

MARCH 2026

NEWSLETTER



Coordinated by Prof. Sumit Sen and Prof. Sandeep Bhatt, the Department of Hydrology successfully conducted a four-day Training Programme on "Springshed Management" from March 9-12, 2026.



The BIS Student Chapter successfully engaged participants on March 19, 2026, with a specialized quiz testing their knowledge of essential IS Codes for Water Resources.



The Department successfully organized Research Scholar's Day and the PRAVAAHA 2026 Water Tech Fest on March 20, 2026.

PATENT GRANTED:

Title: Transforming PET waste into cutting-edge omniphobic membranes for sustainable membrane distillation, Name of the inventors: Bhaskar Jyoti Deka, Gaurav Vaghela, Application No.: 202511021952 (IN) Patent no. 583302, Sl. No. 011227443

AWARD:

Prof. Ashutosh Sharma has been appointed as Associate Editor of Hydrological Sciences Journal, published by IAHS.

Prabhat Dwivedi, received the prestigious LOTUS fellowship under the Japan Science and Technology (JST) Sakura Science Programme to conduct research work at Institute of Science Tokyo (formally Tokyo Tech).

PUBLICATIONS:

Samal, SM ASCE, S. K., Moorthy, G., & Agarwal, A. (2026). Adaptive Rule Curves Integrating Climate Projections and Seasonal Forecasts to Enhance Reservoir Efficiency. *Journal of Hydrologic Engineering*, 31(3), 04026007. <https://doi.org/10.1061/JHYEFF.HEENG-6701>

Kumar, A., Singh, R., & Yadav, B. K. (2026). Comprehensive assessment of nitrogen and phosphorus removal pathways in vermifiltration: Influence of design and oOperational parameters. *Journal of Water Process Engineering*, 86, 109896. <https://doi.org/10.1016/j.jwpe.2026.109896>

Saha, S., Sardana, D., Manoj J, A., & Agarwal, A. Compounding heat waves and extreme precipitation in India using event coincidence analysis. *Journal of Water and Climate Change*. <https://doi.org/10.2166/wcc.2026.312>

De Santis, D., Barbetta, S., Sen, S., Maggioni, V., Bahmanpouri, F., Sharma, A., ... & Massari, C. (2026). Harnessing multi-source hydro-meteorological data for high flows modelling in a partially glacierized Himalayan basin. *Natural Hazards and Earth System Sciences*, 26(3), 1075-1104. <https://doi.org/10.5194/nhess-26-1075-2026>

Kant, C., Meena, R. S., Singh, S. K., Thakur, P. K., & Sharma, A. (2026). Climate change-driven hydroclimatic shifts and energy prospects: Insights from a snow-fed river basin in Western Himalaya. *Progress in Physical Geography: Earth and Environment*, 03091333261428549. <https://doi.org/10.1177/03091333261428549>

Das, B., Sen, S., and Singh, S. N. Integrated morphometric and LULC change-based soil erosion risk prioritization in the Gaudi River sub-watersheds, Lesser Hi- malaya. *Natural Hazards*, 122(7), 309, [doi:10.1007/s11069-026-08043-7](https://doi.org/10.1007/s11069-026-08043-7), 2026.

Dixit, S., Sen, S., Yasmin, T., Khamis,K., Sen, D., Buytaert, W., and Hannah,D. M. Integrating SMART principles in flood early warning systemdesign in the Himalayas. *Natural Hazards and Earth System Sciences*,26(3), 1251-1268, [doi:10.5194/nhess-26-1251-2026](https://doi.org/10.5194/nhess-26-1251-2026), 2026.

De Santis,D., Barbetta, S., Sen, S., Maggioni, V., Bahmanpouri, F., Sharma, A., et al. Harnessing multi-source hydro-meteorological data for high flows modellingin a partially glacierized Himalayan basin. *Natural Hazards and Earth System Sciences*, 26(3), 1075-1104, [doi:10.5194/nhess-26-1075-2026](https://doi.org/10.5194/nhess-26-1075-2026), 2026.

Shah, S., Sen, S., and Adhikari,K. Effects of destratification aeration on physico-chemical parameters and cyanobacterial blooms in a Himalayan lake. *Environmental Monitoring and Assessment*, 198(2), 113, [doi:10.1007/s10661-025-14946-y](https://doi.org/10.1007/s10661-025-14946-y), 2026.

Makumbura, R. K., Wijesundara, H., Sajindra,H., Rathnayake, U., Kumar,V., Duraibabu, D., and Sen, S. QPred: A lightweight deep learning-based web pipeline for accessible and scalable streamflow forecasting. 2026. (DOI not available)

Choubey, S., Shukla,R., Das, A., Dwivedi,S., and Sen, S. Evaluation of climate risk assessment in subnational climate action plansfor the agriculture sector in India. *Weather, Climate, and Society*, 18(1), 239-251, [doi:10.1175/WCAS-D-25-0033.1](https://doi.org/10.1175/WCAS-D-25-0033.1), 2026.

Pant, N., Hagare, D., Maheshwari, B., Rai, S. P., Patel, A., Puthiyottil, N., Jain, S. K., Sahu, L. N., Sen. S., Upadhyay, M. Understanding the influence of landcover on spring dynamics and evaporation, in Himalayan region, using stable isotope and discharge. *Science of The Total Environment*, 112, 181215, 2025.

TALK:

Prof. Ashutosh Sharma delivered a lecture on "Scientific Writing and Reporting" during Training on Comprehensive Research Skills Training: From Problem Formulation to Product Development, organized by NIT Warrangal. Date: Jan 24, 2026

Prof. Ashutosh Sharma delivered a lecture on "Climate Change Impacts on Water Resources in Indian Himalayas: What we know and future directions" at IWRS Student Chapter, Lovely Professional University. Date: Mar 26, 2026

Prof. Ashutosh Sharma delivered a lecture on "Flood Risk Mapping using Machine Learning and GIS" during Five-Day Short-Term Course "River Flow, Sediment Transport, and Wave Dynamics: Concepts, Tools, and Applications", organized by NIT Rourkela. Date: Mar 28, 2026.

Prof. Bhaskar Jyoti Deka was invited to deliver his talk on "Advances in membrane technologies for desalination and wastewater recovery" during International Conference on Desalination, Water Treatment & Management, Urban Water Planning, and Sustainable Development & Annual Congress of InDA (InDACon-2026) organized by Malaviya National Institute of Technology Jaipur, Jaipur, India, from 27th to 28th March 2026.

Prof. Bhaskar Jyoti Deka was invited to deliver online talk on "Membrane technology for water treatment" during World Water Day 2026 celebration, organized by the Civil Engineering Department, Golaghat Engineering College, Assam.

Deepak Pandidurai, PhD scholar, visited the Instituto Dom Luiz (IDL), Faculdade de Ciências da Universidade de Lisboa (FCUL), University of Lisbon, Portugal, from 20.02.2026 to 04.03.2026, hosted by Prof. Ricardo Machado Trigo. During the visit, he delivered a research talk and engaged in scientific discussions with collaborators, faculty, and researchers at the Faculty of Sciences, University of Lisbon.

MISCELLANEOUS:

"Glaciers and Glacier Melt Runoff Changes and their Linkages to Hydro-climatic and Topographic Context in the Upper Ganga Basin", funded by National Mission for Clean Ganga (NMCG). PI: Prof. Ashutosh Sharma.