



भारतीय  
प्रौद्योगिकी  
संस्थान  
काशी हिन्दू विश्वविद्यालय

**IIT** INDIAN  
INSTITUTE OF  
TECHNOLOGY  
BANARAS HINDU UNIVERSITY



जल शक्ति मंत्रालय  
MINISTRY OF  
JAL SHAKTI



EMBASSY  
OF DENMARK  
New Delhi



GROUND WATER DEPARTMENT  
(Namami Gange and Rural Water Supply Department)  
Ministry of Jal Shakti  
Government of Uttar Pradesh

### 3rd International Conference on

## River Health: Assessment to Restoration (RHAR), 2023

With Special Session on

Indo-Danish Smart Laboratory on Clean Rivers (SLCR)

October 12<sup>th</sup>, 2023

at Swatantrata Bhawan, BHU Campus, Varanasi (U.P.)

Organized by: Department of Civil Engineering, IIT(BHU) Varanasi

### PROGRAM SCHEDULE

Timing	Event
08:00 – 09:20	Registration, High-Tea, and Networking
09:20 – 09:30	Opening Ceremony: <i>Kulgeet</i> and <i>Deep Prajwalan</i>
<b>THOUGHT LEADER SESSION</b>	
<b>Session I: Understanding the Clean River with the Perspective of Ministries/ Schemes</b>	
<b>Chair: Prof P K Singh, IIT(BHU)</b> <b>Co-Chair: Dr Anitha K Sharma, Danish Embassy</b>	
09:30 – 10:00	Understanding the Clean River with the Perspective of Ministries/ Schemes 1. <b>Mr. Hitesh Vaidya</b> , Director, NIUA 2. <b>Shri D. P. Mathuria</b> , NMCG, Executive Director (Technical) 3. <b>Dr. V. K. Upadhyay</b> , Director, SGWD, UP
<b>Session II: Clean River with the perspective of Think Tanks &amp; Social Organisations</b>	
<b>Chair: Dr V. R. Desai, Director IIT Dharwad</b> <b>Co-Chair: Dr P Nag, Director, SHEPA, Ex VC, MGKVP</b>	
10:00 - 11:30	1. <b>Prof. R. S. Verma</b> , MMNIT Allahabad, Prayagraj 2. <b>Dr. Varinder Kanwar</b> , CEO, Quality Council of India (QCI) 3. <b>Prof. Mohd. Javed</b> , IIT Guwahati 4. <b>Prof. Vikrant Jain</b> , IIT Gandhinagar 5. <b>Shri Basudev Panda</b> , GM, Banaras Locomotive Works (BLW), Varanasi 6. <b>Shri Bhola Singh</b> , CMD, Northern Coalfields Limited (NCL) 7. <b>Dr. G. K. Prabhu</b> , Manipal University, Jaipur (MUJ)
11:30 - 11:45	<b>BIO-BREAK</b>

### Session III: International Perspective on Clean River

**Chair: Shri D. P. Mathuria, NMCG**

**Co-Chair: Dr Anitha K Sharma, Danish Embassy**

<b>11:45 - 13:00</b>	<ol style="list-style-type: none"><li>1. <b>Dr. Anitha K Sharma</b>, Counsellor in Urban Development, Danish Embassy (Denmark)</li><li>2. <b>Prof. Herve Piegay</b>, Research Director, CNRS (France)</li><li>3. <b>Dr. Antti Herlevi</b>, Director of Water-Related Business Development, Finland Embassy (Finland)</li><li>4. <b>Ms. Laura Sustersic</b>, Project Director, GIZ (Germany)</li><li>5. <b>Prof. Meine Piter Van Dijk</b>, Maastricht School of Management (MSM), (Netherlands)</li><li>6. <b>Ramboll</b> (Singapore) (<b>ONLINE</b>)</li><li>7. <b>Prof. Peter Mollinga</b>, Professor, University of London (UK)</li><li>8. <b>Prof M. S. Babel</b>, Professor, Asian Institute of Technology (AIT), Thailand</li><li>9. <b>Prof. Ayasha Akter</b>, Professor, Bangladesh Agricultural University (BAU), (Bangladesh)</li></ol>
<b>13:00 – 14:00</b>	<b>LUNCH BREAK</b>

