Swami Rama Himalayan University

NAAC A+

Report on

Sustainable Development Goal 13

CLIMATE ACTION

Swami Rama Himalayan University is committed to addressing the global climate crisis through strategic action aligned with Sustainable Development Goal 13: Climate Action. Acknowledging the urgent need to combat climate change and its far-reaching impacts, SRHU has integrated climate-conscious policies, academic programs, research, and campus operations to build a resilient and environmentally responsible institution.

The University implements sustainable practices such as rainwater harvesting, wastewater recycling, energy-efficient infrastructure, and the adoption of electric mobility solutions. SRHU also engages in capacity-building programs, climate resilience research, and extensive community outreach initiatives to promote environmental stewardship both on and beyond the campus.

Carbon Reduction

The University has adopted a multi-pronged strategy to reduce its carbon footprint and contribute to global climate mitigation goals:

- **Carbon Audits**: The University conducts regular carbon and energy audits to identify high-emission sources, optimize energy usage, and track emission reductions. These audits guide policy and infrastructure decisions.
- **Sustainable Infrastructure**: All new buildings follow green construction principles with energy-efficient designs, such as thermal insulation, natural lighting, and proper ventilation. Existing structures are being retrofitted with LED lighting, BLDC fans, and star-rated appliances to lower electricity consumption and indirect CO_2 emissions.
- **Renewable Energy Usage**: A 2,500 kW rooftop solar installation offsets a significant portion of the University's grid power dependency, preventing the emission of hundreds of tonnes of CO_2 annually.
- **Tree Cover & Greenery**: SRHU maintains over 5,000 trees across its 200-acre campus. These trees function as natural carbon sinks, absorbing CO_2 from the atmosphere.

Annual plantation drives further enhance this green buffer, contributing to long-term sequestration and ecosystem restoration.

- **Promotion of Non-Motorized Transport**: The campus supports cycling infrastructure and encourages walking, helping reduce emissions from intra-campus vehicular traffic.

CARBON FOOTPRINT
CERTIFICATE 2023-24

PRESENTED TO

Swami Rama Himalayan University

Swami Ram Nagar, Doiwala, Dehradun, Uttarakhand, India

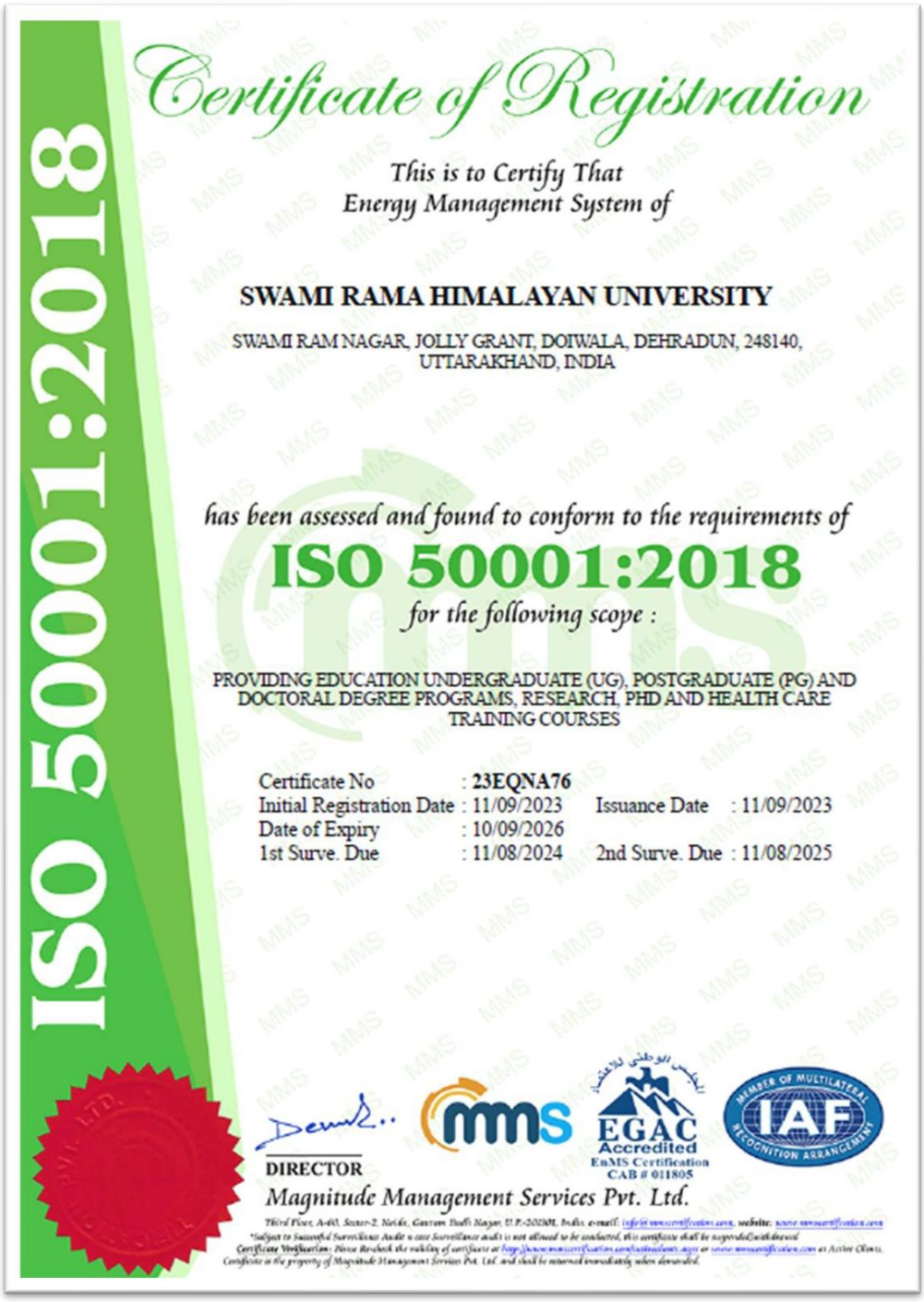
Scope of GHG emissions	tCO_2e	%
Direct emissions to air	858	9.4
Indirect emissions from purchased energy	10	0.11
Other indirect emissions	8260	90.4
Total tCO_2e	9,128	

