CSE Residential Training on
"Revive Your River"
(August 20-22, 2025)

The Centre for Science and Environment (CSE) successfully conducted a three-day residential training on **"Revive Your River"** from **August 20–22, 2025**, at its Anil Agarwal Environment Training Institute (AAETI), Nimli, Rajasthan. The training aimed to strengthen the capacity of state and municipal functionaries, as well as other sector stakeholders, on issues and challenges related to river revival. A total of 16 participants attended the training, representing the National Water Mission, Uttar Pradesh Jal Nigam (Rural), Indian Institutes of Technology (IITs), Indore Municipal Corporation, Delhi Pollution Control Committee and Pani Earth Foundation.

Prior to the training, on August 19, 2025, participants visited CSE's main office at the Tughlakabad Institutional Area, New Delhi. Here, CSE staff introduced them to rainwater harvesting systems, followed by a live demonstration on campus. After lunch, the participants proceeded to the AAETI for the residential training.

Training Day 1 – August 20, 2025

The first formal session, *"**Gaps and Challenges in Managing Clean Rivers and Waterbodies in Cities"*,** was conducted by **Sushmita Sengupta, Senior Programme Manager, CSE**. She highlighted the shortcomings in urban water and wastewater management and their direct impact on the health of rivers and waterbodies. The discussion emphasized that untreated sewage, poor infrastructure, and weak enforcement remain critical gaps contributing to the decline of urban rivers. Sushmita stressed the urgent need to integrate urban water management with river health. Case studies were shared to demonstrate how connecting city-level planning with ecological considerations can help restore and sustain rivers. Possible solutions for achieving cleaner and healthier waterbodies in cities were also discussed.

The next session, ***"How to Use Geospatial Tools in Demarcating the Pollution Stretches of Waterbodies in the City"*,** was conducted by **Pradeep Kumar Mishra, Deputy Programme Manager, CSE.** He demonstrated how GIS and remote sensing can be used to identify and map polluted stretches in urban rivers and lakes. The session highlighted the importance of geospatial

tools in planning interventions, monitoring water quality, and prioritizing areas for restoration. Practical examples and case studies were shared to show how mapping pollution hotspots supports better decision-making and targeted action for urban waterbody management.

The following session, ***"Collecting and Monitoring Protocol for Septage/Faecal Sludge"*****,** was conducted by **Arvind Singh Senger, Principal Scientist, Environment Monitoring Laboratory, CSE.** He explained protocols for collecting, storing, and analyzing faecal sludge and septage samples. The session emphasized how proper monitoring of these wastes is crucial for understanding their impact on river health. He highlighted the direct connection between faecal sludge management and the ecological and public health conditions of urban rivers, stressing the need for systematic practices to reduce pollution and protect waterbodies.

After the session, participants visited CSE's Environment Monitoring Laboratory, where **Sama Kalyana Chakravarty (CSE)** explained various techniques, parameters and equipments for water quality testing. This hands-on session provided practical insights into how water quality is assessed and monitored, highlighting the connection between scientific testing and effective river management.

The day concluded with Vivek Kumar Sah demonstrating the live working models of rainwater harvesting systems at the AAETI campus. This session offered participants practical understanding of sustainable water management technologies and their applications in urban and rural settings.

Training Day 2 – August 21, 2025

The second day began with a live demonstration of the AAETI wastewater system by Swati Bhatia, Deputy Programme Manager, CSE.

The first session, ***"Developing Step-by-Step Shit Flow Diagram (SFD) in Cities"*****,** was conducted by **Sarim A., Deputy Programme Manager, CSE**. He introduced the concept, role, and importance of SFDs in managing a city's wastewater. Participants learned about the SFD format, key data sources, and the process of creating an SFD. The session demonstrated how SFDs can be used to assess the volume of pollution entering city rivers, making them an essential tool for urban wastewater planning and river health management.

The next session, an exercise on ***"Mapping Sources of Pollution for Rivers"*, was facilitated by Dr. Y. R. Satyaji Rao, Director, National Institute of Hydrology (NIH), Roorkee**. Participants learned to identify and map different sources of wastewater in a city, including sewer networks, non-sewered areas, sanitation systems in slums, and other pollution sources. They worked on creating a comprehensive map of river pollution sources, including catchment areas and potential restoration sites. The session provided practical skills to visualize pollution pathways and plan effective interventions for cleaner rivers.

The following session, ***"Success Stories on Reusing Treated Wastewater at City Level – Case Study of Indore"***, was conducted by **Akash Jain, Assistant Engineer, Indore Municipal Corporation.** He shared how Indore has successfully reused treated wastewater, highlighting practical outcomes. The session demonstrated how such initiatives can reduce pollution, conserve freshwater, and support sustainable urban water management.

The final group activity based session of the day, led by **Pradeep Kumar Mishra and Swati Bhatia**, focused on ***"Developing an Action Agenda for Cleaning Rivers at City Level – Solutions for Real-Time Problems"*.** Participants engaged in discussions and presentations to identify practical measures for tackling pollution in urban rivers. They explored step-by-step methods to improve river health, including reducing waste discharge, restoring natural flows, and enhancing water quality.

The session also emphasized strategies to increase biodiversity in rivers, such as creating habitats for aquatic life and planting native vegetation along riverbanks. Participants discussed ways to implement policies effectively and translate them into actionable measures for cleaner and healthier rivers in their cities. The importance of collaboration among government agencies, communities, and other stakeholders for achieving long-term results was underscored.

Training Day 3 – August 22, 2025

The third day was dedicated to a field visit to the Okhla Sewage Treatment Plant (STP). Participants observed the plant's operations and treatment processes, gaining practical insights into large-scale wastewater management. The visit highlighted how sewage treatment plants function, the challenges in handling urban wastewater, and the importance of proper maintenance and monitoring to ensure river health.

The day concluded with a wrap-up session, where participants shared their key takeaways and discussed next steps for implementing river revival initiatives in their cities. Certificates of completion were distributed, and participants expressed appreciation for the hands-on learning, field exposure, and practical insights gained during the three-day residential training.

Photographs -