



Water Futures of Urban and Rural Landscapes

Overview

Water is one of the most valuable and critical natural resources in both urban and rural landscapes. Water availability and its quality are becoming serious challenges in India and many part of the world due to increased demand and pollution. Excessive pumping of groundwater in both urban and rural areas is another concern that is affecting sustainable use and future water security. Becoming a professional in the field of water and land resources management requires understanding of the water cycle, water quality issues, interactions between land use and water, impacts of human activities on both water availability and quality and planning for sustainable water use in different landscapes.

Urbanisation in India is a major driver of significant changes in land and water use in both urban and rural landscapes and it is resulting in hydrologic changes that have environmental, economic and social consequences. These activities require appropriate and integrated management strategies for sustainable water use in catchment.

In this course, the hydrologic cycle will be explored at varying spatial scales in urban and rural contexts. Hydrologic, environmental, economic and social perspectives will be used in the examination of the demand and the sustainable use of water.

Course Aim

This course aims to present different land and water management concepts and theoretical underpinnings and help participants to research a chosen, real-world topic that is important for water and land management and improving current situation. Upon successfully completing this GIAN short course, the participants will be able to:

1. Synthesise and evaluate different concepts and approaches to sound water management in the context of urban and rural landscapes.
2. Analyse and evaluate the nature of demands for water in different landscapes and for different users and the difficulties in matching supply with demand.
3. Assess different sources of water and uses and analyse the issues related to rainwater harvesting, water conservation and recycling.
4. Describe how human activities affect the water quality and health of waterways; and differentiate the impacts of factors such as population pressure and climate change on the availability of water for different uses.
5. Research selected water issue in a workshop setting to apply what they learnt through lecture inputs.
6. Use social, cultural, economic, policy and institutional perspectives to relate sustainable water supply with demand.

Objectives

The primary objectives of the course are as follows:

- i) Expose participants to the water features
- ii) Build confidence and capability amongst the participants
- iii) Provide exposure to practical problems and their solution through case studies and
- iv) Enhance the capability of participants to water features related problems in engineering system.

Internationally faculty **Prof Basant Maheshwari** an academician, researcher and practitioner with proven knowledge, experience and demonstrable ability in teaching, consultancy, research and training will deliver lecture and discuss case studies in the course. The course will be planned and offered as per the norms set by the GIAN programme.

Course participants will learn these topics through lectures and hands-on experiments. Case studies and assignments will also be shared among all to stimulate research motivation of participants.

Course	Water Futures of Urban and Rural Landscapes: February 09–13, 2018 No of participants for the course will be limited to fifty.
You Should Attend If...	Participants from Industry, Research Organisations, Faculty and Students from all over the world who are interested in the course are welcome to register for the course.
Fees	The participation fees for attending the course are as follows: Participants from abroad: : US \$100 Industry participants: Rs. 5,000/- Faculty or Scientists of Institutions: Rs. 3,000/- Academic /Research Institutions-Students: Rs. 1,500/- The above participation fee includes soft copy of all instructional materials, computer use for tutorials and internet facility. The participants will also be provided with shared double occupancy accommodation at the university guest house and Indian vegetarian food on payment will be provided at subsidized rates. Hotel accommodation will be arranged on payment basis at nearby places, if requested. For more details please visit http://www.gbpuat.ac.in/gian/index.html

The Faculty



Prof. Basant Maheshwari is a Professor in Water, Environment and Sustainability at School of Science & Health, Western Sydney University, Hawkesbury Campus, **Penrith, NSW 2751, Australia.**

His research interests include Water resources planning, surface and groundwater management, irrigation and environmental hydrology with a focus on engaging stakeholders, community and government agencies to enhance sustainability of water and land use in both urban and rural landscapes.

His professional heights include **214 publications** in refereed journals, 10 books, 25 book chapters and many technical reports and special issues of journals. He is associated with many Journals like Editorial Board Member/Associate Editor of international, peer reviewed journals like Journal of Agricultural Water Management (Elsevier Publishers, The Netherlands); Journal of Biosystems Engineering (Elsevier Publishers, The Netherlands); Journal of Soils and Sediments (Ecomed Publishers, Germany); and Journal of Irrigation and Drainage Engineering (American Society of Civil Engineers, USA). He is a Recipient of *2010 Collaboration and Leadership Award and 2009, 2010 Vice-Chancellor's Excellence Award. He is working on many R &D and Consultancy projects.*

https://www.westernsydney.edu.au/staff_profiles/uws_profiles/professor_basant_maheshwari



Dr H J Shiva Prasad has research, development and teaching experience of more than 30 years in the field of Hydrology and Water resources. He is a Professor in the Dept of Civil Engineering, College of Technology, G B Pant University of Agriculture and Technology, Pantnagar, Uttarakhand State His research interests include Ground Water Hydrology, Water Resources Planning and Management, Application of Advanced

Tools such as Artificial Neural Networks, Remote Sensing & GIS and water governance.



Dr Mrs. Jyothi Prasad is a Professor in the Department of Civil Engineering, College of Technology, G B Pant University of Agriculture and Technology, Pantnagar, Uttarakhand State. Her area of interest is *Hydrology* with specialisation in Water Shed Management, Irrigation Water Management and Water Resources Management.

She got more than twenty eight years of teaching and industrial experience at different institutions/universities. She has more than fifty publications of National and International Journals / Conferences to her credit. She has organised more than fifteen training / workshop programmes for the faculty of engineering colleges, scientists, field engineers funded by GIAN, DST, AICTE-ISTE, TEQIP WORLD BANK project etc and attended more than forty training programmes/workshops organised by UNESCO, DFID, SDC, DST, GIAN, DOE, AICTE, ISTE, NAAC, ICH, NORAD, IGSH.



Course Coordinator

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For registration visit

<http://www.gian.iitkgp.ac.in/GREGN>

For information visit

<http://www.gbpuat.ac.in/gian/index.html>