



NATIONAL ROUNDTABLE

DECENTRALISED TREATMENT OF WASTEWATER AND ITS BULK REUSE

Technologies, Standards and Policies

October 29, 2026 | From 10 AM

Maple Hall, India Habitat Centre, Lodhi Road, New Delhi

Centre for Science and Environment (CSE) is convening a National Roundtable to discuss the landscape of in-situ and modular decentralised wastewater treatment technologies and reuse of the treated water and treatment-derived solids. The Roundtable will also cover policies for civic bulk reuse, as well as standards – the aim will be to understand how the civic infrastructure can build in effective decentralised treatment systems to potentially use the wastewater onsite and reuse the treated water.

PARTICIPATION BY INVITATION ONLY



India's urban water crisis is no longer a looming threat; it is a lived reality.

According to the NITI Aayog's Composite Water Management Index

- About 600 million Indians face high to extreme water stress.
- Nearly 0.2 million (two lakh) die every year due to inadequate access to safe water.
- By 2030, the country's water demand is projected to be twice the available supply.
- 21 cities, including Delhi, Bengaluru and Hyderabad, are at risk of running out of groundwater.
- Indian cities already lose 30-50 per cent of their supplied water through leakages, theft and inefficient distribution
- Only 28 per cent of urban wastewater is treated.

Conventional approaches — drawing more from rivers, aquifers, and inter-basin transfers — are reaching ecological and economic limits, while climate variability makes rainfall increasingly unreliable. In this context, water and sludge reuse are not merely efficiency measures; they are structural necessities. Decentralised and modular treatment systems offer an opportunity to treat wastewater closer to where it is generated and enable its fit-for-purpose reuse for applications such as flushing, landscaping, cooling, industrial processes and other non-potable uses. Similarly, treated sludge and other treatment-derived solids can potentially be recovered and reused as compost, soil amendments, energy feedstock or sources of nutrients and other resources.

However, the availability of technologies alone does not ensure their wider adoption. Questions remain around technology performance and readiness, treatment and reuse standards, building bylaws, regulatory approvals, monitoring, quality assurance, institutional responsibility and long-term operation and maintenance. There is also a need to examine whether existing technical guidelines and regulatory frameworks are keeping pace with emerging treatment and resource-recovery technologies.

THE ROUNDTABLE WILL, THEREFORE, BRING DIFFERENT STAKEHOLDERS TOGETHER TO ADDRESS THREE BROAD QUESTIONS:

Where are we today?

What technologies and approaches are currently available for in-situ treatment, liquid reuse and solid/resource recovery?

What enables or constrains adoption?

Do existing standards, bylaws, policies and institutional arrangements adequately support decentralised treatment and reuse?

What needs to change?

What technological, regulatory, institutional and implementation changes are required to move from individual projects and pilots towards safe, viable and scalable decentralised treatment and bulk reuse?

EXPECTED OUTCOME

The Roundtable will seek to develop a shared understanding of the current technology and regulatory landscape, identify the key gaps and implementation challenges, and arrive at a prioritised set of actions required to enable decentralised treatment and safe reuse of treated wastewater and recovered solids.

FOR MORE INFORMATION, PLEASE CONTACT:

PRADEEP KUMAR MISHRA

Deputy Programme Manager
Water Programme, CSE
Mobile: 8085443793

Email: pradeep.mishra@cseindia.org

SUBRATA CHAKRABORTY

Programme Director
Water Programme, CSE
Email: subrata.chakraborty@cseindia.org

PROGRAMME AGENDA

Registrations: 10.30 – 11.00 AM

Inaugural / Opening Session: 11.00 – 11.20 AM

- Welcome remarks
- Moderator introduces the day's structure
- **Framing note:** why this roundtable, why now

Round of introduction: 11.20 – 11.30

TEA

Session I — “Where are we today?” 11.45 AM – 12.15 PM

- **Focus:** Landscape of currently available technologies for in-situ treatment, liquid reuse, and solid/resource recovery
- **Purpose:** Establish a shared baseline understanding of what's technically possible and already deployed

Session II — “What enables or constrains adoption?” 12.15 – 1.30 PM

- **Focus:** Standards, building bylaws, regulatory approvals, monitoring/quality assurance, institutional responsibility
- **Purpose:** Establish a shared baseline understanding of what's technically possible and already deployed

LUNCH

Session III — “What needs to change?” 2.30 – 3.15 PM

- **Focus:** Technological, regulatory, institutional, and implementation changes needed to scale from pilots to citywide systems
- **Purpose:** Move from diagnosis to actionable recommendations

Closing Session 3.15 – 4.00 PM

- Summarizing key gaps and challenges identified and arriving at the “prioritized set of actions”
- **Follow up actions:** Moving towards broader framework for in-situ treatment, liquid reuse and solid/resource recovery



CENTRE FOR SCIENCE AND ENVIRONMENT

41, Tughlakabad Institutional Area, New Delhi – 110 062
Phone: 011-29956110, 29955124-25 Fax: 011-29955879