Swami Rama Himalayan University

NAAC A+

Report on

Sustainable Development Goal 6



CLEAN WATER AND SANITATION

2025

SDG 6 -Clean Water and Sanitation

Swami Rama Himalayan University (SRHU) addresses Sustainable Development Goal 6 through research, responsible water consumption, water conservation, wastewater treatment and reuse, and community engagement. During 2021–2025, SRHU recorded 36 publications aligned with SDG 6, covering water quality, groundwater, wastewater treatment, remediation, water security, rainwater management, and sustainable water technologies. During 2024–25, the University monitored water consumption through IoT-enabled systems, recording 2,56,296 m^3 of annual water consumption and an average per-capita consumption of 71.2 litres/FTE/day. Its Water Care programme incorporates groundwater recharge, rainwater harvesting and wastewater treatment through a 1 MLD STP and 90 KLD ETP, with treated wastewater reused for landscaping, toilet flushing, construction and other non-potable purposes. SRHU's water-reuse framework further promotes water conservation, wastewater recycling, rainwater harvesting and groundwater recharge through a Water Neutrality and Water Circularity approach. Through its WATSAN activities, SRHU has also worked with communities across more than 550 villages, supporting water supply, rainwater harvesting, sanitation and local capacity building.

6.1 Research on Water

SRHU has developed a strong interdisciplinary SDG 6 (Clean Water and Sanitation) research portfolio, focusing on water quality, groundwater, wastewater treatment, remediation, water security, rainwater management, and sustainable water technologies, particularly in the Himalayan and sub-Himalayan context.

During 2021–2025, 36 SDG 6 publications were identified through the Elsevier Sustainable Development Goals dataset, accounting for 83.7% of SRHU's 43 identified SDG 6 publications from 2009–2025. The portfolio covers groundwater contamination, hydrogeochemistry, wastewater treatment, microbial remediation, constructed wetlands, nanotechnology, water-quality monitoring, hydrological extremes, and sustainable water management.

The research demonstrates significant citation impact: 32 publications have FWCI data, with an average FWCI of 2.30. A publication-level evidence register supports transparent assessment under SDG 6 indicators 6.1.1 (CiteScore), 6.1.2 (FWCI), and 6.1.3 (Publications).

SRHU SDG 6 Research Profile: 2021–2025

Research Metric	Value
Total Publications during 2021-2025	36
FWCI	2.3
Citation Count	1081
Total Views	1698

6.1.1 Clean Water and Sanitation: CiteScore

SRHU's SDG 6 research output includes publications in indexed journals and scholarly publications addressing water quality, groundwater, wastewater treatment, aquatic remediation, environmental biotechnology, and sustainable water management.
During 2021–2025, 36 publications were identified under the SDG 6 publication dataset. CiteScore information is available for 21 publications.

List of Publications with CiteScore

S. No	Paper Title	Authors	Journal / Book Name	Year	Cite Score	DOI
1	A Comprehensive Review of Occurrences, Causes, and Health Effects of Arsenic in the Groundwater of India	Singh, V.| Prasad, M.| Aswal, R.S.| Uniyal, S.C.	Heavy Metals in Aquatic Ecosystems: Sources, Transport, and Mitigation	2025	-	10.1201/9781003632115-15
2	Biological removal of iron content from water sources using iron-oxidizing bacteria: a review	Bahuguna, M.| Joshi, N.| Bhandari, G.| Singh, P.| Gupta, S.| Rafatullah, M.| Anggayasti, W.L.| Huda, N.	Environmental Pollutants and Bioavailability	2025	6.9	10.1080/26395940.2025.2556182
3	Iron bioremediation by utilizing biochar-bacterial composites	Bahuguna, M.| Bhandari, G.| Joshi, N.| Singh, P.| Gupta, S.| Gangola, S.| Chaube, S.	BMC microbiology	2025	6.5	10.1186/s12866-025-04564-6
4	Exploring Papaya Byproducts: A Step toward Circular Economy and Sustainability	Bhatt, S.C.| Negi, S.| Chauhan, M.| Mishra, S.| Rizwanuddin, S.| Naik, B.| Gupta, A.K.| Kumar, V.| Kumar, V.	ACS Food Science and Technology	2025	4.4	10.1021/acsfoodscitech.4c00872
5	Hospital-associated effluents: the masked environmental threat that needs urgent attention and action	Sharma, C.| Gupta, S.| Kumar, V.| Kumar, V.	Discover Applied Sciences	2025	4.1	10.1007/s42452-024-06456-2
6	Groundwater Quality Assessment in the Foothills	Negi, R.S.| Negi, J.| Prasad, M.| Singh, K.	Water Environment Research	2025	3.8	10.1002/wer.70139

S. No	Paper Title	Authors	Journal / Book Name	Year	Cite Score	DOI
	of the Kumaun Himalaya, India					
7	LED fluorimetric analysis of uranium in potable groundwater and associated health concerns	Negi, R.S.| Prasad, M.| Aswal, R.S.| Negi, J.S.| Shrivastava, U.| Panwar, P.| Kaintura, S.S.| Uniyal, S.C.| Ramola, R.C.	Journal of Radioanalytical and Nuclear Chemistry	2025	2.7	10.1007/s10967-024-09770-6
8	Agricultural Innovations using IOT - A Comprehensive Review	Singh, J.N.| Mall, S.| Arthi, T.S.| Srivastava, D.| Hussein, L.	Proceedings - IEEE 2024 1st International Conference on Advances in Computing, Communication and Networking, ICAC2N 2024	2024	-	10.1109/ICAC2N63387.2024.10895646
9	Demineralized Water Consumption: Unravelling Current Trends and Health Effects	Joshi, N.| Yadav, N.| Choudhary, A.K.| Shikha, D.| Samant, S.	Proceedings - 2024 International Conference on Healthcare Innovations, Software and Engineering Technologies, HISET 2024	2024	-	10.1109/HISET61796.2024.00061
10	Probiotics in Aquaculture	Chandra, S.| Joshi, N.	Handbook of Aquatic Microbiology	2024	-	10.1201/9781003408543-7
11	United Nations Sustainable Development Goals in the context of hydrological extremes	Uniyal, A.| Kaushik, N.| Uniyal, H.P.	Water Sustainability and Hydrological Extremes: Quantity, Quality, and Security	2024	-	10.1016/B978-0-443-21499-8.00014-3
12	Valorization of wastewater through bioremediation approach	Aswal, R.S.| Prasad, M.| Kumar, A.	Biotechnologies for Wastewater Treatment and Resource Recovery: Current Trends and Future Scope	2024	-	10.1016/B978-0-443-27376-6.00010-4
13	Wireless System for Monitoring of Water Tank Using Emerging Technologies	Malik, P.K.| Singh, S.| Tiwari, P.| Arun Kumar, B.| Chanti, Y.| Naim, A.	2024 International Conference on Smart Devices, ICSD 2024	2024	-	10.1109/ICSD60021.2024.10751058
14	Microbiological dimensions and functions in constructed wetlands: A review	Rani, A.| Chauhan, M.| Kumar Sharma, P.| Kumari, M.| Mitra, D.| Joshi, S.	Current Research in Microbial Sciences	2024	10	10.1016/j.crmicr.2024.100311
15	Micro-algae: Revolutionizing food production for a healthy and sustainable future	Naik, B.| Mishra, R.| Kumar, V.| Mishra, S.| Gupta, U.| Rustagi, S.| Gupta, A.K.| Preet, M.S.| Bhatt, S.C.| Rizwanuddin, S.	Journal of Agriculture and Food Research	2024	7.5	10.1016/j.jafr.2023.100939

S. No	Paper Title	Authors	Journal / Book Name	Year	Cite Score	DOI
16	Human exposure to uranium through drinking water and its detrimental impact on the human body organs	Ashish, A.| Bangotra, P.| Dillu, V.| Prasad, M.| Banerjee, S.| Mehra, R.| Singh, N.L.	Environmental Geochemistry and Health	2024	7.2	10.1007/s10653-024-02150-9
17	Spatial analysis and soft computational modeling for hazard assessment of potential toxic elements in potable groundwater	Aswal, R.S.| Prasad, M.| Singh, J.| Singh, H.| Shrivastava, U.| Wadhwa, M.| Pandey, O.P.| Egbueri, J.C.	Scientific Reports	2024	6.7	10.1038/s41598-024-76147-w
18	Microbial exopolysaccharides and their application for bioremediation of environmental pollutants	Vijaylakshmi| Hemwati Nandan, R.M.| Chaudhary, S.| Bhandari, G.	Advanced Microbial Technology for Sustainable Agriculture and Environment	2023	-	10.1016/B978-0-323-95090-9.00014-5
19	Nanofiltration Applications for Potable Water, Treatment, and Reuse	Patel, N.| Dhasmana, A.| Kumari, S.| Sharma, R.| Nayanam, S.| Malik, S.	Advanced and Innovative Approaches of Environmental Biotechnology in Industrial Wastewater Treatment	2023	-	10.1007/978-981-99-2598-8_7
20	Nanotechnology for bioremediation of industrial wastewater treatment	Kumari, M.| Bora, J.| Dhasmana, A.| Sinha, S.| Malik, S.	Advanced Application of Nanotechnology to Industrial Wastewater	2023	-	10.1007/978-981-99-3292-4_7
21	Remediation of heavy metals by rhizospheric bacteria and their mechanism of detoxification	Gangola, S.| Joshi, S.| Bhandari, G.| Bhatt, P.| Kumar, S.| Bhandari, N.S.| Mittal, A.	Advanced Microbial Technology for Sustainable Agriculture and Environment	2023	-	10.1016/B978-0-323-95090-9.00005-4
22	Sustainable Green Approaches for Wastewater Purification	Kumari, P.| Dhasmana, A.| Kishore, S.| Preetam, S.| Mukherjee, N.| Malik, S.	Advanced and Innovative Approaches of Environmental Biotechnology in Industrial Wastewater Treatment	2023	-	10.1007/978-981-99-2598-8_8
23	The Challenges of Wastewater and Wastewater Management	Kumari, S.| Dwivedi, S.| Khan, E.A.R.| Nayanam, S.| Dhasmana, A.| Malik, S.	Advanced and Innovative Approaches of Environmental Biotechnology in Industrial Wastewater Treatment	2023	-	10.1007/978-981-99-2598-8_5
24	A critical review on green approaches in shape and size evolution of metal nanoparticles and their environmental applications	Kumari, M.| Pandey, S.| Giri, V.P.| Nautiyal, C.S.| Mishra, A.	Environmental Nanotechnology, Monitoring and Management	2023	13	10.1016/j.enmm.2023.100895

S. No	Paper Title	Authors	Journal / Book Name	Year	Cite Score	DOI
25	A review on hospital wastewater treatment technologies: Current management practices and future prospects	Bhandari, G.| Chaudhary, P.| Gangola, S.| Gupta, S.| Gupta, A.| Rafatullah, M.| Chen, S.	Journal of Water Process Engineering	2023	10.7	10.1016/j.jwpe.2023.104516
26	Genomics, Proteomics, and Metabolomics Approaches to Improve Abiotic Stress Tolerance in Tomato Plant	Naik, B.| Kumar, V.| Rizwanuddin, S.| Chauhan, M.| Choudhary, M.| Gupta, A.K.| Kumar, P.| Kumar, V.| Saris, P.E.J.| Rather, M.A.| Bhuyan, S.| Neog, P.R.| Mishra, S.| Rustagi, S.	International Journal of Molecular Sciences	2023	8.1	10.3390/ijms24033025
27	A Perspective Review on Microbial Fuel Cells in Treatment and Product Recovery from Wastewater	Malik, S.| Kishore, S.| Dhasmana, A.| Kumari, P.| Mitra, T.| Chaudhary, V.| Kumari, R.| Bora, J.| Ranjan, A.| Minkina, T.| Rajput, V.D.	Water (Switzerland)	2023	5.8	10.3390/w15020316
28	Microbial Biosurfactants and Their Implication Toward Wastewater Management	Rawat, G.| Choudhary, R.| Kumar, V.	Handbook of Environmental Chemistry	2023	2.9	10.1007/698_2022_877
29	Energy from Waste: Poterioochromonas malhamensis Used for Managing Dairy Effluent and Producing Valuable Microalgal Lipid	Dhillon, N.| Gupta, S.| Kumar, V.| Bhandari, G.| Arya, S.	Journal of Pure and Applied Microbiology	2023	2	10.22207/JPAM.17.2.48
30	Microalgae: A promising tool for pesticide mitigation in wastewater	Rajput, V.| Jaiswal, K.K.| Kumar, V.| Vlaskin, M.S.| Nanda, M.| Kumar, S.| Verma, M.	Pesticides Bioremediation	2022	-	10.1007/978-3-030-97000-0_15
31	Algae in wastewater treatment, mechanism, and application of biomass for production of value-added product	Bhatt, P.| Bhandari, G.| Turco, R.F.| Aminikhoei, Z.| Bhatt, K.| Simsek, H.	Environmental Pollution	2022	14.9	10.1016/j.envpol.2022.119688
32	Biotechnological tools to elucidate the mechanism of pesticide degradation in the environment	Gangola, S.| Bhatt, P.| Kumar, A.J.| Bhandari, G.| Joshi, S.| Punetha, A.| Bhatt, K.| Rene, E.R.	Chemosphere	2022	13.3	10.1016/j.chemosphere.2022.133916
33	Microalgae-based removal of pollutants from wastewaters: Occurrence, toxicity and circular economy	Bhatt, P.| Bhandari, G.| Bhatt, K.| Simsek, H.	Chemosphere	2022	13.3	10.1016/j.chemosphere.2022.135576

S. No	Paper Title	Authors	Journal / Book Name	Year	Cite Score	DOI
34	Exploring Microbial-Based Green Nanobiotechnology for Wastewater Remediation: A Sustainable Strategy	Malik, S.| Dhasmana, A.| Preetam, S.| Mishra, Y.K.| Chaudhary, V.| Bera, S.P.| Ranjan, A.| Bora, J.| Kaushik, A.| Minkina, T.| Jatav, H.S.| Singh, R.K.| Rajput, V.D.	Nanomaterials	2022	7.4	10.3390/nano12234187
35	Rhizobiont in Bioremediation of Hazardous Waste	Kumar, V.| Prasad, R.| Kumar, M.	Rhizobiont in Bioremediation of Hazardous Waste	2021	-	10.1007/978-981-16-0602-1
36	Microbial fuel cell united with other existing technologies for enhanced power generation and efficient wastewater treatment	Patwardhan, S.B.| Savla, N.| Pandit, S.| Gupta, P.K.| Mathuriya, A.S.| Lahiri, D.| Jadhav, D.A.| Rai, A.K.| Kanupriya| Ray, R.R.| Singh, V.| Kumar, V.| Prasad, R.	Applied Sciences (Switzerland)	2021	3.7	10.3390/app112210777

6.1.2 Clean Water and Sanitation: FWCI

SRHU's SDG 6 research demonstrates measurable citation impact across the five-year 2021–2025 publication cohort. FWCI values are available for 28 of the 36 identified SDG 6 publications and are reported in Table 2.3.

List of Publications with FWCI

S. No	Paper Title	Authors	Journal / Book Name	Year	FWCI	DOI
1	LED fluorimetric analysis of uranium in potable groundwater and associated health concerns	Negi, R.S.| Prasad, M.| Aswal, R.S.| Negi, J.S.| Shrivastava, U.| Panwar, P.| Kaintura, S.S.| Uniyal, S.C.| Ramola, R.C.	Journal of Radioanalytical and Nuclear Chemistry	2025	2.5	10.1007/s10967-024-09770-6
2	Hospital-associated effluents: the masked environmental threat that needs urgent attention and action	Sharma, C.| Gupta, S.| Kumar, V.| Kumar, V.	Discover Applied Sciences	2025	1.34	10.1007/s42452-024-06456-2
3	Biological removal of iron content from water sources using iron-	Bahuguna, M.| Joshi, N.| Bhandari, G.| Singh, P.| Gupta, S.| Rafatullah, M.| Anggayasti, W.L.| Huda, N.	Environmental Pollutants and Bioavailability	2025	0.6	10.1080/26395940.2025.2556182

S. No	Paper Title	Authors	Journal / Book Name	Year	FWCI	DOI
	oxidizing bacteria: a review					
4	Groundwater Quality Assessment in the Foothills of the Kumaun Himalaya, India	Negi, R.S.| Negi, J.| Prasad, M.| Singh, K.	Water Environment Research	2025	0.51	10.1002/wer.70139
5	Iron bioremediation by utilizing biochar-bacterial composites	Bahuguna, M.| Bhandari, G.| Joshi, N.| Singh, P.| Gupta, S.| Gangola, S.| Chaube, S.	BMC microbiology	2025	0.27	10.1186/s12866-025-04564-6
6	Exploring Papaya Byproducts: A Step toward Circular Economy and Sustainability	Bhatt, S.C.| Negi, S.| Chauhan, M.| Mishra, S.| Rizwanuddin, S.| Naik, B.| Gupta, A.K.| Kumar, V.| Kumar, V.	ACS Food Science and Technology	2025	0.24	10.1021/acsfoodscitech.4c00872
7	A Comprehensive Review of Occurrences, Causes, and Health Effects of Arsenic in the Groundwater of India	Singh, V.| Prasad, M.| Aswal, R.S.| Uniyal, S.C.	Heavy Metals in Aquatic Ecosystems: Sources, Transport, and Mitigation	2025	0	10.1201/9781003632115-15
8	Micro-algae: Revolutionizing food production for a healthy and sustainable future	Naik, B.| Mishra, R.| Kumar, V.| Mishra, S.| Gupta, U.| Rustagi, S.| Gupta, A.K.| Preet, M.S.| Bhatt, S.C.| Rizwanuddin, S.	Journal of Agriculture and Food Research	2024	11.35	10.1016/j.jafr.2023.100939
9	Spatial analysis and soft computational modeling for hazard assessment of potential toxic elements in potable groundwater	Aswal, R.S.| Prasad, M.| Singh, J.| Singh, H.| Shrivastava, U.| Wadhwa, M.| Pandey, O.P.| Egbueri, J.C.	Scientific Reports	2024	2.79	10.1038/s41598-024-76147-w
10	Microbiological dimensions and functions in constructed wetlands: A review	Rani, A.| Chauhan, M.| Kumar Sharma, P.| Kumari, M.| Mitra, D.| Joshi, S.	Current Research in Microbial Sciences	2024	2.77	10.1016/j.crmicr.2024.100311
11	Probiotics in Aquaculture	Chandra, S.| Joshi, N.	Handbook of Aquatic Microbiology	2024	2.01	10.1201/9781003408543-7

S. No	Paper Title	Authors	Journal / Book Name	Year	FWCI	DOI
12	Human exposure to uranium through drinking water and its detrimental impact on the human body organs	Ashish, A.| Bangotra, P.| Dillu, V.| Prasad, M.| Banerjee, S.| Mehra, R.| Singh, N.L.	Environmental Geochemistry and Health	2024	1.87	10.1007/s10653-024-02150-9
13	United Nations Sustainable Development Goals in the context of hydrological extremes	Uniyal, A.| Kaushik, N.| Uniyal, H.P.	Water Sustainability and Hydrological Extremes: Quantity, Quality, and Security	2024	1.14	10.1016/B978-0-443-21499-8.00014-3
14	Valorization of wastewater through bioremediation approach	Aswal, R.S.| Prasad, M.| Kumar, A.	Biotechnologies for Wastewater Treatment and Resource Recovery: Current Trends and Future Scope	2024	0.56	10.1016/B978-0-443-27376-6.00010-4
15	Agricultural Innovations using IOT - A Comprehensive Review	Singh, J.N.| Mall, S.| Arthi, T.S.| Srivastava, D.| Hussein, L.	Proceedings - IEEE 2024 1st International Conference on Advances in Computing, Communication and Networking, ICAC2N 2024	2024	0.35	10.1109/ICAC2N63387.2024.10895646
16	Demineralized Water Consumption: Unravelling Current Trends and Health Effects	Joshi, N.| Yadav, N.| Choudhary, A.K.| Shikha, D.| Samant, S.	Proceedings - 2024 International Conference on Healthcare Innovations, Software and Engineering Technologies, HISET 2024	2024	0	10.1109/HISET61796.2024.00061

S. No	Paper Title	Authors	Journal / Book Name	Year	FWCI	DOI
17	Wireless System for Monitoring of Water Tank Using Emerging Technologies	Malik, P.K.| Singh, S.| Tiwari, P.| Arun Kumar, B.| Chanti, Y.| Naim, A.	2024 International Conference on Smart Devices, ICSD 2024	2024	0	10.1109/ICSD60021.2024.10751058
18	Remediation of heavy metals by rhizospheric bacteria and their mechanism of detoxification	Gangola, S.| Joshi, S.| Bhandari, G.| Bhatt, P.| Kumar, S.| Bhandari, N.S.| Mittal, A.	Advanced Microbial Technology for Sustainable Agriculture and Environment	2023	7.43	10.1016/B978-0-323-95090-9.00005-4
19	Microbial exopolysaccharides and their application for bioremediation of environmental pollutants	Vijaylakshmi| Hemwati Nandan, R.M.| Chaudhary, S.| Bhandari, G.	Advanced Microbial Technology for Sustainable Agriculture and Environment	2023	5.94	10.1016/B978-0-323-95090-9.00014-5
20	The Challenges of Wastewater and Wastewater Management	Kumari, S.| Dwivedi, S.| Khan, E.A.R.| Nayanam, S.| Dhasmana, A.| Malik, S.	Advanced and Innovative Approaches of Environmental Biotechnology in Industrial Wastewater Treatment	2023	4.14	10.1007/978-981-99-2598-8_5
21	A Perspective Review on Microbial Fuel Cells in Treatment and Product Recovery from Wastewater	Malik, S.| Kishore, S.| Dhasmana, A.| Kumari, P.| Mitra, T.| Chaudhary, V.| Kumari, R.| Bora, J.| Ranjan, A.| Minkina, T.| Rajput, V.D.	Water (Switzerland)	2023	4.05	10.3390/w15020316
22	Genomics, Proteomics, and Metabolomics Approaches to Improve Abiotic Stress Tolerance in Tomato Plant	Naik, B.| Kumar, V.| Rizwanuddin, S.| Chauhan, M.| Choudhary, M.| Gupta, A.K.| Kumar, P.| Kumar, V.| Saris, P.E.J.| Rather, M.A.| Bhuyan, S.| Neog, P.R.| Mishra, S.| Rustagi, S.	International Journal of Molecular Sciences	2023	2.52	10.3390/ijms24033025
23	Nanofiltration Applications for	Patel, N.| Dhasmana, A.| Kumari, S.| Sharma, R.| Nayanam, S.| Malik, S.	Advanced and Innovative Approaches of	2023	2.07	10.1007/978-981-

S. No	Paper Title	Authors	Journal / Book Name	Year	FWCI	DOI
	Potable Water, Treatment, and Reuse		Environmental Biotechnology in Industrial Wastewater Treatment			99-2598-8_7
24	A review on hospital wastewater treatment technologies: Current management practices and future prospects	Bhandari, G.| Chaudhary, P.| Gangola, S.| Gupta, S.| Gupta, A.| Rafatullah, M.| Chen, S.	Journal of Water Process Engineering	2023	1.8	10.1016/j.jwpe.2023.104516
25	Sustainable Green Approaches for Wastewater Purification	Kumari, P.| Dhasmana, A.| Kishore, S.| Preetam, S.| Mukherjee, N.| Malik, S.	Advanced and Innovative Approaches of Environmental Biotechnology in Industrial Wastewater Treatment	2023	1.55	10.1007/978-981-99-2598-8_8
26	Nanotechnology for bioremediation of industrial wastewater treatment	Kumari, M.| Bora, J.| Dhasmana, A.| Sinha, S.| Malik, S.	Advanced Application of Nanotechnology to Industrial Wastewater	2023	1.13	10.1007/978-981-99-3292-4_7
27	A critical review on green approaches in shape and size evolution of metal nanoparticles and their environmental applications	Kumari, M.| Pandey, S.| Giri, V.P.| Nautiyal, C.S.| Mishra, A.	Environmental Nanotechnology, Monitoring and Management	2023	0.18	10.1016/j.enmm.2023.100895
28	Energy from Waste: Poterioochromonas malhamensis Used for Managing Dairy Effluent and Producing Valuable Microalgal Lipid	Dhillon, N.| Gupta, S.| Kumar, V.| Bhandari, G.| Arya, S.	Journal of Pure and Applied Microbiology	2023	0.17	10.22207/JPAM.17.2.48
29	Microbial Biosurfactants and Their Implication	Rawat, G.| Choudhary, R.| Kumar, V.	Handbook of Environmental Chemistry	2023	0	10.1007/698_2022_877

S. No	Paper Title	Authors	Journal / Book Name	Year	FWCI	DOI
	Toward Wastewater Management					
30	Algae in wastewater treatment, mechanism, and application of biomass for production of value-added product	Bhatt, P.| Bhandari, G.| Turco, R.F.| Aminikhoei, Z.| Bhatt, K.| Simsek, H.	Environmental Pollution	2022	7.58	10.1016/j.envpol.2022.119688
31	Microalgae-based removal of pollutants from wastewaters: Occurrence, toxicity and circular economy	Bhatt, P.| Bhandari, G.| Bhatt, K.| Simsek, H.	Chemosphere	2022	6.35	10.1016/j.chemosphere.2022.135576
32	Biotechnological tools to elucidate the mechanism of pesticide degradation in the environment	Gangola, S.| Bhatt, P.| Kumar, A.J.| Bhandari, G.| Joshi, S.| Punetha, A.| Bhatt, K.| Rene, E.R.	Chemosphere	2022	6.04	10.1016/j.chemosphere.2022.133916
33	Exploring Microbial-Based Green Nanobiotechnology for Wastewater Remediation: A Sustainable Strategy	Malik, S.| Dhasmana, A.| Preetam, S.| Mishra, Y.K.| Chaudhary, V.| Bera, S.P.| Ranjan, A.| Bora, J.| Kaushik, A.| Minkina, T.| Jatav, H.S.| Singh, R.K.| Rajput, V.D.	Nanomaterials	2022	1.28	10.3390/nano12234187
34	Microalgae: A promising tool for pesticide mitigation in wastewater	Rajput, V.| Jaiswal, K.K.| Kumar, V.| Vlaskin, M.S.| Nanda, M.| Kumar, S.| Verma, M.	Pesticides Bioremediation	2022	0.38	10.1007/978-3-030-97000-0_15
35	Rhizobiont in Bioremediation of Hazardous Waste	Kumar, V.| Prasad, R.| Kumar, M.	Rhizobiont in Bioremediation of Hazardous Waste	2021	1.12	10.1007/978-981-16-0602-1
36	Microbial fuel cell united with other existing technologies for enhanced power generation and efficient wastewater treatment	Patwardhan, S.B.| Savla, N.| Pandit, S.| Gupta, P.K.| Mathuriya, A.S.| Lahiri, D.| Jadhav, D.A.| Rai, A.K.| Kanupriya| Ray, R.R.| Singh, V.| Kumar, V.| Prasad, R.	Applied Sciences (Switzerland)	2021	0.89	10.3390/app112210777

6.1.3 Clean Water and Sanitation: Publications

During the five years 2021–2025, SRHU recorded 36 research publications identified under SDG 6 through the Elsevier publication dataset.

These 36 publications form the principal five-year research corpus for the University's SDG 6 submission. The portfolio includes research outputs addressing groundwater quality and contamination, hydrogeochemistry, wastewater treatment, wastewater resource recovery, biological remediation, constructed wetlands, nanotechnology-based treatment, microbial fuel cells, water-quality monitoring, hydrological extremes, and sustainable water management.

