Training Programme

The Water Vision- From Conservation to Circularity

Course Details

Module 1: Water Realities – Setting the Stage

- India's Water Landscape.
- Overview of India's Regulations and Policies on Water and Wastewater.

Module 2: Water Use Efficiency and Innovations in Water Technologies

- Practical approaches to water audits, including identifying usage hotspots.
- Water Efficiency Practices.
- Overview of Emerging Technologies in Water Management: Desalination, rainwater harvesting, and advanced filtration systems.
- IoT in Water Management: Automated systems for irrigation and industrial water use optimization.

Module 3: Wastewater Management and Innovations in Wastewater Technologies

- Overview of treatment stages: primary, secondary, and tertiary treatment.
- Zero Liquid Discharge (ZLD): Overview of wastewater elimination and water recovery, highlighting its environmental and economic advantages in industrial applications.
- Innovations in recycling and reuse. Application of treated wastewater in operations.

Module 4: Circular Economy in Water and Wastewater

- Integration of ZLD into circular economy models.
- Global & Indian Examples of Water Circularity

Duration: 6 hours (Online)

Trainers' Profiles

Dr. Dipankar Saha
Former Member, Central Ground Water Board, Ministry of Jalshakti, Govt. of India

Dr Saha superannuated as Member (Head Quarters), Central Ground Water Board, Ministry of Jalshakti, Govt. of India. He also served as Member Secretary, Central Ground Water Authority, Govt. of India and Head Training Institute at Raipur India. He is Ph.D. on Groundwater management from Indian Institute of Technology (Dhanbad). Post Superannuation, he served as Advisor, SDC Funded WAPRO Project in India; Advisor- Groundwater, Govt of Gujarat; Adjunct Faculty of IIT Kharagpur. He also remains as Consultant to IWMI, Colombo and IAEA Vienna.

Presently he is Chair Prof at MRIIRS at Delhi NCR and President of the Board of Water for People India. He also served as Chairman Accreditation Committee for Ground Water Consultant Organizations (GWCO) and Member Accreditation Committee for Exploration Agency and Mining Plan Preparation Agencies (EA/MPPA). NABET, Quality Council of India.

He has published more than 50 papers and edited **three books** published by the **Springer**; a) Clean and Sustainable Groundwater in India 2017, b) Water Governance Challenges and Prospects, 2019, c) Managed Groundwater Recharge and Rain water Harvesting: Outlook from the Developing Countries, 2024. He also Edited Aquifer Systems in Indian Subcontinent. Special Issue Journal of Hydrology: Regional Studies in 2014.

The awards received a) National Geo-Science Award 2010 by Government of India, b) Ground Water Excellence award from International Association of Hydrogeologist and c) Eminent Water Resources Engineer Award 2019 from IWRS, IIT Roorkee. He has delivered Invited Talks/Foundation Day Talk/Colloquium at many research labs, IITs, NITs, Universities in India and JICA Tokyo, World Bank Conference at Kathmandu, IAEA Workshop at Viena and Ho Chi Minh City, World Water Week at Stockholm, University of Manchester, CEW at London and Oxfordshire, IAH Congress in Dajeon, Korea, Lincoln University UK and other places.

Dr. Manoranjan Hota

Former Advisor, Ministry of Environment, Forest and Climate Change (MoEFCC), Govt. of India

Dr. Manoranjan Hota has over three decades of experience in policy planning, environmental management, pollution control, chemicals and waste management, sustainability, and environmental governance. During his tenure at MoEFCC and the Central Pollution Control Board (CPCB), he played a key role in developing federal and state-level policies on waste management. As an expert member in Environmental Impact Assessment (EIA), he reviewed and contributed to policies on air, water, and solid waste management, including plastic, biomedical, e-waste, and hazardous waste. He was instrumental in drafting and reviewing the Plastic Waste Management, Municipal Solid Waste Management, and Fly Ash Rules, integrating Extended Producer Responsibility (EPR) into the regulatory framework.

Dr. Hota has extensive expertise in air and water pollution control, including standards development and the adoption of best available technologies. He led initiatives on Common Effluent Treatment Plants (CETPs) and the formulation of Minimal National Standards for industries such as Chlor-Alkali and Manmade Fibre. His project management experience spans World Bank, GIZ, NORAD, and SIDA-funded projects on pollution and waste management. These involved feasibility studies, project implementation across states and industrial clusters, institutional capacity building, and the construction of wastewater treatment facilities to ensure regulatory compliance.

He has served in several advisory roles, including Chairman of the E-Waste Management Advisory Committee at CPCB and member of the Expert Group for Plastic and Solid Waste Management. Additionally, he has also advised the Skill Council for Green Jobs, contributing to capacity-building initiatives in the environmental sector.