



**DEPARTMENT OF CIVIL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY PATNA**

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**REPORT OF
INTERNATIONAL CONFERENCE ON “WETLANDS AND WATER
RESOURCES FOR SUSTAINABLE DEVELOPMENT”
(WET-WAR 2025 INTERNATIONAL)
DECEMBER 29-31, 2025**

The wetlands are essentially needed for flood mitigation, peak flow reduction in rivers, and reducing pollutants in the river. The wetlands are also useful for managing the impact of any possible climate change in river basins, rainwater harvesting, groundwater recharge and silting of river beds. The wetlands play a role as a buffer zone prior to the discharge of basin water to the river. Figure 1 shows a typical schematic diagram of wetlands. Different types of wetlands are the areas of Marsh, Peatland (Bogs), Fen, water whether natural or artificial, and/or permanent or temporary, with water that is static or flowing, fresh, brackish or salt. areas of marine water, the depth of which at low tide does not exceed six meters.

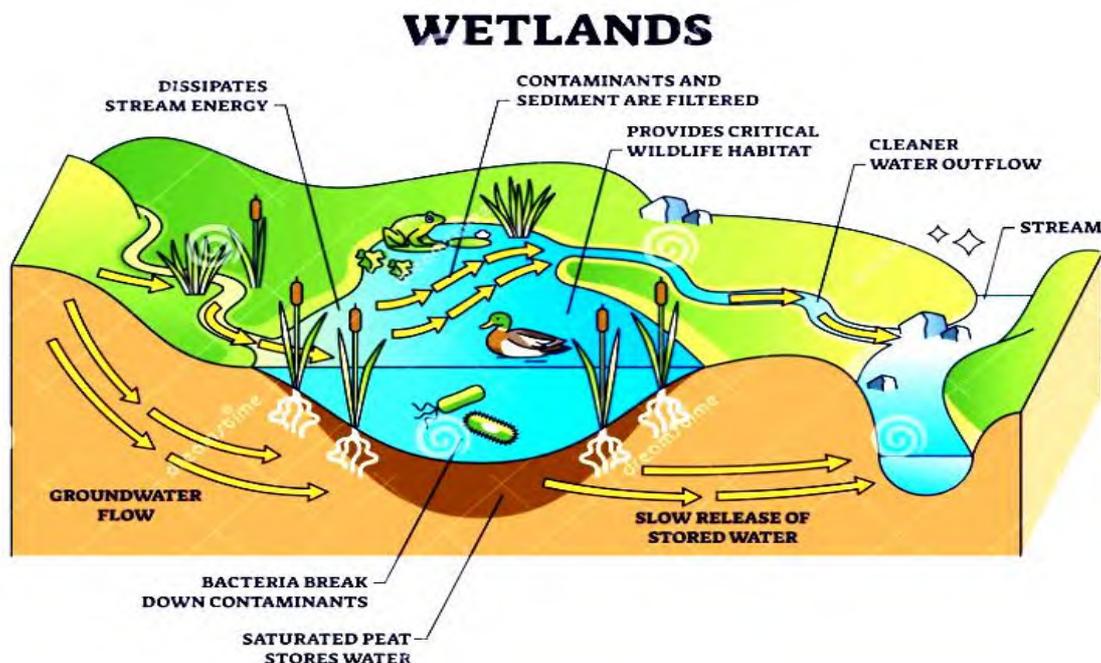


Figure 1: Schematic diagram of Wetlands

The Government of India has also initiated several related programs, namely “Amrit Sarovar”, “Swachh Bharat Mission”, “National mission for Clean Ganga” “Har Ghar Jal Mission” and “Unnat Bharat Abhiyan.

The National Institute of Technology Patna (NITP), Bihar, organized an International Conference, “WET-WAR 2025 INTERNATIONAL” (Wetlands and Water Resources for sustainable development) during 29-31 December 2025 at NIT Patna. The Department of Civil Engineering and the Department of Architecture and Planning jointly organised the International Conference.

