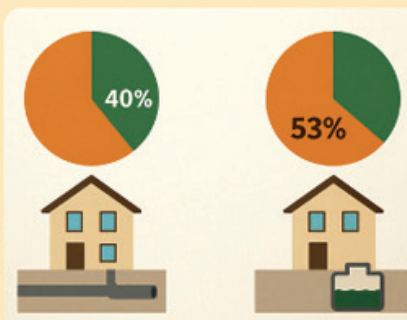




Turning Sanitation Challenges into Sustainable Solutions

Hidden Sanitation Gap & Health Hazard

- Sanitation gap: Only 40% of Indian households are sewer-connected; 53% rely on septic tanks.
- Urban challenge: Cities with negligible sewer networks, leading to dumping and overloaded sewage treatment plants.
- Environmental risk: Pathogens and solids increase STP load, while nutrient-rich nitrogen and phosphorus are wasted.
- Public health: Unsafe disposal contaminates groundwater and spreads disease.



CSIR-NEERI's Innovation



- Technology: Mechanical Dewatering and Drying System (MDDS) - indigenously designed under Indo-EU Horizon 2020 Project 'PAVITR'.
- Capacity: 65,000 litres/day; processes 20 truckloads of faecal sludge daily.
- Output: ~100 kg/day of pathogen-free, nutrient-rich organic manure compliant with Fertilizer Control Order norms.



India's first-of-its-kind faecal sludge and septage management (FSSM) plant to the Chandrapur Municipal Corporation (CMC).



Impact & Benefits

- Circular economy: Converts sanitation hazard into valuable agricultural resource.
- Decentralised solution: Compact, safe, and scalable for municipalities.
- Policy alignment: Supports Swachh Bharat Mission I & II goals.
- Groundwater safety: Reduces contamination risks from untreated faecal waste.
- Model for replication: Hailed as a blueprint for nationwide adoption.

CSIR:
**Innovating Sanitation,
Empowering
Sustainability**