ECOSCIENCE CONSULTANCY, Vishnu Vihar Colony, Bahadrabad Haridwar, Uttarakhand- 249402

Dr. Gurpreet Singh
(Authorized Signatory)
Lead Auditor – GHG & Environment Audits
Ecoscience Consultancy, Uttarakhand

Date: 24/07/2024

Carbon Footprint Certification (2023–2024), reflecting SRHU's commitment to climate accountability and sustainable environmental practices



ISO 50001:2018

Certificate of Registration

This is to Certify That
Energy Management System of

SWAMI RAMA HIMALAYAN UNIVERSITY

SWAMI RAM NAGAR, JOLLY GRANT, DOIWALA, DEHRADUN, 248140, UTTARAKHAND, INDIA

has been assessed and found to conform to the requirements of

ISO 50001:2018

for the following scope :

PROVIDING EDUCATION UNDERGRADUATE (UG), POSTGRADUATE (PG) AND DOCTORAL DEGREE PROGRAMS, RESEARCH, PHD AND HEALTH CARE TRAINING COURSES

Certificate No	: 23EQNA76		
Initial Registration Date	: 11/09/2023	Issuance Date	: 11/09/2023
Date of Expiry	: 10/09/2026		
1st Surve. Due	: 11/08/2024	2nd Surve. Due	: 11/08/2025

DIRECTOR
Magnitude Management Services Pvt. Ltd.

EGAC Accredited
EnMS Certification
CAB # 011805

MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT
IAF

ISO 50001:2018 certification demonstrates SRHU's commitment to energy efficiency and sustainable resource management in support of Climate Action

Renewable Energy Initiatives

SRHU has taken concrete steps to reduce its dependency on non-renewable energy sources and promote a cleaner, greener, and energy-resilient campus. Through a combination of solar energy production, biogas utilization, and energy-efficient appliances, SRHU contributes actively to reducing greenhouse gas emissions and meeting national renewable energy targets.

Rooftop Solar Power Installation

The University (SRHU) demonstrates strong leadership in climate action by aggressively reducing its carbon footprint through the expansion of renewable energy use, especially solar power. Over the past three years, SRHU's rooftop solar plants with total installed capacity of 2,500 kilowatts have generated more than 7.16 million kWh of clean energy, resulting in substantial cost savings and fulfilling up to 17.43% of the University's total electricity demand. The commissioning of a new 1 MW rooftop solar power plant in 2024, equipped with advanced monocrystalline dual-side panels, is projected to further boost clean energy generation by approximately 136,435 kWh monthly. These initiatives significantly reduce dependence on fossil fuels, improve energy efficiency, and contribute clean power back to the grid. By embedding sustainability into its infrastructure and operations, SRHU actively supports SDG 13's mandate for urgent climate action and fosters a resilient, low-carbon future for its community and beyond.