In the WET-WAR 2025 International Conference, the Chief Guest of the function was **Prof. Vijay P. Singh**, Texas A & M University, USA. The Guest of Honour were **Prof. V. R. Desai**, Director, IIT Dharwad, Karnatak and **Prof. B. Subudhi**, Director, NIT Warangal, Telangana. The Inaugural session was presided over by **Prof. P. K. Jain**, Director, NIT Patna, and the Chair of the Conference was **Prof. Ramakar JHA**, HAG Professor, Department of Civil Engineering, NIT Patna. The Organising committee members include Dr. Roshni T., De. Anushri Barman, Dr. Anjali Sharma, Dr. Bhabani Shankar Das and Dr. Joseph Tripura of NIT Patna and so on.

The deliberations of Experts, academicians, Engineers, Scientists, teachers, students and all other stakeholders were made in the Plenary sessions and different parallel technical sessions. Some of the key persons who were off the Dias and deliberated on the talks were **Prof. R. S. Kanwar**, IOWA State University, USA; **Prof. Govindaraju**, Purdue University, USA; **Prof. Ashish Sharma**, University of New South Wales, Australia; **Dr. Bhanu Neupane**, UNESCO, Paris; **Dr. Viswa Ranajn Sinha**, IUCN, Bangkok, Thailand; **Prof Nandita Singh**, Södertörn University Stockholm, Sweden; **Dr. Dhiraj**, Tribhuval University and The Small Earth, Nepal; **Prof. Vinod Tare**, Professor, IIT Kanpur; **Dr. Vijay Kumar**, Director, MoES, Delhi; **Prof. C. S. P. Ojha**, Professor. IIT Roorkee; **Sri Bharat Jyoti**, Chairman, Bihar State Biodiversity Board, Patna; **Dr. S. Chandrasekar**, Chief Conservator of Forest, Bihar; **Dr. Manoj Samuel**, Director, CWRDM, Kerala; **Dr. C. N. Prabhu**, Director, Mausam Sewa Kendra, Patna, Bihar; **Sri, Abhyanad Thakur**, GGM, NHPC, New Delhi; **Prof. M. K. Verma**, Ex- VC, CSVTU, Bhilai; **Dr. Shakeel Ahmed**, EX Scientist, NGRI; **Dr. Arvind Kumar**, Head, DST; **Prof.**

Vivekanand Singh Vice Chancellor, Purnea University; **Dr. Gopal Sharma**, Director, Bihar Dolphin Centre, Patna; **Prof. Govind Pandey**, Professor, MMM University, Gorakhpur, UP; **Prof. A. Q. Dar**, Department of Civil Engineering, NIT Srinagar; **Prof. K. K. Khatua**, Department of Civil Engineering, NIT Rourkela; **Dr. Keshav**, Department of Civil Engineering, IIT BHU, Varanasi; Prof. Devetha C. T., Department of Civil Engineering, NUIT Suratkal, Karnataka; **Dr. Kshyana Samal**, Department of Civil Engineering, KIIT, Bhubaneswar; **Dr. Snehal Donde**, Social Reformer Mumbai; **Sri Kishore Jaiswal**, Social reformer and national water award winner, Bihar; **and so on.**

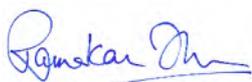
About 250 participants from different institutions, Colleges, and NOGs participated in the conference. Participation from IITs, NITs, ISM, Govt. Engineering Colleges, VJIT, NEHU, ELFU and Private colleges were on board. All participants were given sufficient time for their presentation, and the Best Paper award (certificate and mementoes) was given in each session by the respective Chairs of each session.

