechanisms.

He also highlighted the need to plan for future urban expansion by integrating peri-urban areas into long-term development strategies. Strengthening the technical and managerial capacities of local bodies was identified as a key requirement for ensuring sustainable service delivery.

Closing Remarks

Harsh Yadava, Programme Officer, Water Programme, CSE

In his closing remarks, Harsh Yadava reflected on the key insights from the webinar and emphasized that peri-urban areas represent a critical frontier for achieving equitable WASH access.

He highlighted the need to move from recognition to action by integrating peri-urban areas into planning frameworks, strengthening institutional capacity, and adopting context-specific and sustainable solutions.

The session concluded with a call to policymakers, practitioners, and stakeholders to prioritize peri-urban areas and work collaboratively towards building inclusive and resilient WASH systems.

Conclusion

The session concluded with remarks by Harsh Yadava, who thanked all speakers and participants. He emphasized that the discussions highlighted the urgent need to address peri-urban WASH challenges through integrated, inclusive, and forward-looking approaches.

“Peri-urban areas are where the future of our cities is being shaped today. If we bring together planning, governance, and community participation in these spaces, we can not only address existing service gaps but also build more resilient and equitable urban systems.”

Addressing these challenges requires integrated approaches, stronger institutional mechanisms, and inclusive planning processes that reflect the realities of these dynamic regions. By bringing together field insights, policy perspectives, and technical expertise, the session provided a comprehensive understanding of the issues and identified actionable pathways for improving WASH outcomes in peri-urban areas.