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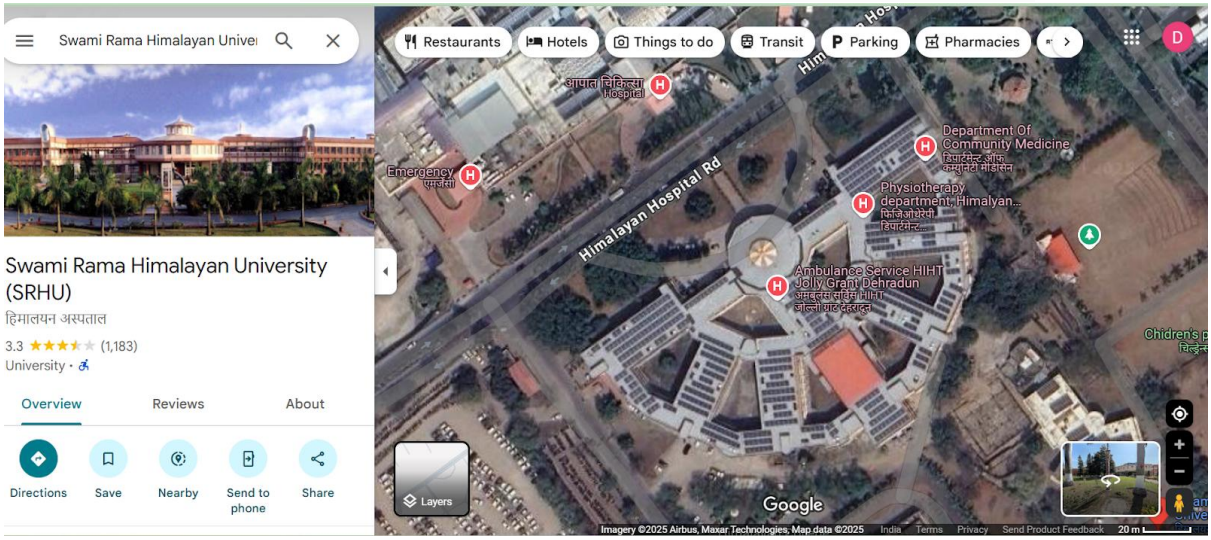
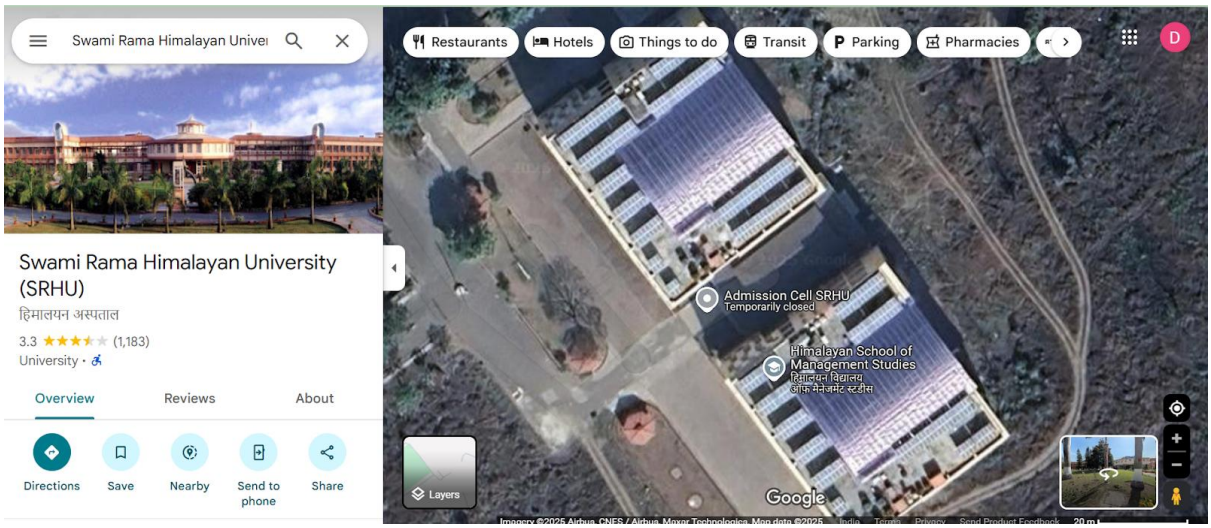
Swami Rama Himalayan University

Installation of New Solar Power Plant at Swami Rama Himalayan University

Rooftop solar panels at Swami Rama Himalayan University harnessing renewable energy to promote sustainability and reduce carbon footprint.



Aerial view of Solar panels at HIMS (Google Maps)

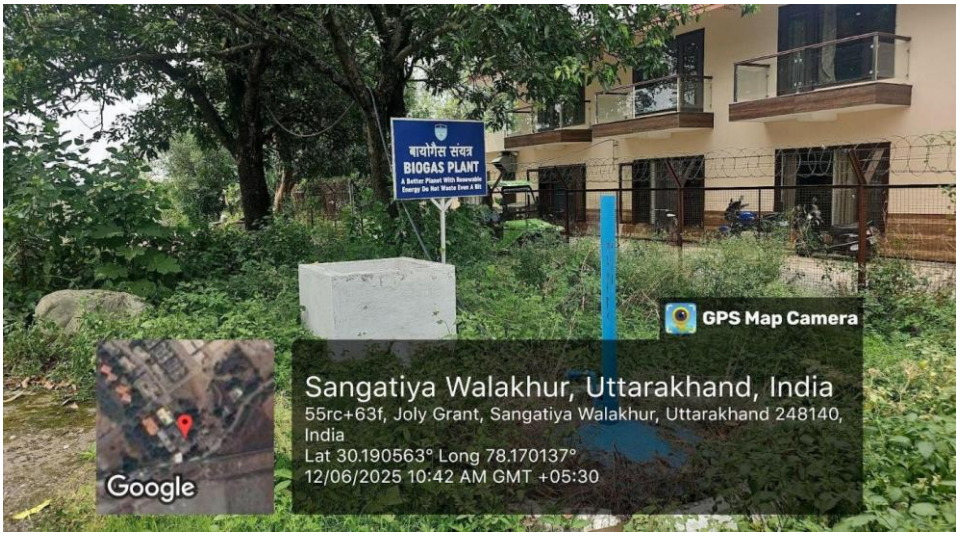


Aerial view of Solar panels at SMS and SST (Google Maps)