List of Publications

S. No	Paper Title	Authors	Journal / Book Name	Year	DOI
1	A Comprehensive Review of Occurrences, Causes, and Health Effects of Arsenic in the Groundwater of India	Singh, V.| Prasad, M.| Aswal, R.S.| Uniyal, S.C.	Heavy Metals in Aquatic Ecosystems: Sources, Transport, and Mitigation	2025	10.1201/9781003632115-15
2	Biological removal of iron content from water sources using iron-oxidizing bacteria: a review	Bahuguna, M.| Joshi, N.| Bhandari, G.| Singh, P.| Gupta, S.| Rafatullah, M.| Anggayasti, W.L.| Huda, N.	Environmental Pollutants and Bioavailability	2025	10.1080/26395940.2025.2556182
3	Exploring Papaya Byproducts: A Step toward Circular Economy and Sustainability	Bhatt, S.C.| Negi, S.| Chauhan, M.| Mishra, S.| Rizwanuddin, S.| Naik, B.| Gupta, A.K.| Kumar, V.| Kumar, V.	ACS Food Science and Technology	2025	10.1021/acsfoodscitech.4c00872
4	Groundwater Quality Assessment in the Foothills of the Kumaun Himalaya, India	Negi, R.S.| Negi, J.| Prasad, M.| Singh, K.	Water Environment Research	2025	10.1002/wer.70139
5	Hospital-associated effluents: the masked environmental threat that needs urgent attention and action	Sharma, C.| Gupta, S.| Kumar, V.| Kumar, V.	Discover Applied Sciences	2025	10.1007/s42452-024-06456-2

S. No	Paper Title	Authors	Journal / Book Name	Year	DOI
6	Iron bioremediation by utilizing biochar-bacterial composites	Bahuguna, M.| Bhandari, G.| Joshi, N.| Singh, P.| Gupta, S.| Gangola, S.| Chaube, S.	BMC microbiology	2025	10.1186/s12866-025-04564-6
7	LED fluorimetric analysis of uranium in potable groundwater and associated health concerns	Negi, R.S.| Prasad, M.| Aswal, R.S.| Negi, J.S.| Shrivastava, U.| Panwar, P.| Kaintura, S.S.| Uniyal, S.C.| Ramola, R.C.	Journal of Radioanalytical and Nuclear Chemistry	2025	10.1007/s10967-024-09770-6
8	Agricultural Innovations using IOT - A Comprehensive Review	Singh, J.N.| Mall, S.| Arthi, T.S.| Srivastava, D.| Hussein, L.	Proceedings - IEEE 2024 1st International Conference on Advances in Computing, Communication and Networking, ICAC2N 2024	2024	10.1109/ICAC2N63387.2024.10895646
9	Demineralized Water Consumption: Unravelling Current Trends and Health Effects	Joshi, N.| Yadav, N.| Choudhary, A.K.| Shikha, D.| Samant, S.	Proceedings - 2024 International Conference on Healthcare Innovations, Software and Engineering Technologies, HISET 2024	2024	10.1109/HISET61796.2024.00061
10	Human exposure to uranium through drinking water and its detrimental impact on the human body organs	Ashish, A.| Bangotra, P.| Dillu, V.| Prasad, M.| Banerjee, S.| Mehra, R.| Singh, N.L.	Environmental Geochemistry and Health	2024	10.1007/s10653-024-02150-9
11	Micro-algae: Revolutionizing food production for a healthy and sustainable future	Naik, B.| Mishra, R.| Kumar, V.| Mishra, S.| Gupta, U.| Rustagi, S.| Gupta, A.K.| Preet, M.S.| Bhatt, S.C.| Rizwanuddin, S.	Journal of Agriculture and Food Research	2024	10.1016/j.jafr.2023.100939

S. No	Paper Title	Authors	Journal / Book Name	Year	DOI
12	Microbiological dimensions and functions in constructed wetlands: A review	Rani, A.| Chauhan, M.| Kumar Sharma, P.| Kumari, M.| Mitra, D.| Joshi, S.	Current Research in Microbial Sciences	2024	10.1016/j.crmicr.2024.100311
13	Probiotics in Aquaculture	Chandra, S.| Joshi, N.	Handbook of Aquatic Microbiology	2024	10.1201/9781003408543-7
14	Spatial analysis and soft computational modeling for hazard assessment of potential toxic elements in potable groundwater	Aswal, R.S.| Prasad, M.| Singh, J.| Singh, H.| Shrivastava, U.| Wadhwa, M.| Pandey, O.P.| Egbueri, J.C.	Scientific Reports	2024	10.1038/s41598-024-76147-w
15	United Nations Sustainable Development Goals in the context of hydrological extremes	Uniyal, A.| Kaushik, N.| Uniyal, H.P.	Water Sustainability and Hydrological Extremes: Quantity, Quality, and Security	2024	10.1016/B978-0-443-21499-8.00014-3
16	Valorization of wastewater through bioremediation approach	Aswal, R.S.| Prasad, M.| Kumar, A.	Biotechnologies for Wastewater Treatment and Resource Recovery: Current Trends and Future Scope	2024	10.1016/B978-0-443-27376-6.00010-4
17	Wireless System for Monitoring of Water Tank Using Emerging Technologies	Malik, P.K.| Singh, S.| Tiwari, P.| Arun Kumar, B.| Chanti, Y.| Naim, A.	2024 International Conference on Smart Devices, ICSD 2024	2024	10.1109/ICSD60021.2024.10751058
18	A critical review on green approaches in shape and size evolution of metal nanoparticles and their	Kumari, M.| Pandey, S.| Giri, V.P.| Nautiyal, C.S.| Mishra, A.	Environmental Nanotechnology, Monitoring and Management	2023	10.1016/j.enmm.2023.100895

S. No	Paper Title	Authors	Journal / Book Name	Year	DOI
	environmental applications				
19	A Perspective Review on Microbial Fuel Cells in Treatment and Product Recovery from Wastewater	Malik, S.| Kishore, S.| Dhasmana, A.| Kumari, P.| Mitra, T.| Chaudhary, V.| Kumari, R.| Bora, J.| Ranjan, A.| Minkina, T.| Rajput, V.D.	Water (Switzerland)	2023	10.3390/w15020316
20	A review on hospital wastewater treatment technologies: Current management practices and future prospects	Bhandari, G.| Chaudhary, P.| Gangola, S.| Gupta, S.| Gupta, A.| Rafatullah, M.| Chen, S.	Journal of Water Process Engineering	2023	10.1016/j.jwpe.2023.104516
21	Energy from Waste: Poterioochromonas malhamensis Used for Managing Dairy Effluent and Producing Valuable Microalgal Lipid	Dhillon, N.| Gupta, S.| Kumar, V.| Bhandari, G.| Arya, S.	Journal of Pure and Applied Microbiology	2023	10.22207/JPAM.17.2.48
22	Genomics, Proteomics, and Metabolomics Approaches to Improve Abiotic Stress Tolerance in Tomato Plant	Naik, B.| Kumar, V.| Rizwanuddin, S.| Chauhan, M.| Choudhary, M.| Gupta, A.K.| Kumar, P.| Kumar, V.| Saris, P.E.J.| Rather, M.A.| Bhuyan, S.| Neog, P.R.| Mishra, S.| Rustagi, S.	International Journal of Molecular Sciences	2023	10.3390/ijms24033025
23	Microbial Biosurfactants and Their Implication Toward Wastewater Management	Rawat, G.| Choudhary, R.| Kumar, V.	Handbook of Environmental Chemistry	2023	10.1007/698_2022_877

S. No	Paper Title	Authors	Journal / Book Name	Year	DOI
24	Microbial exopolysaccharides and their application for bioremediation of environmental pollutants	Vijaylakshmi| Hemwati Nandan, R.M.| Chaudhary, S.| Bhandari, G.	Advanced Microbial Technology for Sustainable Agriculture and Environment	2023	10.1016/B978-0-323-95090-9.00014-5
25	Nanofiltration Applications for Potable Water, Treatment, and Reuse	Patel, N.| Dhasmana, A.| Kumari, S.| Sharma, R.| Nayanam, S.| Malik, S.	Advanced and Innovative Approaches of Environmental Biotechnology in Industrial Wastewater Treatment	2023	10.1007/978-981-99-2598-8_7
26	Nanotechnology for bioremediation of industrial wastewater treatment	Kumari, M.| Bora, J.| Dhasmana, A.| Sinha, S.| Malik, S.	Advanced Application of Nanotechnology to Industrial Wastewater	2023	10.1007/978-981-99-3292-4_7
27	Remediation of heavy metals by rhizospheric bacteria and their mechanism of detoxification	Gangola, S.| Joshi, S.| Bhandari, G.| Bhatt, P.| Kumar, S.| Bhandari, N.S.| Mittal, A.	Advanced Microbial Technology for Sustainable Agriculture and Environment	2023	10.1016/B978-0-323-95090-9.00005-4
28	Sustainable Green Approaches for Wastewater Purification	Kumari, P.| Dhasmana, A.| Kishore, S.| Preetam, S.| Mukherjee, N.| Malik, S.	Advanced and Innovative Approaches of Environmental Biotechnology in Industrial Wastewater Treatment	2023	10.1007/978-981-99-2598-8_8
29	The Challenges of Wastewater and Wastewater Management	Kumari, S.| Dwivedi, S.| Khan, E.A.R.| Nayanam, S.| Dhasmana, A.| Malik, S.	Advanced and Innovative Approaches of Environmental Biotechnology in Industrial Wastewater Treatment	2023	10.1007/978-981-99-2598-8_5

S. No	Paper Title	Authors	Journal / Book Name	Year	DOI
30	Algae in wastewater treatment, mechanism, and application of biomass for production of value-added product	Bhatt, P.| Bhandari, G.| Turco, R.F.| Aminikhoei, Z.| Bhatt, K.| Simsek, H.	Environmental Pollution	2022	10.1016/j.envpol.2022.119688
31	Biotechnological tools to elucidate the mechanism of pesticide degradation in the environment	Gangola, S.| Bhatt, P.| Kumar, A.J.| Bhandari, G.| Joshi, S.| Punetha, A.| Bhatt, K.| Rene, E.R.	Chemosphere	2022	10.1016/j.chemosphere.2022.133916
32	Exploring Microbial-Based Green Nanobiotechnology for Wastewater Remediation: A Sustainable Strategy	Malik, S.| Dhasmana, A.| Preetam, S.| Mishra, Y.K.| Chaudhary, V.| Bera, S.P.| Ranjan, A.| Bora, J.| Kaushik, A.| Minkina, T.| Jatav, H.S.| Singh, R.K.| Rajput, V.D.	Nanomaterials	2022	10.3390/nano12234187
33	Microalgae: A promising tool for pesticide mitigation in wastewater	Rajput, V.| Jaiswal, K.K.| Kumar, V.| Vlaskin, M.S.| Nanda, M.| Kumar, S.| Verma, M.	Pesticides Bioremediation	2022	10.1007/978-3-030-97000-0_15
34	Microalgae-based removal of pollutants from wastewaters: Occurrence, toxicity and circular economy	Bhatt, P.| Bhandari, G.| Bhatt, K.| Simsek, H.	Chemosphere	2022	10.1016/j.chemosphere.2022.135576
35	Microbial fuel cell united with other existing technologies for enhanced power generation and efficient wastewater treatment	Patwardhan, S.B.| Savla, N.| Pandit, S.| Gupta, P.K.| Mathuriya, A.S.| Lahiri, D.| Jadhav, D.A.| Rai, A.K.| Kanupriya| Ray, R.R.| Singh, V.| Kumar, V.| Prasad, R.	Applied Sciences (Switzerland)	2021	10.3390/app112210777
36	Rhizobiont in Bioremediation of Hazardous Waste	Kumar, V.| Prasad, R.| Kumar, M.	Rhizobiont in Bioremediation of Hazardous Waste	2021	10.1007/978-981-16-0602-1

Translational Technology, Patents & Community Knowledge Translation

Category	Technology / Intellectual Property	Key Details / Application
Patent published	Patent Application No. 202311053398 – "Rooftop Rain Water Harvester"	Civil / Hydrogeology; high-volume underground buffer storage and multi-chamber continuous filtration system for institutional campuses; published in the Indian Patent Journal.
Patent published	Patent Application No. 202311008945 – "A System for Injecting Treated Rain Water Directly to Aquifers"	Civil / Water Engineering; dual-filtration injection manifold converting depleted/defunct handpumps into deep-aquifer recharge shafts; published on 02/08/2024.
Elsevier publication/ Research publication	Book Chapter – *"UN SDGs in the Context of Hydrological Extremes"*	Published in the Elsevier publication *Water Sustainability and Hydrological Extremes* (2024). The chapter examines the relevance of the United Nations Sustainable Development Goals (UN SDGs) in addressing hydrological extremes and their implications for sustainable water management.
Copyrighted Behavioral Framework	"Pani Ki Kahani"	Behavioral curriculum deployed in rural schools and community centres for water-conservation literacy.
Applied Engineering Monograph / Policy Manual	Himalayan Well	Stream-bed subsurface intake technology designed to reduce turbidity in mountainous rivulets (gadheras); validated in partnership with IIT Roorkee.
Applied Engineering Monograph / Policy Manual	Steel Intake-cum-Roughening Filter	Prefabricated mountain spring-tapping unit with a daily filtration capacity of 31,000 litres.
Applied Engineering Monograph / Policy Manual	Low-Cost Biosand Community Filters	Gravity bio-filters providing approximately 70–80 litres/day of potable water for rural households.
National Technical Manuals	Jal Jeevan Mission Manuals	Operation & Maintenance guidelines, DPR preparation codes, and disaster WASH response protocols reportedly utilized across 31 States & UTs.

Evidence 1:

Certificate of Patent published for "Rooftop Rainwater Harvester"

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2023
(21) Application No.202311053398 A
(43) Publication Date : 01/09/2023

(54) Title of the invention : ROOFTOP RAIN WATER HARVESTER

(51) International classification	:C02F0001140000, C02F0001280000, A23L0002520000, E03B0003340000, G01V0001000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides a rooftop rain water harvester for collecting, storage and distribution of rooftop rain water and making available 150 liter to 3000-liter water per day in all 365 days of the year for supplementing our non-potable uses such as flushing, washing, gardening at household, institution and community level. It has been observed that approximately 35-75% of the total rainfall collected can be made available for non-potable use and remaining 25-65% will go to the ground water recharge depending on the rainfall and rooftop area available. Thus, with the disclosed harvester the community / municipal water supply can be reduced significantly. The harvester not only save cost of production, storage, treatment and transportation of community water supply but the harvester will also save withdrawal of drinking water from surface / underground water source.

No. of Pages : 18 No. of Claims : 7

Evidence 2:

Certificate of Patent published for "A System for Injecting treated rainwater directly to the aquifer"

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/02/2023

(21) Application No.202311008945 A

(43) Publication Date : 02/08/2024

(54) Title of the invention : A SYSTEM FOR INJECTING TREATED RAIN WATER DIRECTLY TO THE AQUIFERS.

(51) International classification	:E03B3/02, E03F5/10
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

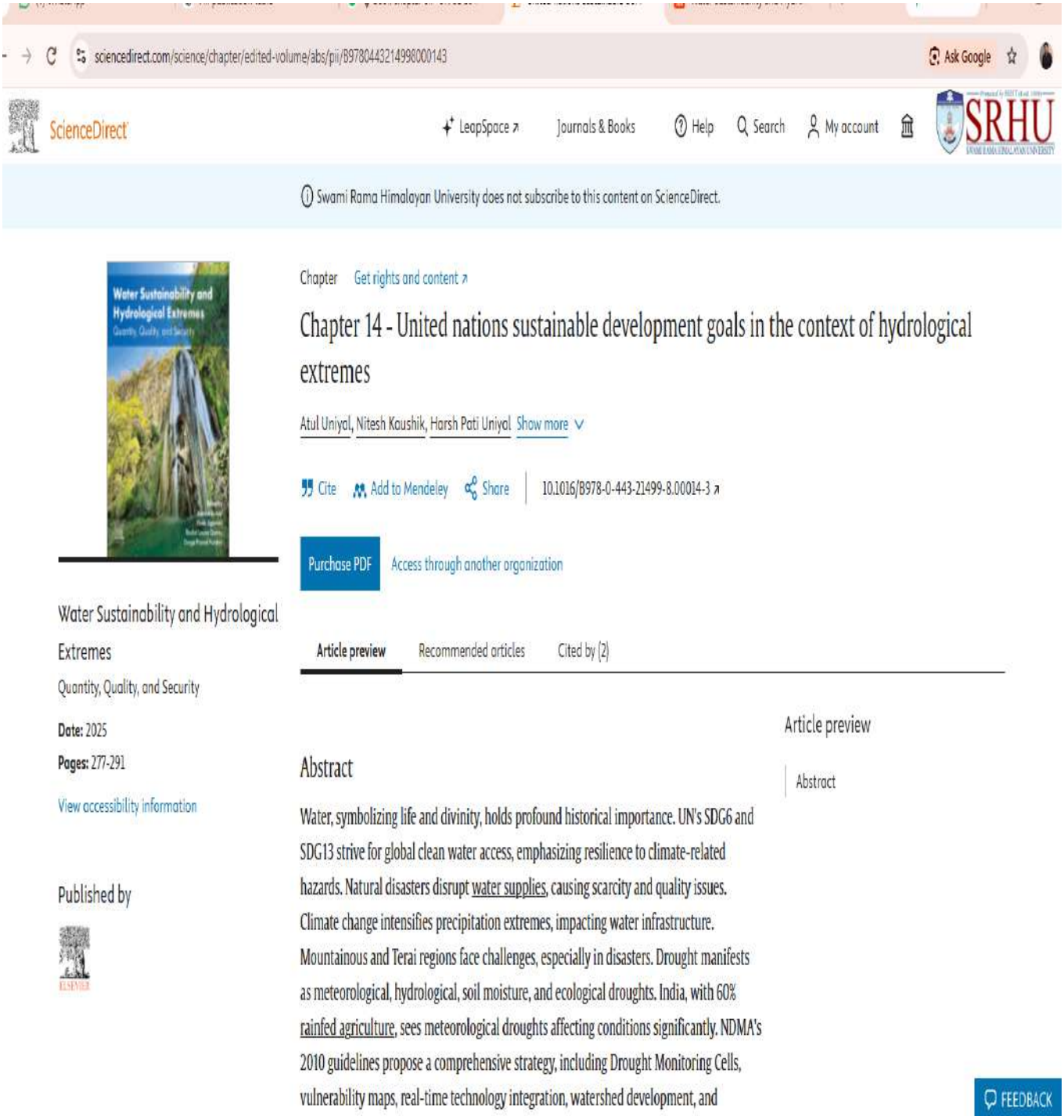
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Address of Applicant : NA
(72)**Name of Inventor :**
1)Er. Harsh Pati Uniyal
Address of Applicant :Advisor, Swami Rama Himalayan University; Swami Ram Nagar, Jolly Grant, Dehradun Uttarakhand India 248016 Dehradun ---------- ----------

(57) Abstract :
The present invention relates to a system for rainwater harvesting and recharging by direct injection to aquifers through defunct or failed borewell/handpumps in a quickest and cheapest way.The invention discloses a system and method of recharging/replenish fresh clean filtered rain water to the exhausted/depleted underground aquifer from which water has been withdrawn by already installed India Mark II hand pumps having 5" dia MS casing pipe body and a 32mm dia GI riser pipe based hand pump assembly inside the casing pipe. The surrounding ground level of the casing pipe is excavated up to 1 meter and graded filter media with pebbles, charcoal and sand is filled in the excavated portion are provided in a MS fabricated chamber. At the bottom of graded filter media a few holes are done in the casing pipe to allow filtered water to enter inside the casing pipe and flow directly to recharge the depleted/dried up aquifer connected to it. Thus the rain water after filtration enters the hand pump body through these holes and straight away travels about 50-80 meter depth and filled in the aquifer within few minutes without any loss due to seepage or evaporation. (Figure 2)

No. of Pages : 28 No. of Claims : 13

Evidence 3:

Screenshot of Book chapter on "UN SDGs in the context of hydrological extremes" published in the Elsevier publication "Water Sustainability and Hydrological Extremes", 2024 from ScienceDirect – Elsevier website.



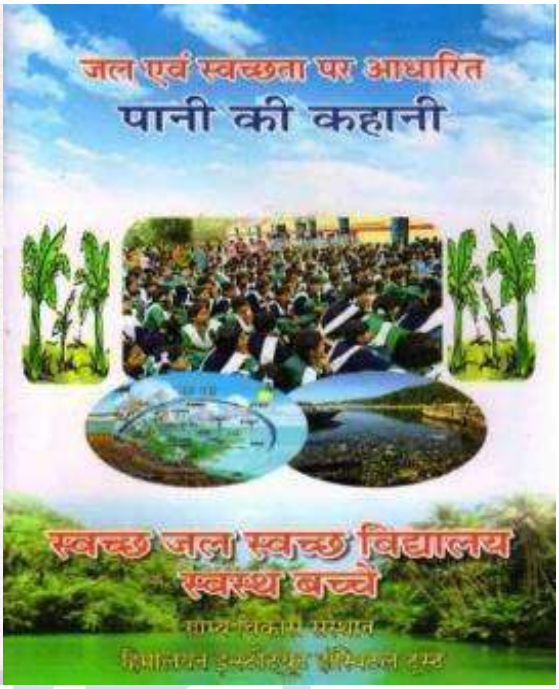
Evidence 4:

Pani ki Khani Copyrighted Certificate & front page of Pani ki Khani (Copyrighted publication)


Copyright Office
Government of India

Extracts from the Register of Copyrights

DEPUTY REGISTRAR OF COPYRIGHTS



Evidence 5:

Direct Injection technology Copyrighted Certificate & front page of "Recharging of Water Source through Handpump -DI Technology (Copyrighted publication)


Copyright Office, Government Of India

Application No.: LD-53190/2025-CO Date of Filing: 24/12/2025

This is to certify that a copyright has been registered for the work titled "Haind Pump se Jal Sroton ka Recharge ek Safal Abhinav Technique" as disclosed in the below mentioned application in accordance with the provisions of the Copyright Act,1957.

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1	PROF. H.P UNIYAL	ADVISOR, WATSAN DEPARTMENT, SWAMI RAMA HIMALAYAN UNIVERSITY, SWAMI RAM NAGAR, DOIWALA, DEHRADUN-248016
2	MR. NITESH KAUSHIK	DEPUTY DIRECTOR, WATSAN, WATER & SANITATION EXPERT, SWAMI RAMA HIMALAYAN UNIVERSITY, SWAMI RAM NAGAR, DOIWALA, DEHRADUN-248016

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Publisher Details: N.A.

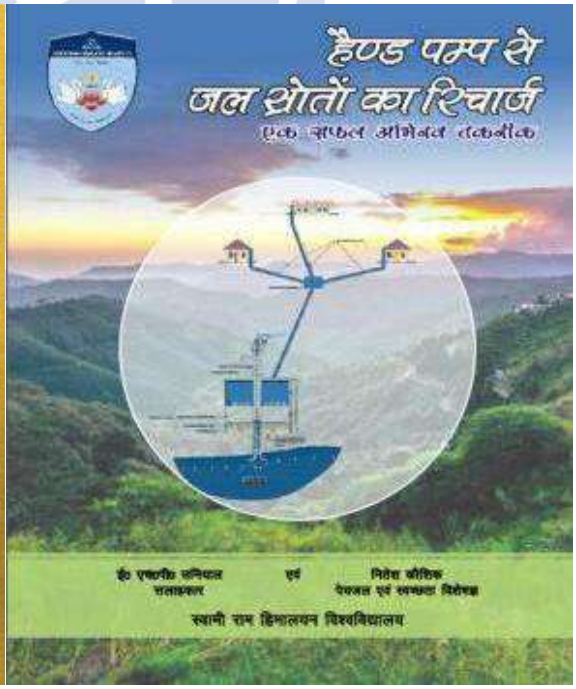
Language of the Work: Hindi

Description of the Work: Haind Pump se Jal Sroton ka Recharge ek Safal Abhinav Technique

(Conditions/ Remarks, if any): N.A.

Date of HOC: 02/06/2026

Registrar of Copyrights

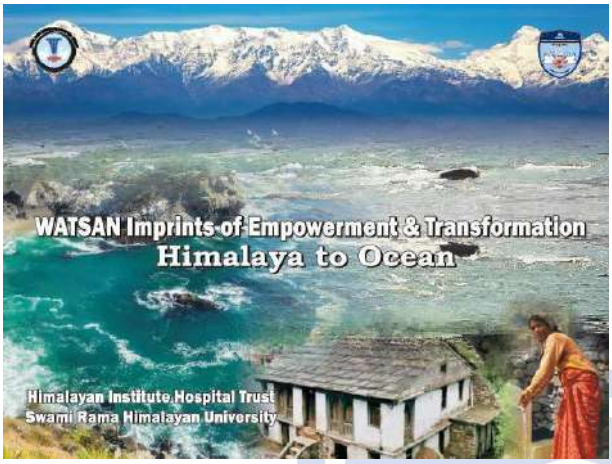


List of Book, Manual & Article Publications under RDI and SRHU:

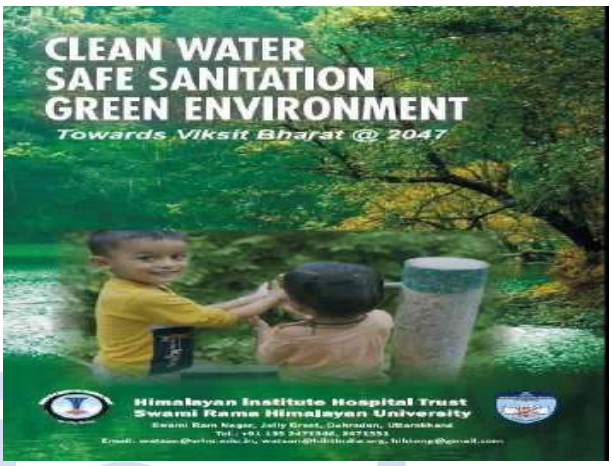
- "Cost-Effective, Disaster-Resilient Innovative Techniques for Achieving United Nations Sustainable Development Goals and Sustainable Operation and Maintenance of Water Supply Schemes in the Indian Himalayan Region" published in the 5th National Conference on Recent Innovations in Emerging Technology & Science (20-21 September, 2024.)
- "Innovative and Sustainable Aquifer Rejuvenation through Direct Injection of Rainwater in the Hilly Regions" published in the 5th National Conference on Recent Innovations in Emerging Technology & Science (20-21 September, 2024).
- "Jal Jeevan Mission – PRIs, VWSCs and Community", 2023
- "Revival of Traditional water bodies for source sustainability" for mid-management officials, 2023
- "Springshed Management, Direct Injection for long-term source sustainability" for mid-management officials, 2023
- "Operation & Maintenance of water schemes" for Mid management officials, 2023
- "Grey Water Management, Nature based solutions and Circular Economy" for Mid management officials, 2023
- "WASH Services during Disaster & Emergency" for Mid management officials, 2023
- "Implementation Support Agency Role & Activities in Jal Jeevan Mission" for NGOs, 2022
- Article in **Jal Jeevan Samvad** National Magazine of Govt. of India on "Demystifying Jal Jeevan Mission, 2023; "Participatory Planning, Implementation, O&M", 2021; and "Long term Source Sustainability, recharge and management of drinking water sources", 2021

Evidence of List of Book, Manual & Article Publications under RDI and SRHU

WATSAN Imprints (Training Manual)



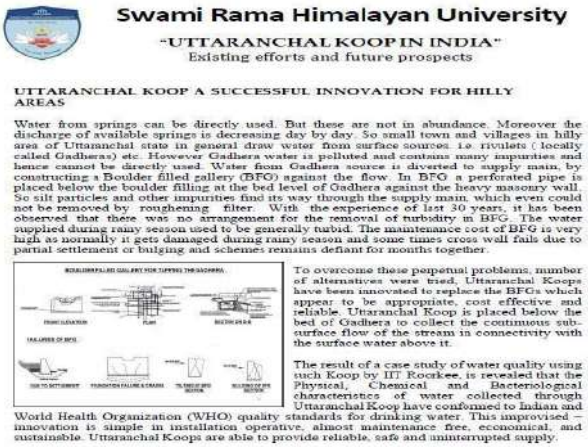
WATSAN (Technical Manual)



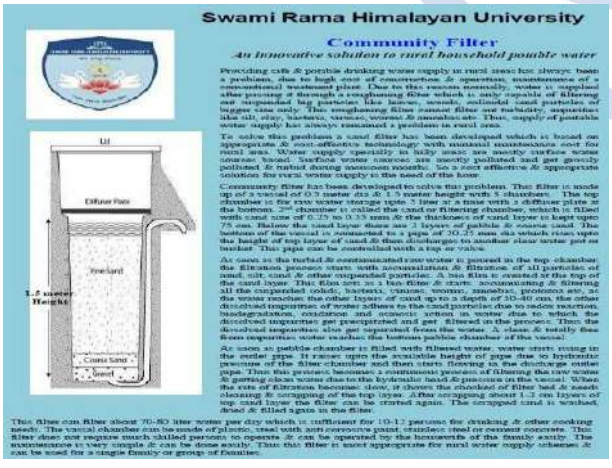
Innovative Model for Rooftop Rain Water Harvesting (Technical Manual)



Uttaranchal Koop (Technical Manual)



Community Filter (Technical Manual)



Solar pumping water scheme (Technical Manual)



Steel Intake cum Roughening filter (Technical manual)

Grey Water Management (Technical manual)


Swami Rama Himalayan University

Steel Intake cum Roughening Filter

Situation of Rural water supply

During the maintenance and repair of various schemes situated in remote areas, the following difficulties are invariably encountered:

- Long drains that are constructed on stone masonry walls to tap the spring water and transport it to intake chamber get cracked due to unequal settlement and start leaking.
- During monsoon, the drain and its supporting wall get damaged due to land slide and overflow.
- The masonry intake chamber starts leaking after few years.
- The drain and intake chamber if not covered properly, allow leaves, suspended wood, silt and other floating particles into the chamber. This poses the risk of choking of the inlet pipe.

These problems affect water supply. Although the repair work is of minor nature, it does necessitate the transportation of cement, sand, ballast etc not to remoter parts of the state where these are not readily available. In the event of cracks developing in the drain or leakage in the intake chamber, the water supply schemes have to be closed until the repair works are completed causing inconvenience to public.

Motivation for Developing the Initiative

After observing the situation for many years, a realization of the genuine need to develop a source tapping arrangement which is not susceptible to frequent damages provided the vision and inspiration for the innovation. The outcome is the innovative Steel Intake Chamber

Description of the Innovation

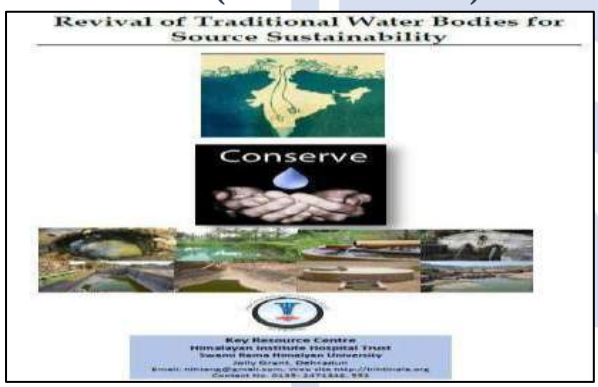
The Steel Intake Chamber is made up in two compartments from 3 mm thick MS plates with welded joints and coated with anti- corrosive paint. The normal size of the steel chamber has been kept as 0.60 X 0.80 X 0.90 m. A perforated plate is placed 45 cm below from the top of the chamber to make two compartments. The upper compartment is filled with graded filter media packed in wire mesh or fine pore plastic bags. It receives water through a channel section welded with the chamber and acts as a drain for receiving water from the spring. The water that trickles down through graded filter media and perforated MS plate is collected in lower 15 cm deep clear water compartment. This compartment is connected to outlet and wash out arrangement. The intake chamber is supported by four angle iron legs grouted in cement mortar near the spring source. The complete structure is spray painted with anti corrosive paint before use.

Steel Intake Chamber

Results Achieved

These chambers are environment-friendly having thin sections and adjustable legs for installation on small surface areas at sloping land. These structures have no adverse visual impacts because of their simple design. These structures can directly be placed and grouted just at the mouth of spring source without disturbing the spring source. Taking the filtration rate as 3600 litres / sqm/ hr, the capacity of this chamber is to filter 31,000 litres per day.

Handbook for revival of traditional water bodies (Technical manual)


Revival of Traditional Water Bodies for Source Sustainability

Conserve

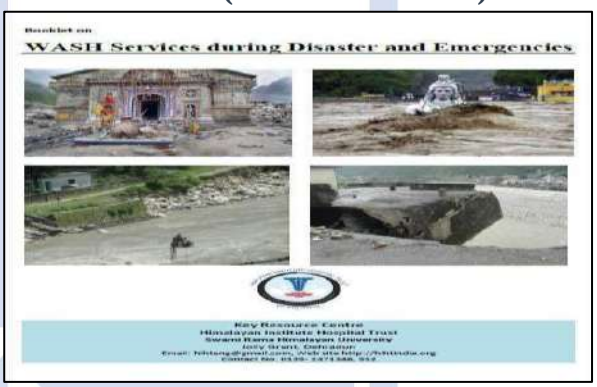
Key Resource Centre
Himalayan Institute Hospital Trust
Swami Rama Himalayan University


HANDBOOK FOR

Grey Water Management

Key Resource Center
Himalayan Institute Hospital Trust
Swami Rama Himalayan University
Swami Ram Nagar, Jolly Grant Dehradun 248016 (Uttarakhand)
☎ 0135- 2471346

Handbook for WASH services during disaster (Technical manual)


Booklet on

WASH Services during Disaster and Emergencies

Key Resource Centre
Himalayan Institute Hospital Trust
Swami Rama Himalayan University

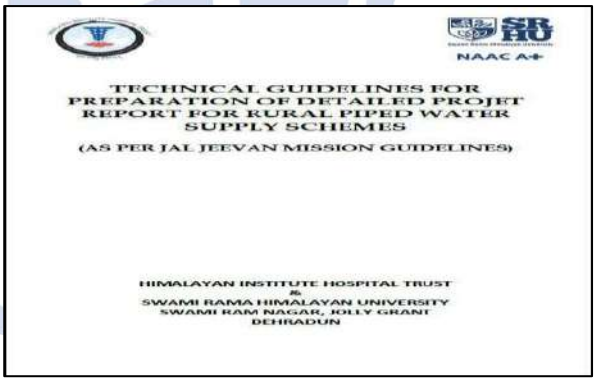
Handbook for O&M of RWSS (Technical manual)


Handbook for

Proper Operation & Maintenance
(O&M) of Rural Water Supply Schemes for its functionality and sustainability
(As per JJM Guidelines)

Key Resource Center
Himalayan Institute Hospital Trust
Swami Rama Himalayan University

Technical guidelines for preparation of detailed project report


NAAC A+

TECHNICAL GUIDELINES FOR PREPARATION OF DETAILED PROJET REPORT FOR RURAL PIPED WATER SUPPLY SCHEMES

(AS PER JAL JEEVAN MISSION GUIDELINES)

HIMALAYAN INSTITUTE HOSPITAL TRUST
&
SWAMI RAMA HIMALAYAN UNIVERSITY
SWAMI RAM NAGAR, JOLLY GRANT
DEHRADUN

Training manual for ISAs



Training manual for VWSC/ PRI members



Research, Strategic Studies, Assessment and Impact Evaluation

SRHU undertakes **research and studies on water, sanitation, environmental sustainability, and public health**, while developing and implementing **innovative technologies, interventions, and community-based solutions** in the field. These initiatives are piloted and evaluated in real-world conditions to assess their **technical, social, environmental, and economic impacts**, and to improve and refine the technologies for wider application. Through this research-to-field approach, the Unit works towards developing **cost-effective, climate-resilient, sustainable, and community-centric solutions** that improve water security, sanitation, health, and overall community well-being.