### INAUGURAL SESSION

<b>14:00 - 14:05</b>	<i>Deep Prajvalan</i> , Garlanding of the Bust of Mahamana Ji, Clean Ganga Sankalp, and <i>Kulgeet</i>
<b>14:05 - 14:10</b>	Opening Remark by <b>Prof. P. K. Singh</b> , Civil Engineering Department, IIT(BHU)
<b>14:10 – 14:15</b>	Welcome Address by <b>Prof. S. Mandal</b> , Head, Civil Engineering Department, IIT(BHU)
<b>14:15 - 14:20</b>	Welcome Address by <b>Prof. P. K. Jain</b> , Director, IIT(BHU) / Dean (R&D), IIT(BHU)
<b>14:20 - 14:25</b>	Address by <b>Mr. S. Rajalingam</b> , District Magistrate, Varanasi
<b>14:25 - 14:30</b>	Address by <b>Mr. Hitesh Vaidya</b> , Director, National Institute of Urban Affairs (NIUA)
<b>14:30 - 14:35</b>	Address by <b>Mr. G Asok</b> , Director General, National Mission for Clean Ganga
<b>14:35 – 14:45</b>	Address by Guest of Honour– <b>Mr. Freddy Svane</b> , Ambassador, Royal Danish Embassy in India
<b>14:45– 15:00</b>	Address by Chief Guest – <b>Shri Swatantra Dev Singh Ji</b> , Hon'ble Minister, MoJS, GoUP
<b>15:00 – 15:05</b>	<b>Felicitation Ceremony</b>
<b>15:05 – 15:10</b>	Vote of Thanks by <b>Dr. Anurag Ohri</b> , Department of Civil Engg., Department, IIT(BHU)
<b>15:10 – 15:30</b>	<b>TEA BREAK</b>

**TECHNICAL SESSIONS RHAR 2023 and SLCR**

	<b>TECHNICAL SESSION I Planning to Implementation</b>	<b>TECHNICAL SESSION II Nature-based Solutions in the River Rejuvenation</b>
	<b>Chair:</b> Mr. Hitesh Vaidya, Director, NIUA <b>Co-Chair:</b> Dr Agnivesh, IIT(BHU)	<b>Chair:</b> Herve Piegay, France <b>Co-Chair:</b> Prof Vikrant Jain, IIT Gandhinagar
	(Venue: Senate Hall) Google Meet Link: <a href="https://meet.google.com/cbm-vokp-svv">https://meet.google.com/cbm-vokp-svv</a>	(Venue: Conference Room) Google Meet Link: <a href="https://meet.google.com/eju-hctq-vyo">https://meet.google.com/eju-hctq-vyo</a>
<b>15:30-16:45</b>	<b>Presentation 1:</b> Concepts developed in SLCR by <b>Mrs. Rajni, Ramboll India</b>	<b>Presentation 1:</b> Concepts developed in SLCR by <b>Ramboll, India</b>
	<b>Presentation 2:</b> <b>Prof. V. Datta, BBAU</b>	<b>Presentation 2:</b> WRI on Remote Sensing-Based WQM by <b>Dr.A. Ohri, IIT(BHU)</b>
	<b>Presentation 3:</b> GIZ on River Basin Planning, Ramganga and Tapi river basin plans by <b>Dr. Sumit Gautam, GIZ</b>	<b>Presentation 3: (ONLINE)</b> NCB concept developed in Udaipur
	<b>Presentation 4:</b> NIUA on URMP by <b>Dr. Victor Shinde, NIUA</b>	<b>Presentation 4:</b> <b>Prof. Meine Piter VanDijk, Netherlands</b>
	<b>Presentation 5: (ONLINE)</b> Maharashtra IWRM Plan by <b>Dr. Prof. Pennan Chinnasamy, IIT Bombay</b>	<b>Presentation 5: (ONLINE)</b> Demonstration of Biodiversity Park by <b>Prof. C R Babu, New Delhi</b>
	<b>Presentation 6:</b> Mike SHE Study in India by <b>Dr. Kuldeep Pareta, DHI India</b>	<b>Presentation 6:</b> Case Study by <b>Ramboll, India</b>
	<b>Presentation 7: (ONLINE)</b> The Room for River concept by <b>Mr Luit-Jan Dijkhuis, Ministry of Infrastructure &amp; Water Management, Govt. of the Netherlands</b>	
<b>16:40 – 16:50</b>	Concluding Remarks from the Chairperson	Concluding Remarks from the Chairperson
<b>16:50 - 17:00</b>	<b>SESSION TEA</b>	