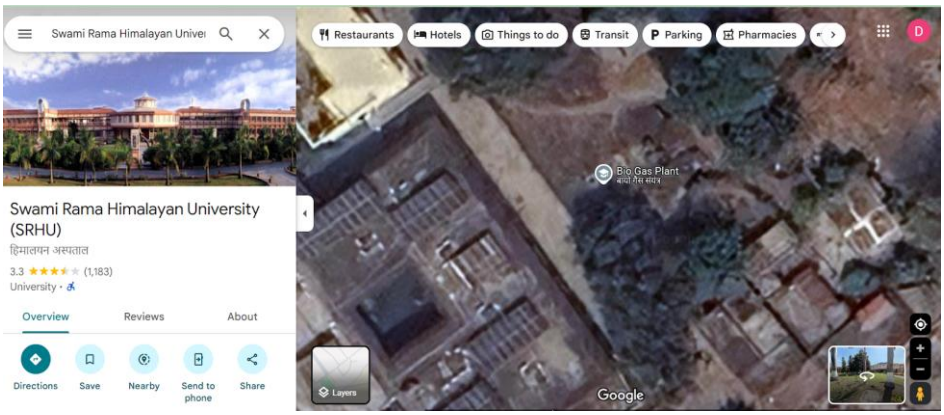
Organic Waste to Energy

To complement its solar energy initiatives, SRHU has implemented an organic waste-based biogas plant on campus that converts biodegradable kitchen waste from hostels and hospital kitchens into methane-rich biogas. Processing approximately 100 to 150 kilograms of organic waste daily, the plant generates clean biogas equivalent to 4–6 LPG cylinders each month, which is used as a sustainable cooking fuel alternative. Additionally, the by-product slurry

serves as organic compost for the University's gardens and green spaces. This system not only reduces methane emissions from decomposing waste but also prevents organic waste from being dumped in landfills, thereby promoting environmental sustainability and supporting SRHU's commitment to eco-friendly campus practices.



Biogas plant at Swami Rama Himalayan University converts organic waste into clean cooking fuel

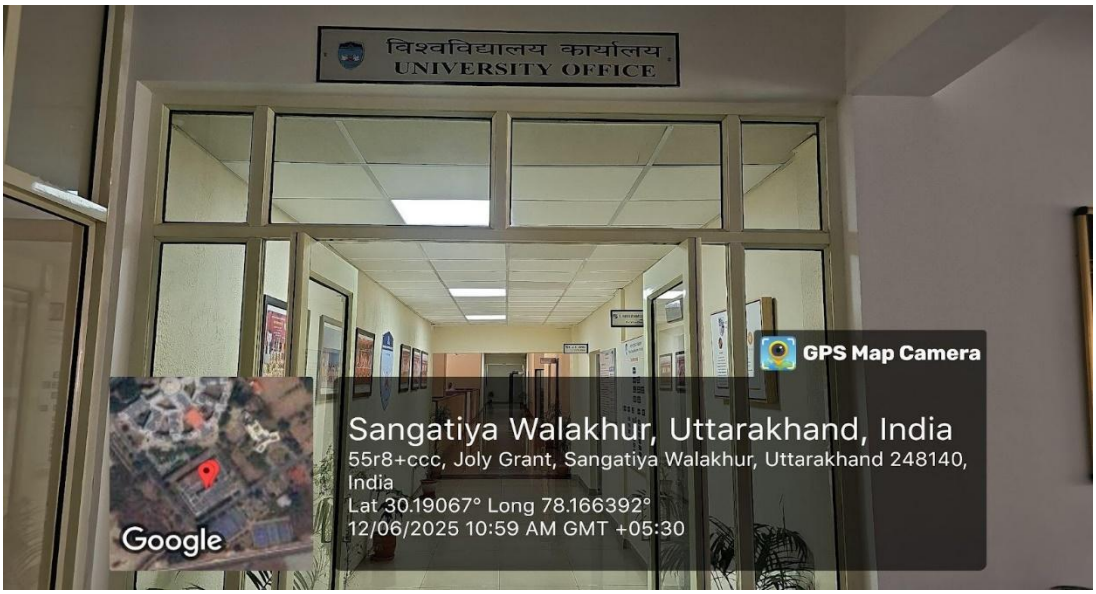


Aerial view of Biogas Plant at SRHU (Google Maps)

