

# FINAL CONFERENCE

Wastewater treatment and reuse:  
challenges and solutions in India



Venue  
India Habitat Centre  
New Delhi



Funded by the European Union's Horizon 2020 research and innovation programme under grant agreement No 821051.  
Co-funded by Department of Biotechnology (DBT), Government of India.



THE ENERGY AND RESOURCES INSTITUTE  
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## About the project

The Energy and Resources Institute (TERI) and VITO, along with Indian and European Partners, have executed a joint project titled "**Pavitra Ganga: unlocking wastewater treatment, water re-use and resource recovery opportunities in India**". The project aims at showcasing innovative, cost effective and energy efficient solutions for the treatment of (unregulated) drains in India. By improving the existing treatment installations, as well as decentralized sewage treatment for urban and peri-urban settings, we will take advantage of the economic and development opportunities of water re-use and recovery of resources within the framework of the Circular Economy.

The objectives of the project are:

- Create policy and social support for innovative technologies through engagement of stakeholders, suggesting water government solutions and supporting policy makers.
- Map, evaluate and improve promising wastewater treatment and reuse technologies that can address Indian challenges in an efficient manner.
- Deliver actionable, robust, smart, and comprehensive solutions for quality and quantity monitoring, control and management of water resources
- Validate the selected innovative technologies for real water challenges in Indian settings at open-innovation test sites
- Establish long lasting cooperation in capacity building and knowledge sharing
- Establish future market uptake and post-project exploitation of the demonstrated innovations

## About the conference

As the project nears its conclusion, we are organizing a Final Conference titled "**Wastewater Treatment and Reuse: Challenges and Solutions in India**". The primary objective of this conference is to showcase the project's outcomes, including the water reuse and resource recovery options from wastewater and proposed technological and management options to complement conventional STP (Sewage Treatment Plant) approaches in India. Besides this, a sharing of professional knowledge and enhancement of skills of relevant stakeholders will also be a part of the conference.

## Programme Summary

- Inauguration and opening ceremony
  - Welcome speech by Dr Vibha Dhawan, Director General of TERI.
  - Inaugural address by Shri G Asok Kumar, Director General of the National Mission for Clean Ganga, Ministry of Jal Shakti, Government of India.
- Session 1: Setting the scene for wastewater treatment and reuse.
- Session 2: Pavitra Ganga Technology Pitches – outcomes and outlook.
- Session 3: Water Governance to address barriers to wastewater treatment and reuse.
- Final Conference Closure and Networking with drinks.

**Venue:** Silver Oak, India Habitat Centre, Lodhi Road, New Delhi – 110003



## Agenda

### Pavitra Ganga Final Conference

#### Wastewater treatment and reuse: challenges and solutions in India

| <b>Date:</b> 24 January 2024   |  |
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| <b>Venue:</b> Silver Oak, India Habitat Centre, Lodhi Road, New Delhi, India |  |
| <b>09:00 h – 9:40 h</b>  | <b>Registration and tea</b>  |
| <b>09:40 h – 10.20 h</b>   | <b>Opening ceremony</b>  |
| 09:40 h – 9:45 h   | Welcome and opening note – Shri Anshuman (Director, Water Resources Division, TERI)  |
| 09:45 h – 09:50 h  | The Pavitra Ganga Project: An Overview – Dr. Paul Campling (International Business Development Manager, VITO)                              |
| 09:50 h – 10:00 h  | Welcome Address – Dr Vibha Dhawan (Director General, TERI)   |
| 10:00 h – 10:10 h  | Opening Address – Shri D.K. Tewary (Scientist 'G' Department of Biotechnology, Ministry of Science and Technology, GoI)                    |
| 10:10 h – 10:20 h  | Special Address – Shri D.P. Mathuria (CE, PDO, Central Water Commission, Ministry of Jal Shakti, GoI)                                      |
| <b>10:20 h – 12:15 h</b>   | <b>Session 1 – Setting the scene for wastewater treatment and reuse (Moderator: Prof Purnendu Bose)</b>                                    |
| 10:20 h – 10:30 h  | Keynote 1: Water quality issues in India: environmental and social impacts – Anshuman (TERI)   |
| 10:30 h – 10:40 h  | Keynote 2: Wastewater treatment innovations for water reuse – Prof. Christian Kazner (HBO)   |
| 10:40 h – 10:50 h  | Keynote 3: Developments and potential of anaerobic wastewater treatment – Prof. Merle De Kreuk (TU Delft)                                  |
| 10:50 h – 11:00 h  | Keynote 4: New approaches and innovations in smart water management – Dr. Paul Campling (VITO)   |
| 11:00 h – 11:10 h  | Keynote 5: Water resources challenges and solutions in the Ganga Basin – Dr. Dinesh Kumar (IRAP)   |
| 11:10 h – 11:20 h  | Keynote 6: Current trends in analytical techniques for monitoring water and wastewater quality – Prof. Shaikh Ziauddin Ahammad (IIT Delhi) |
| 11:20 h – 11:30 h  | Keynote 7: Application of membranes to treat wastewater – cases using IPC membranes – Dr Ajay Popat (Ion Exchange)                         |
| 11:30 h – 11:40 h  | Q & A  |
| <b>11:40 h – 13:00 h</b>   | <b>Session 2A – Pavitra Ganga Technology Pitches – outcomes and outlook (Moderator: Prof Saroj Sharma)</b>                                 |
| 11:40 h – 11:50 h  | Pavitra Ganga approach to wastewater treatment and reuse piloting – Prof. Christian Kazner (HBO)   |
| 11:50 h – 12:00 h  | Andicos (Aditya Sharma/Sofie Van Ermen/S. Sankararaman)  |
| 12:00 h – 12:10 h  | Self-forming dynamic Membrane Bioreactor (Alfieri Pollice)   |
| 12:10 h – 12:20 h  | Constructed wetland plus (Luca Ofiera/Auchitya Verma)  |
| 12:20 h – 12:30 h  | Structured adsorbents (Bart Michielsen/Sofie Van Ermen/Elena Seftel)   |
| 12:30 h – 12:40 h  | Clean blocks (Antonella Piaggio/Merle De Kreuk)  |