Title of Study & Research	Description
Social and Environmental Audit of STPs and I&Ds under Namami Gange Programme	Conducting social and environmental audit, impact evaluation of sewage treatment plants in District – Dehradun, Tehri, Haridwar and Nainital under Namami Gange Programme
National Mission on Himalayan Studies, Ministry of Environment, Forest & Climate Change, Government of India "Affordable Climate-resilient Water Supply Infrastructure Prototype for Indian Himalayan Region"	Design low-cost, climate-resilient water supply infrastructure prototype and pilot I in the districts of Pauri, Rudraprayag, Chamoli, Tehri, and Uttarkashi, Uttarakhand
Direct Injection of Rainwater through Handpump for recharging of aquifers in Mountainous Areas (Patented)	Innovative technology of aquifer recharging developed. 36 Cr. Sanctioned to GoUK by GoI under Jal Shakti Abhiyan 2023 for this technology scale-up
Innovative 365 Days Model of Rooftop Rain Water Harvesting for non-potable uses (Patented)	Rooftop rainwater being used in toilets of various buildings throughout the year and remaining water used for recharging of groundwater
groundwater	

Title of Study & Research	Description
Innovative Technologies for tapping of Spring & Stream in Mountainous Area	Developed disaster-prone water supply technologies – Uttaranchal Koop for stream and Steel Intake for Spring
Health & hygiene benefits through WATSAN	To study the sustainable health & hygiene benefits
Action Research on Solar Pumping water supply scheme	• 186 mt. height single-lift solar pumping water scheme from a spring, first of its kind in Uttarakhand at Chureddhar, Tehri Garhwal • 17.5 HP Tubewell solar pumping water scheme for 3000+ beneficiaries at Jasuvawala, Haridwar • 3 other solar pumping schemes in Pauri Garhwal
Geo-hydrology based Springshed Management	Science-based concept of spring recharge using traditional wisdom
Open Defecation Free Verification (Evaluation) Study in 5 Districts of U.P.	ODF Verification Study was conducted in 96 Gram Panchayats of U.P. to find out ODF Status and to ensure improved sanitation behaviour and practices
Health Benefit Study of World Bank funded Swajal Project	Impact assessment through implementation of water & sanitation project
Impact Assessment Study	Impact assessment (social, technical, financial, environmental) on community through implementation of Swajal project
Project Implementation Plan	Pre-feasibility, Planning & implementation guidelines of water and sanitation project
Information Needs Assessment	Identifying information needs of various stakeholders under WATSAN sector
Institutional Mapping Exercise and Publishing Blue Pages	Blue book of the water & sanitation institutes

Curricular Integration and Academic Mapping for SDG 6 Alleviation

Program Name	Course Name	Course Code
MBBS Third Prof Part I & Part II	Community medicine	1101301
MD Biochemistry	Molecular biology, Molecular and genetic aspects of cancer, Immunology, and Environmental Biochemistry.	1101508
MD Community Medicine	Conceptual (and applied) understanding of Public Health, Community Medicine, Communicable and Non- Communicable diseases, emerging and re-emerging diseases, Applied Epidemiology, Health research, Biostatistics.	1101509
MD Community Medicine	Nutrition, Environmental Health, Primary Health Care system, Panchayat Raj system, National health Programs, RCH, Demography and Family Welfare, Health Care Administration, Health Management and Public Health Leadership.	1101509
MD Community Medicine	Social & Behavioral sciences- applied aspects, Scientific communications & Medical writing, Research Methodology, Public Health Legislations, International Health & Global Diseases surveillance.	1101509
MD Community Medicine	Health Policy planning, Medical Education technology, Information Technology, Integration of alternative Health system including AYUSH, Occupational Health, Recent advances in Public Health & Miscellaneous issues, Health Economics.	1101509
MD General Medicine	Therapeutics and tropical medicine	1101510
MD General Medicine	Recent advances in the subject	1101510
MD Emergency Medicine	Basic Medical Science (Applied Basic Sciences, General Emergency Medicine And Disaster Preparedness)	1101521
MD Emergency Medicine	Infectious Disease, HIV And AIDS, CVS, GIT, Critical Care, Paediatrics, Environmental Emergencies And Toxicology	1101521
MD Emergency Medicine	Nephrology, Endocrinology, Haematology, Oncology, Psychiatry, Dermatology, Occupational Disease And Recent Advances	1101521
M.Sc. Clinical Research	Environmental & Regulatory Physiology	CMCR517
M.Sc. Epidemiology	Introduction to Environmental, Occupational, Nutritional and Genetic Epidemiology	CMEP502
M.Sc. Epidemiology	Environmental and Occupational Epidemiology	CMEC001
Bachelor of Physiotherapy (BPT)	Introduction to quality and patient safety(including emergency care, BLS, and biomedical waste)	BPT 306
Bachelor of Physiotherapy (BPT)	Environmental science -1	EVS 301
Bachelor of Physiotherapy (BPT)	Exercise Therapeutics II	BPT 402

Program Name	Course Name	Course Code
Bachelor of Physiotherapy (BPT)	Environmental Science II	*EVS 301
Bachelor of Physiotherapy (BPT)	Community medicine	BPT 504
BMLT	General Bacteriology	BMLT 102
BMLT	Systemic Bacteriology	BMLT 302
BMLT	Environmental Science - I	EVS 301
BMLT	Instrumentation in Biochemical Analysis	BMLT 401
BMLT	Virology and Mycology	BMLT 402
BMLT	Environmental Science - II	EVS302
BMLT	General Parasitology	BMLT 502
BMLT	Applied Microbiology and Advanced Techniques	BMLT 602
B.Sc. Medical Radiology & Imaging Technology (BRIT)	Environmental Science-I	EVS 301
B.Sc. Medical Radiology & Imaging Technology (BRIT)	Environmental Science- II	EVS301
B.Sc. Medical Technology (Radiotherapy-BRT)	Human Anatomy-I	BRT101
B.Sc. Medical Technology (Radiotherapy-BRT)	Human Physiology-I	BRT102
B.Sc. Medical Technology (Radiotherapy-BRT)	Human Anatomy-II	BRT201
B.Sc. Medical Technology (Radiotherapy-BRT)	Human Physiology- II	BRT202
B.Sc. Medical Technology (Radiotherapy-BRT)	Environmental Science- I*	EVS 301
B.Sc. Medical Technology (Radiotherapy-BRT)	Environmental Science - II	EVS 301
Bachelor of Occupational Therapy (BOT)	Human Anatomy- I	BOT101
Bachelor of Occupational Therapy (BOT)	Human Physiology-I	BOT102
Bachelor of Occupational Therapy (BOT)	Biochemistry	BOT103
Bachelor of Occupational Therapy (BOT)	Pharmacology Principles Relevant to Operation Theatre Technology	BOT104
Bachelor of Occupational Therapy (BOT)	Introduction to Quality, Patient safety and Patient care - I	BOT105
Bachelor of Occupational Therapy (BOT)	Human Anatomy-II	BOT201
Bachelor of Occupational Therapy (BOT)	Human Physiology II	BOT202
Bachelor of Occupational Therapy (BOT)	Basic Pathology and Hematology	BOT203
Bachelor of Occupational Therapy (BOT)	Microbiology	BOT204

Program Name	Course Name	Course Code
Bachelor of Occupational Therapy (BOT)	Introduction to Quality, Patient safety and Patient care - II	BOT205
Bachelor of Occupational Therapy (BOT)	English, Communication and soft skills	ECS201
Bachelor of Occupational Therapy (BOT)	Introduction to Yoga - Basic theory, sciences and techniques	YST201
Bachelor of Occupational Therapy (BOT)	Basic computer and Information sciences	CIS201
Bachelor of Occupational Therapy (BOT)	Introduction to operation theatre (OT)	BOT 301
Bachelor of Occupational Therapy (BOT)	Introduction to basic surgical instruments	BOT302
Bachelor of Occupational Therapy (BOT)	Introduction to Anaesthesia Technology	BOT303
Bachelor of Occupational Therapy (BOT)	Environmental Sciences-I	BOT301
Bachelor of Occupational Therapy (BOT)	Introduction to basic surgical equipment (OT)	BOT401
Bachelor of Occupational Therapy (BOT)	Basic concepts of Allied Surgeries	BOT402
Bachelor of Occupational Therapy (BOT)	Medical diseases influencing choice of Anaesthesia	BOT403
Bachelor of Occupational Therapy (BOT)	Environmental science II	EVS301
Bachelor of Occupational Therapy (BOT)	Considerations in special surgical procedures (General surgery, Obstetrics and gynae, ENT, Ortho)	BOT501
Bachelor of Occupational Therapy (BOT)	CSSD procedures and Sterilization techniques	BOT502
Bachelor of Occupational Therapy (BOT)	Advanced anaesthesia and PACU care	BOT503
Bachelor of Occupational Therapy (BOT)	Basic Intensive Care, ManPower resourse, Fire safety, and instrument maintenance	BOT601
Bachelor of Occupational Therapy (BOT)	Specialized surgery (Plastic, Pediatric, Cardio thoracic and vascular surgeries)	BOT602
Bachelor of Occupational Therapy (BOT)	Speciality Anaesthesia	BOT603
Bachelor of Optometry (B.Optom)	Biochemistry	BOPT103
Bachelor of Optometry (B.Optom)	Basic Orthoptics	BOPT203
Bachelor of Optometry (B.Optom)	Environmental Science – I*	EVS301
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Anatomy and Physiology of Speech & Swallowing	B1.3MC

Program Name	Course Name	Course Code
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Practical Speech-Language Pathology	B1.5M
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Linguistics and Phonetics	B2.3MC
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Environmental Sciences	EVS
Master of Physiotherapy (MPT)	Physiotherapeutics I	MPT104
Master of Physiotherapy (MPT)	Musculoskeletal Disorders: Advanced Physiotherapeutics II	MPT1 404
Master of Hospital Administration	Hospital Planning and Operations	MHA122
B.Sc. Nursing	Community Health Nursing I including Environmental Science & Epidemiology - Theory	N- COMH (I) 310
B.Sc. Nursing	Community Health Nursing I including Environmental Science & Epidemiology – Practical	N- COMH (I) 310
Post Basic BSc Nursing	Environmental Science	PBN207
M.Sc. Nursing	Community Health Nursing - I	MSN102 B
M.Sc. Nursing	Community Health Nursing - I Practical	MSN102 B
M.Sc. Nursing	Community Health Nursing – II	MSN-201 B
M.Sc. Nursing	Community Health Nursing – II	MSN201 B
B.Sc. Biotechnology	General Microbiology	BMBC 111
B.Sc. Biotechnology	Public Health & Hygiene	BBTSE 111
B.Sc. Biotechnology	Environmental Science-I	AECC 111
B.Sc. Biotechnology	Lab course based on course BMBC 111	BBTPC 113
B.Sc. Biotechnology	Microbial physiology & metabolism	BMBC 121
B.Sc. Biotechnology	Biofertilizers	BBTSE 121
B.Sc. Biotechnology	Lab course based on course BBTC 121	BBTPC 121
B.Sc. Biotechnology	Lab course based on course BMBC 121	BBTPC 123
B.Sc. Biotechnology	Molecular Biology	BBTC 231
B.Sc. Biotechnology	Chemistry-I	BBTC 233
B.Sc. Biotechnology	Microbial Quality Control in Food and Pharmaceutical Industries	BBTSE 231
B.Sc. Biotechnology	Environmental Sciences-II	AECC 231
B.Sc. Biotechnology	Lab course based on course BBTC 233	BBP TC 232
B.Sc. Biotechnology	Beverage biotechnology	BBTOE 241
B.Sc. Biotechnology	Biotechnology and Human Welfare	BBTOE 242
B.Sc. Biotechnology	Environmental Biotechnology	BBTC 503
B.Sc. Biotechnology	Practical- X (Paper XXXI & XXXII)	BBTP 502
B.Sc. Microbiology	General Microbiology	BMBC 111
B.Sc. Microbiology	Environmental Science-I	AECC 111
B.Sc. Microbiology	Lab course based on course BMBC 111	BBTPC 113
B.Sc. Microbiology	Microbial physiology & metabolism	BMBC 121

Program Name	Course Name	Course Code
B.Sc. Microbiology	Biofertilizers	BBTSE 121
B.Sc. Microbiology	Lab course based on course BBTC 121	BBTPC 121
B.Sc. Microbiology	Molecular Biology	BBTC 231
B.Sc. Microbiology	Food &Diary Microbiology	BMBC 231
B.Sc. Microbiology	Microbial Quality Control in Food and Pharmaceutical Industries	BBTSE 231
B.Sc. Microbiology	Environmental Sciences-II	AECC 231
B.Sc. Microbiology	Lab course based on course BMBC 231	BMPC 232
B.Sc. Microbiology	Lab course based on course BBTC 233	BMPC 233
B.Sc. Microbiology	Biotechnology and Human Welfare	BBTOE 242
M.Sc. Biotechnology, Sem-I	Microbiology	MMBT 101
M.ScBiotechnologyy, Sem-I	Microbiology Practical	MMBP 101
M.Sc. Biotechnology, Sem-III	Food and Industrial Biotechnology	MBTT 303
M.Sc. Biotechnology, Sem-III	Advanced Environmental Biotechnology	MBTE 302
M.Sc. Biotechnology, Sem-III	Microbial Technology	MBTE 307
M.Sc. Biotechnology, Sem-III	Nanobiotechnology	MBTE 308
M.Sc. Biotechnology, Sem-III	Energy & Environment	MBTE 310
M.Sc. Biotechnology, Sem-IV	Research Project/Dissertation	MBTR 401
M.Sc. Microbiology	Microbiology	MMBT 101
M.Sc. Microbiology	Microbiology Practical	MMBP 101
M.Sc. Microbiology	Virology and Bacteriology Practical	MMBP 201
M.Sc. Microbiology	Microbial Physiology & Metabolism Practical	MMBP 202
M.Sc. Microbiology	Industrial Waste Management	MMBE 302
M.Sc. Microbiology	Soil and Agriculture Microbiology	MMBE 304
M.Sc. Microbiology	Bioprocess Technology	MMBE 310
M.Sc. Microbiology	Research Project/Dissertation	MMBR 401
BSc. Yoga Science and Holistic Health	Human Anatomy and Physiology-I	BYSC103
BSc. Yoga Science and Holistic Health	Public Health and Hygiene	BYSC105
BSc. Yoga Science and Holistic Health	Human Anatomy and Physiology-II	BYSC203
BSc. Yoga Science and Holistic Health	Human Anatomy and Physiology Practical – II	BYSC208
BSc. Yoga Science and Holistic Health	Fundamentals of Environmental Science	BYS603
MSc. Yoga Science and Holistic Health	Human Anatomy and Physiology-I	MYS103
MSc. Yoga Science and Holistic Health	Fundamentals of Ayurveda and Naturopathy	MYS202
MSc. Yoga Science and holistic health	Human Anatomy and Physiology-II	MYS203
MSc. Yoga Science and holistic health	Environmental Pollution and	MYS303
B.Tech CSE	Environmental Studies	HST112
B.Tech CSE	Disaster Management	GES471

Program Name	Course Name	Course Code
B.Tech (Hons.) CSE with AI & ML	Environmental Studies	HST112
B.Tech (Hons.) CSE with DS & ML	Environmental Studies	HST112
B.Tech CSE – Cyber Security	Environmental Studies	HST112
Bachelor of Computer Applications (BCA)	Environmental Studies	BCT125
Bachelor of Computer Applications (BCA)	Disaster Management	BCA309
B.Sc. Data Science	Environmental Studies	MD121T
BBA	Management Concepts	BBA 104
BBA	Soft Skills-I	BBA 106
BBA	Environment Studies	BBA 107
BBA	Business Environment Analysis	BBA 201
BBA	Marketing Management	BBA 304
BBA	Business Finance	BBA 401
BBA	Quantitative Techniques	BBA 405
BBA	Soft Skills-II	BBA 406
BBA	Soft Skills-II	BBA 506
B.Com	Financial Accounting	BCM 103
B.Com	Mercantile Law	BCM 201
B.Com	Advanced Accounting – I	BCM 202
B.Com	Business Mathematics	BCM 203
B.Com	Financial Management	BCM 204
B.Com	Soft Skills – I	BCM 206
B.Com	Environment Studies	BCM 207
B.Com	Corporate Accounting	BCM 303
B.Com	Cost Accounting	BCM 304
B.Com	Computer Applications	BCM 306
B.Com	Human Resource Management	BCM 405
B.Com	Summer Internship Project*	BCM 505
B.Com	Auditing & Assurance Practices	BCM 601
MBA	Statistics For Managers	MBA 102
MBA	Economics For Business Decisions	MBA 104
MBA	Marketing Management	MBA 106
MBA	Communication For Managers	MBA 107
MBA	Management Science	MBA 108
MBA	Cost & Management Accounting	MBA 203
MBA	Human Resource Management	MBA 206
MBA	International Business	MBA 208
MBA	Introduction to Business Analytics	MBA 209
MBA	Strategic Management	MBA301
MBA	Summer Internship (6 Weeks)	MBA305

6.2 Water Consumption per person Year 2025

The university monitored its daily water consumption using IoT-enabled IoSense. The annual water consumption of the university during 2024-2025 was 2,56,296 m^3, with a total campus population (Full-Time Equivalent, FTE) of 9862.

6.2.1 Water consumption tracking Year: 2024-25

The University has established comprehensive and transparent water-consumption monitoring aligned with CGWA standards. A water-consumption measurement and monitoring system is in place across the campus to record water-use data. The system captures real-time water-use data across the full campus using telemetry-enabled piezometers, supplemented by government-supplied water data. With publicly available information through IoSense, SRHU demonstrates a strong institutional commitment to sustainable water resource management and transparent reporting. The average per-capita water consumption is 71.2 L/FTE/day, corresponding to an average annual consumption of 25 m^3/FTE/year, based on the total annual water consumption of 256,296 m^3 for a total FTE population of 9,862.

At present, one IoSense monitoring units and two piezometers equipped with telemetry have been installed on campus to continuously monitor groundwater levels.

The monitoring system provides documented and verifiable evidence of water consumption and groundwater monitoring. Relevant monitoring data and supporting evidence are publicly available through the University's official website, ensuring transparency and facilitating independent verification. This demonstrates the University's institutional commitment to sustainable water-resource management, continuous monitoring, and transparent reporting.

Daily Tubewell Water Extraction and water supply from Municipal Sources

Sl. No.	Volume of water used in the university	Quantity
1	Recorded groundwater level (2024-25)	68.45 m
2	Daily water withdrawal from Tubewells	1294 m^3
3	Fresh water supplied through the municipal water supply system	50 m^3

Annual water intake (in cubic meters) from various sources at SRHU for the year 2024–25

Sl. No.	Volume of water used in the university	Quantity (m^3)
1	Municipal water supply (UJS)	10950
2	Total Ground Water Withdrawal from Tubewells	284763
3	Tubewell 1	43927
4	Tubewell 2	165799
5	Tubewell 3	75037
	Grand Total	**295713**

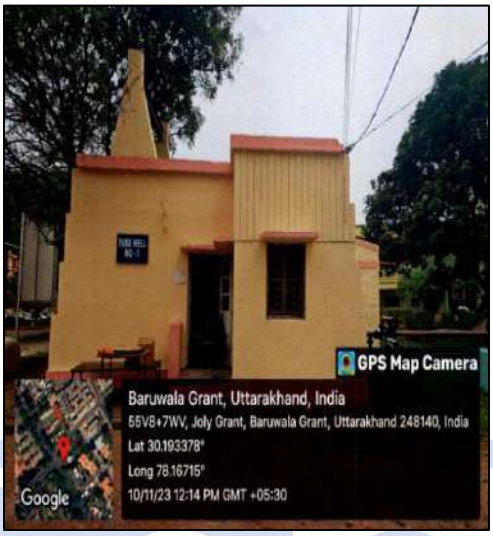
Annual water consumption for Swami Rama Himalayan University during 2024- 2025.

Year	Annual Water consumption		Serving Population
	Quantity (m^3)	Source of Water	
	Institutional/ Domestic use		
2024 – 25	256,296	Tube well & municipal supply	Students 4314 (1213 hostellers + 3101 day scholars), Faculty 342, staff- 2800 and resident Population- 1193

Particulars	Status	Details
Existence of Measurement	Yes	Piezometers Installed and IoSense is in place
Is the evidence Provided	Yes	Images of Piezometers, Tube well and EM Flow meter provided
Is the evidence in public domain	Yes	Data available in IoSense portal

Images of Piezometers, Tube Well and EM Flow Meter







Tubewell No 1 with the distribution pipe

Volume of Water Used in the University: Inbound (Treated or Extracted Water)

Main source of water in SRHU are tube wells and municipal supply. The percentage of municipal supply is very low. The University records 2,56,296 m³ of total inbound water for 2024-25 (including treated and extracted sources), monitored in real time through telemetry-based piezometers. The reduction in water intake compared to the previous year is attributed to the implementation of sustainable water conservation practices, including rainwater harvesting systems, innovative 365-day rainwater harvesting models, groundwater recharge structures, and water-saving fixtures. All water sources comply with CGWA guidelines and BIS 10500 potable water standards, ensuring sustainable and safe usage across the entire campus serving over 9862 people daily.

Campus Population: Campus population covers employees, students and employee families residing in the University campus (**Total -9862**)

Details of daily and annual water consumption at the University for 2024–25

S. No.	Detail	Population	Per FTE/Year Consumption (m³/year)	Total Water Consumption (m³/year)
1	**Students**	4,314	18	77,500
2	Faculty	342	18	6,100
3	Hostelers	1,213	51	61,944
4	Staff	2,800	18	49,752
5	Residential Population	1,193	51	61,000
	Total	**9,862**		**256,296**

6.2.2. Academic Unit-Wise, Administrative & Residential Water Consumption

- **Student FTE:** 4314 Students (Hosteler 1213 + Day's scholar 3101)
- **Faculty FTE:** 342 Faculties
- **Staff FTE:** 2800

- **Institute resident Residential FTE:** 1193 residential population
- **Total FTE:** 4427+343+1289+1193 (9862 FTE)

Per unit Per month water consumption (m^3) (Source of water supply - Tube wells / Municipal supply**)**

Sl. No.	Academic Unit	FTE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Consumption (m^3)
1	Himalayan College of Nursing	792	1,296	1,284	1,385	1,330	1,349	575	521	1,327	1,314	1,406	1,325	764	13,876
2	Himalayan Institute of Medical Sciences	3,374	5,127	5,138	5,315	5,245	5,219	4,460	4,250	5,266	5,275	5,443	5,251	4,355	60,344
3	School of Biosciences	372	586	579	603	591	611	262	237	599	594	630	600	354	6,246
4	School of Management Studies	553	921	859	939	901	939	398	361	916	909	950	881	513	9,487
5	School of Pharmaceutical Sciences	124	207	204	216	207	227	95	87	220	215	215	206	119	2,218
6	School of Science and Technology	754	1,285	1,303	1,348	1,326	1,359	576	521	1,302	1,281	1,392	1,324	743	13,760
7	School of Yoga Science	237	386	387	405	399	413	174	156	396	391	413	403	229	4,152
8	Administrative Buildings	1,250	2,112	2,073	2,038	2,068	2,103	1,479	1,370	2,071	2,086	2,187	2,110	1,572	23,269
9	Residential Area	1,193	5,366	5,206	5,340	5,249	5,320	4,856	4,736	5,209	5,248	5,330	5,272	3,868	61,000
10	Hostels	1,213	6,291	5,866	6,388	6,134	6,543	1,133	994	6,316	6,480	6,643	6,079	3,077	61,944
	Total	9,862	23,577	22,899	23,977	23,450	24,083	14,008	13,233	23,622	23,793	24,609	23,451	15,594	256,296

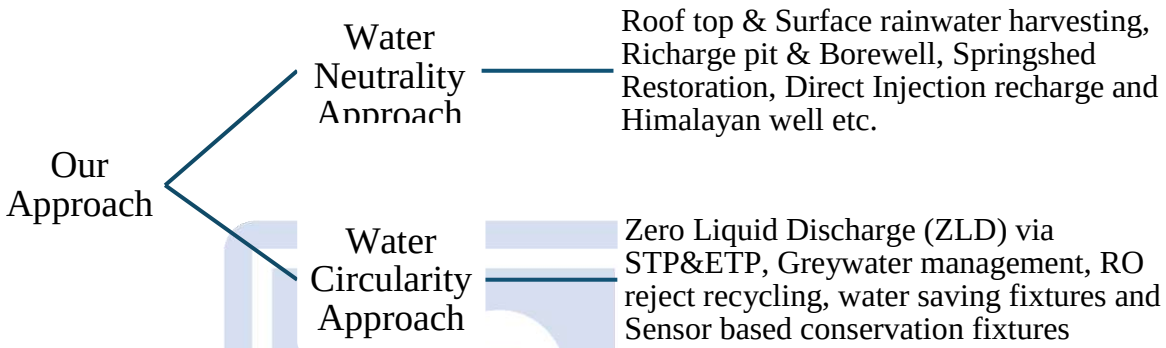
6.2.2. Academic unit wise per capita consumption

Sl. No.	Academic Unit	FTE	Per FTE per Day Consumption (L/D)	Per FTE per Year Consumption (m^3)	Annual Consumption (m^3)
1	Himalayan College of Nursing	48	18	13,876	48
2	Himalayan Institute of Medical Sciences	49	18	60,344	49
3	School of Biosciences	46	17	6,246	46
4	School of Management Studies	47	17	9,487	47
5	School of Pharmaceutical Sciences	49	18	2,218	49
6	School of Science and Technology	50	18	13,760	50
7	School of Yoga Science	48	18	4,152	48
8	Administrative Buildings	51	19	23,269	51
9	Residential Area	140	51	61,000	140
10	Hostels	140	51	61,944	140
Total		9,862	48	18	13,876

6.3 Water Usage and Care

During 2024–25, Swami Rama Himalayan University strengthened its Water Care programme through Water Neutrality and Water Circularity, focusing on groundwater recharge, wastewater reuse and efficient water consumption. The campus utilized 16 recharge pits, 2 borewell recharge structures, and multiple rainwater harvesting systems to enhance water recharge and conservation. Wastewater was treated through a 1 MLD STP and 90 KLD ETP and reused for landscaping, toilet flushing, construction, and other non-potable purposes. Water-saving measures such as waterless urinals, sensor-based fixtures, drip irrigation, and RO-reject water reuse further reduced freshwater consumption. In addition, automatic cut-off valves were installed in water tanks; once a tank reaches full capacity, the water supply automatically stops, preventing overflow and significantly reducing water wastage. Together, these measures promoted efficient, circular, and sustainable water management across the campus.

6.3.1 Wastewater Treatment Year 2024-2025



Wastewater Treatment Process

Sl. No	Wastewater Treatment Plant	Capacity	Details
1	**Sewage Treatment Plant**	**1.0 MLD**	Treats campus sanitary sewage via extended biological aeration, clarifier settling, multi-grade sand and activated carbon filtration, and chlorination.
2	**Effluent Treatment Plant**	**90 KLD**	Dedicated clinical facility treating liquid biomedical waste from Himalayan Hospital, pathology laboratories, and surgical suites via chemical equalization, coagulation, neutralization, and secondary biological aeration.

Wastewater treatment during 2024-2025

Year	Quantity generated (m^3)	Quantity recycled (m^3)	
		(m^3)	%
2024 – 25	**216599**	**216599**	**100**

Per unit per month wastewater generation (m^3)

Sl. No.	Academic Unit	FTE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Wastewater Generation (m^3)
1	Himalayan College of Nursing	792	1,478	1,478	1,565	1,565	1,565	1,478	957	1,565	1,565	1,565	1,478	1,129	**17,400**
2	Himalayan Institute of Medical Sciences	3,374	6,230	6,230	6,596	6,596	6,596	6,230	4,028	6,596	6,596	6,596	6,230	4,751	**74,102**
3	School of Biosciences	372	687	687	735	735	735	687	444	735	735	735	687	524	**8,166**
4	School of Management Studies	553	1,032	1,032	1,093	1,093	1,093	1,032	668	1,093	1,093	1,093	1,032	790	**12,144**
5	School of Pharmaceutical Sciences	124	231	231	245	245	245	231	149	245	245	245	231	178	**2,721**
6	School of Science and Technology	754	1,406	1,406	1,491	1,491	1,491	1,406	1,027	1,491	1,491	1,491	1,406	1,073	**16,559**
7	School of Yoga Science	237	440	440	469	469	469	440	288	469	469	469	440	344	**5,206**
8	Administrative Buildings	1,250	2,334	2,334	2,471	2,471	2,471	2,334	1,515	2,471	2,471	2,471	2,334	1,778	**27,456**
9	Residential Area	1,193	2,225	2,225	2,356	2,356	2,356	2,225	1,446	2,356	2,356	2,356	2,225	1,762	**26,200**
10	Hostels	1,213	2,348	2,348	2,473	2,473	2,473	2,348	1,417	2,473	2,473	2,473	2,348	1,763	**26,645**
	Total	**9,862**	**18,411**	**18,411**	**19,494**	**19,494**	**19,494**	**18,411**	**11,913**	**19,494**	**19,494**	**19,494**	**18,411**	**14,078**	**216,599**

Reuse of Treated water

- 67 m^3 of water is used for irrigation of the green belt of 1,60,800 sqm area.
- The manure produced through STP is utilized in the green belt

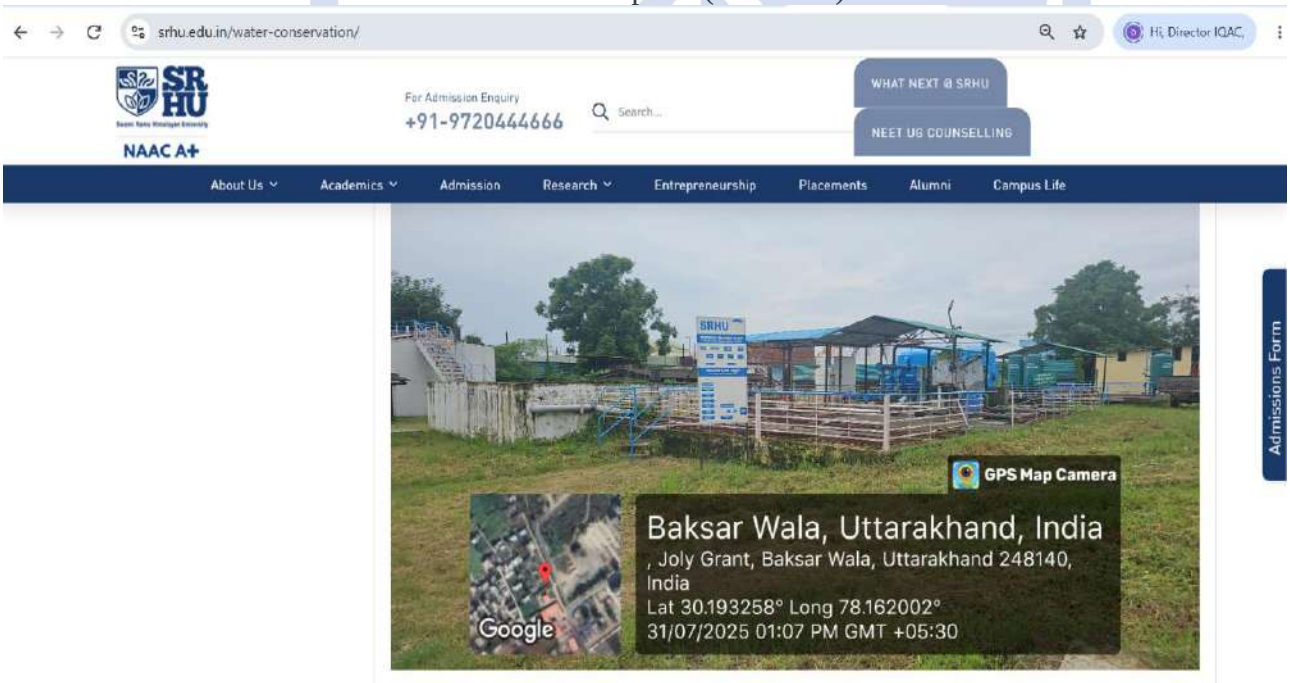
- The STP inlet and outlet water are tested every six months at an NABL-accredited laboratory and found within norms

Particulars	Status	Details
Existence of process	Yes	STP and ETP in place EM Flow meter installed
Evidence Provided	Yes	Images of STP & ETP
Is the evidence in public domain	Yes	Available on the sustainability page of SRHU website https://srhu.edu.in/water-conservation/

Evidence 1.
Images of STP & ETP & EM flow meter



Evidence 2. Screenshot of wastewater treatment plant (STP/ETP) from website



6.3.2 Preventing water system pollution

SRHU has established a comprehensive process to prevent water-system pollution through separate dual water-supply lines for treated/reused water and drinking water**,** regular chlorination of supplied water at storage tanks**,** and periodic water-quality testing to ensure adequate disinfection and prevent bacteriological contamination. Graded filter media are installed in rainwater-harvesting recharge structures to minimize the entry of contaminants into groundwater. Wastewater is treated through the operational STP before reuse or discharge, while oil traps, sedimentation chambers, and appropriate treatment systems help control pollutants. Biomedical, general, and laboratory waste are managed separately in accordance with applicable requirements, with hazardous chemicals appropriately treated before disposal. The University also maintains General Waste-Management and Water-Conservation policies, supported by regular monitoring, maintenance, and awareness activities, to protect campus water resources and surrounding water bodies from pollution.