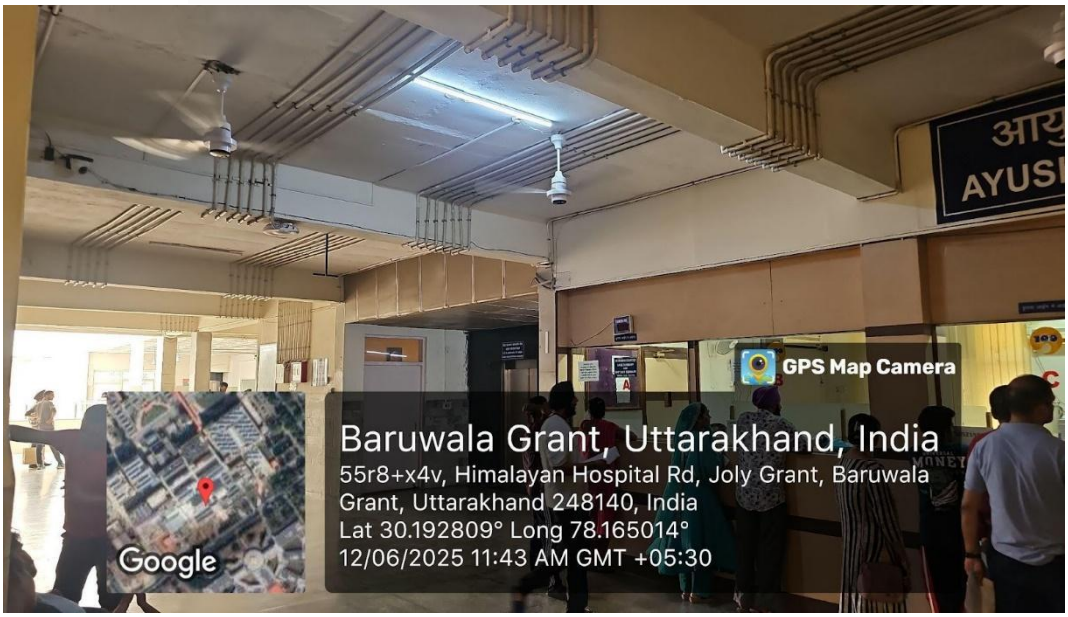
Campus-Wide Use of Energy-Efficient Appliances

To further optimize energy use and reduce electricity consumption, SRHU has implemented high-efficiency electrical appliances across the campus. This includes 100% LED lighting in

classrooms, laboratories, offices, hostels, and corridors, significantly lowering energy demand. The University also uses BLDC (Brushless Direct Current) fans, which consume 65% less power than conventional fans, along with BEE 5-star rated appliances such as air conditioners, refrigerators, and geysers to ensure minimal energy consumption. Additionally, motion sensor-based lighting and automated timers have been installed in select areas to prevent unnecessary energy wastage, reinforcing SRHU's commitment to sustainable and efficient energy management.



Implementation of LED lighting at the University office to optimize energy usage and reduce electricity consumption



Energy-efficient BLDC (Brushless Direct Current) fans within hospital premises to enhance energy conservation

Energy Efficient split inverter air conditioners

Policy and Energy Management

SRHU has institutionalized energy conservation through a dedicated Energy Management Plan which includes regular energy audits and carbon footprint analyses to monitor and reduce environmental impact. It also promotes awareness among students and staff to encourage energy-saving behaviors across the campus. Further, SRHU plans to expand its renewable energy capacity by exploring options such as solar water heaters, and hybrid energy solutions combining solar power with battery storage, further strengthening its commitment to sustainable energy use.

Water & Waste Reuse

Swami Rama Himalayan University (SRHU) has implemented a robust, multi-tiered system for the treatment, reuse, and conservation of water resources. These initiatives not only promote water sustainability on campus but also contribute significantly to climate resilience, reducing the risk of water scarcity and flooding.

Sewage Treatment Plant (STP)

The University has implemented a 1 million litre per day (1 MLD) Sewage Treatment Plant (STP) to manage domestic wastewater from its hostels, residential areas, hospital, and academic blocks. Utilizing biological treatment through aerobic processes, the STP ensures that treated water is safely reused for landscape irrigation, horticulture, and plantation—thereby reducing dependency on freshwater sources. This initiative not only safeguards environmental health by preventing untreated discharge into the soil and groundwater but also curtails waterlogging and associated contamination risks. Additionally, by reusing treated water, SRHU minimizes the energy required for fresh water pumping and supports groundwater recharge

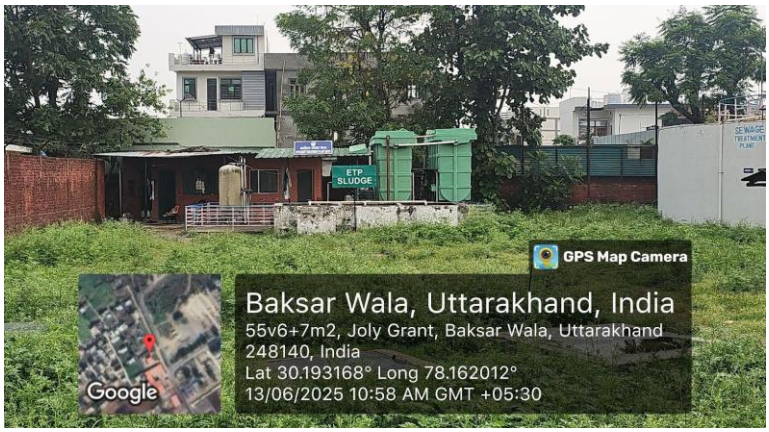
Sewage Treatment Plant at the University