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|-------------------|--|
| 12:40 h – 12:50 h | Q & A  |
| 12:50 h – 13:50 h | <b>Networking Lunch break</b>  |
| 13:50 h – 14:00 h | <b>Conference Group Photo</b>  |
| 14:00 h – 14:30 h | <b>Guest of Honour Address</b>   |
| 14:00 h – 14:03 h | Welcome and Conference Snapshot – Shri Anshuman (Director, Water Resources Division, TERI)   |
| 14:03 h – 14:05 h | The Pavitra Ganga Project: An Overview – Dr. Paul Campling (International Business Development Manager, VITO)                      |
| 14:05 h – 14:15 h | Special Address – Dr Vibha Dhawan (Director General, TERI)   |
| 14:15 h – 14:30 h | Keynote Address – Shri G Asok Kumar (Director General, NMCG, Ministry of Jal Shakti, Govt. of India)                               |
| 14:30 h – 15:25 h | <b>Session 2B – Pavitra Ganga Technology Pitches – outcomes and outlook (Moderator: Prof Saroj Sharma)</b>                         |
| 14:30 h – 14:40 h | Photo activated sludge (Eldon R. Rene/Ashish)  |
| 14:40 h – 14:50 h | AquaTrack and Ozonation (Sudhir/Ulla Chowdhury)  |
| 14:50 h – 15:00 h | Citizen based water quality surveying (Isha Parihar)   |
| 15:00 h – 15:10 h | Pavitra Ganga Water Management Dashboard (Sofie Van Ermen)   |
| 15:10 h – 15:25 h | Recommendations and next steps for wastewater treatment and water reuse – Prof. Christian Kazner (HBO)                             |
| 15:25 h – 15:35 h | Q & A  |
| 15:35 h – 15:45 h | <b>Coffee / Tea Break</b>  |
| 15:45 h – 17:00 h | <b>Session 3 – Water Governance to address barriers to wastewater treatment and reuse (Moderator: Dr Paul Campling)</b>            |
| 15:45 h – 15:55 h | Keynote 8: Stakeholder engagement and lessons learnt to promote wastewater treatment and reuse – Prof Tineke Hooijmans (IHE Delft) |
| 15:55 h – 16:05 h | Keynote 9: Wastewater safety planning – a call for action – Dr Claire Furlong (IHE Delft) and Lena Breitenmoser (FHNW)             |
| 16:05 h – 16:15 h | Keynote 10: Policy recommendations to promote wastewater treatment and reuse in India – Anshuman (TERI)                            |
| 16:15 h – 16:25 h | Q & A  |
| 16:25 h – 16:45 h | Closing remarks, the way forward and vote of thanks  |
| 16:45 h – 18.00 h | <b>Conference networking with drinks &amp; snacks</b>  |

## Partners