Particulars	Status	Details
Existence of process	Yes	The university has established separate supply lines for the reuse of treated wastewater, regular chlorination and water-quality monitoring systems, graded filter media in all rainwater harvesting structures, and comprehensive general waste management and water conservation policies.
Evidence Provided	Yes	Sample images of interventions and images of policies
Is the evidence in public domain	Yes	Available on the sustainability page of the SRHU website https://srhu.edu.in/policies-guidelines/policy-for-water-conservation/

Evidences

Evidence 1:

Separate treated wastewater supply



Evidence 2:

Chlorination at the tank





Evidence 3:

Water Quality testing Reports

DELHI ANALYTICAL RESEARCH LABORATORY

Plot No. 2 (A-2) Timber Block , Jhilmil Industrial Area, Delhi- 110095
E- mail: darltesting@gmail.com , www.darltesting.in
Ph.: 011-43545890 ,09717324010 , 9971520106 , 8595224665.
(A GOVERNMENT APPROVED &ISO 9001 :2015, ISO 45001: 2018 Certified Testing Laboratory)

ARL — TC-5163

TEST REPORT Format No. DARL/QF/50

Report Issue to: Swami Rama Himalayan University, Swami Rama Nagar Doiwala Dehradun Uttarakhand - 248140.		ULR No.	TC516324000010191F
		Report No.	820240626WT006
		Sample Receipt Date	26/06/2024
		Test Started On	26/06/2024
		Date of Completion	02/07/2024
		Issue Date	02/07/2024
Name of Sample	Drinking water (Tubewell no. 1)		
Brand Name	N.S.	Date of Sampling	25/06/2024
Sample Quantity	5+1 Ltr	Batch/Lot No.	N.S.
Sample Collected by	Mr. rajan	Manufacturing Date	Not Specified
Sampling Method	N.S	Expiry Date	Not Specified
Sample Description	Drinking water (Tubewell no. 1)		

TEST RESULTS

Group Name : Water Discipline : Chemical

S.No.	Test Parameters	Units	Results	Desirable Limit	Permissible Limit	Test Method
Physical & Chemical Parameters						
1	Colour	In Hazen unit	Less than 1	5	May be extended upto 15	IS: 3025 (P-4)
2	Odour	--	Agreeable	Agreeable	--	IS: 3025 (P-5)
3	Turbidity	NTU	Less than 1	1	May be extended upto5	IS: 3025 (P-10)
4	Total dissolved solid	mg/l	149.0	500	2000	IS: 3025 (P-16)
5	pH value	--	6.69	6.5 to 8.5	No Relaxation	IS: 3025 (P-11)
6	Chloride(asCl)	mg/l	12.4	250	May be extended up to 1000	IS:3025(P-32)
7	Fluoride(as F)	mg/l	Less than 0.2	1.0	May be extended up to 1.5	IS:3025(P-60)
8	Iron(As Fe)	mg/l	BLQ(0.1)	1.0	No Relaxation	IS:3025(P-53)
9	Magnesium(As Mg)	mg/l	11.3	30	May be extended up to	IS:3025(P-46)

Page No. 1/3

Note : 1. The results are related to the test items only. 2. Sample will be destroyed after one month from the date of issue of test report

DELHI ANALYTICAL RESEARCH LABORATORY

Plot No. 2, (A-2) Timber Block, Jhilmil Industrial Area, Delhi-110095
E-mail : darltesting@gmail.com, www.darltesting.in
Ph.: 011-43545890, 09717324010, 9971520106, 8595224665.
(A GOVERNMENT APPROVED & ISO 9001 : 2015, ISO 45001:2018 Certified Testing Laboratory)

ARL — TC-5163

TEST REPORT Format No. DARL/QF/50

Report Issue to: Swami Rama Himalayan University, Swami Rama Nagar Doiwala Dehradun Uttarakhand - 248140.		ULR No.:	TC516325000005573F
		Report No.	820250402WT002
		Sample Receipt Date	02/04/2025
		Test Started On	02/04/2025
		Date of Completion	09/04/2025
		Issue Date	09/04/2025

TEST RESULTS

Group Name : Water Discipline : Chemical and Biological

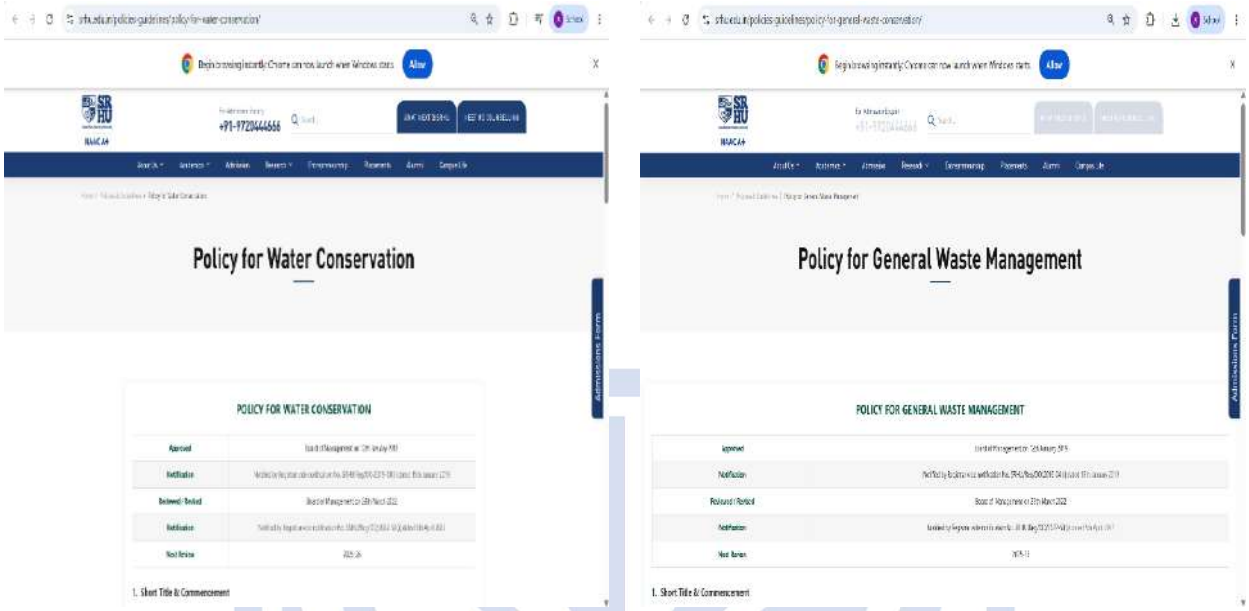
S.No.	Test Parameters	Units	Results	Desirable Limit	Permissible Limit	Test Method
8					100	
9	Nitrate (as No3)	mg/l	BLQ(0.5)	45	No Relaxation	IS 3025(P-34) 2023 Clause no. 6.4
10	Calcium(as Ca)	mg/l	20.0	75	May be extended up to 200	IS 3025(P-40) 1991 ammendment no 1 : 2004 Clause no. 5
11	Sulphate(as SO4)	mg/l	10.8	200	400	IS 3025(P-24)/ Sec-1 2022Clause no. 5
12	Total Alkalinity(asCaCO3)	mg/l	91.4	200	(May be extended up to 600)	IS 3025(P-23) 2023 Clause no. 10
13	Total Hardness(as CaCO3)	mg/l	96.3	200	(May be extended up to 600)	IS 3025(P-21) 2009 Clause no. 5
14	Ammonia (As total ammonia-N)	mg/l	BLQ(0.2)	0.5	No relaxation	IS 3025(P-34) 2023 Clause no.6.4
15	Free Residual Chlorine	mg/l	BLQ(0.1)	0.2	1	IS 3025(P-26) 2021 Clause no. 7.1.4
16	Boron,(as B),	mg/l	BLQ(0.1)	0.5	May be extended up to 2.4	IS 3025(P-57) 2021 CLAUSE NO.5
17	Phenolic Compound (as C6H5OH)	mg/l	BLQ(0.001)	0.001	(May be extended up to 0.002)	IS 3025(P-43)/Dec-1 2022 Clause no.6
18	Chloramines(as Cl2)	mg/l	BLQ(1.0)	4.0	No Relaxation	IS 3025 (P 26) 2021
19	Sulphide (as H2S)	mg/l	BLQ(0.05)	0.05	No Relaxation	IS 3025(P-29) 2022 Clause no. 7.0

Page No. 2/4

Note: 1. The results are related to the test items only. 2. Sample will be destroyed after one month from the date of issue of test report.

Evidence 4:

General wastewater management and Water conservation policy



Evidence 5:

Testing report of treated wastewater quality



DELHI ANALYTICAL RESEARCH LABORATORY

Plot No. 2 (A-2) Timber Block , Jhilmil Industrial Area, Delhi- 110095
E- mail: darltesting@gmail.com , www.darltesting.in
Ph.: 011-43545890 ,09717324010 , 9971520106 , 8595224665.
(A GOVERNMENT APPROVED &ISO 9001:2015, ISO 45001: 2018 Certified Testing Laboratory)

ARL

TC-5165

TEST REPORT Format No. DARL/QF/50

ULR No.: TC616324000101 90F

Report issue to: Swami Rama Himalayan University Swami Rama Nagar Doiwala Dehradun Uttarakhand - 248140		Report No	82C240625WT014
		Sample Receipt Date	26/06/2024
		Test Started On	26/06/2024
		Date of Completion	02/07/2024
		Issue Date	02/07/2024
Name of Sample	STP Outlet (1 MLD)		
Brand Name	N.S.	Date of Sampling	25/06/2024
Sample Quantity	1 Ltr.	Batch/Lot No	N.S.
Sample Collected by	Mr. rajan	Manufacturing Date	Not Specified
Sampling Method	N.S	Expiry Date	Not Specified
Sample Description	STP Outlet (1 MLD)		

TEST RESULTS

Group Name : Water Discipline : Chemical

S.No.	Test Parameter	Unit	Result	Limit	Test Method
1	pH	--	7.26	5.5 to 9.0	IS : 3025(P-11)
2	Total suspended sol.(TSS)	mg/L	18.0	20 Max	IS : 3025(P-17)
3	Biochemical oxygen demand (BOD at 27oC for 3 days	mg/L	9.0	10 Max	IS : 3025(P-44)
4	Chemical oxygen demand (COD)	mg/L	46.4	50 Max	IS : 3025(P-58)
5	Oil and grease	mg/L	Less than 4	---	IS 3025(P-39)

Remarks : The above tested sample complies as per C.P.C.B. guideline with respect to above test only

End of Report

6.3.3 Free drinking water provided

The University provides free and safe drinking water through purified water dispensers installed across academic blocks, hostels, libraries, and administrative areas. Regular testing and maintenance of water purification systems ensure compliance with health and hygiene standards. RO-based water dispensers and purified water stations are installed at various public locations. Drinking water facilities are available in academic blocks, hostels, and public spaces for students, staff, and visitors. Water quality is regularly tested to ensure hygiene and safety. The provision of accessible drinking water reflects SRHU's commitment to health, welfare, and sustainability. There area total of 86 water purifiers in the University.

Particulars	Status	Details
Existence of provision	Yes	RO-based water dispensers and purified water stations are installed
Evidence Provided	Yes	Sample Images of facilities provided
Is the evidence in public domain	yes	Available on website

Evidence:

Free drinking water facility equipped with purifiers installed at key locations across the University to ensure safe and clean drinking water for students, staff, and visitors





6.3.4 Water conscious building standards:

SRHU does have formal water-conscious standards and policies and has implemented campus measures that match "water-conscious building" practice (rainwater harvesting, recharge pits, STP/treated-water reuse, storage tanks, awareness & monitoring).

Particulars	Status	Details
Existence of Standards	Yes	The university has implemented 365-day rooftop rainwater harvesting and storage, waterless urinals, reduced-flush cisterns using sand bottles, AC condensate water reuse, RO reject water reuse, a Sewage Treatment Plant (STP), and an Effluent Treatment Plant (ETP). Policy for Water Conservation 2019 and its section 2.2 embedded the water-conscious green building codes aligned with Indian Green Building Council (IGBC) guidelines,
Evidence Provided	Yes	Images of implemented measures
Is the evidence in public domain	Yes	Available on the sustainability page under water conservation of SRHU website https://srhu.edu.in/water-conservation/

Application of Water-Efficient Building Standards and Practices to Minimise Campus Water Use

Water Conservation Standard / Practice	Application at SRHU Campus	Annual Water Use, Saving & Treatment (m^3/year)
365-day Rooftop Rainwater Harvesting & Storage	**150 m^3** underground RWH tank with advanced filtration; designed for **3 m^3/day;** serves **119 toilets and 138-bathroom taps**.	945 m^3/year used for toilets + 15,700 m^3/year for groundwater recharge
Waterless Urinals	250 waterless urinals installed across campus to eliminate flushing-water demand.	37,800 m^3/year estimated savings
Reduced-Flush Cisterns – Sand Bottles	1-L sand-filled bottles installed in toilet cisterns to reduce water volume per flush across 1,236 toilets.	4,511 m^3/year estimated saving
AC Condensate Water Reuse	Condensate from air-conditioning units is collected and reused for non-potable purposes.	120 m^3/year estimated saving
RO Reject Water Reuse	RO reject water is reused for toilet flushing and laundry, reducing freshwater demand.	3,285 m^3/year estimated saving
Sewage treatment plant	1 MLD STP plant, treated water reuse in Gardening, Landscaping, construction activities, and other non-potable uses in the university	216599 m^3/year
Effluent Treatment Plant	90 KLD ETP; the treated water is reused in Gardening and landscaping in the university	67 m^3 of water is used for irrigation of the green belt of 1,60,800 sqm area.
16 Recharge pits and 2 borewell recharge	Precipitated and runoff water through building rooftops, roads, open areas, and Green belt supplied for groundwater recharge	Total volume of 377893 m^3 supplied annually for rainwater harvesting through Recharge pits and borewell recharge

365 Days Rooftop Rainwater Harvesting Storage

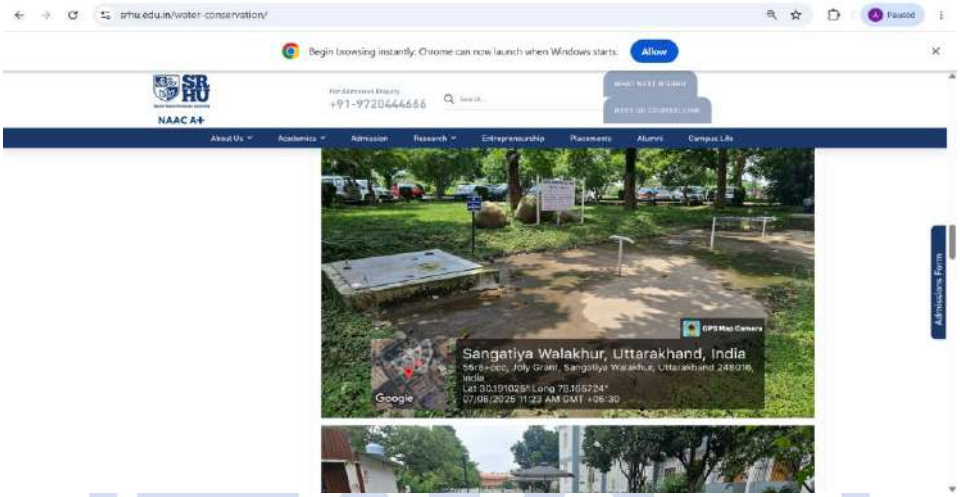
- SRHU has installed an innovative 150 m^3 underground rooftop rainwater harvesting tank.
- The harvested water is utilized in 119 toilets and 138 bathroom taps of the Nursing and Medical Colleges, saving about 945 m^3 annually.
- 15756 m^3 towards groundwater recharge.

S. No.	Month	Incoming Water (m^3)	Balance Water at Storage Tank After Use (m^3)	Total Water Available (m^3)	For Consumption @ 3000 Litres/Day Capacity (m^3)	Total Water Remaining (m^3)	To Ground Recharge/ Overflow (m^3)
1	September	2382.9	150.0	2532.9	78	2454.9	2304.9
2	October	293.5	150.0	443.5	81	362.5	212.5
3	November	37.3	150.0	187.3	78	109.3	0.0
4	December	132.7	109.3	242.0	81	161.0	11.0
5	January	331.0	150.0	481.0	78	403.0	253.0
6	February	505.2	150.0	655.2	72	583.2	433.2
7	March	398.3	150.0	548.3	81	467.3	317.3
8	April	262.0	150.0	412.0	78	334.0	184.0
9	May	351.9	150.0	501.9	81	420.9	270.9
10	June	1608.3	150.0	1758.3	78	1680.3	1530.3
11	July	4909.8	150.0	5059.8	81	4978.8	4828.8
12	August	5338.5	150.0	5488.5	78	5410.5	5410.5
	Total	**16551.3**			**945**		**15756.3**

Evidences

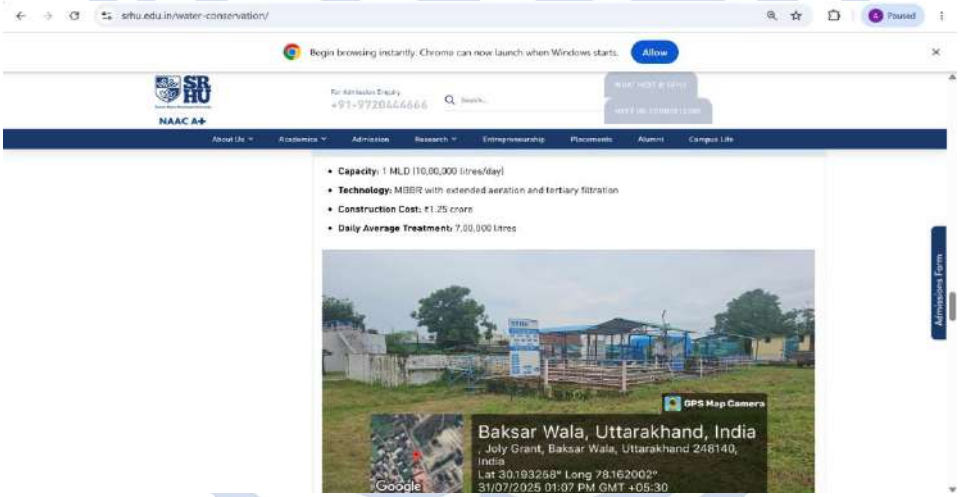
Evidence 1:

Screenshot of Rainwater Harvesting Tank detail



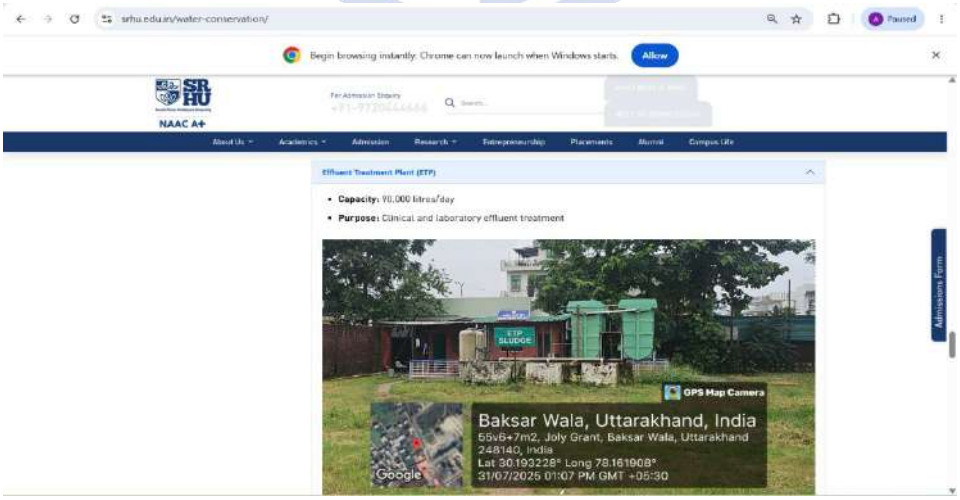
Evidence 2:

Screenshot of Sewage Treatment Plant Detail

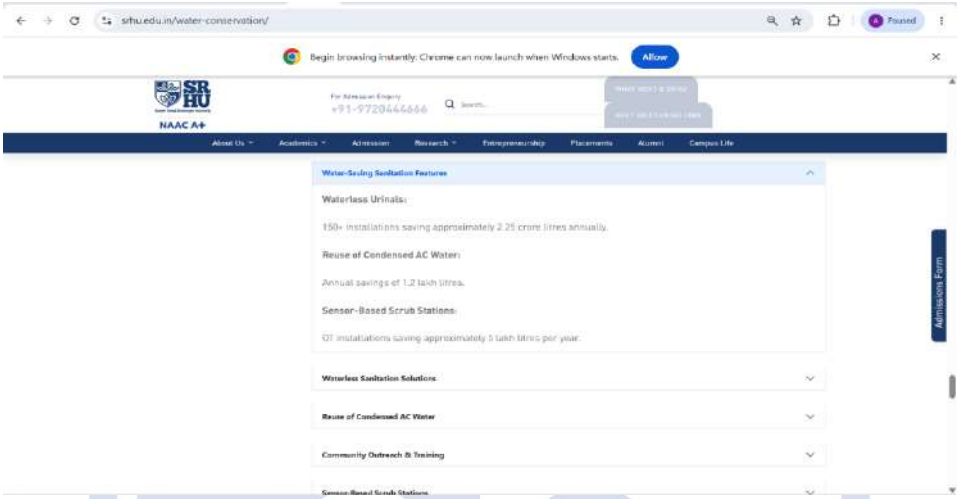


Evidence 3:

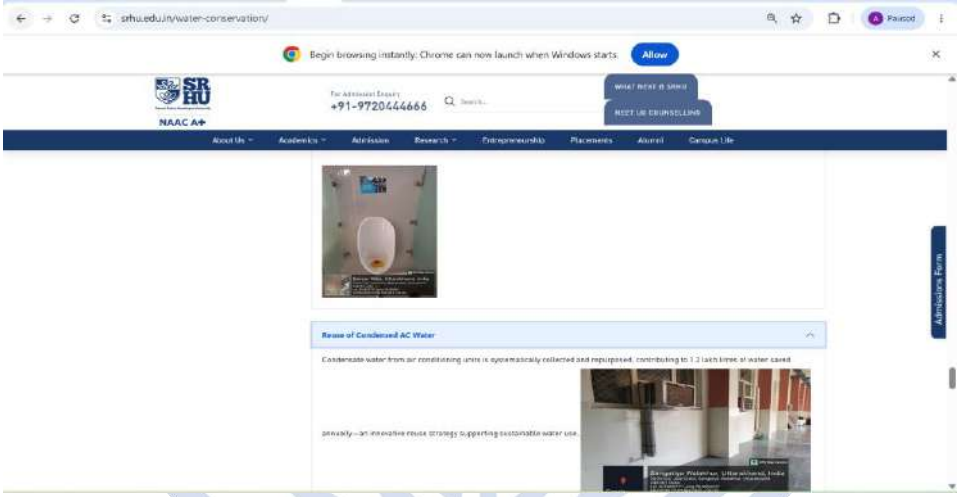
Screenshot of Effluent treatment plant detail



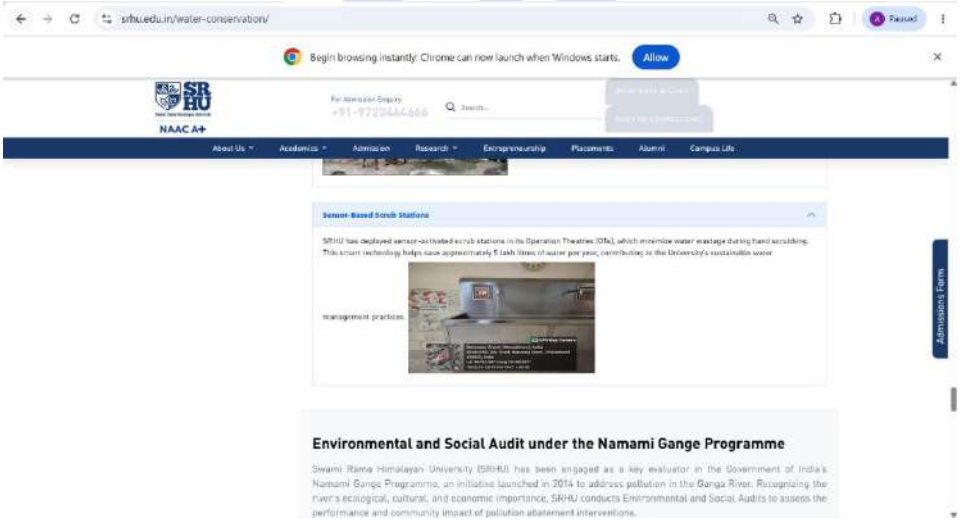
Evidence 4:
Evidence of water-saving solution features



Evidence 5:
Evidence of minimizing campus water use



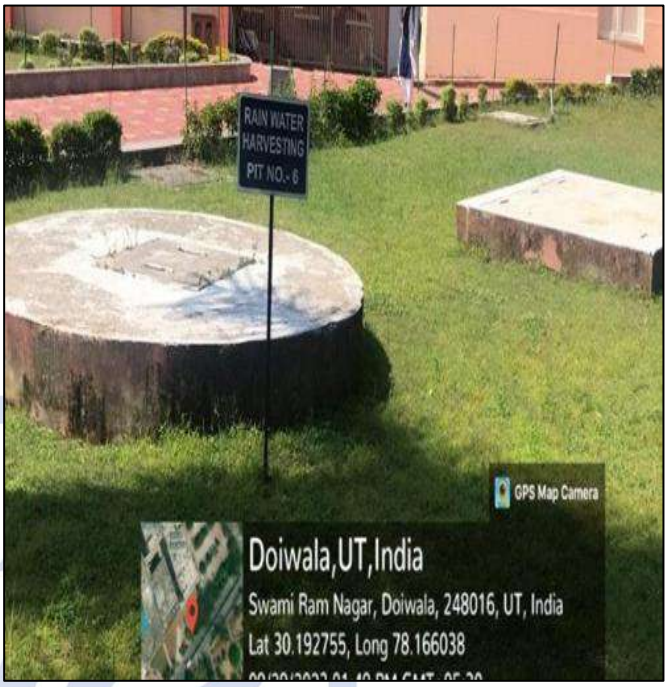
Evidence 6:
Water-saving features and sensor-based water conservation measures



Evidence 7:

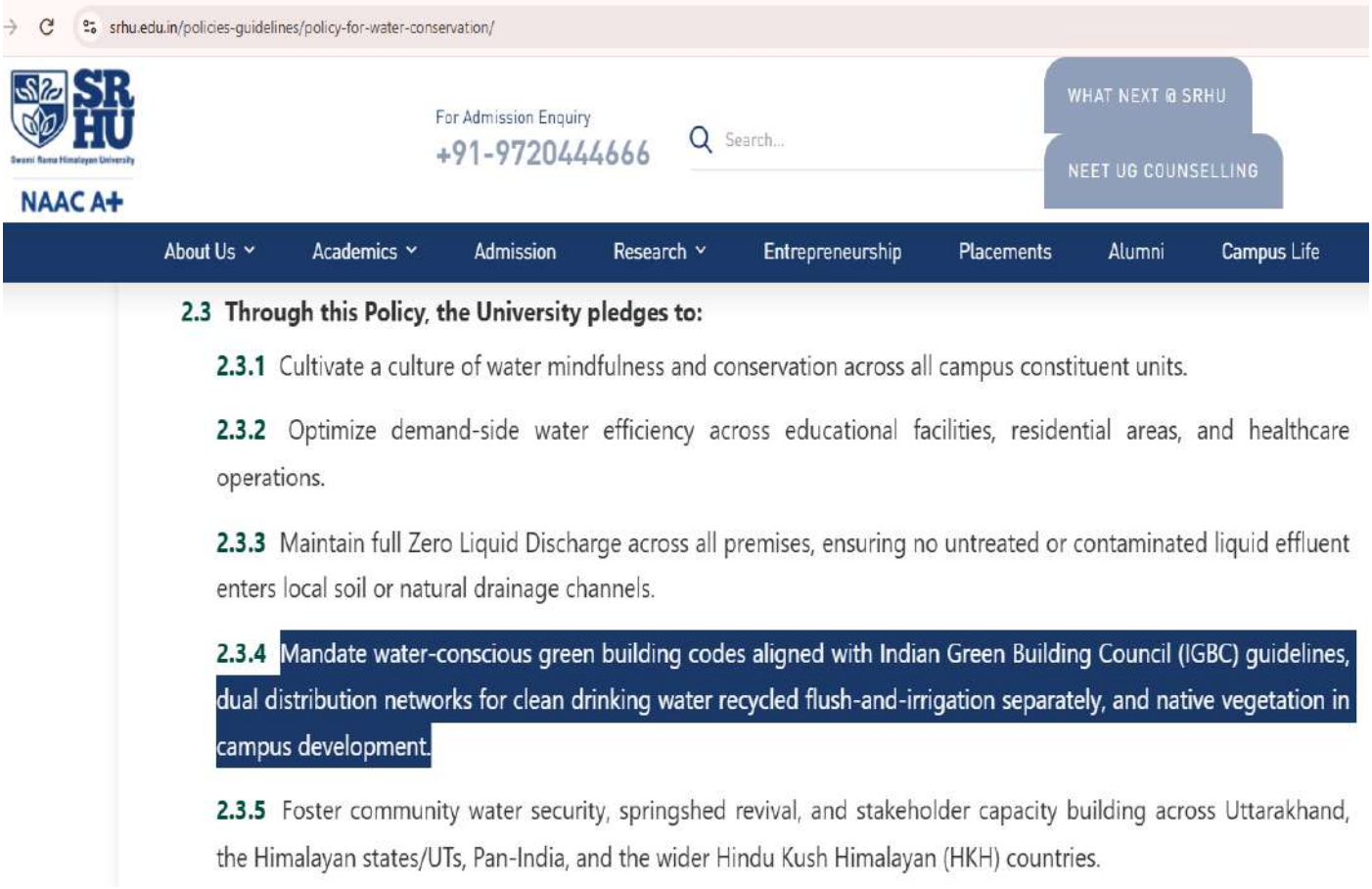
Evidence of a recharge pit on campus





Evidence 8:

Screenshot/Policy document from website



6.3.5 Water conscious planting

SRHU practices water-conscious planting by using native Himalayan species and drought-tolerant shrubs in landscaping areas, supported by drip irrigation and mulching to minimize water usage.