Water flow meter monitoring system from water inlet and outlet

Recycling of water from STP aligning with Sustainable Development Goals

Effluent Treatment Plant (ETP)

SRHU also operates a 90 KLD Effluent Treatment Plant (ETP) to manage chemically contaminated wastewater from hospital labs, diagnostic units, and laundry facilities. The treatment process involves primary filtration, chemical and biological treatment, followed by disinfection, ensuring the effluent is safe for non-contact reuse such as floor washing and flushing. Fully compliant with CPCB and SPCB regulations, the ETP prevents harmful discharge into the environment, thereby reducing the risk of chemical pollution and eutrophication in water bodies. This initiative supports SRHU's commitment to sustainable water management and aligns with SDG 13 by mitigating climate and ecological risks



Effluent Treatment Plant at SRHU for treatment of clinical and laboratory effluent

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

TC-5163

TEST REPORT Format No. DARL/QF/50

ULR No.: TC516325000009746F

Report Issue to: Swami Rama Himalayan University, Swami Rama Nagar Doiwala Dehradun Uttarakhand - 248140.	Report No. 820250626WT019
	Sample Receipt Date 26/06/2025
	Test Started On 26/06/2025
	Date of Completion 30/06/2025
	Issue Date 30/06/2025

Name of Sample	STP Inlet water (1 MLD)		
Brand Name	N.S.	Date of Sampling	26/06/2025
Sample Quantity	1 Ltr	Batch/Lot No.	N.S.
Sample Collected by	Our lab Representative Mr. Rajan	Manufacturing Date	Not Specified
Sampling Method	N.S.	Expiry Date	Not Specified
Sample Description	STP Inlet water (1 MLD)		

TEST RESULTS

Group Name : Water Discipline : Chemical and Biological

S.No.	Test Parameter	Unit	Result	Test Method
1	pH	--	6.69	IS : 3025(P-11):2022 Clause no. 9
2	Total suspended solid(TSS)	mg/L	185.0	IS : 3025(P-17):2022 Clause no. 6.1
3	Biochemical oxygen demand (BOD) at 270C for 3 days	mg/L	134.8	IS : 3025(P-44):2023 Clause no.9
4	Chemical oxygen demand (COD)	mg/L	595.2	IS : 3025(P-58):2023 Clause no. 9
5	Oil and grease	mg/L	Less than 4	IS:3025(P-39):2021 Clause no 5.5
6	Microbiological Parameter	-	-	
7	Faecal coliform	MPN/100ml	<2	IS:1622:1981 Clause no. 3.3.3

Remarks : Party asked for above test only.

End of Report

Review by

Authorized Signatory
Manmohan pandey
Authorized Signatory (Chemical)

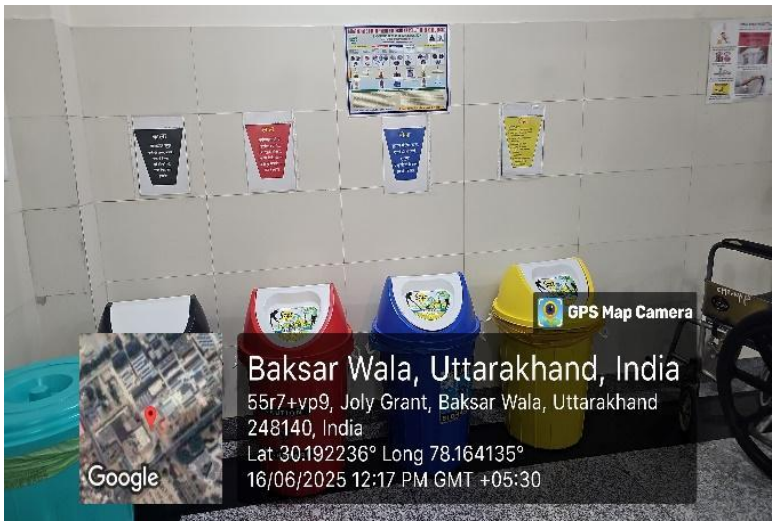
Page No. 1/1 Mr. Manmohan Pandey

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. 3. This report is not be reproduced wholly or in part and cannot as an evidence in the court of law and should not be used in any advertisement media without written consent. 4. Laboratory is not responsible for customer provided details. 5. When report is without NABL Symbol & URL, it implies that these products & tests are not covered under NABL accredited scope.

