Shiv Nadar Institution of Eminence

Cooperation on water security

Shiv Nadar IoE is committed to address water scarcity, pollution, and management challenges through cooperation with local, regional, national, or global governments on water security. Our faculty and staff are working on many projects and reports in collaboration with local, regional, national and global partners.

Cooperation with local bodies

Shiv Nadar University collaborates with the Krishi Vigyan Kendra (KVK), a center located in Dadri, a region in western Uttar Pradesh, state of India on projects focused on sustainable agriculture, farmer engagement, and water resource management. The partnership supports undergraduate student research, provides access to university facilities for KVK, and aims to develop solutions for issues like water-efficient irrigation and crop monitoring.

Cooperation with regional government

Dr. Sanjeev Yadav, Associate Professor, Department of Chemical Engineering is also working on a project funded by the Council of Science and Technology, government of the state of Uttar Pradesh in India for a project on producing treated water that meets or exceeds discharge standards, potentially allowing for water reclamation and reuse within the tannery industry. The state of Uttar Pradesh has a significant tannery industry cluster particularly in the areas around the district of Kanpur.

Cooperation with national government

- Department of Science and Technology (DST), Government of India, supports start-up research projects and Dr. Gopal Das Singhal, Professor, Dr. Hitesh Upreti, Assistant Professor, and Dr. Ellora Padhi from IIT Roorkee has received funding under the to provide solutions for developing water-efficient irrigation strategies and mapping crop water stress that are vital for ensuring sustainable food production and water availability. Also, cascading instream storage strategies will be developed to promote self-sustained water and to mitigate flood scenarios.
- The University has also established a Water Management Field Laboratory with funds from the Government of India to serve as a state-of- the-art research facility. The faculty and student research team are developing AI-based decision-support systems for improved crop water use efficiency under a regulated deficit drip irrigation regime against the backdrop of climate change. The research aim is to provide /water-saving solutions for the two widely grown and consumed crops, rice and wheat. It has an extensive crop experimentation facility equipped with a drip irrigation system and research equipment facility for monitoring crops and soil parameters.

Cooperation with global government

Indo-Japan collaborative research project for development of a cost-effective alternative to drone-based hyperspectral remote sensing for agricultural monitoring and yield estimation using machine learning techniques. Dr. Gopal Das Singhal, Professor, and Dr. Hitesh Upreti, Assistant Professor, Department of Civil Engineering, are collaborating with Dr. Masaomi Kimura and Dr. Yutaka Matsuno, Department of Environmental Management, Faculty of Agriculture, Kindai University, Japan. The team is working on using drone-based remote sensing data and machine learning for agricultural monitoring and water management.