

# Urban Water and Wastewater Management for India

## Overview

'Water crisis' is the global problem especially in the third world countries like India. The major challenge for water supply authorities is to provide continuous and safe water to the consumer. The supply of clean water to the inhabitants on a 24x7 basis, which can be drunk straight from the taps, is still a distant dream in Indian metropolis. Only limited progress by providing good quality of water to its core area was observed in recent past.

In terms of wastewater management, utilities have rarely managed to treat its wastewater to a secondary level reliably and consistently. As a result, many water bodies are getting increasingly more and more contaminated because of continuous discharge of untreated or partially treated industrial and domestic wastewater. The contamination now includes domestic organic pollutants, faecal coliform, heavy metals, hazardous chemicals and pharmaceutical wastes, etc. As a result, the sources of drinking water, both from surface and groundwater bodies are becoming increasingly polluted, which demands expensive and extensive treatment prior to use. The main objective of the authorities of the water sector is to maintain a robust system which is technically, environmentally and financially sustainable.

The focus of the Executive Training Programme will be how to move from the present unacceptable water supply and wastewater treatment systems to an acceptable situation that is compatible to the current level of India's economic development and also meet the expectations and aspirations of a rapidly growing middle class.

The course has been specially designed so that it becomes a hands-on learning exercise of the state-of-the-art of usable knowledge. The lectures will be in the mornings. In the afternoons, participants will take the actual water problems of selected Indian water utilities and then find solutions that are realistic and implementable.

<b>Modules</b>	<b>A: Duration</b> <b>April 30-May 4, 2018</b> <b>B: Venue</b> <b>School of Water Resources, Indian Institute of Technology Kharagpur, Kharagpur, India - 721302</b>
<b>You Should Attend If...</b>	<b>Number of participants for the course will be limited to fifty.</b> <ul style="list-style-type: none"> <li>▪ you are an Executive, engineer and researcher from academia industry and government organizations including R&amp;D laboratories.</li> <li>▪ you are a Student or Faculty from reputed academic institutions.</li> </ul>
<b>Fees</b>	The participation fees for taking the course is as follows: <b>Participants from abroad: US \$750</b> <b>Industry/ Research Organizations: INR 15000</b> <b>Academic Institutions (Faculty): INR 5000</b> <b>Academic Institutions (Students): INR 1000*</b> <b>Students of IIT Kharagpur: NIL</b> <b>* Only returnable DD to be sent for registration fees for the students of academic institution. Online payment is not allowed for students.</b> The above fees (exclusive of GST) and includes the use of all instructional materials assigned for the course and access to 24 h free internet facility. The participants will be provided with accommodation on payment basis.

## The Faculty



The Training Programme will be conducted by **Prof Asit K. Biswas**, universally acknowledged as one of the world's leading authorities on water and environmental management. He is co-founder of the Third World Centre for Water Management in Mexico and currently the Distinguished Visiting Professor at the Lee Kuan Yew School for Public Policy in Singapore. Formerly Professor in UK, Canada and Sweden, he was member of the World Commission on Water, and a founder of the International Water Resources Association and World Water Council. He has been senior advisor to 20 governments, six Heads of United Nations Agencies, two Secretary-Generals of OECD, and many other major international and national organizations. He is Past President of the International Water Resources Association and is founder and co-chair of the Club of Tokyo. Among his numerous awards are Crystal Drop and Millennium Prizes of the International Water Resources Association; Walter Huber Prize of the American Society of Civil Engineering. He received the Stockholm Water Prize, considered to be the Nobel Prize for area of water, for 'his outstanding and multi-faceted contributions to global water resource issues;' Person of the Year Award from Prime Minister Harper of Canada; Aragon Environment Prize of Spain; 'Excellence Award for Achievements' from New Global Indian Foundation; 'Hind Rattan Award' (Jewel of India). Reuters named him as one of the top 10 water trailblazers of the world. He was selected by the Impeller magazine as a 'true global water hero', and was named the world's second most influential water industry leader by Water and Wastewater International of UK. Prof. Biswas was a member of the Global Agenda Council of the World Economic Forum and is currently member of the International Advisory Board, Pictet Investments, Geneva; member of the Advisory Board, Indian Institute of Technology, Kharagpur; and Strategic Advisor, Singapore International Water Week. He advises Chairman of the Board or CEOs of three major multinational companies which are listed within the first 50 of the Global 500 companies, on corporate strategies, technological issues and social responsibilities. Prof. Biswas is the founder of the International Journal of Water Resources Development and was its Editor-in-Chief for its first 29 years. He has authored or edited 84 books and has published well over 650 scientific and technical papers. His work has now been translated into 38 languages. He is regular contributor to many national and international newspapers on resource and development related issues and also is a television commentator in three continents.



**Dr. Cecilia Tortajada** is Senior Research Fellow, Institute of Water Policy, Lee Kuan Yew School of Public Policy, National University of Singapore. The main focus of her work at present is future of water, food, energy and environmental governance, and urban water and wastewater management. She has been advisor to major international institutions like FAO, UNDP, JICA, ADB, OECD and GIZ, and has worked in countries in Africa, Asia, North and South America and Europe on water, natural resources and environment policies. She is a member of the OECD Initiative in Water Governance. Her book on Singapore Water Story comprehensively analyses the enabling conditions that allowed the city-state to advance from that of an average third world utility to be one of the best in the world in about 25 years. She is a Past President of the International Water Resources Association (IWRA), Editor-in-Chief of the International Journal of Water Resources Development, Associate Editor of Water International, and member of the Editorial Boards of the International Journal of Water Governance, Journal of Natural Resources Policy Research, Urban, Planning and Transport Research Journal and Journal on Frontiers in Environmental Science; and Editor of book series with Oxford University Press and Springer. She is the author and Editor of more than 30 books by major international publishers. Her work has been translated into Arabic, Chinese, French, German, Japanese and Spanish languages. In 2017, IWRA awarded her its most prestigious Crystal Drop Award for her "Outstanding contributions to water management."



**Dr. Ashok Kumar Gupta** is a Professor in the Environmental Engineering Division of the Civil Engineering Department and Head, School of Water Resources, Indian Institute of Technology Kharagpur and is actively involved in teaching, research and consultancy. His research interests are primarily focused on water treatment, wastewater treatment and reuse, environmental impact assessment, monitoring and modelling of air and water pollution, geogenic pollutant scavenging etc. He has more than 75 publications in top-ranking International journals and is credited with more than 3000 citations in Scopus. Dr. Gupta is a renowned technical consultant in the arena of environmental engineering having more than 30 completed/ongoing projects of national and international importance to his credit. He has served as the guest editor of the International Journal of Ecology and Development for the Special issue in 2006 and was in the Editorial Advisory Board of Recent Patents on Chemical Engineering in 2008.

## Course Co-ordinator

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