	<b>TECHNICAL SESSION III</b> Water Conservation Innovations and Best Practices	<b>TECHNICAL SESSION IV</b> Carbon-Neutral and Water-Positive
	<b>Chair:</b> Dr V Upadhyay, Director, SGWB <b>Co-Chair:</b> Dr Pramod Soni, IIT(BHU)	<b>Chair:</b> Shri D. P. Mathuria, NMCG <b>Co-Chair:</b> Dr Victor R. Shinde, NIUA
	(Venue: Senate Hall) Google Meet Link: <a href="https://meet.google.com/cbm-vokp-svv">https://meet.google.com/cbm-vokp-svv</a>	(Venue: Conference Room) Google Meet Link: <a href="https://meet.google.com/eju-hctq-yvo">https://meet.google.com/eju-hctq-yvo</a>
<b>17:00 – 17:55</b>	<b>Presentation 1:</b> Dr. Herve Piegay, Director CNRS, France	<b>Presentation 1:(ONLINE)</b> Water Positive in Rural Perspective by Dr. Heeralal, Special Secretary Irrigation, GoUP
	<b>Presentation 2:(ONLINE)</b> Water Conservation Initiative by Ground Water Department, GoUP, presented by Mr. Puneet Maurya, Geophysicist.	<b>Presentation 2:</b> Concepts developed in SLCDr. Nikhilesh, IIT(BHU)
	<b>Presentation 3:</b> Water Security by Prof. M S Babel, Prof. Sandhya Babel, AIT	<b>Presentation 3:</b> Capacity building of Villages (UNOPs) Dr. Vinod Mishra, Country Manager, UNOPS
	<b>Presentation 4:</b> RCA by Commissioner, Mr. Vishal Singh Ayodhya	<b>Presentation 4:(ONLINE)</b> Carbon Neutrality at Palli Village by Prof. Virendra Kumar Vijay, IIT Delhi, National Coordinator, Unnat Bharat Abhiyan (UBA)
	<b>Presentation 5:</b> RCA by Bhubaneswar	
<b>17:55 – 18:00</b>	Concluding Remarks from the Chairperson	Concluding Remarks from the Chairperson

<b>15:30 – 18:00</b>	<b>Technical Sessions</b>
<b>15:30 – 16:45</b>	<b>Technical Session 1</b> Gopal Tripathi Auditorium, Department of Chemical Engg., IIT(BHU)
	<b>Theme 1: Techniques and tools for identification of ‘water stressed’ and ‘water positive’ regions and methods of hydrological enrichment on catchment scales</b> <b>Chair-</b> Dr. Ashwani Kumar Agnihotri (Delhi University) <b>Co-chair-</b> Dr. Sujana Dhar (Hydrologist) <b>Keynote address:</b> Prof. Santosh G Thampi (NIT Calicut) [1779] 1. Yash Duggad (IIT Gandhinagar) [5089] 2. Rajat Mishra and Yogesh S Patel (Sankalchand Patel Uni. Gujarat) [6546] 3. Chiranjit Singha (IGNOU) [3856] 4. Yashwi Joshi and Mallickarjun Joshi (BHU) [5590]
<b>16:45 – 17:00</b>	<b>Tea Break</b>

	<b>Technical Session 2</b> <b>Gopal Tripathi Auditorium,</b> <b>Department of Chemical Engg., IIT(BHU)</b>
<b>17:00 – 18:00</b>	<b>Theme 4: Ecological indices of river health and conceptual frameworks on world rivers</b> <b>Chair- Prof. Santosh G Thampi (NIT Calicut)</b> <b>Co-chair- Dr. Ashwani Kumar Agnihotri (Delhi University)</b> <b>Keynote address: Prof. Venkatesh Datta (BBAU Lucknow) [8955]</b> <ol style="list-style-type: none"> <li>1. Lipsita Choudhury (CUTM Odisha) [3447]</li> <li>2. Debanand Mahapatro (CUTM Odisha) [6019]</li> <li>3. Triambak Baghel (AIT Bangkok) [9754]</li> </ol>
<b>18.00-18.30</b>	<b>Break</b>
<b>18.30-20.00</b>	<b>Cultural Evening</b>
<b>20.00-21.00</b>	<b>Dinner</b>

**End of the First Day Event!**

**Best Complements from our Partners & Supporters:**



## DAY 2: 13.10.2023

3<sup>rd</sup> International Conference on RIVER HEALTH: ASSESSMENT TO RESTORATION

(RHAR 2023)

Moving towards Water Positive Regions (WPR) and Water Smart Cities (WSC)

(Website: <https://conferences.iitbhu.ac.in/rhar/>)

Detailed Program of RHAR 2023

Day 2: 13.10.2023 (Friday)

Workshop and Technical Session 3 & 4 (09:30 – 11:30)

