



WATER SOCIETY AND SUSTAINABILITY

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INTENDED AUDIENCE : Located at the intersections across science, society, technology and sustainability, the course will be highly relevant for students from different disciplinary backgrounds including: agriculture, water resource engineering, environmental sciences, rural development, civil engineering, geology and humanities and social sciences.

INDUSTRY SUPPORT : Bengal National Chamber of Commerce and Industry. Other companies interest (some of which have approached the instructor) can be explored.

COURSE OUTLINE :

The global water scenario is beset by multiple challenges: water availability, severe inequity to water access and entitlements across social and spatial lines, frequent floods and droughts, disputes over corporate control of limited water resources, etc. The world appears to be on track to halve the number of people without access to safe clean water. However, in the urban Global South, this success masks regional and local inequalities and a process of urbanization without infrastructure, which is particularly acute in the growing peripheries of existing cities. Interestingly enough, lessons can be learnt from small-scale community water conservation practices and localized needs-driven initiatives. Within this context, it is important to understand and address water beyond the physical and technical attributes and explore the complex and cyclical processes through which water shapes, and, is in turn shaped by society. The course is located at the intersections across water, technology, science and society towards sustainable future. It combines fundamental theoretical, methodological approaches and empirical case studies to introduce and familiarize students with water-society relationship: the contemporary challenges and prospective potentials.

ABOUT INSTRUCTOR :

Prof. Jenia Mukherjee is Assistant Professor at the Department of Humanities and Social Sciences, Indian Institute of Technology Kharagpur. Her research interest spans across environmental humanities, transdisciplinary water research and urban studies. In 2013, she was awarded the World Social Science Fellowship by the International Social Science Council. In 2010 and 2015 she received the Department of Foreign Affairs and Trade (DFAT), Government of Australia sponsored Australian Leadership Awards Fellowship (ALAF) for her research on riverine island communities. She had conducted and organized several workshops, conferences and seminars. She had recently organized an AICTE course on 'Combining Hydrology and Hydrosocial: Towards Comprehensive Understanding of River Systems at IIT Kharagpur (October 2017)'. She had published three books, several articles and book chapters in peer-reviewed journals and edited volumes. Presently, she is leading three international projects funded by AHRC-ICHR, EU-ICSSR and SSHRC (Canada) at IIT Kharagpur apart from and along with co-investigation of multiple projects funded by national agencies like DST. She received the prestigious Carson Writing Fellowship in 2019 from the Rachel Carson Center for Environment and Development, Munich (Germany) for completing her book: Blue Infrastructures of Kolkata: Natural History, Political Ecology and Urban Development in Kolkata (Springer Nature: Singapore, 2020). She is member at the international advisory committee for the TU-Delft conference on Sociohydrology to be held in September 2021. She is the lead (guest) editor for the (forthcoming: 2022) Special Issue on 'Sociohydrology: Solutions Related to Actual Interventions', Frontiers in Water.

COURSE PLAN :

Week 1: 1.Setting the Context

2.Beyond Hydrology

3.Socio Hydrology

4.Political Ecology of Water

5.Hydrosocial

Week 2: 6.Critical Physical Geography

7.The South Asian Context

8.Water Harvesting and Water Use Techniques in Ancient India 1

9.Water Harvesting and Water Use Techniques in Ancient India 2

10.Water Harvesting and Water Use Techniques in Ancient India 3

Week 3: 11.Water Technology in Medieval India 1

12.Water Technology in Medieval India 2 13.'Colonial Hydrology'

14.Dams and Development in Contemporary India

15.The Farakka Barrage Project: Historical and Technical Details

Week 4: 16.The Farakka Barrage Project: Socio-environmental Implications

17.Urban Waters: Historical and Political Ecological Perspectives

18.Transforming Trajectories of Blue Infrastructures of Kolkata

19.Peri-urban Water Justice in the Global South

20.Discussion and Conclusion