Routine Testing report of effluent discharged from ETP

Waste Segregation and Reduction

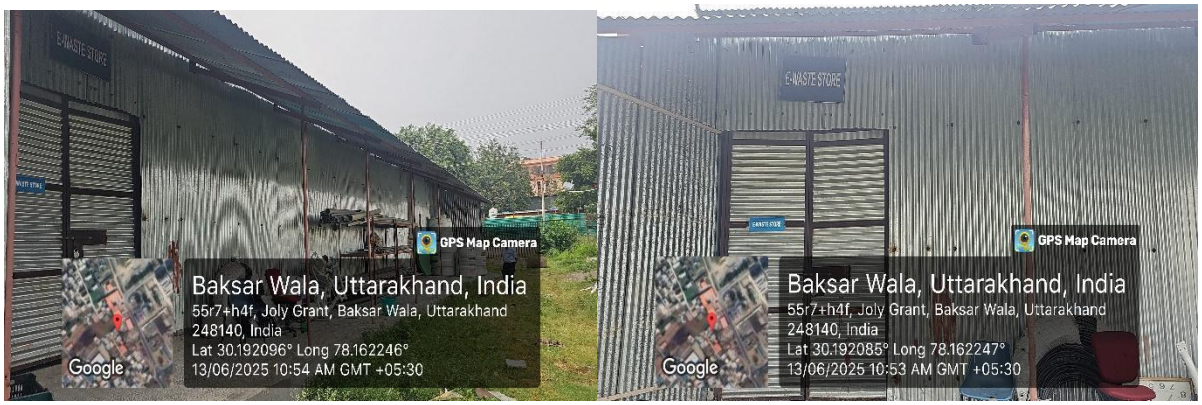
A robust, campus-wide waste segregation system has been implemented, with clearly labeled bins for plastics, paper, metals, and organic waste. This source-level sorting promotes efficient recycling, significantly reduces landfill contributions, and prevents environmental pollution. Additionally, regular awareness campaigns encourage students and staff to adopt waste-minimizing habits, such as reducing single-use plastics and making sustainable lifestyle choices—further reinforcing SRHU's low-carbon goals.



Promoting responsible waste management through systematic waste segregation at SRHU

E-Waste Management

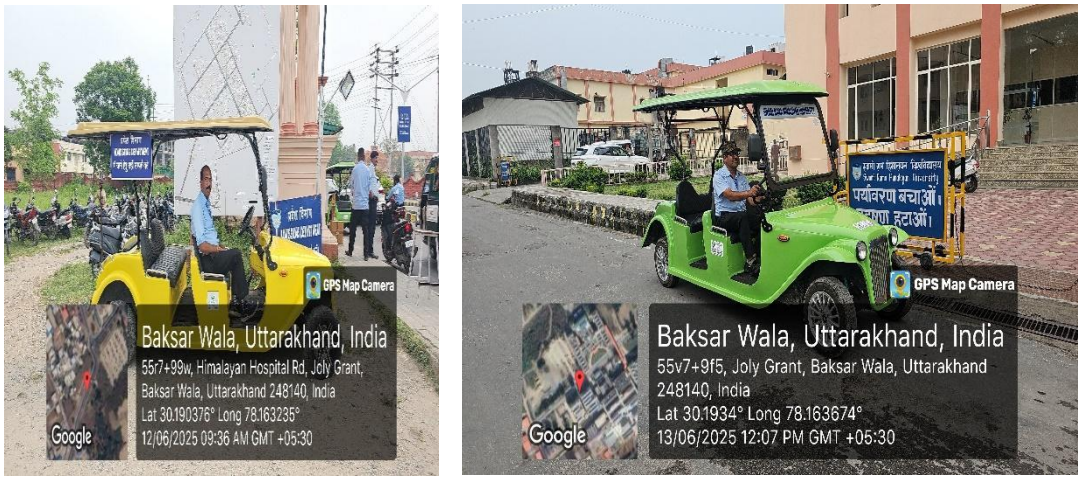
Addressing the growing challenge of electronic waste, SRHU has established a dedicated E-Waste Store and collection system to safely manage obsolete electronic equipment. All e-waste is processed through government-authorized recyclers, and proper documentation is maintained to ensure environmental compliance. Devices are screened by IT professionals to safeguard data before disposal. This systematic approach helps reduce the carbon footprint associated with the improper disposal and production of electronic items, contributing to climate mitigation.



Designated E-Waste Disposal Store at SRHU ensures safe and eco-friendly handling of electronic waste, supporting responsible consumption

Electric Mobility and Low-Carbon Campus Operations

As part of its strategy to transition to a low-carbon future, SRHU has integrated electric vehicles (EVs) into its transportation system. These EVs are used for shuttle services, campus logistics, and maintenance activities, replacing conventional fossil fuel-powered vehicles and reducing emissions of CO_2 and other pollutants.



Electric vehicle used on campus to promote green and sustainable transportation.

Students can also rent e-bikes for short durations, making it easier to attend classes, visit facilities, and move around quickly without hassle. This initiative supports the University's commitment to green transportation and enhances the overall campus experience.

E-bike rental facility available for students to commute sustainably across the campus

Climate Resilience and Adaptation Strategies

The University actively embeds climate resilience and adaptation strategies into its institutional framework, encompassing operations, research, and community engagement—strongly aligned with the Sustainable Development Goals (SDGs). In response to the growing threats of climate change, SRHU prioritizes capacity-building programs to enhance preparedness and strengthen the resilience of both its campus and surrounding communities.

Green Landscaping for Climate Mitigation

Landscaping at SRHU is designed not only to enhance the visual appeal of the campus but also to serve as a vital element in its sustainability agenda. By using native plant species, eco-conscious landscape designs, and low-maintenance vegetation, the University supports biodiversity conservation while minimizing resource consumption.