Particulars	Status	Details
Existence of those landscape	Yes	The University has 1,60,800 m² of green-belt area with 1,468 trees, supported by diverse landscaping, a horticulture nursery, and regular plantation activities.
Evidence Provided	Yes	Sample images of plantation drive
Is the evidence in public domain	Yes	Available on the sustainability page of the SRHU website https://srhu.edu.in/sustainability-initiatives-for-green-campus-2/

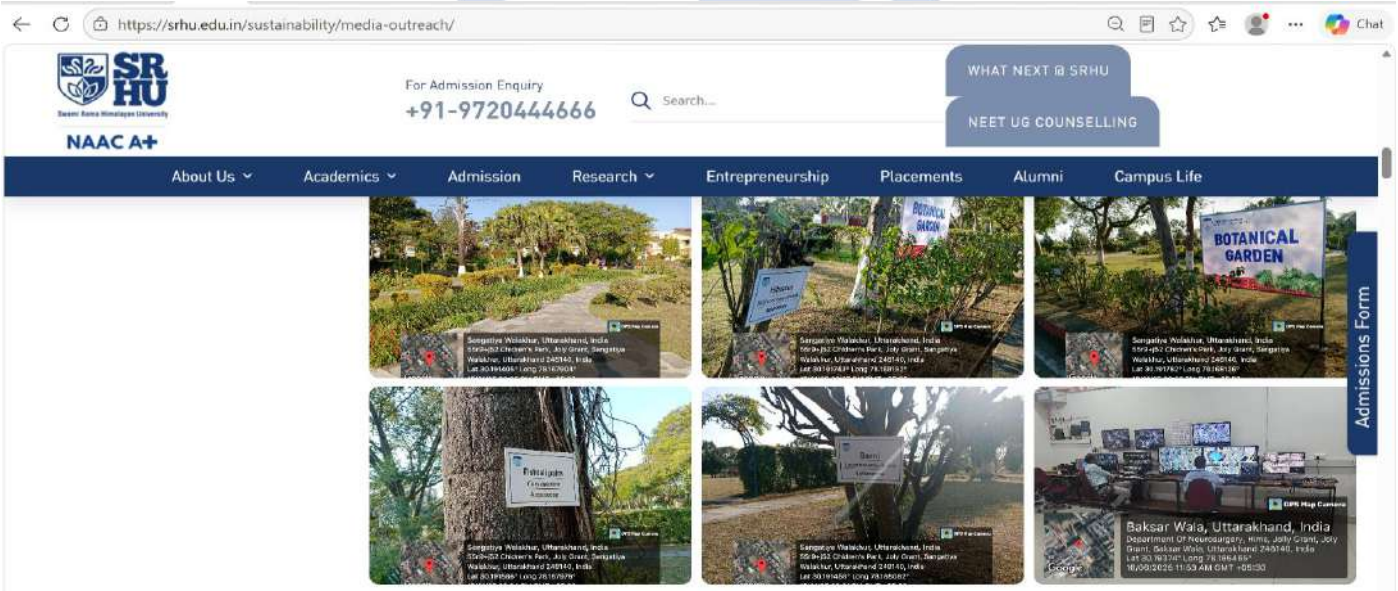
Water-Conscious Landscaping and Drought-Tolerant Planting

Landscape Aspect	Details
Green Belt Area	Approximately 1,60,800 m², with 1,468 trees of different varieties
Plantation Drive	3,300 tree saplings planted in September 2024
Plant Species	Neem (Azadirachta indica), Amaltas, Bougainvillea, Lantana camara, Vetiver (Khus grass), Aloe vera, Jatropha, Indian Carpet Grass (Axonopus compressus), Kachnar (Bauhinia variegata), etc.
Horticulture Nursery	SRHU has its own horticulture nursery, maintained by 40 staff members to support and maintain campus green areas.

Evidences

Evidence 1:

Screenshot from university website



Evidence 2:

Plantation drive:



Evidence 3:

Image of Biodiversity parks across the University







Evidence 4:

List of trees planted in the university

Swami Rama Himalayan University

स्वामी राम हिमालयन विश्वविद्यालय

Nos of Trees with location and type

S.No	Type of Tree	Qty	location
1	Tunn	1	Manish parking CRI
2	Sibbal	1	Manish parking CRI
3	Saal	4	Manish parking CRI
4	Neem	1	Manish parking CRI
5	mango tree	1	DG room Hospital
6	Saal	1	DG room Hospital
7	Guava tree	1	CRI staff parking
8	Tunn	1	CRI staff parking
9	Sibbal	1	CRI staff parking
10	Sagwaan	3	New Building
11	Guava tree	1	New Building
12	Bargal	1	Skill center
13	mango tree	14	Skill center
14	Pipple	2	Skill center
15	Pilekhan	1	Skill center
16	Tunn	2	Skill center
17	Sibbal	1	Skill center
18	Pelto faram	39	Skill center
19	Sisaam	1	Skill center
20	Tunn	6	Skill center
21	Paam	23	Medical college
22	Neem	5	Medical college
23	Kesariya	2	Medical college
24	Pelto faram	3	Medical college
25	Tree	6	Medical college
26	kapoor	2	Medical college
27	Rubber palanut	16	Medical college
28	mango tree	1	Medical college
29	Gulmore	1	Ishwar parking
30	Pipple	1	Ishwar parking
31	saal	1	Ishwar parking
32	Tunn	1	Ishwar parking
33	kathal	2	Ishwar parking
34	mango tree	5	Ishwar parking
35	Gulmore	5	Ishwar parking
36	polto	5	Ishwar parking
37	Pipple	1	Emergency
38	Caner	5	Emergency
39	mango tree	2	Near ATM

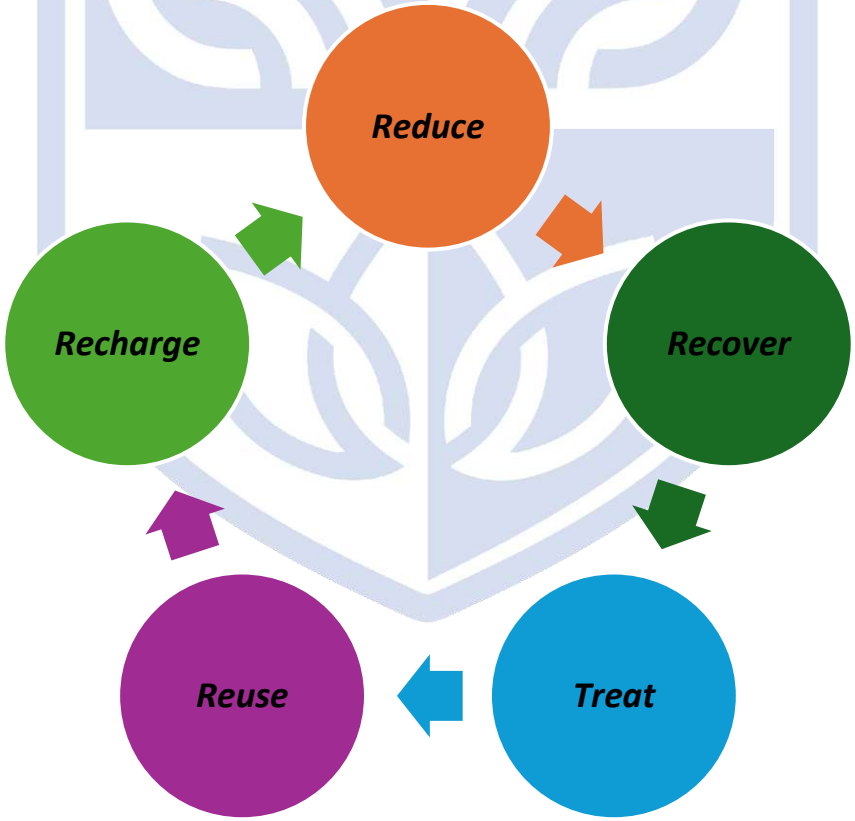
6.4Water reuse

SRHU has adopted the Policy for Water Conservation and Sustainable Management approved by the Board of Management. The policy formally establishes the frameworks of Water Neutrality and Water Circularity, mandating Zero Liquid Discharge, 100% wastewater recycling, source segregation, dual plumbing, and native planting across all operational units. The University's approach integrates Reduce → Recover → Treat → Reuse → Recharge, combining direct reuse of treated/recovered water with measures that reduce freshwater demand.

6.4.1 Water Reuse Policy

Since its inception in 2019, the Policy for Water Conservation and Sustainable Management has promoted water reduction, reuse, and recharge across the University, specifically embedding these principles in its Section 2.2.

The policy adopts a Water Circularity Approach based on the following closed-loop cycle:



The policy promotes:

- Conservation and responsible use of water;
- Maximum feasible reuse and recycling of water;
- Treatment and reuse of wastewater;
- Rainwater harvesting and groundwater recharge;
- Reduction of freshwater demand;

- Sustainable water management across University facilities.

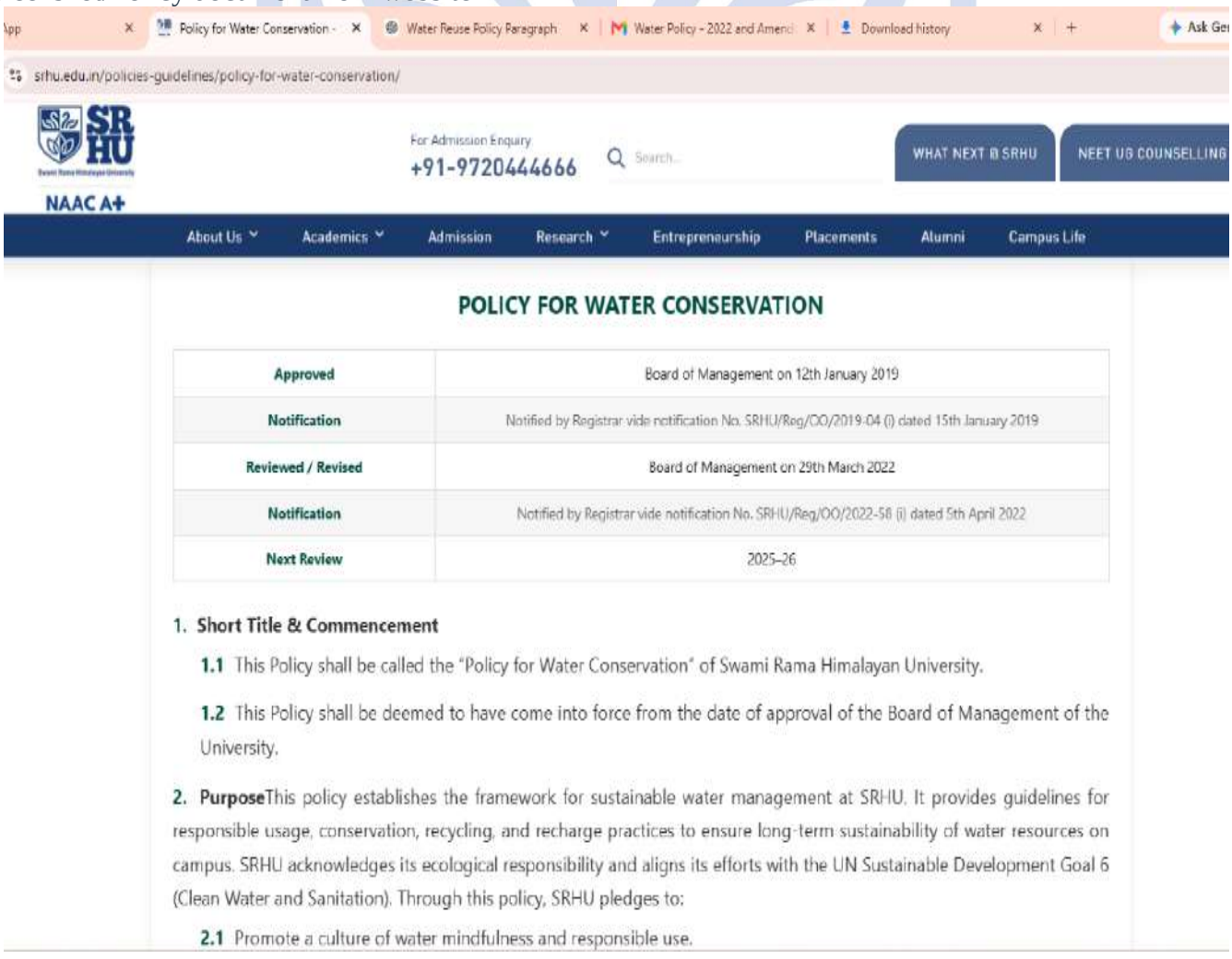
The policy framework covers academic and administrative facilities, healthcare facilities, hostels and residential areas, laboratories and research facilities, and outdoor areas including irrigation and landscaping.

Particulars	Status	Details
Existence of water reuse policy	Yes	Policy for Water Conservation and Sustainable Management since 2019, and its section 2.2 embeds water reduction, reuse, and recharge.
Evidence provided	Yes	Snapshot/Policy document provided
Is the evidence provided public	Yes	SRHU Policy for Water Conservation https://srhu.edu.in/policies-guidelines/policy-for-water-conservation/
Is policy created or reviewed in period 2022–2026	Yes	Reviewed in 2022

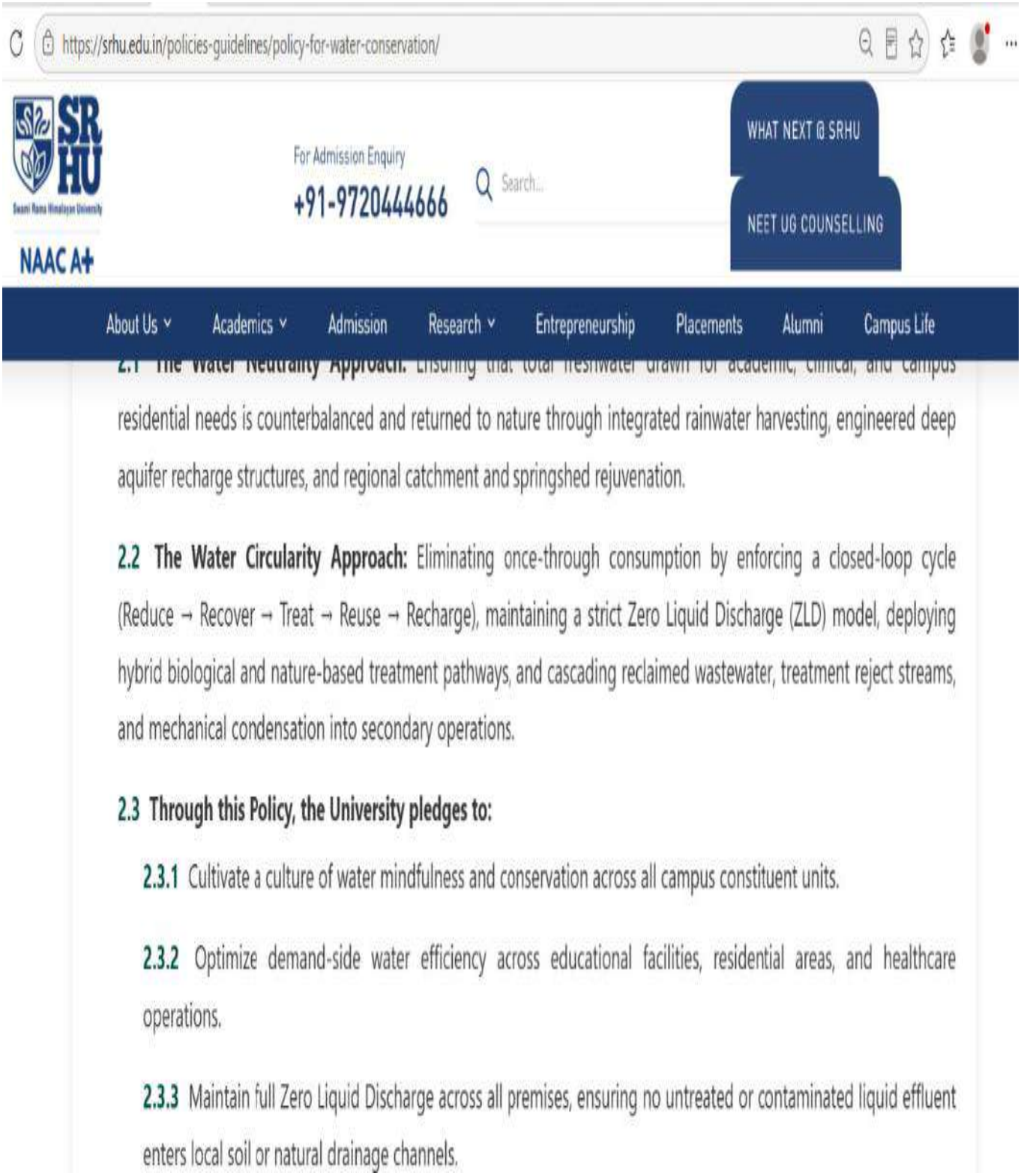
Evidences

Evidence 1:

Screenshot/Policy document from website



Evidence 2:
Section 2.2 of the Policy for Water Conservation document, outlining the institution's commitment to sustainable water management, responsible reuse, and alignment with SDG 6



https://srhu.edu.in/policies-guidelines/policy-for-water-conservation/

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residential needs is counterbalanced and returned to nature through integrated rainwater harvesting, engineered deep aquifer recharge structures, and regional catchment and springshed rejuvenation.

2.2 The Water Circularity Approach: Eliminating once-through consumption by enforcing a closed-loop cycle (Reduce → Recover → Treat → Reuse → Recharge), maintaining a strict Zero Liquid Discharge (ZLD) model, deploying hybrid biological and nature-based treatment pathways, and cascading reclaimed wastewater, treatment reject streams, and mechanical condensation into secondary operations.

2.3 Through this Policy, the University pledges to:

2.3.1 Cultivate a culture of water mindfulness and conservation across all campus constituent units.

2.3.2 Optimize demand-side water efficiency across educational facilities, residential areas, and healthcare operations.

2.3.3 Maintain full Zero Liquid Discharge across all premises, ensuring no untreated or contaminated liquid effluent enters local soil or natural drainage channels.

6.4.2 Water reuse measurement

At SRHU, water reuse measurement is systematically carried out through metered systems that monitor the quantity of treated wastewater and harvested rainwater being reused across the campus. The treated water from the sewage treatment plant is measured and utilized for irrigation, toilet flushing, and other non-potable purposes. Regular analysis of daily and monthly data helps assess the effectiveness of reuse practices and optimize water resource management. This continuous monitoring ensures efficient utilization of reclaimed water, reduces dependence on freshwater sources, and supports SRHU's commitment to sustainable and responsible water management.

Quantified Water Reuse & Utility Cascading

Circular Operational Stream	Annual Volume Saved / Reused	Operational Application & Technological Impact
STP Reclaimed Water	216599 m^3/year	Dedicated red-coded lines for 160,800 m^2 landscape irrigation, construction, and flushing
Waterless Urinal Fleet	37,800 m^3/year	250 odor-barrier waterless cartridges saved
Patented Rooftop RWH System	945 m^3/year	150 KL buffer cistern supplying non-potable water to 119 flush units and 138 wash taps
High-Efficiency Laundry	10,183.5 m^3/year saved	Commercial Fabcare extractor systems reducing cycle volume by 22.8%
RO Reject Recovery	3,285 m^3/year	Rerouted to holding tanks for toilet flushing and laundry cycles
Cistern Displacement Inserts	4,511 m^3/year	Calibrated displacement bottles across 1,236 toilets campus-wide
Fleet Vehicle Washing Facility	1,460 m^3/year	Reclaimed treated water used to wash 25 cars, 26 buses, and 12 service trucks
HVAC Condensate Capture	120 m^3/year	Air-conditioning condensate plumbed into auxiliary cooling towers
OT Sensor Scrub Basins	500 m^3/year	Touchless infrared surgical scrub stations preventing open bypass flow

Existence of measurement	**Yes**	**1. 365 days Rooftop Rainwater Harvesting Storage (Patent published)** • Innovative 150 KL rooftop rainwater harvesting underground tank with advanced filtration unit • Tank size designed for consumption of 3000 litres per day • Being used in 119 toilets & 138 bathroom taps of Nursing College, Medical College • 9.45 lakh litres being used in toilets and 1.57 Cr. Litres for groundwater recharging **2. STP-1MLD & ETP 90KLD** 9,43,153 litres of water is used for irrigation of the green belt of 1,60,800 sqm area, construction, and vehicle washing. **3. Water-Saving Sanitation Features** ● Waterless Urinals: 250+ installations saving approximately 37800 m^3 annually. ● Reuse of Condensed AC Water: Annual savings of 120 m^3 ● Reuse of RO Reject Water: Saving approximately 3,285 m^3 of freshwater annually. ● Sensor-Based Scrub Stations: OT installations saving approximately 500 m^3 annually.
Evidence provided	**Yes**	Screenshot of the following ● Rainwater Harvesting ● Recharge Pit ● STP ● Water saving practices ● Certificate of patent
Is the evidence provided public	**Yes**	Certification of Patent published and available on website https://srhu.edu.in/water-conservation/

Evidences

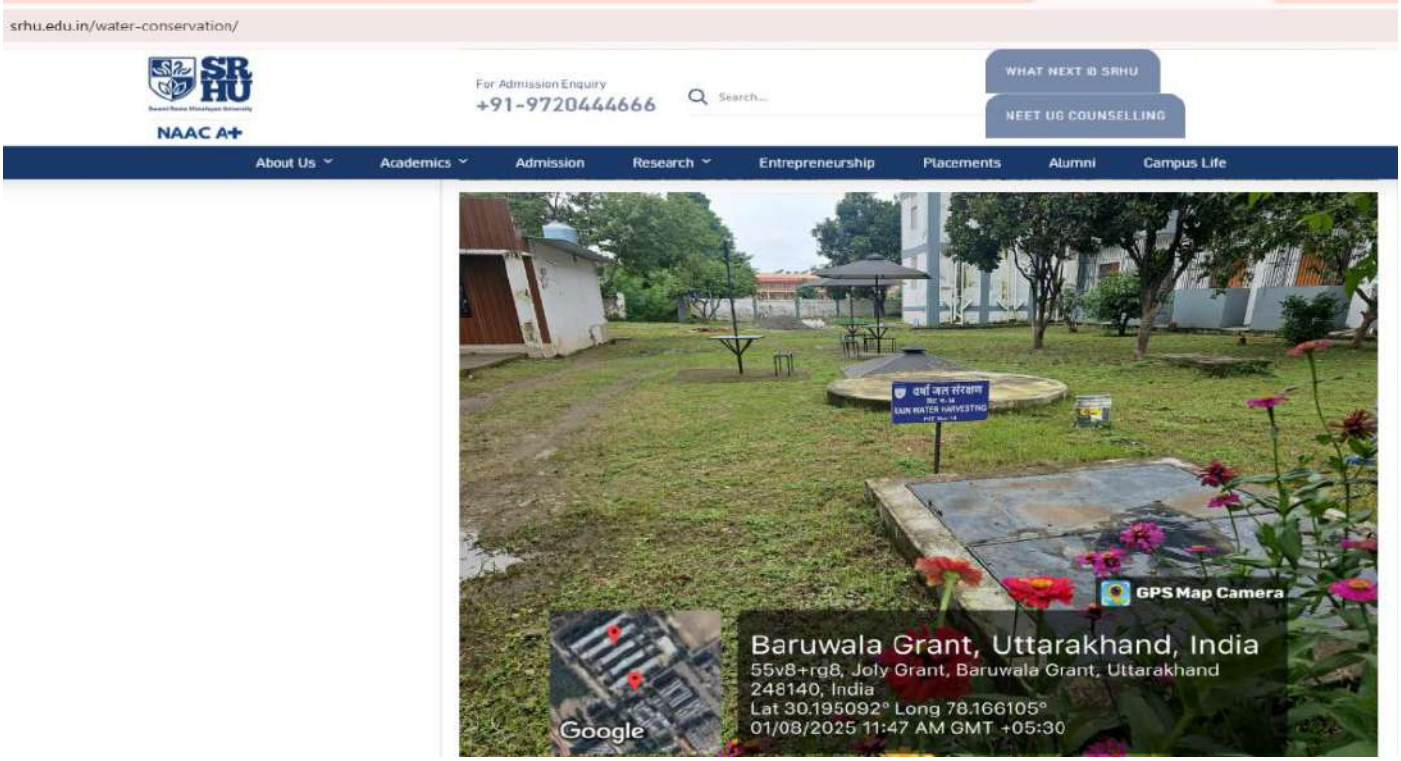
Evidence 1:

Snapshot of 150 KL rooftop rainwater harvesting underground tank and in Campus from SRHU website



Evidence 2:

Screenshot of the recharge pit from the SRHU website



Evidence 3:

Copy of the patent published “Rooftop Rainwater Harvester”

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2023

(21) Application No.202311053398 A
(43) Publication Date : 01/09/2023

(54) Title of the invention : ROOFTOP RAIN WATER HARVESTER

(51) International classification	:C02F0001140000, C02F0001280000, A23L0002520000, E03B0003340000, G01V0001000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

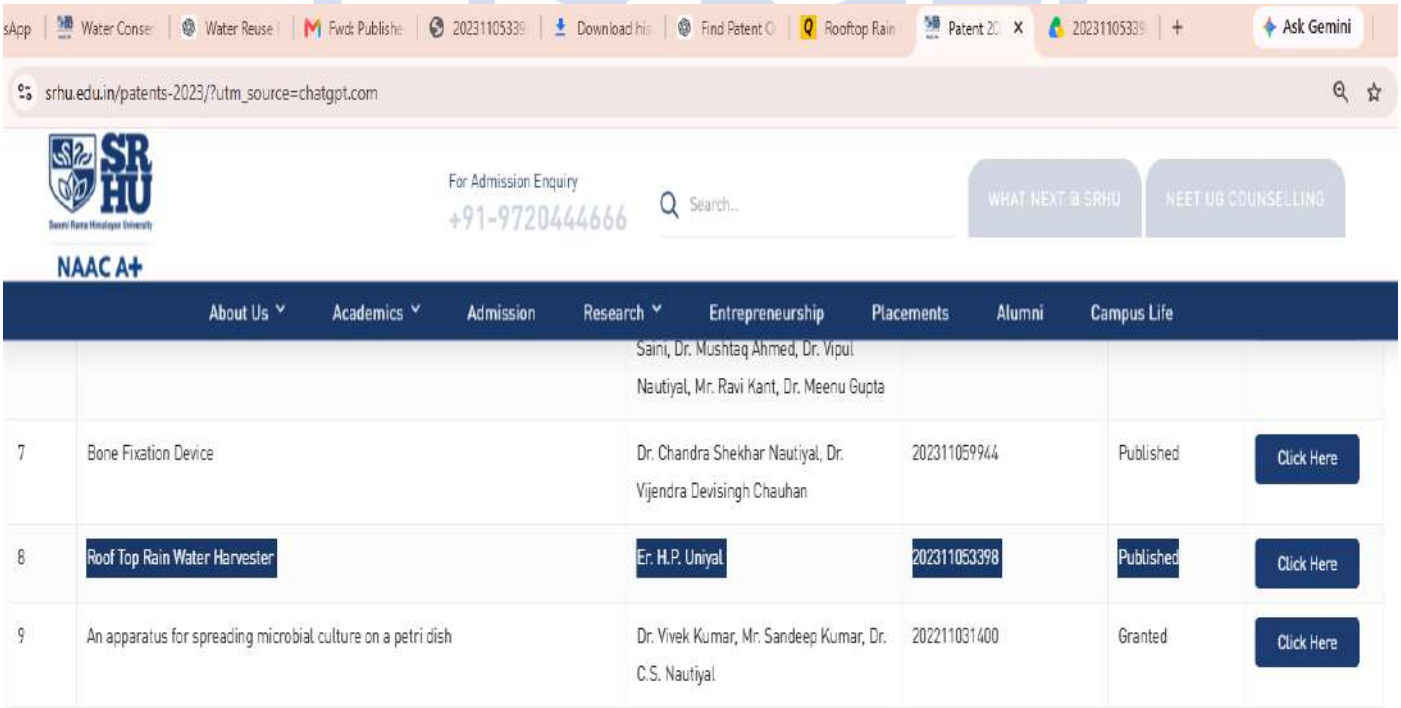
(71)Name of Applicant :
1)Swami Rama Himalayan University
Address of Applicant :Swami Rama Himalayan University, Swami Ram Nagar, Jolly Grant, Dehradun, Uttarakhand, 248016, India Dehradun ---------- ----------
Name of Applicant : NA
Address of Applicant : NA
(72)Name of Inventor :
1)Er. H.P. Uniyal
Address of Applicant :Swami Rama Himalayan University, Swami Ram Nagar, Jolly Grant, Dehradun, Uttarakhand, 248016, India Dehradun ---------- ----------

(57) Abstract :
The present invention provides a rooftop rain water harvester for collecting, storage and distribution of rooftop rain water and making available 150 liter to 3000-liter water per day in all 365 days of the year for supplementing our non-potable uses such as flushing, washing, gardening at household, institution and community level. It has been observed that approximately 35-75% of the total rainfall collected can be made available for non-potable use and remaining 25-65% will go to the ground water recharge depending on the rainfall and rooftop area available. Thus, with the disclosed harvester the community / municipal water supply can be reduced significantly. The harvester not only save cost of production, storage, treatment and transportation of community water supply but the harvester will also save withdrawal of drinking water from surface / underground water source.