Every day, evening Cultural programs were organised. A few renowned personalities performed Mithila culture, regional and traditional dance at different sessions. A session was also devoted by Brahkumaries, Delhi and Patna. All were invited to the program at NIT Patna by the organisers. **Ms. Yamini Sharma**, Faculty, Patna Women's College, performed Kathak dance, and her team performed two folk dances (Jhumar and Jhijhia) of Bihar. Mrs Sudipa Ghosh, an acclaimed Bharatanatyam dancer and her team presented *Sita Swayamvar* through Bharatanatyam dialogue. Ms Greece Lee, Head, **King Sejong Institute Patna** (a Korean language and culture centre) and her team performed Korean Dance and songs very effectively. The **Kilkari Bihar Bal Bhawan** is a cultural and creative centre for children in Bihar performed Jhijhia dance. Dr Dhiraj, The Small Earth Nepal and his team performed Nepali dance and Hindi songs.

Sister Vidhatri is a Rajyoga meditation teacher associated with the Brahma Kumaris, who has given talks on Raj Yoga and spirituality. **It was very effective for the audience.**

Recommendations of WET – WAR 2025: International Conference on “Wetlands and Water Resources for Sustainable Development 2025”

1. **Collaborative Governance & Enforcement:** Develop a unified mechanism for Integrated Water Resources Development and Management Authority (IWRDMA), include experts in policy committees.
2. **Effective Water Communication:** Emphasize user-friendly, interactive, and visual data communication to effectively convey water issues.
3. **Bottom-Up Community Engagement:** Shift toward integrated management that prioritizes a bottom-up approach.
4. **Resource Mapping and Assessment:** Create data framework to map all wetlands to create a comprehensive baseline database, ensuring this data is open and accessible to all stakeholders.
5. **Revival and Restoration of Wetlands:** Focus on the physical rehabilitation of water bodies by restoring natural inlets, undertaking desilting combined with phytoremediation, and reviving local flora and fauna populations.
6. **Commercial Valuation:** Link wetlands to commercial value (land and water productivity) to incentivise preservation.
7. **Educational Reform:** Redesign curricula (aligned with NEP 2020) to move beyond theory, focusing on practical, field-based research and training students in visual data communication.
8. **Nature-Based Solution:** Promote nature-based solutions for ecosystem restoration, flood mitigation, and the revival of local biodiversity.
9. **Sustainable Resource Management:** Shift consumption focus from groundwater to surface water and link wetlands to commercial productivity to create economic incentives for their preservation.
10. **A Centre of Excellence on Wetlands and Water Resources should be established in Bihar to mitigate floods, reduce water pollution, manage silting and maintain urban and rural biodiversity of flora and fauna at the riverbank.**



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International Conference: WET-WAR 2025	
December 29th – 31st, 2025	
<i>Schedule Overview</i>	
Day 1 (29th December 2025)	
Time (hours)	Program
8.30 – 9.30	Registration
9.30 – 11.00	Inaugural Session
11.00 – 11.30	High Tea
11.30 – 13.45	Talk by Guests
13.45 – 14.45	LUNCH BREAK
14.45 – 16.15	Talk by Guests
16.15 – 16.30	Tea Break
16.30 – 18.00	Talk by Guests
18.00 – 21.00	Cultural Events
19.00 – 21.00	DINNER
Day 2 (30th December 2025)	
Time (hours)	Program
8.00- 9.30	BREAKFAST
9.30-11.00	UNESCO Program
11.00-11.30	TEA BREAK
11.30- 13.00	Technical Session 1 to 6
13.00-14.00	LUNCH BREAK
14.00-15.30	Technical Session 7 to 12
15.30-15.45	TEA BREAK
15.45-17.15	Technical Session 13 to 18

17.30- 19.00	Talk by Brahma Kumaries
19.00- 21.00	Cultural events
19.00- 21.30	DINNER
Day 3 (31st December 2025)	
Time (hours)	Program
8.00- 9.30	BREAKFAST
9.30-11.00	IUCN Program
11.00-11.30	TEA BREAK
11.30- 13.00	Technical Session 18 to 24
13.00-14.00	LUNCH BREAK
14.00-15.30	Technical Session 24 to 30
15.30-16.30	PANEL DISCUSSION and Valedictory Function
16.30- 17.00	High Tea
17.00- 20.00	Cultural events
19.00- 21.00	New Year's Eve DINNER



























