**Chair: Prof. Prabhat Kumar Singh**

**Co-Chair: Prof. Venketesh Dutta**

**Keynote address:**

**Prof. Peter Mollinga (SOAS, Uni. of London) [4854]**

**Prof. Mukand S Babel (AIT Bangkok) [4466]**

**Prof. Aysha Akter (CUET, Bangladesh) [4200]**

**Prof. Ashok Keshari (IIT Delhi) [5323]**

Bio-Break (11:30 – 11:45)

Workshop	Technical Session 3	Technical Session 4
<b>Senate Hall</b> Swatantrata Bhawan, IIT(BHU)  <b>Workshop on</b> “Water Security Assessment of Cities”  (11:45 – 14:30)	<b>Conference Hall</b> Swatantrata Bhawan, IIT(BHU)  <b>Theme 2: Water Balance Status in Urban Centers under Smart Cities Mission of India and Integrated Water Resource Management (IWRM) and Circular Economy</b>  (11:45 – 13:00)	<b>Gopal Tripathi Auditorium</b> Department of Chemical Engg., IIT(BHU) <b>Theme 3: River water quality monitoring, qualitative indexing, geospatial studies, modelling and control measures, hydrological factors, transport of pollutants</b>  (11:45 – 13:00)
<b>Workshop Conducting Team</b>  <b>Prof. Mukand S Babel, AIT Bangkok</b> <b>Dr. Devesh Sharma, AIT Bangkok</b> <b>Mr. Shashwat Sharma, AIT Bangkok</b>	<b>Chair- Prof. Ashok Keshari (IIT Delhi)</b> <b>Co-chair- Prof. Aysha Akter (CUET, Bangladesh)</b>  <ol style="list-style-type: none"><li>1. Dr. Satya P. Maurya (Graphic Era Uni., Dehradun) [7576]</li><li>2. Anurag Yadav (MNNIT Allahabad)[2649]</li><li>3. Purna Jasuja (Malaviya NIT, Jaipur) [9430]</li><li>4. Tanya Issar and Nidhi Sehwat (Development Alternatives) [1647]</li><li>5. Rijurekha Dasgupta (Jadavpur University) [4991]</li><li>6. Debarghya De (CUTM Odisha)[7939]</li></ol>	<b>Chair- Prof. Mallickarjun Joshi (BHU)</b> <b>Co-chair- Prof. Ramakar Jha (NIT Patna)</b>  <ol style="list-style-type: none"><li>1. Vijay Suryawanshi (NITK Surathkal) [1085]</li><li>2. Yash Duggad (IIT Gandhinagar) [1105]</li><li>3. Yogita Dashora (VBP College) [2134]</li><li>4. Amlan Mahata ( Uni. of Burdwan,W. Bengal) [3679]</li><li>5. Prakash P (NITK Surathkal) [3777]</li><li>6. Priya Khanda (CUTM Odisha) [4206]</li><li>7. Santosh G Thampi (NIT Calicut) [6496]</li><li>8. Jay Prakash Kumar (NIT Patna) [6648]</li></ol>

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Detailed Program of RHAR 2023

Day 2: 13.10.2023 (Friday)

Senate Hall, Swatantrata Bhawan, IIT(BHU)	Technical Session 5 Conference Hall, Swatantrata Bhawan, IIT(BHU)	Technical Session 6 Gopal Tripathi Auditorium, Department of Chemical Engg., IIT(BHU)
Contd..	(13:00 – 14:30)	(13:00 – 14:30)
<p>Workshop on “Water Security Assessment of Cities” <b>Workshop Conducting Team</b></p> <p><b>Prof. Mukand S Babel, AIT Bangkok</b> <b>Dr. Devesh Sharma, AIT Bangkok</b> <b>Mr. Shashwat Sharma, AIT Bangkok</b></p>	<p><b>Theme 7: Drinking water contaminants, Evaluation of sorbents or catalysts for removal of common contaminants and Groundwater monitoring and modeling, R-A exchanges, landfill leachate effects and Wastewater treatment, valorization, bioremediation, disinfection and reuse.</b></p> <p><b>Chair: Prof. Hervey Piegay (CNRS, Lyon France)</b> <b>Co-chair: Prof. Venketesh Dutta, BBAU Lucknow</b></p> <p><b>Keynote address: Prof. M. Jawed (IIT Guwahati) [1650]</b></p> <ol style="list-style-type: none"><li>1. Aparna Upadhyay (Development Alternatives) [111]</li><li>2. Pratima Kumari (IIT ISM Dhanbad) [2880]</li><li>3. Praveen Kumar (MNNIT Allahabad) [3666]</li><li>4. Deepak Singh (MNNIT Allahabad) [4028]</li><li>5. Indranil De (INST, Mohali) [4561]</li><li>6. Nilanjan Saha (Jadavpur University) [5408]</li></ol>	<p><b>Theme 6: Risk evaluation and management of emerging contaminants (heavy metals, organic compounds, pharmaceutical pollutants, micro- plastics) in rivers.</b></p> <p><b>Chair: Prof. Prabhat Kumar Singh Co-chair: Prof. Sandhya Babel (SIIT Thailand)</b></p> <p><b>Keynote address: Prof. Sandhya Babel (SIIT Thailand) [4189]</b></p> <ol style="list-style-type: none"><li>1. Madhu K. Kumara (IIT Hyderabad) [2511]</li><li>2. Mebin Aby Jose (WII, Dehradun) [3780]</li><li>3. Mohit Kumar (BHU) [4160]</li><li>4. Pooja Chaudhary (WII, Dehradun) [6555]</li><li>5. Aneet Yadav (BBAU, Lucknow) [9474]</li><li>6. Priya Agarwal (Sharda University) [9947]</li></ol>
<b>Lunch (14:30 – 15.30)</b>		
<b>Excursion (16:00 – 20:00) (Ganga Darshan and Aarti)</b>		