No. of Pages : 18 No. of Claims : 7

Evidence 4:

Snapshot of the certification of the patent published from the SRHU website



Evidence 5:

Campus Photo of recycled water from the STP for landscaping



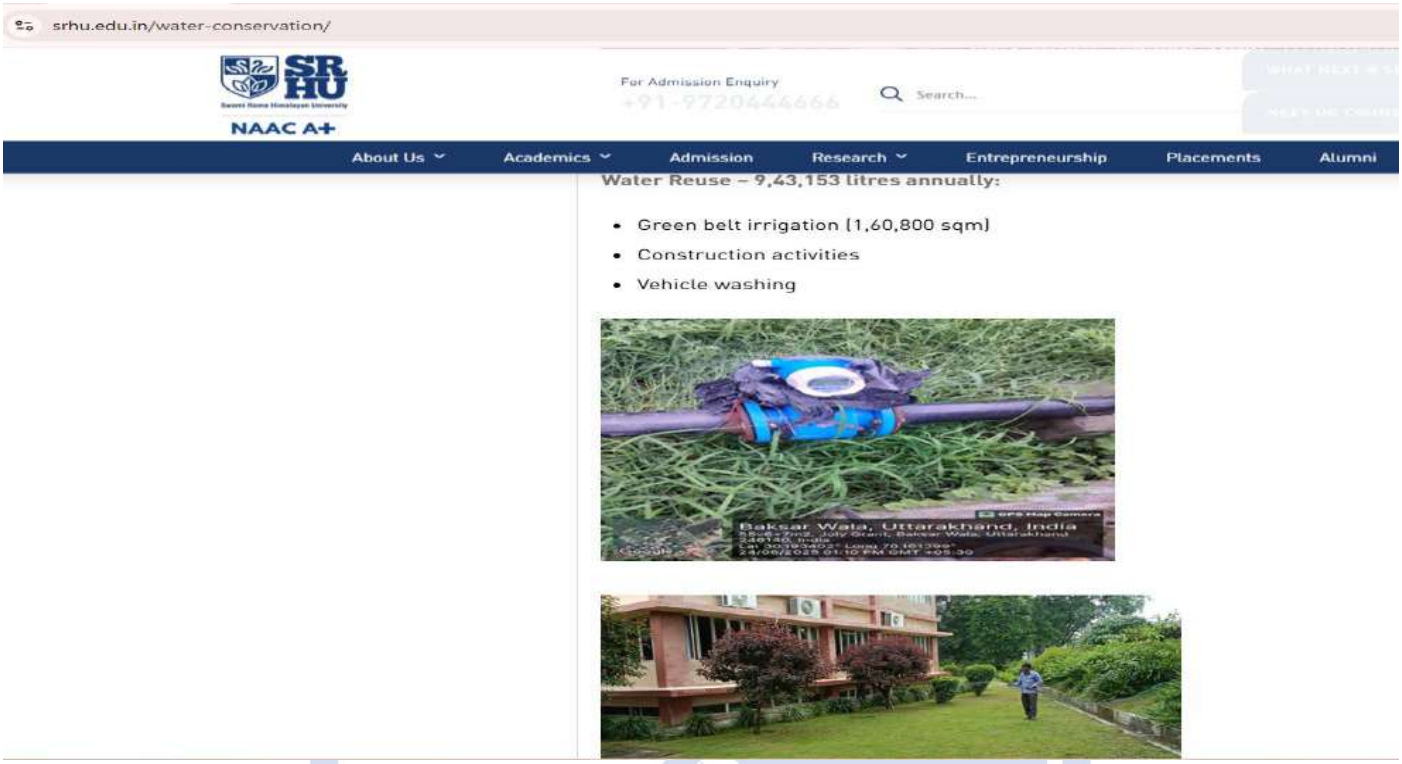
Evidence 6:

Red-marked tap supplying treated wastewater from the STP



Evidence 7:

Screenshot from website



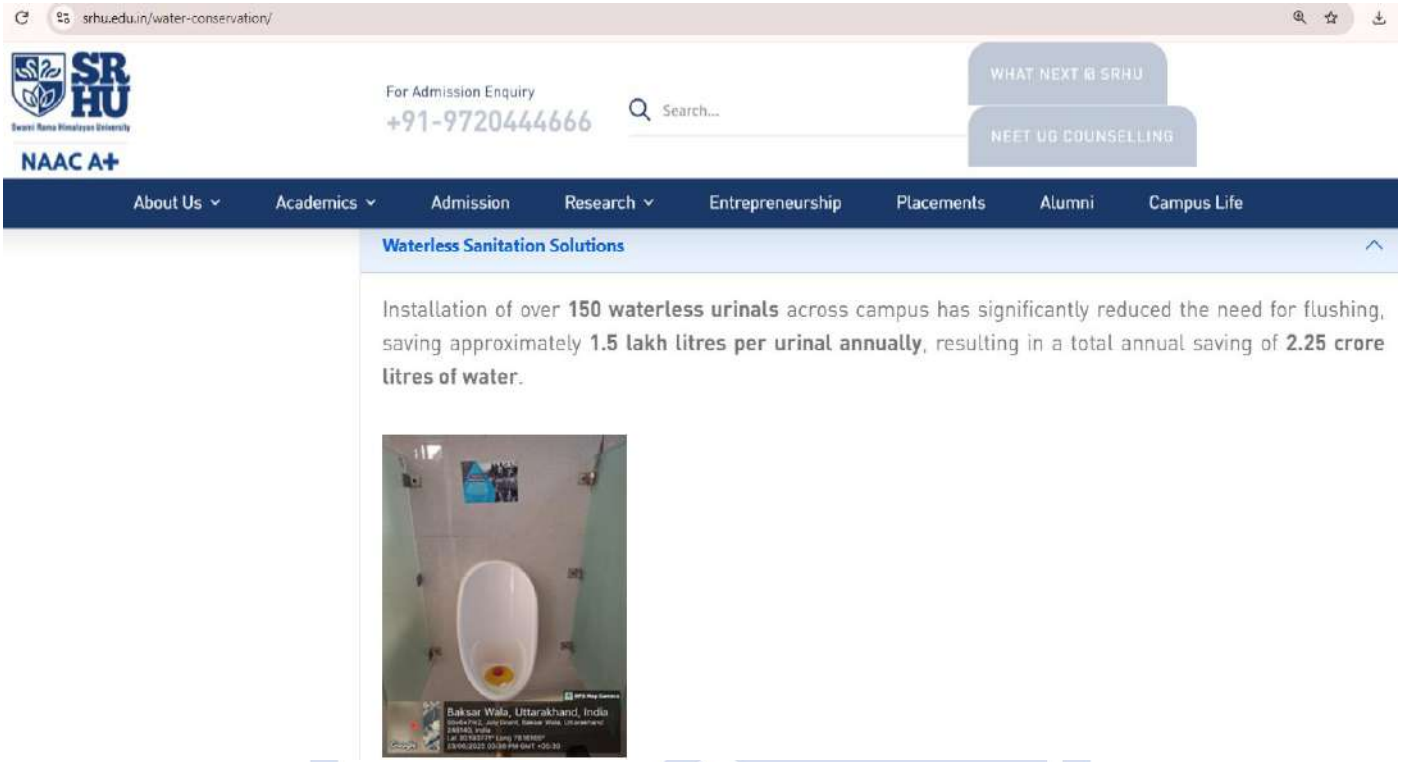
Evidence 8:

SRHU Vehicles washing with STP-treated water



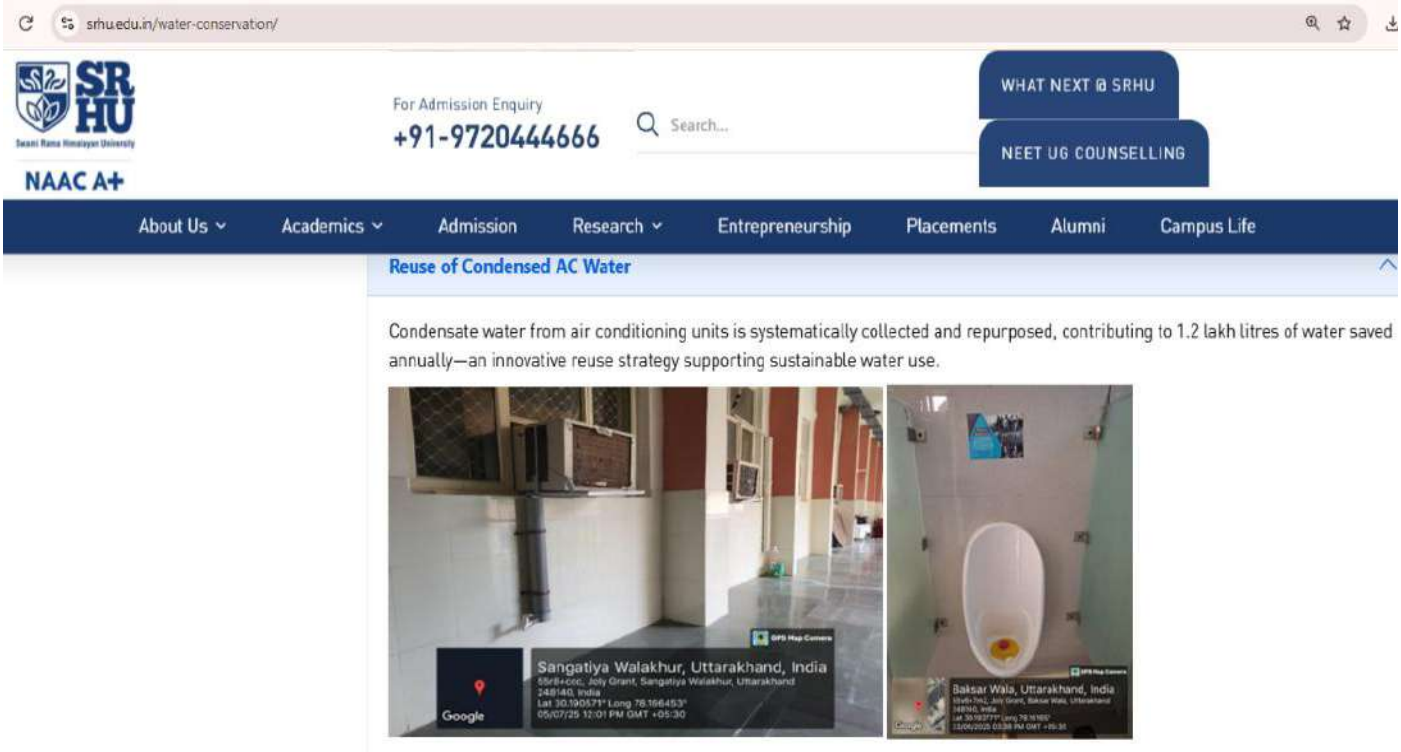
Evidence 9:

Screenshot of waterless Sanitation solution from website



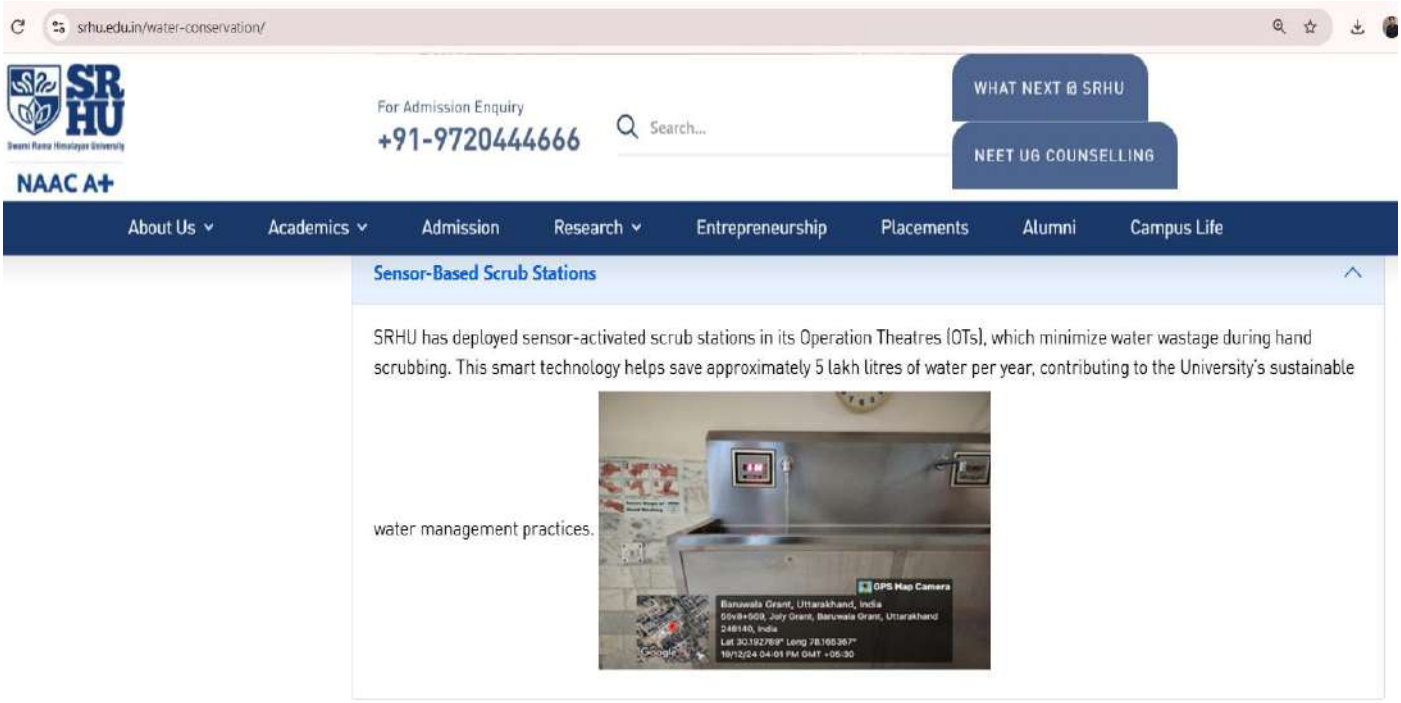
Evidence 10:

Screenshot of reuse of AC condensate water



Evidence 11:

Screenshot of sensor-based scrub station



Evidence 12:

Water-saving awareness pamphlets are displayed throughout the university campus to promote conscious water use and water conservation practices.





6.5 Water in The Community

Swami Rama Himalayan University (SRHU), through its Water and Sanitation (WATSAN) activities and institutional programmes, engages communities, water-sector stakeholders and government/intergovernmental institutions on water management and water security. Since 1998, the WATSAN Department has worked on this principle, taking research directly to communities across more than 550 villages and demonstrating what sustainable water management looks like in practice. Its approach is community-driven and demand-responsive, built on participation, gender equity, and environmental sustainability, so that villagers are partners in managing their own water rather than passive recipients of infrastructure. The results are tangible: over 340 water supply schemes, more than 600 rainwater harvesting tanks, 14,000 eco-friendly toilets, and springshed treatment across hundreds of hectares. Training more than 25,000 stakeholders, from public health engineers to PRI and VWSC functionaries and ASHAs, has also built local capacity to sustain these systems. As a Key Resource Centre under the Jal Jeevan Mission and Swachh Bharat Mission (Gramin), and through partnerships with IIT Roorkee, NIH Roorkee, and ICIMOD, WATSAN links academic innovation, including its two patented aquifer recharge and rooftop harvesting technologies, to field-level practice. Recognized with the CII Platinum award for green practices, the department shows how direct university outreach can turn water research into better community health, resilience, and quality of life.

6.5.1 Water Management Educational Opportunities

Swami Rama Himalayan University (SRHU), through its Key Resource Centre (KRC) under the Jal Jeevan Mission (JJM), has played a transformative role in building the technical and managerial capacities of government officials, engineers and community representatives working in the water and sanitation sector.

Particulars	Status	Details
Existence of opportunity	Yes	a) SRHU provided valuable water education opportunities for local communities in villages including Pasta, Tashila, Moldhar, and Jaswawala. Through community-led activities, villagers gained practical knowledge on water conservation, safe drinking water management, sanitation, hygiene, and source protection. These initiatives strengthened community awareness and encouraged local participation in sustainable and healthy water management practices. b) A two-day residential Level-2 training program on "Change Management – Role of Public Health Engineers and Activities for Har Ghar Jal" was conducted for seven batches with a total of 287 participants. The program was funded by the State Water & Sanitation Mission (SWSM), Government of Uttarakhand. c) Regional training on Gender Equality and Social Inclusion (GESI) responsive Watershed Management in the Hindu Kush Himalaya (HKH), held 29 January – 1 February 2025 in Dehradun, in collaboration with the International Centre for Integrated Mountain Development (ICIMOD), Nepal, G.B. Pant NIHE (Almora), and the Ministry of Environment & Forest, Government of India, was attended by 63 participants from Nepal and Bhutan, as well as from 11 Indian states.
Evidence Provided	Yes	Images of training programmes & Certificate of Appreciations ● Water education opportunities for local communities in villages ● Training program on "Change Management – Role of Public Health Engineers and Activities for Har Ghar Jal" ● Certificate of Appreciation from the Government of Uttarakhand publicly available on the university website. ● Regional training on Gender Equality and Social Inclusion (GESI) responsive Springshed Management in the Hindu Kush Himalaya (HKH) ● Certificate of Appreciation from the G.B. Pant National Institute of Himalayan Environment (NIHE) and Certificate of Appreciation – ICIMOD
Is the evidence in public domain	Yes	Publicly available on the SRHU website under Sustainability https://srhu.edu.in/awards-and-recognitions/

Evidences

Evidence 1:

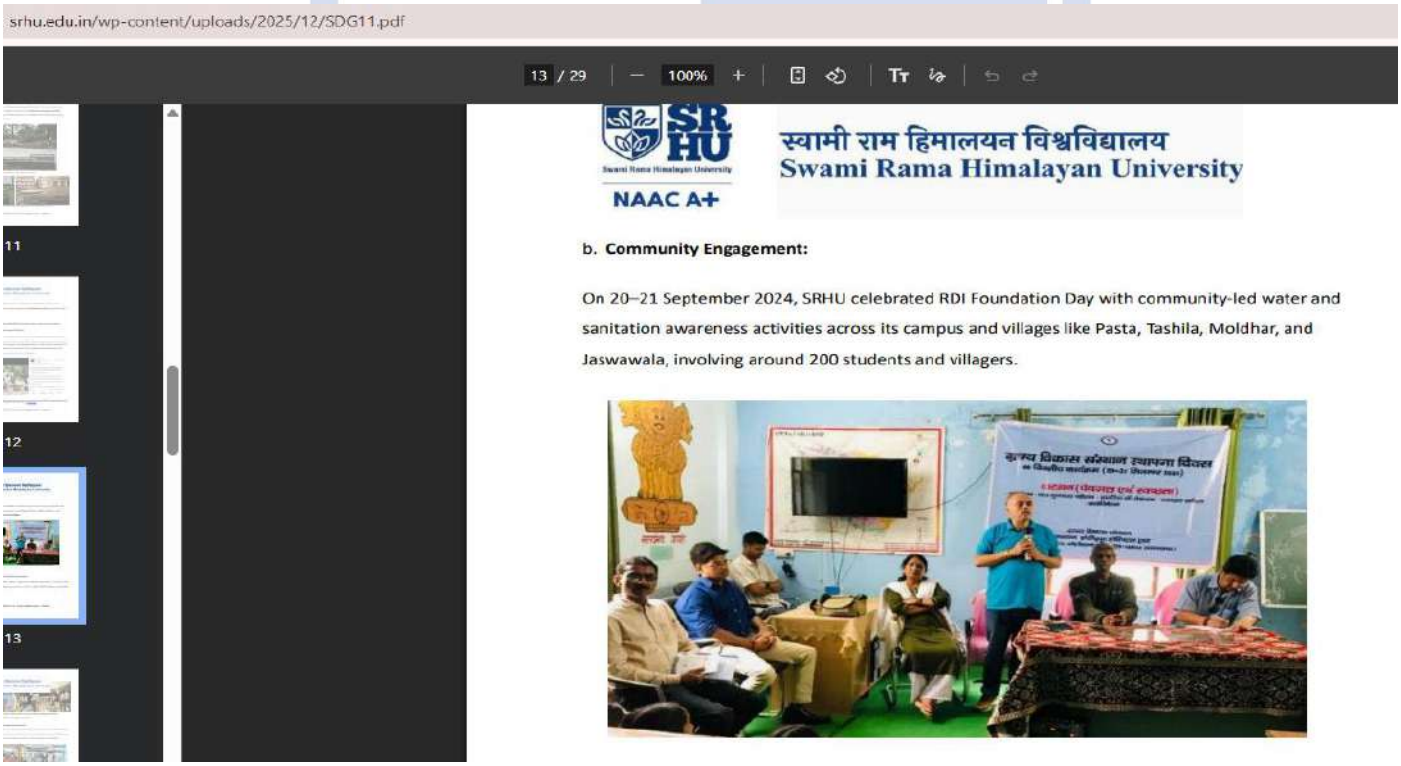
Water education opportunities for local communities in villages

a) Photos of Community Awareness and Water Education Activities Conducted





b) Snapshot from Website of Community Awareness and Water Education



Evidence 2.

Training program on "Change Management – Role of Public Health Engineers and Activities for Har Ghar Jal"

a) Photos of this training program





b) Participant attendance of this Training program



Attendance Sheet (05-06 July 2024, Venue- UIRD, Rudrapur)- Residential Training Program (Level- 2)

S. N.	Name of participant	Designation	Department	District	Contact No.	Attendance		Is accommodation availed?	
						Day-1 (05.07.24)	Day- 2 (06.07.24)	Yes/ No	Signature
1	P.N.Chaudhary	EE	UJN	US Nagar	9411757070	—	—	—	—
2	Pardeep Kumar	AE	UJN	US Nagar	9058670236	—	—	—	—
3	Kamlesh Singh Rawat	JE	UJN	US Nagar	8938040882	—	—	—	—
4	Sanjay Gahtodi	JE	UJN	US Nagar	9675559400			Yes	
5	Abhishek Singh Manral	JE	UJN	US Nagar	9808259128			Yes	

NITESH KAUSHIK
Nodal Officer & Dy. Director
Swami Rama Himalayan University

c) Screenshot of the Final Report for the Two-Day Residential Level-2 Training



TRAINING REPORT OF LEVEL- 2 (MID MANAGEMENT)

ON

Change Management- Role (as Public Health Engineer) and Activities for HAR GHAR JAL (Batch- 5)

Date: 05 July- 06 July 2024

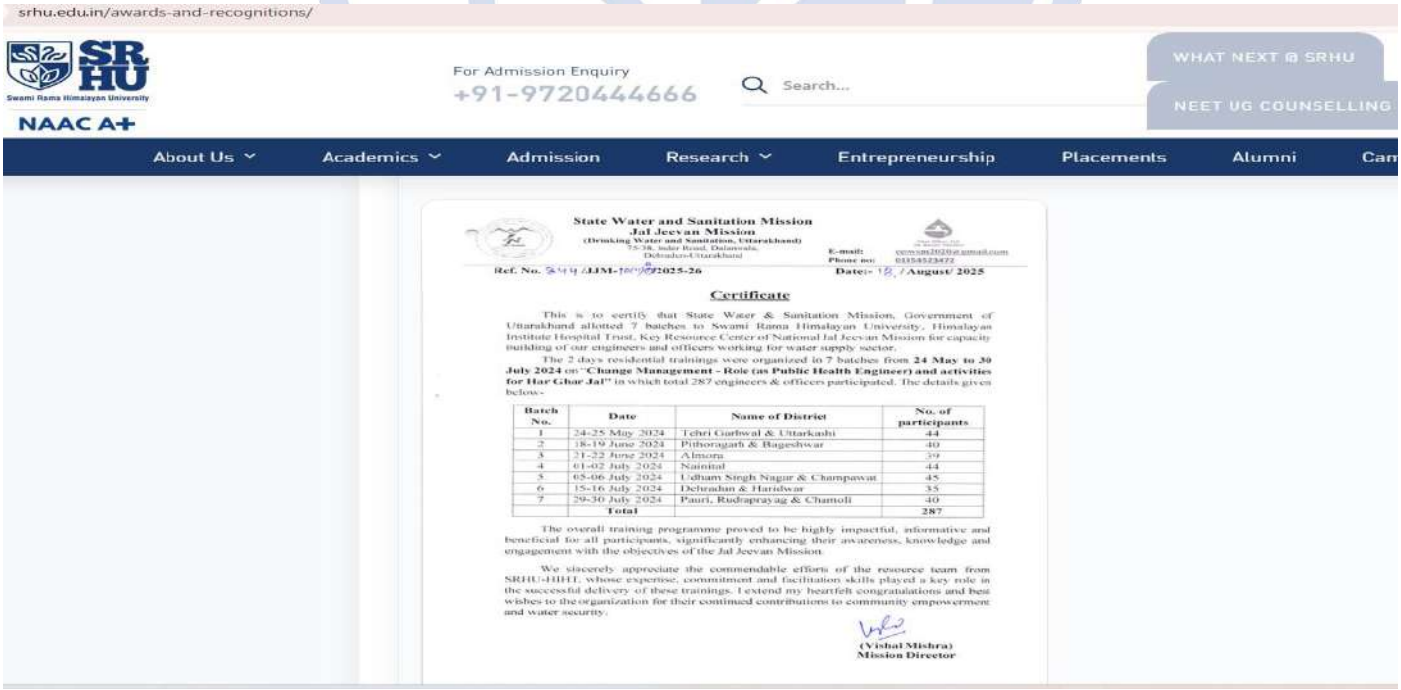
No. of Participants: 45

Report submitted to
State Water Sanitation Mission
Govt. of Uttarakhand

Report submitted by
Key Resource Centre
Himalayan Institute Hospital Trust (HIHT)
Jolly Grant, Dehradun

Evidence 3:

Screenshot of Certificate of Appreciation from the Government of Uttarakhand publicly available on the university website.



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State Water and Sanitation Mission
Jal Jeevan Mission
(Drinking Water and Sanitation, Uttarakhand)

Ref. No. 544 /JJM-[illegible]/2025-26 Date:- 12 /August/ 2025

Certificate

This is to certify that State Water & Sanitation Mission, Government of Uttarakhand allotted 7 batches to Swami Rama Himalayan University, Himalayan Institute Hospital Trust, Key Resource Center of National Jal Jeevan Mission for capacity building of our engineers and officers working for water supply sector.

The 2 days residential trainings were organized in 7 batches from **24 May to 30 July 2024** on "**Change Management - Role (as Public Health Engineer) and activities for Har Ghar Jal**" in which total 287 engineers & officers participated. The details given below:-

Batch No.	Date	Name of District	No. of participants
1	24-25 May 2024	Tehri Garhwal & Uttarkashi	44
2	18-19 June 2024	Pithoragarh & Bageshwar	40
3	21-22 June 2024	Almora	39
4	01-02 July 2024	Nainital	44
5	03-06 July 2024	Udham Singh Nagar & Champawat	45
6	15-16 July 2024	Dehradun & Haridwar	55
7	29-30 July 2024	Pauri, Rudraprayag & Chamoli	40
	Total		**287**

The overall training programme proved to be highly impactful, informative and beneficial for all participants, significantly enhancing their awareness, knowledge and engagement with the objectives of the Jal Jeevan Mission.

We sincerely appreciate the commendable efforts of the resource team from SRHU-HIHT, whose expertise, commitment and facilitation skills played a key role in the successful delivery of these trainings. I extend my heartfelt congratulations and best wishes to the organization for their continued contributions to community empowerment and water security.

(Vishal Mishra)
Mission Director

Evidence 4:

Regional training on Gender Equality and Social Inclusion (GESI) responsive Watershed Management in the Hindu Kush Himalaya (HKH)

a) Photos of the Regional Training on Gender Equality and Social Inclusion (GESI)







b) Attendance Sheet for the Regional Training on Gender Equality and Social Inclusion (GESI)

Attendance

Regional training on gender equality and social inclusion (GESI) responsive springshed management in the Hindu Kush Himalaya (HKH)

Dehradun, India : 29 Jan – 01 Feb

S.N.	Name	Designation	Institution	Email / contacts	29 Jan	30 Jan	31 Jan	1 Feb
1	Sumaan Bisht	Gender Expert	-	sumibisht@gmail.com				
2	Sonam Chaki Dawa	Sr. Forest Ranger	Department of Forest and Parks Services					
3	Penam Yarden	GIS officer	Department of Water MoEWR.					
4	Thinley Wangmo	Asst. Forester	Department of water. MoEWR					
5	Manisha Gairola	Technician	Department of water MoEWR					
6	Santosh Kafle	Environment officer	Namobuddha municipality, Kavre					

By signing this I agree to take pictures and videos during the workshop.

c) Snapshot from the Website of the Regional Training on Gender Equality and Social Inclusion (GESI)


srhu.edu.in/circulars-and-notices/springshed-management-training-rdi/

Springshed Management Training | RDI

Published on: February 4, 2025

SRHU Hosts International Training on Gender Equality & Springshed Management

Swami Rama Himalayan University (SRHU) successfully conducted a four-day international training on Gender Equality and Social Inclusion (GESI) Responsive Springshed Management in the Hindu Kush Himalaya (HKH) from January 29 to February 1, 2025. Organized in collaboration with the International Centre for Integrated Mountain Development (ICIMOD), Nepal, and GB Pant National Institute of Himalayan Environment (NIHE), the program aimed to enhance socio-ecological resilience through improved Springshed management.

The workshop was attended by 60 participants from Nepal, Bhutan and different States of the India including Arunachal Pradesh, Assam, Manipur, Nagaland, Sikkim, Meghalaya, J&K, Ladakh, Telangana, Maharashtra and Uttarakhand. The closing ceremony was graced by Mrs. Ritu Khanduri Bhushan, Hon'ble Speaker, Uttarakhand Legislative Assembly, who emphasized integrating traditional wisdom with scientific approaches for spring revival, alongside Dr. Vijay Dhasmana, President, SRHU, who lauded the initiative. Other key speakers included Dr. V. Chauhan (SRHU), Dr. I.D. Bhatt (NIHE), and Prof. H.P. Uniyal (SRHU). Participants received certificates, and winners of the poster presentation were felicitated.

The inaugural ceremony, held at SRHU's Mother Teresa Auditorium, featured Sh. Anand Vardhan (IAS), Additional Chief Secretary & CEO, SARA, as Chief Guest. He underscored government initiatives on spring and river rejuvenation, emphasizing civic engagement and cross-regional knowledge sharing.

The program covered an in-depth six-step methodology for spring revival, including springshed mapping, hydrogeology concepts, governance structures, and digital tools like ISHWAR. Participants also visited villages in Tehri district, including Churendhar, Narendra Nagar, Koti Gad, Nogini, and Heval Ghati, to observe real-world water conservation efforts like solar pumping and resilient water supply schemes.

Led by experts from ICIMOD (Dr. Sanjeev Bhuchar), NIHE (Dr. I.D. Bhatt), and SRHU (Prof. H.P. Uniyal), the event was coordinated by SRHU's WATSAN Department, including Nitesh Kaushik, Vivek Anand, Atul Uniyal, and team.

This training reinforces SRHU's commitment to sustainable water management, fostering collaboration for Himalayan environmental conservation.

Evidence 5

Certificate of Appreciation from the G.B. Pant National Institute of Himalayan Environment (NIHE) and Certificate of Appreciation – ICIMOD


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Certificate

6.5.3 Off-Campus Water Conservation Support Year: 2025

Swami Rama Himalayan University (SRHU), through its Department of WATSAN, supports off-campus water conservation, climate-resilient water management, and sustainable water and sanitation solutions in the Himalayan region. Under the NMHS, MoEFCC, SRHU developed the approved "Affordable Climate-Resilient Water Supply Infrastructure Prototype for Indian Himalayan Region" to promote low-cost, prefabricated, and climate-resilient drinking water systems for vulnerable communities. In addition, under the Namami Gange Programme**,** SRHU conducted Environmental and Social Audits of STPs and I&D projects across nine locations in Haridwar, Tehri, Dehradun, and Nainital, covering household surveys, community consultations, technical and water-quality assessments, and O&M evaluation. These initiatives strengthen water conservation, pollution control, sustainable sanitation, and climate resilience in off-campus communities and Himalayan ecosystems.

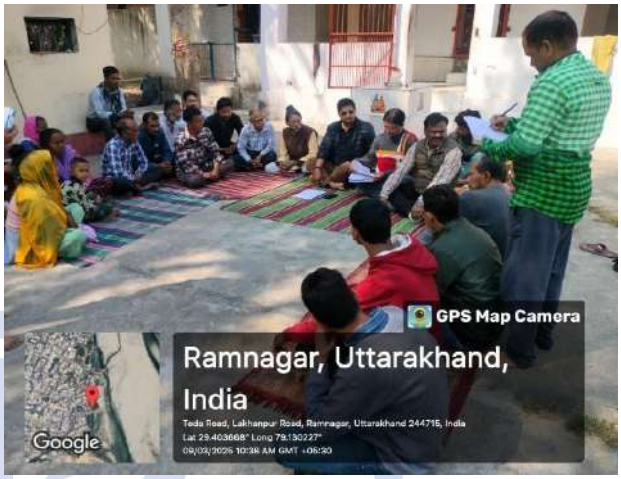
Particulars	Status	Details
Existence of Support	Yes	a) SRHU has been entrusted with conducting the Environmental and Social Audit of STPs and I&D projects under the Namami Gange Programme. The audit included Social, environmental, and technical assessments of STPs and I&D works, covering 611 households and FGDs with 270 participants. b) SRHU implemented a project on "Affordable Climate-Resilient Water Supply Infrastructure Prototype for Indian Himalayan Region" in 5 districts of Uttarakhand with support from the Ministry of Environment, Forest & Climate Change, Government of India to support water conservation, sustainable water-source management, and climate-resilient drinking water infrastructure. c) SRHU was included in the first list of 21 approved supporting organizations for the implementation of the Jal Jeevan Mission (JJM) by the State Water & Sanitation Mission, Uttarakhand. This recognition established the institution as a supporting organization for JJM-related activities beyond the campus, strengthening its role in extending technical and community-based support for water supply, water conservation, sanitation, and sustainable water management in rural communities across Uttarakhand.
Evidence Provided	Yes	• Field Photos, Work orders, Attendance Sheets, Certificate of Appreciation, Empanelment letter, final report submitted to Govt. of Uttarakhand and Snapshot of approval • Approval letter for "Affordable Climate-Resilient Water Supply Infrastructure Prototype for Indian Himalayan Region" • Letter of Empanelment as an approved Supporting Organization under the Jal Jeevan Mission (JJM)
Is the evidence in public domain	Yes	Publicly available on the SRHU website https://srhu.edu.in/awards-and-recognitions/ NMHS project is listed under MoEFCC's NMHS grant records **https://nmhs.org.in/Project_Database/Project_filter.php**

Evidences

Evidence 1:

a) Field Photos of Environmental and Social Audit Activities under the Namami Gange Programme





b) Copy of the Work Order for Environmental and Social Audit Activities under the Namami Gange Programme

/33505/2024 NAMAMI GANGE

Office of the Program Director
State Mission for Clean Ganga
Namami Gange Uttarakhand

Letter No. 541 */SMCG/Namami Gange/* Social & Environmental Audit *Dated:* 26/12/2024

Ganga's purity is our responsibility
Save Ganga, Save Water, Save Life

To,

The Vice Chancellor
Swami Ram Himalayan University
Jollygrant, Dehradun.

