

## Progress Report: SDG 6 Clean water and Sanitation

**Sustainable Approach:** Shoolini University is highly focused on following the Sustainable Development Goals. Our University is working on the clean water and sanitation indicators and progressively following the different parameters. We continuously calculate the total inflow from various resources (290 m<sup>3</sup>D) and usage of the water in the university and also water consumption per person (400 KLD or 66.6 Lts/person). We are measuring the supply of total water from various resources. The total peak residential population including students and staff on campus is 5000 persons and floating population of the campus is about 1000 persons. We also have a water treatment plant for the reuse of the water and utilizing the treated water for various purposes. We have a Sewage Treatment Plant (STP) with the capacity of 400 KLD in which we have adopted biological treatment and tertiary treatment technology. University also has a process to prevent the polluted water entering water system and waste water is properly going to the STP by a suitable scientific mechanism.



**Sewage Treatment Plant at Shoolini University Campus**



**Buildings Supporting Rain Water Harvesting**

Our University is providing purified and quality approved free drinking water for students, staff and visitors. To minimize the water use we have constructed our buildings in a way to harvest the rain water and paneled with the facility for rain water supply to the building for specific purposes. Our buildings also support the draining of rain water to the underground after filtration and treatment which helps in increasing and maintaining the ground water level. We also have very successful model for the landscape plantations. We have plantation of drought tolerant plants as well to minimize the usage of water and also support the water conservation. Apart from the working on clean water and sanitation inside the university campus, we also have explored our activities to



**Landscape Plantation at Shoolini University**

the off campus for the water conservation and reuse and also awareness generation. Rainwater harvesting is also adopted in the vicinity of university campus.

Harvested rainwater is used for landscaping and recharging of the bore well pits. Water is collected in



lab scale to pilot scale and constantly producing high end research publications during this time. Some of the details of excelling in the field of water research and sustainable management are summarized as follows:

- As per **Scopus Data**, the university has done considerably well in terms of publishing under the domains of water treatment and corresponded water management and has 833 publications in total using the keyword “water treatment”.
- Keeping up with the today’s demand of inventing fascinating technologies for water and wastewater treatment, Shoolini University has successfully filled 33 patents in the domain of water purification out of which one utility patent has also been granted for photocatalytic water purification technology.
- Considering the importance of water and sustainable approaches to treat wastewater, Shoolini University has also started a doctorate programme in **water management** (<https://shooliniuniversity.com/phd-water-management>)
- With the aim of developing high end research environments for sustainable development goals, recently Shoolini University has established an International Research Centre of Nanotechnology for Himalayan Sustainability (IIRCNSH) and is dedicated to the multi-disciplinary and dynamic research for environmental detoxification, clean energy production, and waste water treatment.
- In continuation with achieving global rankings, two scientists from Shoolini University namely Dr. Gaurav Sharma and Dr. S.S. Chandel who worked for environmental restoration technologies have been featured in Stanford University’s list of top 2% Scientists.

### Collaborations with Government and NGO’s

Our university has strong research collaboration with other reputed Govt. organizations/NGOs to address the issue of water pollution. As a result, scientists from Shoolini University have received funding from various government agencies to work on water-related issues. Shoolini University has many successful partnerships with different government Research bodies. Our scientists have received funds of 3 crore INR from Vardhman Textiles Limited, India to find a sustainable solution for polluted Industrial water. Our developed system shows promise for practical applications in wastewater purification. In order to achieve

## MoU for research in nanotechnology

TRIBUNE NEWS SERVICE

SOLAN, OCTOBER 29

In a bid to encourage industry-academia partnership, Shoolini University has signed a memorandum of understanding (MoU) with Vardhman Textiles Limited (VTL) who will contribute Rs 3 crore for research in nanotechnology.

By putting nano-materials and techniques to use in the state-of-the-art lab, Shoolini University aims to work for environmental detoxification, clean energy production and waste utilisation.

The MoU was signed by Shoolini University Chancellor Prof PK Khosla and Vardhman Textiles director and chairman of CSR, Prafull Anubhai Patel, in the presence of SP Oswal, chairman and Managing Director of Vardhman Group.

“Industry-academia partnership is the right step for application of research for societal benefits. The support that Vardhman is giving for establishing this lab in

### ₹3-CRORE GRANT

■ Vardhman Textiles Ltd will contribute ₹3 crore for research in nanotechnology at Shoolini University

■ The university aims to work for environmental detoxification and waste utilisation

Shoolini University will go a long way in promoting this. The lab is named after SP Oswal’s father - Ratan Chand Oswal Himalayan Center of Excellence in Nanotechnology — will help to sprout the seeds of this joint partnership,” said Prof Khosla.

Prafull Anubhai Patel from Vardhman said that the group was committed to holistic development and considered education and quality healthcare facilities as essentials. “With sustainable development as our goal, we find it a privilege to be able to give back. As a responsible corporate citizen, we willingly contribute to social cause and participate in the development of communities that host us.”

**MoU with Vardhman Textile Ltd.**

the goal of sustainable development and environmental protection various government and non-government agencies have funded Shoolini University to carry out the high end research. The list of various funding agencies is as follows:

1. Vardhman textile Limited, Ludhiana Punjab, India.
2. Department of Science and Technology, MHR, New Delhi.
3. Himachal Pradesh Council for Science, Technology & Environment.
4. Indian Council of Agricultural Research, Government of India
5. Indian Council of Medical Research, Department of Health Research, Ministry of Health and Family Welfare, Government of India
6. Central Council for Research in Ayurvedic Sciences, Ministry of Ayush, Government of India.
7. Defence Research and Development Organization, Government of India
8. MOU with iHUB Divyasampark from IIT Roorkee for the development of smart technologies.



### Awareness Generation:

Shoolini University has strong bonding with the local community and involve with the local persons for the social cause. Water shortage is one of the local problems as we are

### SES REC Institution Certificate from Government of India



**Awareness Generation Through Off-Campus Cleanliness Drive**

situated at the hills and generally our water needs depends on the supply water. So, conscious usage and reuse of water is the essential requirement for the local community. We also support water conservation off campus. Rainwater harvesting facility is established with the help of University management in the vicinity of the campus and collected rain water is treated inside the University for Reuse for various purposes such as irrigation of landscape, irrigation to our

agricultural farms, construction works, and recharging of the bore well pits. Water is collected in rainwater harvesting tanks from the roof tops and roadside drain. We also promote local community by the training and demonstration camps, off the campus for the cleaning and conservation of water resources. We have workshops with the local community off campus for the demonstrations towards water conservation steps and events. Our students regularly visited "Ashwini Khadd" and local water bodies in the nearby villages for cleaning the natural water resources, regularly. We also educate the local communities for the plantation of drought-tolerant plants to preserve water consumption and increase the ground water level.