## DAY 3: 14.10.2023

3<sup>rd</sup> International Conference on RIVER HEALTH: ASSESSMENT TO RESTORATION

(RHAR 2023)

Moving towards Water Positive Regions (WPR) and Water Smart Cities (WSC)

(Website: <https://conferences.iitbhu.ac.in/rhar/>)

### Detailed Program of RHAR 2023

#### Day 3: 14.10.2023 (Saturday)

Technical Session 7 (09:30 – 11:30) Senate Hall, Swatantrata Bhawan, IIT(BHU)	Technical Session 8 (09:30 – 11:30) Conference Hall, Swatantrata Bhawan, BHU Varanasi
<p><b>Theme 5: Techno legal dimensions for river health restoration, Climate change, Environmental policies and regulations</b></p> <p><b>Chair- Honorable Justice Shekhar Yadav, Allahabad High Court</b> <b>Co-chair- Prof. Venkatesh Datta (BBAU Lucknow)</b></p> <p><b>Keynote address:</b> <b>Prof. Venkatesh Datta (BBAU Lucknow) [4473]</b> <b>Dr. Avdhesh Pratap (Water Law Expert) [5675]</b> <b>Dr. Mansee Bal Bhargava [3091]</b></p> <ol style="list-style-type: none"><li>1. Shri Arun Gupta Senior Advocate, Allahabad High Court</li><li>2. Shri Rishabh Sancheti, Advocate, Supreme Court</li><li>3. Shri Anil Garg, Secretary to Govt of UP Irrigation and Water Resources Deptt.</li><li>4. Nancy Gupta (School of Planning and Architecture) [1455]</li><li>5. Shreshtha Sachdeva (MNIT Jaipur) [7483]</li><li>6. Vratika (MNIT Jaipur) [4060]</li><li>7. Krishna K. Tiwari (MNNIT Allahabad) [8849]</li><li>8. Megavath Narahari (MNNIT Allahabad) [9104]</li><li>9. Dipali Singh (University of Lucknow) [9686]</li></ol>	<p><b>Theme 8: Visions, Initiatives and Success examples towards Water Smart Cities</b></p> <p><b>Chair- Prof. Aysha Akter (CUET, Bangladesh)</b> <b>Co-chair- Dr. Satya P. Maurya (Graphic Era Uni., Dehradun)</b></p> <p><b>Keynote address:</b> <b>Prof. Meine Pieter van Dijk (MSM Netherlands) [9087]</b> <b>Dr Sujana Dhar (Hydrologist) [2640]</b> <b>Dr. Ashok Matani (GEC Jalgaon) [7290]</b></p> <ol style="list-style-type: none"><li>1. Madhuri Subbarao (Shri Venkateshwara Uni.)[721]</li><li>2. Saniya Ansari (Ajeenkya DY Patil School Of Engineering Pune) [7984]</li><li>3. Abhishek Chhonkar (MNIT Jaipur) [9635]</li><li>4. Chinnu Kumar (MNIT Jaipur) [9659]</li></ol>
<b>Bio-Break (11:30 – 11:45)</b>	
<b>Valedictory Session (12:00 – 13:30)</b> Senate Hall, Swatantrata Bhawan, BHU Varanasi	
<b>Lunch</b>	