Sub.: Work Order for conducting Social & Environmental Audit of STPs

Ref.: Your Proposal dated 06th November, 2024 and subsequently presentation on technical and financial proposal on 11th December, 2024.

Sir,

This has reference to the proposal submitted by Advisor, Swami Ram Himalayan University (SRHU) Jollygrant, Dehradun to State Mission for Clean Ganga (SMCG) Namami Gange Uttarakhand in response to SMCG's letter no. 446, dated 28.10.2024, subsequently presentation on technical and financial proposal on 11th 2024 December at SMCG office, regarding conducting Social & Environmental Audit of 02 Interception & Diversion (I&D) and 07 Sewage Treatment Plants (STPs) established under Namami Gange program at following 06 locations: -

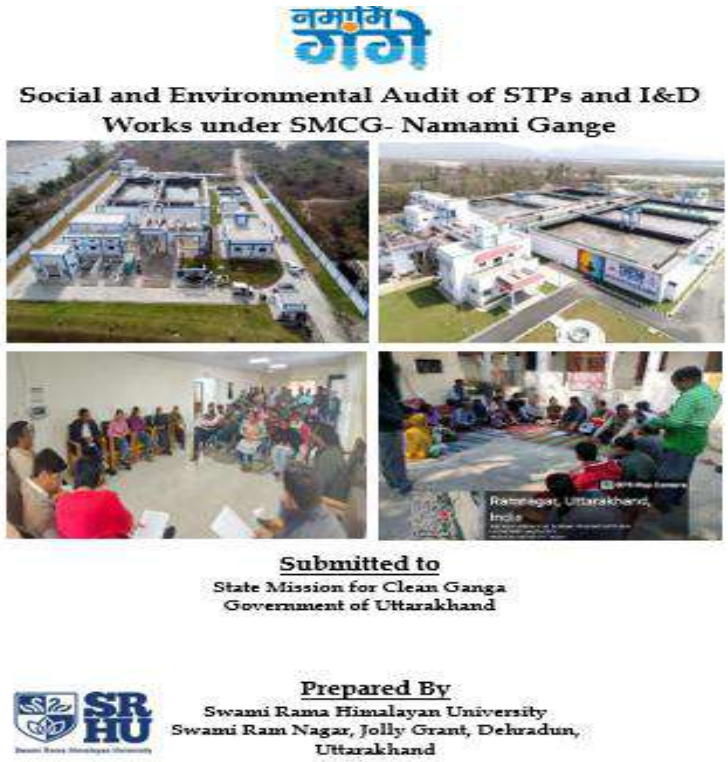
Table -1

S.No.	I&D and STPs Name/Location
1	I&D and STP Ramnagar (7.00 MLD and 1.50 MLD), Distt. Nainital
2	12.5 MLD (7.50 + 5.00 MLD), STPs Muni ki Reti & Dhalwala, Distt. Tehri Garhwal
3	26 MLD STP Lakkarghat, Rishikesh, Distt Dehradun.
4	I&D work Rispana & Bindal River Dehradun.
5	14 MLD STP Sarai, Distt. Haridwar.
6	68 MLD STP Jagjeetpur, Distt. Haridwar.

2. In this regard, your proposal for conducting Social & Environmental Audit of I&D and STPs is accepted and SRHU, Jollygrant, Dehradun is hereby being appointed as Third-Party Inspection (TPI) Agency by SMCG for conducting Social & Environmental Audit of I&D and STPs, established under Namami Gange Program & located in the river Ganga and its tributaries basin districts i.e., Nainital, Tehri Garhwal, Dehradun, & Haridwar of the State of Uttarakhand. For this assignment, Mr. Nitesh Kaushik, Deputy Director, SRHU will be the Principal Investigator, and Mr. Raj Kumar Verma, Assistant Manager, SRHU as Co-Principal Investigator alongwith the TPI proposed experts/researchers team for conducting Social & Environmental Audit of I&D and STPs in coordination with concerned Units of executing agency Uttarakhand Peyjal Nigam (UKPJN), Uttarakhand Jal Sansthan (UJS), respective Urban Local Bodies (ULBs), SMCG and GIZ-SGR.

3. Further, Audit Agency/SRHU will coordinate with UKPJN/UJS during execution of Social & Environmental Audit of I&D and STPs, with in a period of 03 months (w.e.f. from 1st January, 2025 – 31st March, 2025). The sanctioned budget for conducting the Social & Environmental Audit in the above I&D and STPs

c) Cover Page of the Final Report on Environmental and Social Audit Activities under the Namami Gange Programme



d) Certificate of Appreciation from the Government of Uttarakhand for Contributions Under the Namami Gange Programme



Evidence 2:

a) Approval letter for "Affordable Climate-Resilient Water Supply Infrastructure Prototype for Indian Himalayan Region"

NATIONAL MISSION ON HIMALAYAN STUDIES (NMHS)
G.B. Pant National Institute of Himalayan Environment (NIHE)
Kosi-Katarmal, Almora - 263643, Uttarakhand, India

No.: NMHS2024-25/SC-XIII/MG/SL-12 Date: 20/03/2025

E-mail/ Copy by Speed Post
<atuliuniyal@srhu.edu.in>

To,
Er. H.P. Uniyal
Swami Rama Himalayan University
Jolly Grant, Dehradun, Uttarakhand

Subject: Approval of the project entitled "*Affordable Climate-resilient Water Supply Infrastructure Prototype for Indian Himalayan Region*" for funding under Medium Grant (MG) of NMHS 2024-25-reg.

Sir,

I am directed to convey the approval of the Competent Authority for the above-mentioned project at a total cost of **Rs. 10,100,000/-(Rupees One Crore One Lakh Only)** for a period of **Three (03) years**, as per the break-up given below:

Budget Head	1st year	2nd year	3rd year	Total
(i) Professional Services:* RA-II for 2 Years @61000/-+10%HRA, Field Assistant@20000/- for 2 Year 6 Month fixed, Project Assistant@20000/-for 2 Years fixed, Honorarium to Experts @350000/- for the project period	832600	1425200	782600	3040400
(ii) Training Expenses:	280000	175000	205000	660000
(iii) Domestic Travel Expenses:	480000	480000	480000	1440000
(iv) Office Expenses: Office Assistant @15000/- fixed for three years, stationery charges, contingency expenses, etc.	500000	355000	348100	1203100
(v) Printing and Publication:	0	0	100000	100000
(vi) Digital Equipment: 01 Digital Altimeters @1750/-, 02 GPS @24500/-, 03 Digital Flow Meter @18500/-, 05 Digital Rain Gauge @13500/-, 03 Digital Depth Sensors @500/-, 01 Physical Parameter testing probe @14500/-, 05 Brunton com @1100/-, 05 Hammers with soft chisel @1200/-, 02V-Notch @65000/-, 01 Arch GIS Software @50000/-, 01 SPSS Software @160000, 01 Endnote Software @10000/-.	181000	375500	0	556500
(vii) Material and Supplies: Water quality test, Material, Lab Scale testing, Field Scale testing, Laboratory setup, Graded Filter Media.	1625000	1425000	50000	3100000
Grand Total	3898600	4235700	1965700	10100000

* The at-source recovery of Tax Deduction at Source (TDS) should be made as per Income Tax Act 1961 under Professional Services.

2. The approval of the project is subject to incorporation/compliance with the following project-specific remarks/conditions:
   - **Collaborate with the Uttarakhand Water Department to secure their agreement for involvement in the project.**
   - **Include the comprehensive data/ information in terms of criteria for identification and selection of all disasters-prone areas, including cloud burst, forest fires, etc. towards ensuring the disaster-resilient, climate-resistant water supply.**

NMHS 2024-25 NMHS-Project Grant Sanction Letter Page 1 of 4

XVI. As per the directive of the Govt. of India, the implementing agency must be registered in **Public Financial Management System (PFMS)**. All transactions should be done through PFMS Portal only for transparency and accountability of the Govt. grant.

XVII. All the purchases/services should be made mandatorily through GeM, strictly following the provision of rule 149 of GFR-2017 and procurement manual for purchase of goods.

XVIII. After the 1st installment (i.e., only 25% of the total project cost), the second and subsequent installment will be released only after utilization of 75% of the installment released, under respective Budget Head. While submitting the demand for 2nd and subsequent installment, the bills/Vouchers in original will be provided by the proponent. The Annual UC & SOE as per the provision of GFR 238(1) will be submitted by the proponent to the NMHS-PMU.

6. Please send your acceptance with the Terms & Conditions of this NMHS-Project Grant Sanction Letter so that the funds may be released without any further delay.

7. Please send your acceptance with the Terms & Conditions of this NMHS-Project Grant Sanction Letter, so that the funds may be released without any further delay.

8. Please note that following documents must be submitted before the start of the project activities.
   (i) Quotations for the equipment/ instruments to be procured.
   (ii) Roles and responsibilities of the partners with the budget allocated to each of them.
   (iii) Original Copy of Bond (Rs. 100 Stamp Paper) duly signed by authorized person of grantee.

Encl.: **Annexure-I**
Appendix-A
Appendix-B

Yours Sincerely,

Er. MS Lodhi
Scientist-'F' & Nodal Officer
NMHS-PMU, GBP NIHE HQs

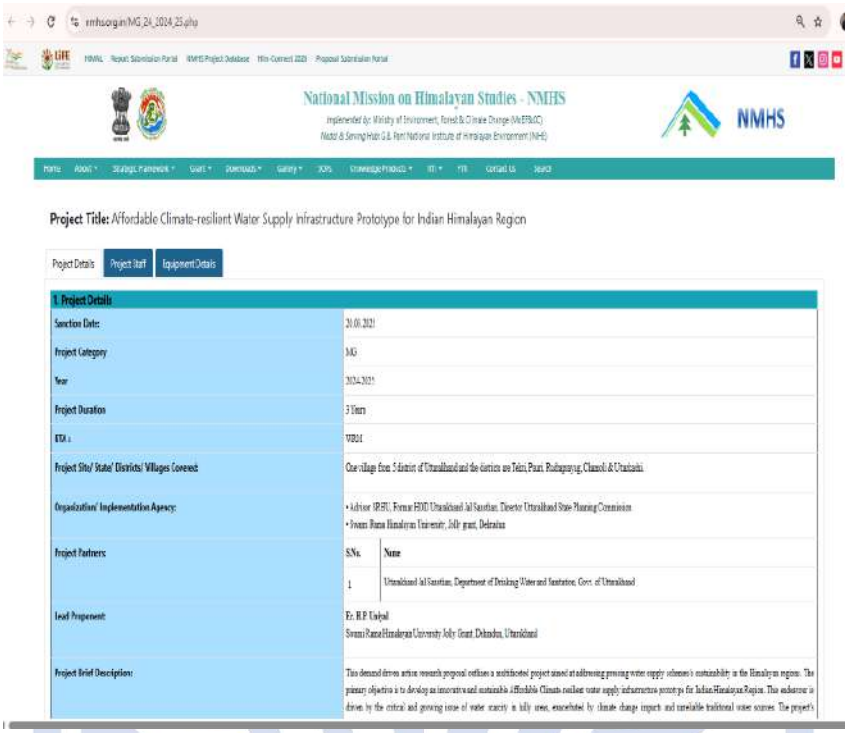
Copy to:

1. Registrar, Swami Rama Himalayan University, Swami Ram Nagar, Jolly Grant, Dehradun, Uttarakhand
2. Dr. Susan George K, Scientist- 'E', CS-I (Mountain) Division, Agni Wing, 5th Floor, Indira Paryavaran Bhawan, Ministry of Environment, Forest & Climate Change (MoEF&CC), Govt. of India, Jorbagh Road, New Delhi 110003
3. The Director, G.B. Pant National Institute of Himalayan Environment (NIHE), Kosi-Katarmal, Almora, Uttarakhand-263643
4. The Finance Officer, G.B. Pant National Institute of Himalayan Environment (NIHE), Kosi-Katarmal, Almora, Uttarakhand-263643
5. The Principal Director of Audit, Scientific Department, AGCR Building, IP Estate, New Delhi-110002
6. Project File – NMHS-PMU.



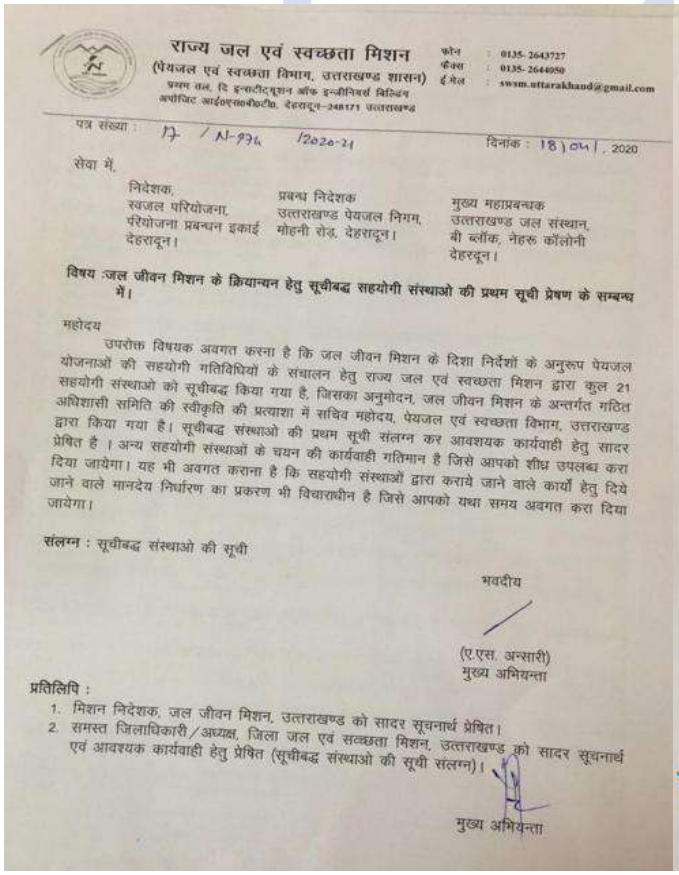
Field Photos of NMHS Project

b) Screenshot from NMHS Website



Evidence 3:

a) Letter of Empanelment as an approved Supporting Organization under the Jal Jeevan Mission (JJM)



राज्य जल एवं स्वच्छता मिशन
(पेयजल एवं स्वच्छता विभाग, उत्तराखण्ड शासन)
प्रथम तल, दि इन्फ्रास्ट्रक्चर ऑफ इन्जीनियर्स बिल्डिंग अपोजिट आईएसबीटी, देहरादून-248171 उत्तराखण्ड
फोन : 0135-2643727
फैक्स : 0135-2644050
ई-मेल : swsm.uttarakhand@gmail.com

पत्र संख्या : 17 / N-976 /2020-21 दिनांक : 18/04/, 2020

सेवा में,

निदेशक,
स्वजल परियोजना,
परियोजना प्रबन्धन इकाई
देहरादून।

प्रबन्ध निदेशक
उत्तराखण्ड पेयजल निगम,
मोहनी रोड़, देहरादून।

मुख्य महाप्रबन्धक
उत्तराखण्ड जल संस्थान,
बी ब्लॉक, नेहरू कॉलोनी
देहरादून।

विषय :जल जीवन मिशन के क्रियान्वन हेतु सूचीबद्ध सहयोगी संस्थाओ की प्रथम सूची प्रेषण के सम्बन्ध में।

महोदय

उपरोक्त विषयक अवगत करना है कि जल जीवन मिशन के दिशा निर्देशों के अनुरूप पेयजल योजनाओं की सहयोगी गतिविधियों के संचालन हेतु राज्य जल एवं स्वच्छता मिशन द्वारा कुल 21 सहयोगी संस्थाओ को सूचीबद्ध किया गया है, जिसका अनुमोदन, जल जीवन मिशन के अन्तर्गत गठित अधिशासी समिति की स्वीकृति की प्रत्याशा में सचिव महोदय, पेयजल एवं स्वच्छता विभाग, उत्तराखण्ड द्वारा किया गया है। सूचीबद्ध संस्थाओ की प्रथम सूची संलग्न कर आवश्यक कार्यवाही हेतु सादर प्रेषित है । अन्य सहयोगी संस्थाओं के चयन की कार्यवाही गतिमान है जिसे आपको शीघ्र उपलब्ध करा दिया जायेगा। यह भी अवगत कराना है कि सहयोगी संस्थाओं द्वारा कराये जाने वाले कार्यों हेतु दिये जाने वाले मानदेय निर्धारण का प्रकरण भी विचाराधीन है जिसे आपको यथा समय अवगत करा दिया जायेगा।

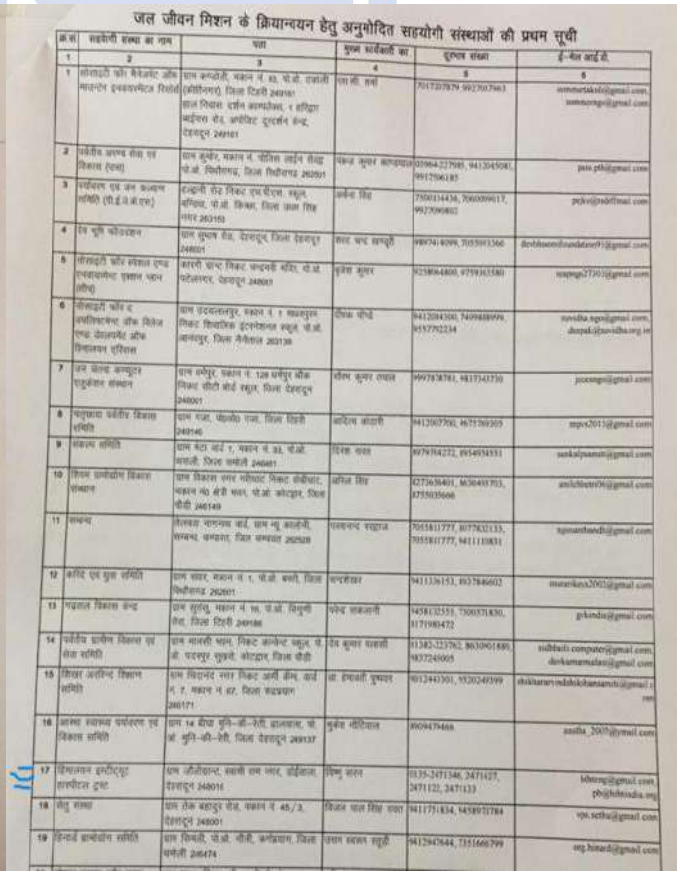
संलग्न : सूचीबद्ध संस्थाओ की सूची

भवदीय

(ए.एस. अन्सारी)
मुख्य अभियन्ता

प्रतिलिपि :
1. मिशन निदेशक, जल जीवन मिशन, उत्तराखण्ड को सादर सूचनार्थ प्रेषित।
2. समस्त जिलाधिकारी/अध्यक्ष, जिला जल एवं सव्च्छता मिशन, उत्तराखण्ड को सादर सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित (सूचीबद्ध संस्थाओ की सूची संलग्न)।

मुख्य अभियन्ता



जल जीवन मिशन के क्रियान्वयन हेतु अनुमोदित सहयोगी संस्थाओं की प्रथम सूची

क्र.सं	सहयोगी संस्था का नाम	पता	मुख्य कार्यकारी का	दूरभाष संख्या	ई-मेल आई.डी.
1	2	3	4	5	6
1	सोसायटी फॉर मैनेजमेंट ऑफ सस्टेनेबल इन्फ्रास्ट्रक्चर सिस्टम्स	ग्राम कण्डोली, मकान नं. 83, पो.ओ. रायपुर (देहरादून), जिला टिहरी 249161 डाक निवास, दर्शन कलमोड़ा, 1 सर्विस अटेंडेन्स रोड, आईएसबीटी दूरदर्शन के पास, देहरादून 249161	एस.सी. सती	7017207879, 9927037963	
2	पर्वतीय अंचल सेवा एवं विकास (पासं)	ग्राम कुमेर, मकान नं. नोटिस लार्ज सेवा पो.ओ. सिमोरगढ़, जिला पिथौरागढ़ 262501	पंकज कुमार कापड़ी	05964-227989, 9412045041, 9917096185	pass.pth@gmail.com
3	पर्यावरण एवं जल कल्याण समिति (पी.ई.डब्ल्यू.ए.)	हरकुली रोड निकट एम.डी.एस. स्कूल, बाजपुर, पो.ओ. किच्छा, जिला ऊधम सिंह नगर 263153	अनीता सिंह	7500114436, 7060099017, 9927090802	pcky@rediffmail.com
4	ऐरा भूमि कॉरपोरेशन	ग्राम सुभाष रोड, देहरादून, जिला देहरादून 248001	शशि भूषण बहुगुणी	9897418099, 7055093566	deshbandhuandalaw91@gmail.com
5	सोसाइटी फॉर सर्वेक्षण एण्ड एप्लायमेण्ट इन्फ्रास्ट्रक्चर प्लान (सीएई)	कारगी चौक निकट चन्द्रमणी मंदिर, पो.ओ. पटेलनगर, देहरादून 248001	सुरेश कुमार	9258064800, 9759363580	saepsp27301@gmail.com
6	सोसाइटी फॉर द अप्लीकेशन्स ऑफ विजन एण्ड डेवलपमेंट ऑफ विलेज इकोसिस्टम्स	ग्राम उदयशंकरपुर, मकान नं. 1 सहस्रधारा, निकट विधानिक इंस्टीट्यूशन स्कूल, पो.ओ. आमवाला, जिला मैकेंजरा 263139	दीपक पोखरियाल	9412084360, 7409488999, 9557792234	suvidha.ngo@gmail.com, deepak@suvidha.org.in
7	ग्राम डेवलप कम्प्यूटर एजुकेशन सोसायटी	ग्राम धर्मपुर, मकान नं. 128 धर्मपुर ओल्ड निकट सीटी बोर्ड स्कूल, जिला देहरादून 248001	सौरभ कुमार तयाल	9997878781, 9837343750	jrcsengg@gmail.com
8	ग्रामोत्थान पर्वतीय विकास समिति	ग्राम गजा, पोस्ट गजा, जिला टिहरी 249146	आदेश कांडारी	9412607901, 9675703005	mpvs2011@gmail.com
9	संकल्प समिति	ग्राम बेटा बाई 1, मकान नं 33, पो.ओ. नयाबाद, जिला उत्तरकाशी 249601	दिनेश गंगवार	8979784272, 8954858551	sankalpsamiti@gmail.com
10	शिवम इन्फ्रास्ट्रक्चर डिवेलपर्स	ग्राम विकास नगर नोटिफाइड निकट सोसियाटी, मकान नं0 सेती मंदार, पो.ओ. कोटद्वार, जिला पौड़ी 246149	अभिषेक सिंह	8273639401, 8630495703, 8755035666	anilchhetri94@gmail.com
11	सम्बन्ध	रेलवाला नारायण बाई, ग्राम नयू काण्डोरी, सम्बन्ध, धनपाल, जिला धनपाल 262529	एकलव्य रतूड़ा	7055811777, 8077832133, 7055811777, 9411110831	sjsansthan@gmail.com
12	कलिंद एवं मुक्त समिति	ग्राम सहर, मकान नं 1, पो.ओ. बनी, जिला चिन्यालीसौड़ 262601	मनमोहन	9411336153, 8937846602	manmohan2002@gmail.com
13	पहाड़ल विकास संस्था	ग्राम सुरोलू, मकान नं. 98, पो.ओ. सिमली रोड, जिला टिहरी 249186	पवेन्द्र सकलानी	9458132555, 7500378830, 8171980472	pvkndu@gmail.com
14	पर्वतीय ग्रामीण विकास एवं सेवा समिति	ग्राम मालकी भाग, निकट आनंदपट्ट स्कूल, पो.ओ. पटवसूर सुखरो, कोटद्वार, जिला पौड़ी	दीप कुमार खंडारी	91382-223762, 8630901880, 9837249005	subhash.computer@gmail.com, devkumarnalas@gmail.com
15	शिवम अंतरिक्ष विज्ञान समिति	ग्राम विद्यानंद नगर निकट अली बीज, कार्ड न. 7, मकान नं 67, जिला रुद्रप्रयाग 246171	डा. हेमवती पुष्पवान	9012443301, 9520249399	shikharvrmdshikharsamiti@gmail.com
16	आत्मा स्वास्थ्य पर्यावरण एवं विकास समिति	ग्राम 14 बीघा पूर्वी-डी-रेती, ढालवाला, पो.ओ. पूर्वी-डी-रेती, जिला देहरादून 249137	मुकेश नौटियाल	8909479468	aastha_2005@ymail.com
17	हिमालयन इन्टीग्रेटेड सस्टेनेबल ट्रस्ट	ग्राम जौलीग्रान्ट, सहली ग्राम नगर, डोईवाला, देहरादून 248016	विष्णु भारद्वाज	0135-2471346, 2471427, 2471122, 2471133	hihtrust@gmail.com, pb@hihtrust.org
18	सेतु संस्था	ग्राम तेज बहादुर रोड, मकान नं. 45/3, देहरादून 248001	विजय पाल सिंह रावत	9411771834, 9458931784	vpr.setu@gmail.com
19	हिमवंत आर्थोपेडिक समिति	ग्राम किमाड़ी, पो.ओ. नौकी, जनपद्याग, जिला उत्तरकाशी 246474	उत्तम सजवान सहगी	9412947644, 7351660799	org.himard@gmail.com

b) Photos of Community participation to support water conservation implementation project





6.5.4 Sustainable Water Extraction on Campus Year: In place by 2025

On-Campus Sustainable Water Extraction

Swami Rama Himalayan University (SRHU) follows a sustainable and monitored approach to water extraction, with drinking water primarily sourced from three authorized borewells, supplemented by limited municipal supply. Water use is monitored through metering and telemetry-based systems to support responsible groundwater management and compliance with applicable CGWA guidelines and BIS 10500 standards. Groundwater extraction is complemented by an integrated rainwater harvesting and recharge system comprising 21 structures, including recharge pits and borewell recharge units, along with a 150 KL underground rainwater harvesting tank. The campus further reduces dependence on freshwater through a 1 MLD STP and 90 KLD ETP, reuse of treated wastewater, and recovery of RO reject and AC condensate water for non-potable applications. Together, these measures promote water conservation, aquifer recharge, efficient resource use, and long-term water security across the 200-acre campus.

Off-Campus Sustainable Water Extraction

SRHU promotes sustainable and climate-resilient water extraction in rural and Himalayan communities through innovative Implementation and low-cost technologies. The University has implemented five solar-powered water supply schemes using spring and groundwater sources, reducing dependence on conventional electricity and diesel while enabling community-managed water supply. Its patented Direct Injection (DI) Technology recharges depleted aquifers by directing harvested rainwater into low-yield or defunct handpump bores, supporting groundwater restoration in mountainous areas. In addition, the Himalayan Well and Steel Intake systems provide climate-resilient methods for sustainably tapping stream and spring sources while reducing vulnerability to landslides and flash floods.

Particulars	Status	Details
Existence of applicable technologies	Yes	**A) On-campus applicable technologies** i. **Rainwater Harvesting Structures:** 21 total structures, including 16 recharge pits, 2 borewell recharge units, and additional filtration/infiltration pits ii. **365-day Rainwater Harvesting Tank:** A 150 KL (1.5 lakh litres) underground rainwater harvesting tank iii. **Wastewater Management:** Operates a 1 million litres per day (1 MLD) Sewage Treatment Plant (STP) using MBBR technology and a 90 KLD Effluent Treatment Plant (ETP) for laboratory waste. iv. **Water Saving Practices** such as waterless urinals, sand bottle cistern, reuse of RO reject water and AC condensate water **B) Off-campus applicable technologies:** i. **Direct Injection Technology:** A patented SRHU innovation to recharge aquifers and conserve groundwater. Designed for Himalayan terrain, the low-cost and replicable technology has been field-validated in Chamoli, Pauri Garhwal, Tehri Garhwal, and Pithoragarh. ii. **Himalayan Well:** Affordable Climate-resilient Water Supply Infrastructure for Stream/Rivulet Source tapping iii. **Solar Pumping Water Supply:** SRHU has implemented five solar-powered rural water supply schemes using spring and tube-well sources, providing low-maintenance, community-managed water supply.
Evidence Provided	Yes	Screenshot of the above-mentioned applicable technologies from the SRHU website
Is the evidence in public domain	Yes	Available on website: https://srhu.edu.in/water-conservation/

Evidences

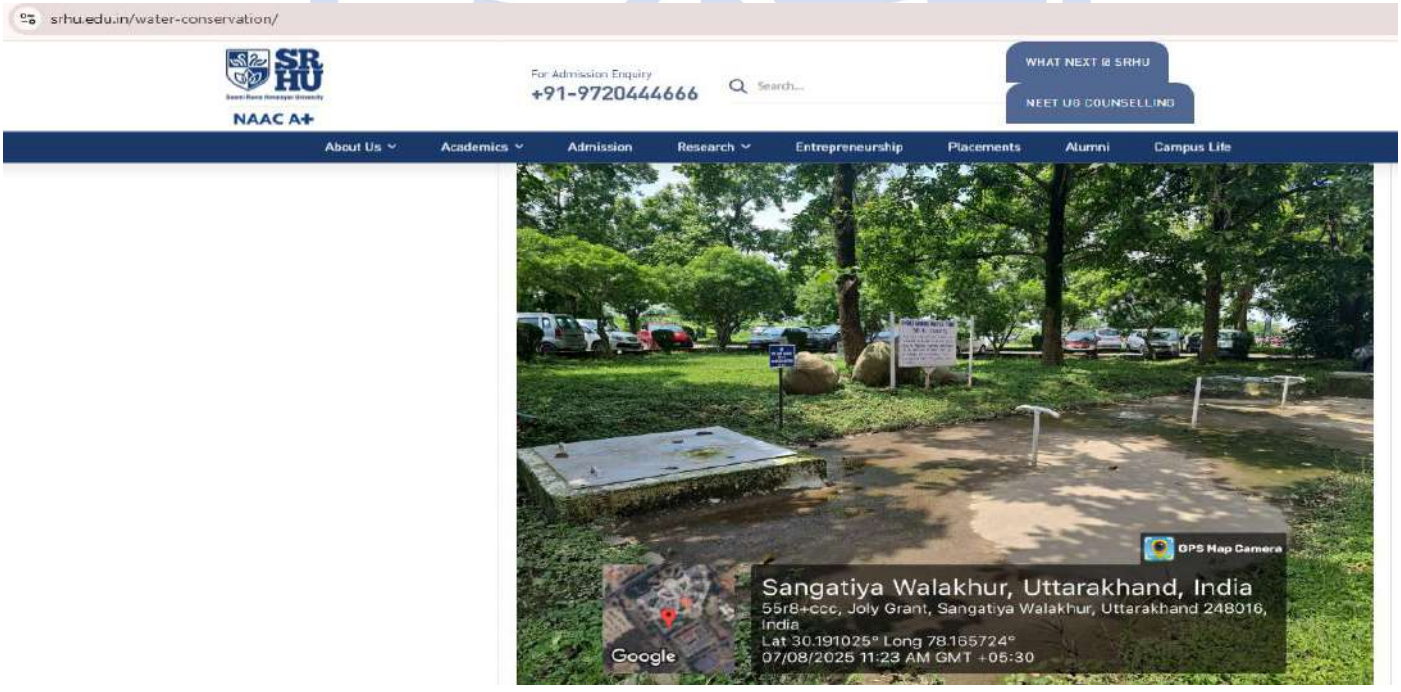
Evidence 1:

Screenshot of recharge pit



Evidence 2:

Screenshot of the 365-Day Rainwater Harvesting Tank



Evidence 3:

Screenshot of Wastewater Management Plant



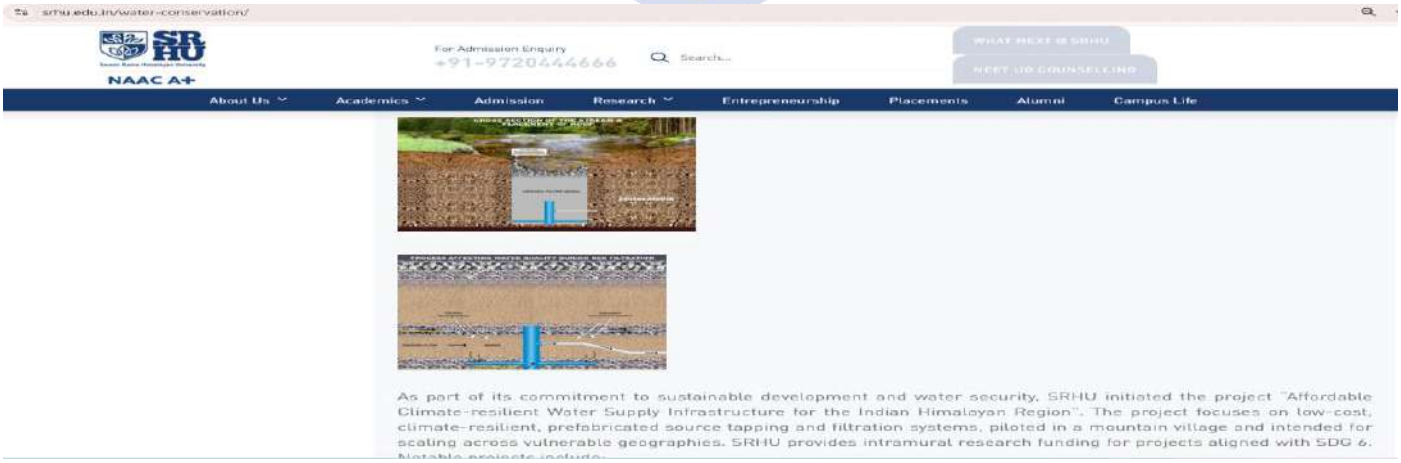
Evidence 4:

Screenshot of Water-Saving Practices



Evidence 5:

Screenshot of Innovative Climate-Resilient Water Supply and Groundwater Recharge Technologies



Evidence 6:

Screenshot of Solar Pumping Technology





Evidence 7:

Inauguration of Direct Injection Technology by the Hon'ble CM of Uttarakhand





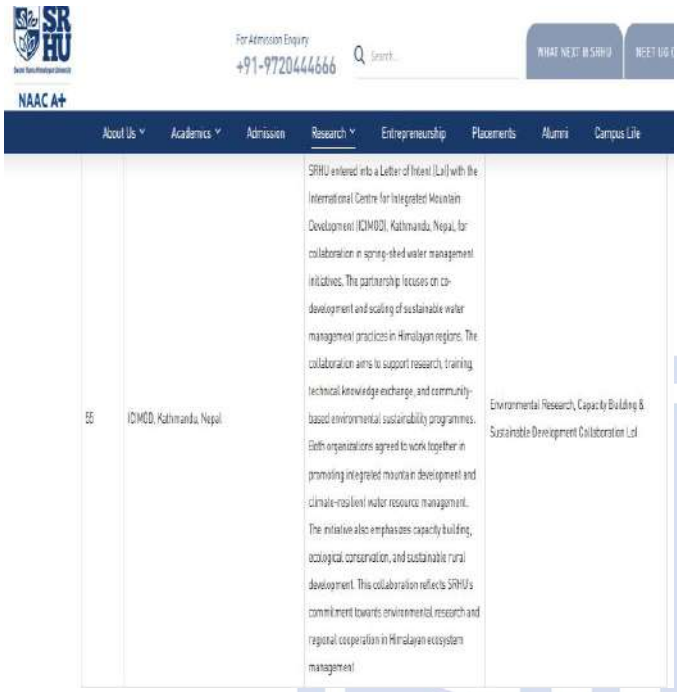
6.5.5 Cooperation on water security Year: 2025

Swami Rama Himalayan University (SRHU) demonstrates a multi-level commitment to water security through collaboration with communities, government institutions, national programmes, and international partners. At the local level, SRHU engages with communities and Gram Panchayats through water and sanitation programmes, promoting participatory approaches to sustainable water management. At the regional and state level, its MoU with Uttarakhand Jal Sansthan supports joint research, training, capacity building, knowledge management, technical expertise, monitoring and evaluation, and improvement of water-supply schemes. SRHU also contributes to state-level water governance through participation in the State Water Sanitation Mission Executive Committee. At the national level, SRHU serves as a Key Resource Centre (KRC) and Sector Partner under the Jal Jeevan Mission, supporting institutional capacity building across 31 States and UTs by training government officials, engineers, PRI members and community institutions. Through training modules, technical support systems and capacity-building programmes, more than 8,500 officials and PRIs have been trained. SRHU also works with Jal Jeevan Mission, Namami Gange, Ministry of Jal Shakti and MoEFCC through training, technical support, water-system assessment and capacity building. Internationally, SRHU collaborates with ICIMOD on springshed management, including regional knowledge exchange and training involving participants from Nepal, Bhutan and Indian states. These partnerships collectively strengthen institutional capacity, community participation, technical expertise and regional cooperation for resilient and sustainable water security.

Particulars	Status	Details
Existence of Cooperation	Yes	1. SRHU collaborates with the International Centre for Integrated Mountain Development (ICIMOD), an intergovernmental organisation serving the eight Hindu Kush Himalayan member countries. ICIMOD is governed by a Board of Governors with representatives nominated by the respective government nodal agencies of its eight Regional Member Countries. SRHU's collaboration with ICIMOD on springshed management, knowledge exchange and capacity building therefore provides evidence of engagement within an intergovernmental regional framework for water security. 2. A two-day residential Co-learning Exposure Visit on Springshed Management for Water Security was organized on 22–23 April 2025 at SRHU, Jolly Grant, Dehradun. The programme was organized under ICIMOD's Himalayan Resilience Enabling Action Programme (HI-REAP) 3. SRHU has signed an MoU with Uttarakhand Jal Sansthan (UJS), Government of Uttarakhand, to strengthen cooperation in the water and sanitation sector. 4. Since 2021, SRHU has strengthened cooperation on water security through its role as a Sector Partner and Key Resource Centre under the National Jal Jeevan Mission, supporting assured, sustainable, and quality drinking-water services in rural communities
Evidence Provided	Yes	MoUs, Letters of Intent, photos, and Certificates of Appreciation letters from different states.
Is the evidence in public domain	Yes	Available on website https://srhu.edu.in/mous/, https://srhu.edu.in/awards-and-recognitions/

Evidences

Evidence1: Screenshot of LoI signed between SRHU and ICIMOD



For Admission Enquiry: +91-9720444666

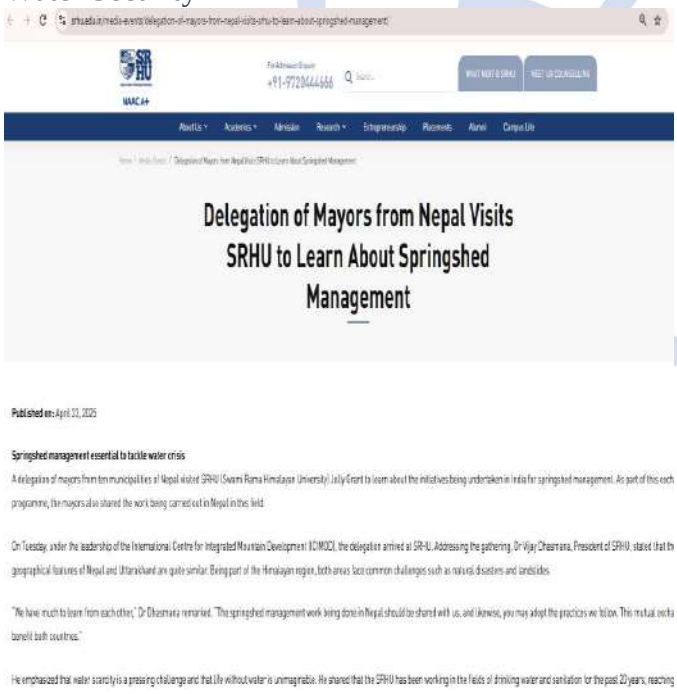
NAAC A+

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55	ICIMOD, Kathmandu, Nepal	SRHU entered into a Letter of Intent (LoI) with the International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal, for collaboration in spring-shed water management initiatives. The partnership focuses on co-development and scaling of sustainable water management practices in Himalayan regions. The collaboration aims to support research, training, technical knowledge exchange, and community-based environmental sustainability programmes. Both organizations agreed to work together in promoting integrated mountain development and climate-resilient water resource management. The initiative also emphasizes capacity building, ecological conservation, and sustainable rural development. This collaboration reflects SRHU's commitment towards environmental research and regional cooperation in Himalayan ecosystem management	Environmental Research, Capacity Building & Sustainable Development Collaboration LoI

Evidence 2: Cover page of Letter of Intent (LoI) signed between SRHU and ICIMOD

Evidence 3:
Screenshot of the Two-Day Residential Co-Learning Exposure Visit on Springshed Management for Water Security



Delegation of Mayors from Nepal Visits SRHU to Learn About Springshed Management

Published on: April 23, 2025

Springshed management essential to tackle water crisis

A delegation of mayors from ten municipalities of Nepal visited SRHU (Swami Rama Himalayan University), Jolly Grant to learn about the initiatives being undertaken in India for springshed management. As part of this exch programme, the mayors also shared the work being carried out in Nepal in this field.

On Tuesday, under the leadership of the International Centre for Integrated Mountain Development (ICIMOD), the delegation arrived at SRHU. Addressing the gathering, Dr Vijay Dhasmana, President of SRHU, stated that th geographical features of Nepal and Uttarakhand are quite similar. Being part of the Himalayan region, both areas face common challenges such as natural disasters and landslides.

"We have much to learn from each other," Dr Dhasmana remarked. "The springshed management work being done in Nepal should be shared with us, and likewise, you may adopt the practices we follow. This mutual excha benefit both countries."

He emphasized that water scarcity is a pressing challenge and that life without water is unimaginable. He shared that the SRHU has been working in the fields of drinking water and sanitation for the past 20 years, reaching

Evidence 4:
Attendance Sheet for the Two-Day Residential Co-Learning Exposure Visit on Springshed Management for Water Security



ICIMOD | स्वामी राम हिमालयन विश्वविद्यालय Swami Rama Himalayan University | PSI | UK International Development

CO-LEARNING VISIT
SPRINGSHED MANAGEMENT FOR WATER SECURITY
(22-23 April 2025)

Venue: Swami Rama Himalayan University, Dehradun (India) Date: 22 April 2025

Registration Sheet

SRHU Representatives

S. N.	Name of Dignitaries	Designation	Signature
1	Dr. Vijay Dhasmana	Hon'ble President, SRHU, Uttarakhand, India	
2	Dr. Rajendra Dobhal	Hon'ble VC, SRHU, Uttarakhand, India	
3	Dr. A.K. Deorari	Pro VC, SRHU, Uttarakhand, India	
4	Dr. V. Chauhan	Director General, Academic, SRHU, Uttarakhand, India	
5	Lt. Gen. Dr. Daljit Singh, AVSM, VSM (Retd.)	Principal, HIMS, SRHU, Uttarakhand, India	
6	Ms. B. Maithili	Director, RDI, HIHT, Uttarakhand, India	
7	Prof. H.P. Uniyal	Advisor, SRHU, Uttarakhand, India	
8	Dr. Rajeev Bijalwan	Dy. Director, RDI, HIHT-SRHU, Uttarakhand, India	
9	Mr. Nitesh Kaushik	Dy. Director, WATSAN, HIHT-SRHU, Uttarakhand, India	
10	Ms. Neelam Pandey	Manager, RDI, HIHT-SRHU, Uttarakhand, India	

Evidence 5:

Snapshot of certificate of Appreciation from other states on water Security





Evidence 6:

Copy of MoU signed between SRHU and **Uttarakhand Jal Sansthan (UJS), Government of Uttarakhand**



MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MOU) is made and entered into on this 17th day of June, two thousand and twenty-five (2025).

Between

Swami Rama Himalayan University (SRHU), a University established under section 2(f) of UGC Act, 1956 vide Uttarakhand State Act, having its registered office at Swami Ram Nagar, Jolly Grant, Dehradun- 248016, Uttarakhand, hereafter referred to as the **"SRHU or the First Party"**.

And

Uttarakhand Jal Sansthan (UJS), Government of Uttarakhand, having its registered office at Jal Bhavan, Nehru Colony, Dehradun – 248001, Uttarakhand, hereinafter referred to as the **"UJS or the Second Party"**

The terms 'First Party' or 'SRHU' & 'Second Party' or 'UJS' shall, unless excluded by or repugnant to the context, include its successors in interest, legal representatives, nominees, permitted assigns etc.

'First Party' or 'SRHU' & 'Second Party' or 'UJS' are hereinafter collectively referred to as "parties" and individually a "party"

WHEREAS, Swami Rama Himalayan University was established under Uttarakhand State Act No. 12 of 2013, and, with the enactment of Uttarakhand Private University Act, 2023 (Uttarakhand Act No. 02 of 2024) it now stands incorporated and established under the Uttarakhand Private University Act, 2023 (Notified vide Uttarakhand Gazette No. 02/XXXVI (3)/2024/S8(1)/2023), dated 03/01/2024). Swami Rama Himalayan University (SRHU) is a NAAC A+ accredited non-profit University, is committed to providing education, training and research in areas of medical sciences, management, science, engineering & technology, rural development.

WHEREAS, SRHU has been promoted by **Himalayan Institute Hospital Trust (HIHT)** a society established under Societies Registration Act, 1860 which was founded by H.H. Dr. Swami Rama. Over three decades since its inception, Institute has executed various programs in the development sector primarily in Water & Sanitation, Health, Education & Livelihood sectors and has covered 2000+ villages. HIHT has covered more than 550 villages for providing water/ sanitation/ hygiene services. Based on institute's rich experience in water & sanitation sector, Ministry of Jal Shakti, Govt. of India has nominated as National Key Resource Centre & Sector Partner for National Jal Jeevan Mission and Swachh Bharat Mission.

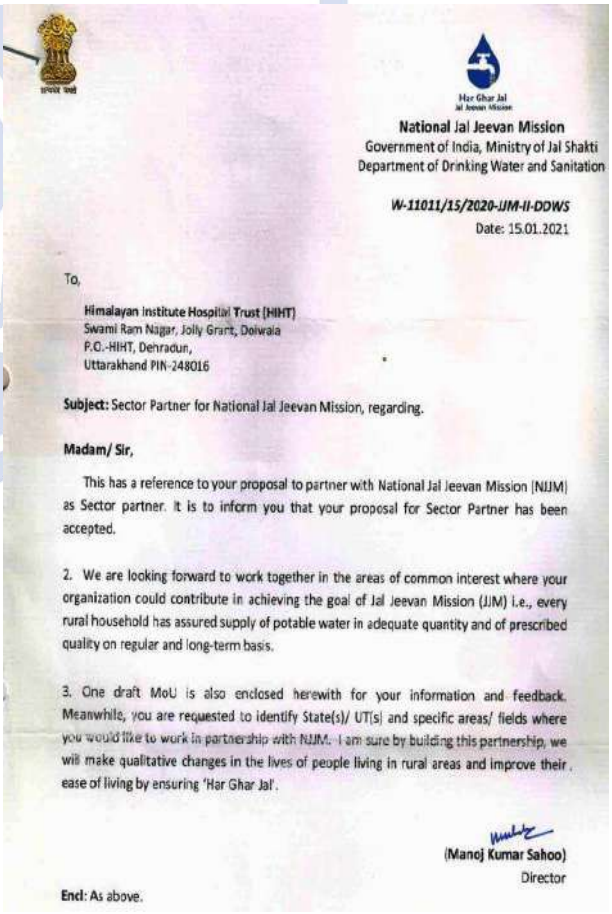
WHEREAS, Uttarakhand Jal Sansthan (UJS), constituted under Section 18 of the Principal Act, having jurisdiction throughout the state of Uttarakhand by amalgamation of "Garhwal Jal Sansthan" and "Kumaun Jal Sansthan" on 26th August 2002. "Garhwal Jal Sansthan" and "Kumaun Jal Sansthan" were formed under the Uttar Pradesh Water Supply and Sewerage Act, 1975. It extends to the whole of Uttarakhand excluding cantonment areas. It is a state-owned organization established by the Government of Uttarakhand to manage urban and rural water supply, sewerage systems, and wastewater treatment in the state. Its main objective is to provide safe drinking water, efficient sewerage systems, and ensure water quality across Uttarakhand.

(D.K. Singh)
Chief General Manager
Uttarakhand Jal Sansthan
Dehradun

Advisor & PI
Rama Himalayan University
Dehradun (Uttarakhand)

Evidence 7:

Letter of Empanelment of Sector Partner, Ministry of Jal Shakti-NJJM, Govt. of India.



Har Ghar Jal
Jal Jeevan Mission

National Jal Jeevan Mission
Government of India, Ministry of Jal Shakti
Department of Drinking Water and Sanitation

W-11011/15/2020-IJM-II-DDWS
Date: 15.01.2021

To,

Himalayan Institute Hospital Trust (HIHT)
Swami Ram Nagar, Jolly Grant, Doiwala
P.O.-HIHT, Dehradun,
Uttarakhand PIN-248016

Subject: Sector Partner for National Jal Jeevan Mission, regarding.

Madam/ Sir,

This has a reference to your proposal to partner with National Jal Jeevan Mission (NJJM) as Sector partner. It is to inform you that your proposal for Sector Partner has been accepted.

2. We are looking forward to work together in the areas of common interest where your organization could contribute in achieving the goal of Jal Jeevan Mission (JJM) i.e., every rural household has assured supply of potable water in adequate quantity and of prescribed quality on regular and long-term basis.

3. One draft MoU is also enclosed herewith for your information and feedback. Meanwhile, you are requested to identify State(s)/ UT(s) and specific areas/ fields where you would like to work in partnership with NJJM. I am sure by building this partnership, we will make qualitative changes in the lives of people living in rural areas and improve their ease of living by ensuring 'Har Ghar Jal'.

(Manoj Kumar Sahoo)
Director

Encl: As above.

6.5.6 Promoting conscious water usage on campus Year: 2025

Swami Rama Himalayan University (SRHU) actively promotes responsible and conscious water use across campus through awareness, monitoring, conservation, and reuse measures. Water consumption is regularly monitored through metering and telemetry-based systems, while rainwater harvesting and groundwater recharge structures support sustainable water management. The University encourages the reuse of treated wastewater, RO reject water, and air-conditioning condensate for non-potable applications such as flushing, cleaning, and irrigation. Awareness initiatives among students, staff, and campus communities further encourage avoiding wastage, efficient water use, leak prevention, and responsible consumption, strengthening a culture of water conservation and long-term water security.

Particulars	Status	Details
Existence of Promotions	Yes	• Awareness campaigns: Water Conservation Pledge, Nukkad Natak on Swachhta, Poster Presentation, Cleanliness Drive in Nearby Villages, etc. • Workshop on Water Conservation to Commemorate India's 78th Independence Day (25th August 2024) • Celebrating World Water Day
Evidence Provided	Yes	Screenshot, image, and attendance sheet
Is the evidence in public domain	Yes	Available on website https://srhu.edu.in/sustainability/

Activities carried out during awareness campaign:

- **Water Conservation Pledge (24 Sep 2024):** SRHU encourages students, faculty, and staff to take a Water Conservation Pledge committing to responsible water use, prevention of wastage, water reuse, rainwater harvesting, and protection of water resources.
- **Visit to STP, ETP, Recycled Wastepaper Plant & Plastic Bank (24 Sep 2024):** 150 students from five schools (Yoga, Medical, Nursing, Bio Science, and Management) visited these facilities in groups of 25, accompanied by two faculty members from each school.
- **Nukkad Natak on Swachhta (25 Sep 2024):** Three groups of students performed street plays at different locations: Medical College (Main Hospital), Bio Science College (CRI Hospital), and Nursing College (near Anchal Dairy).
- **Poster Presentation (26 Sep 2024):** Students from five schools participated in poster presentations on the theme "Swachchata Hi Sewa" at their respective colleges.
- **Pledge and Walkathon (27 Sep 2024):** The Principal of HIMS, Prof. A. Devrari, and Professor & Advisor Er. H.P. Uniyal flagged off a walkathon participated in by students from five schools, following a pledge-taking ceremony.
- **Plantation Caretaking Drive (28 Sep 2024):** Students from five schools, in association with the Gardening Department, undertook watering, weeding, and mulching activities.
- **Cleanliness Drive in Nearby Villages (30 Sep 2024):** Students from Medical College participated in a cleanliness drive and pledge-taking ceremony in the nearby village of Bhogpur.
- **Swachhta Workshop and Expert Talk by Mr. Anoop Nautiyal (01 Oct 2024):** The program began with welcome of Hon. Vice Chancellor Dr. R. Dobhal as the chief guest and Mr. Anoop Nautiyal, Expert Speaker being greeted with a potted plant.
- **Mr. Anoop Nautiyal, Founder of SDC Foundation, Dehradun,** delivered a talk on "Swachchata Hi Seva" in the Adi Kailash Auditorium, attended by 320 students and 100 HODs, faculty, and staff members.

Evidences

Evidence 1:

Photos of Various Activities: Pledge, Rallies, and Nukkad Natak undertaken by the University to promote awareness campaigns on Water Conservation & Management.

















Evidence 2:

Posters Displayed Across University Promoting Awareness For Water Conservation





Evidence 3:

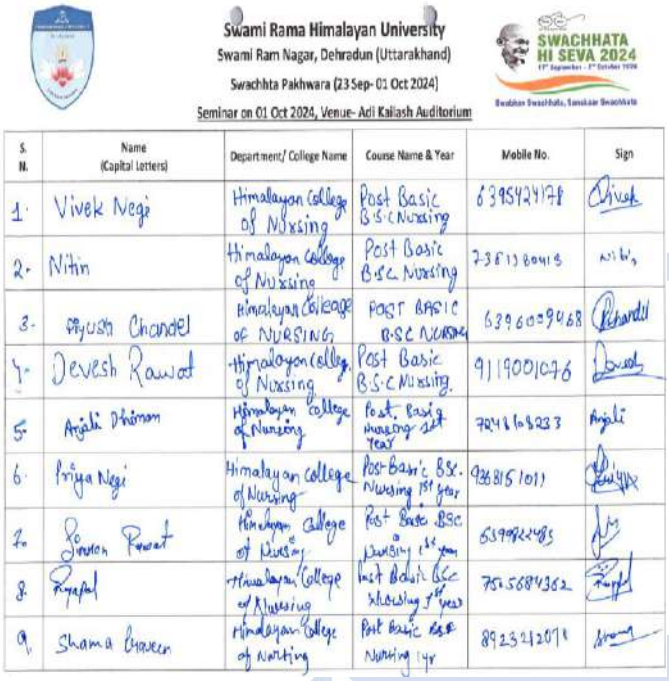
Attendance at Water Conservation and Awareness Campaigns at SRHU

Swami Rama Himalayan University
Swami Ram Nagar, Dehradun (Uttarakhand)
78th glorious years of Independence Day (15 August 2024)
University Grants Commission
Workshop on Water Conservation

S. N.	Name (Capital Letters)	Gender (M/F /T)	Department/ College Name	Course Name & Year	Mobile No.	E-mail	Sign
1	NEHA RAWAT	F	Himalayan Colleg of Nursing	BSC(N) 4th yea	7505279268	ns586886@gmail.com	Neha
2	NIHARIKA	F	Himalayan College of Nursing	Bsc Nursing 4thyea	9541234415	niharikapundir@gmail.com	Nihrik
3	PRAGATI	F	Himalayan college of Nursing	BSc nursing 4th year	8899981260	thakurpragati2@gmail.com	Pragati
4	SANDHYA YADAV	f	Himalyan College of nursing	Bsc nursing 4th ye.	7817824264	Sy94265@gmail.com	Sdhya
5	NAVYA	f	Himalayan College of nursing	BSc Nursing 4thyr.	6395601019	navyabos001@gmail.com	Navya
6	NEHA KUMARI	F	Himalayan college of Nursing	B.Sc Nursing 4th Year	7505828139	Nehakumari339931@gmail.com	Neha
7	SARTHI BADONI	F	Himalayan College of Nursing	BSC Nursing 4thyear	6398329939	saesinbadoni1238@gmail.com	Sarthi
8	NANCY BAUNI	F	Himalayan college of Nursing	Bsc Nursing 4th year	8791332130	nancybauni@gmail.com	Nancy
9	MOSKAN NEGI	F	Himalayan college of Nursing	BSc NURSING 4thYear	7618476952	negimoskan@gmail.com	Moskan

Evidence 4:

Attendance at the Workshop on Water Conservation to Commemorate India's 78th Independence Day – 25 August 2024



Swami Rama Himalayan University
Swami Ram Nagar, Dehradun (Uttarakhand)
Swachhta Pakhwara (23 Sep- 01 Oct 2024)
Seminar on 01 Oct 2024, Venue- Adi Kailash Auditorium

SWACHHATA HI SEVA 2024

S. N.	Name (Capital Letters)	Department/ College Name	Course Name & Year	Mobile No.	Sign
1.	Vivek Negi	Himalayan College of Nursing	Post Basic B.Sc Nursing	6395424178	
2.	Nitin	Himalayan College of Nursing	Post Basic B.Sc Nursing	7381804195	
3.	Piyush Chandel	Himalayan College of NURSING	POST BASIC B.SC NURSING	6396029468	
4.	Devesh Rawat	Himalayan College of Nursing	Post Basic B.Sc Nursing	9119001076	
5.	Anjali Dhiman	Himalayan College of Nursing	Post Basic Nursing 1st Year	7248168233	
6.	Priya Negi	Himalayan College of Nursing	Post Basic BSc. Nursing 1st year	9368151011	
7.	Ro Jaiveer Pawar	Himalayan College of Nursing	Post Basic BSc Nursing 1st year	5399822485	
8.	Rupal	Himalayan College of Nursing	Post Basic BSc Nursing 1st year	7055884362	
9.	Shama Praveen	Himalayan College of Nursing	Post Basic BSc Nursing 1st	8923242078	

Evidence 5:

Photos of the Workshop on Water Conservation to Commemorate India's 78th Independence Day – 25 August 2024





Evidence 6:

Photos of Celebrating World Water Day – 22 March 2025





Evidence 7:

Attendance for the Celebration of World Water Day – 22 March 2025

Swami Rama Himalayan University
Swami Ram Nagar, Dehradun (Uttarakhand)

World Water Day
(22 March 2025- Glacier Preservation)

Himalayan College of Nursing (HCN)



S. N.	Name (Capital Letters)	Course Name & Year	Mobile No.	Sign
1	RIYA RAWAT	Bsc Nursing VIIIth Semester	7505655158	
2	SAKSHI TANDOLA	BSC Nursing VIIth Semester	7060264641	
3	VAISHNAVI BALONI	BA NURSING VIII SEMESTER	9389349112	
4	SHIVANI NAUTIYAL	Bsc NURSING VII SEMESTER	7457089052	
5	SHRUTI NEGI	Bsc Nursing VII Semester	7617753450	
6	SEEMA BHANDHARI	BSC. NURSING VII SEMESTER	9528600556	
7	SHIVANI	BSC NURSING VII Semester	7830332570	
8	VARSHA GAIROLA	BSC NURSING VII Semester	9997159272	
9	Sakshi Panwar	Bsc Nursing VIIth Semester	8445987276	
10	Sakshi Thapliyal	BSC NURSING VIIth Semester	8126966530	
11	Khushi	BSC (N) 4th Semester	8936918575	
12	Shristhi pundir	BSC(N) 7th Semester	9068249767	
13	SWARNIKA RANA	B.Sc (N) 7th Sem	9058334930	
14	SAKSHI PARMAR	B.Sc (N) 7th Sem	7253812077	

6.5.7 Promoting Conscious Water Usage in The Wider Community Year: 2025

SRHU actively promotes responsible and conscious water use in surrounding communities through awareness programmes, capacity building & training, water conservation initiatives, and field interventions. Through its Department of WATSAN, the University promotes rainwater harvesting, groundwater recharge, safe water practices, water reuse, leak prevention, and efficient consumption, working with local communities, Gram Panchayats, and other stakeholders to encourage sustainable water management and strengthen long-term community water security.

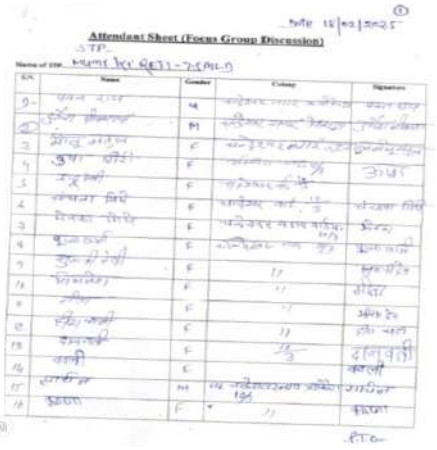
Particulars	Status	Details
Existence of Promotions	Yes	• SRHU, under the Namami Gange Programme, conducted Environmental and Social Audits of STPs and I&D projects, which included 611 households and 7 Focus Group Discussions involving 270 participants. • SRHU celebrated World Water Day in Kokliyal and Tachela villages, Tehri Garhwal, engaging 40–45 villagers in awareness on traditional springs and water conservation. • One-day awareness session for 24 staff members on water conservation and waste management at Wipro Haridwar. • SRHU promoted conscious water usage in wider communities through community-based awareness and education programmes to adopt water conservation, safe water use, sanitation, hygiene, and source-protection practices.
Evidence Provided	Yes	Photos and attendance
Is the evidence in public domain	Yes	Available on website https://srhu.edu.in/water-conservation/

Evidences

Evidence 1:
Photos of Environmental and Social Audit Activities under the Namami Gange Programme



Evidence 2:
Attendance at Environmental and Social Audit Activities under the Namami Gange Programme



Evidence 3:
Screenshot of Environmental and Social Audit Activities under the Namami Gange Programme



Evidence 4:

Photos of World Water Day Celebrations and Water Conservation Awareness Activities





Evidence 5:
Photos of the Awareness Session on Water Conservation and Waste Management



Evidence 6:
Photos of Community-Based Water Conservation and Awareness Activities



Evidence 7:
Snapshot of Community-Based Water Conservation and Awareness Activities from the website



SDG 6 Champion

Name : Karan Singh Negi
Designation: Civil Engineer
Email :knegi497@gmail.com