Thoughtfully developed green areas—including gardens, tree-lined walkways, and water features—help lower the campus's carbon footprint, improve air quality, and foster a serene, healthy environment conducive to learning. These green spaces are supported by sustainable practices such as rainwater harvesting, organic composting, and soil conservation, reinforcing SRHU's commitment to environmental responsibility.

Snippets of lush green campus supporting biodiversity

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Swami Rama Himalayan University

Tel:91-135-2471102, 2471140 Fax: 91-135-2471141 Email: info@srhu.edu.in Website: www.srhu.edu.in

Numerous varieties of trees, shrubs and seasonal plants across the University premises supporting fauna

Extensive Tree Plantation Drive

One of SRHU's most significant environmental initiatives is its comprehensive tree plantation program, which plays a crucial role in climate action. Trees planted across the campus serve as natural air purifiers, absorbing harmful pollutants and releasing oxygen—thereby significantly improving air quality. Additionally, they provide shade, reduce ambient temperatures, and help mitigate the urban heat island effect, making the campus cooler and more comfortable, especially during warmer months.

The University has carefully selected a mix of indigenous and climate-resilient tree species that are well-suited to the local environment. This initiative not only enhances greenery and ecological balance on campus but also supports long-term climate resilience, contributing to a sustainable, healthier atmosphere for current and future generations.

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Harela celebration at SRHU fostering cultural awareness and biodiversity conservation

RDI at SRHU conducts community-driven tree plantation initiatives, empowering local residents to actively participate in ecological restoration and environmental stewardship

Rainwater Harvesting System

SRHU has implemented a comprehensive rainwater harvesting system aimed at conserving water and enhancing groundwater recharge across its campus. The infrastructure includes 16 strategically located recharge pits and 2 borewell recharge shafts integrated into the stormwater drainage system. With an average annual rainfall of 2073.3 mm, the campus has a harvesting potential of approximately 3,81,408.7 cubic meters—equivalent to nearly 3.8 crore litres of water per year. This initiative significantly reduces reliance on external water sources, replenishes underground aquifers, and mitigates surface runoff and flood risks,

Underground RWH tank (capacity 150 KL)

Additional Water Conservation Measures

In addition to robust wastewater treatment and rainwater harvesting systems, Swami Rama Himalayan University (SRHU) has implemented a series of innovative, low-cost, and high-impact interventions to reduce freshwater consumption across its academic, residential, and clinical zones.

Waterless Sanitation Solutions: Installation of over 150 waterless urinals across campus has significantly reduced the need for flushing, saving approximately 1.5 lakh litres per urinal annually, resulting in a total annual saving of 2.25 crore litres of water.

Waterless urinals present at different locations across the University

Cistern Optimization: A simple yet effective practice of placing sand-filled bottles in toilet cisterns has been introduced across the campus to reduce water per flush. This has led to additional savings of approximately 30,000 litres per day, translating to 1.1 crore litres per year.

Reuse of Condensed AC Water: Condensate water from air conditioning units is systematically collected and repurposed, contributing to 1.2 lakh litres of water saved annually—an innovative reuse strategy supporting sustainable water use.

Condensate water from AC Units placed across the campus with an aim to repurpose and recycle water

Recycling of RO Reject Water: RO (Reverse Osmosis) reject water, which is often discarded, is now being utilized effectively for toilet flushing and laundry, leading to annual savings of approximately 32.85 lakh litres.

Sensor-Based Scrub Stations: SRHU has deployed sensor-activated scrub stations in its Operation Theatres (OTs), which minimize water wastage during hand scrubbing. This smart technology saves approximately 5 lakh litres of water per year.

Sensor activated scrub station aiding in water conservation

Research at SRHU for Climate Action

SRHU fosters innovation in sustainable technologies, environmental remediation, renewable energy, circular economy, biowaste valorization, and climate-resilient agriculture. The University's research ecosystem supports faculty and students in generating impactful scientific knowledge that informs policy, advances sustainable practices, and enhances climate literacy. Over the past year, SRHU has published an impressive collection of 44 peer-reviewed research works in scopus indexed journals , each contributing to diverse domains such as bioremediation, nanotechnology for environmental applications, sustainable agriculture, IoT-driven climate solutions, and the circular economy. These studies explore real-world challenges—ranging from the use of microbial technologies in waste treatment to the optimization of renewable energy systems—highlighting the institution's commitment to practical, scalable, and eco-centric innovations.

S.N.	Title	DOI
1.	Experimental investigation on the spectral, mechanical, and thermal behaviors of thermoplastic starch and de-laminated talc-filled sustainable bio-nanocomposite of polypropylene	10.1515/jmbm-2024-0031
2.	Spatial distribution analysis of soil radioactivity using gamma-ray spectroscopy and radiological inferences	10.1140/epjs/s11734-025-01645-5
3.	Advancements in energy storage applications: harnessing the potential of fish industry waste	10.1007/s43939-024-00161-y

4.	Near-infrared spectroscopy for nutrient analysis in manure: Techniques, applications, and innovations	10.4018/979-8-3693-7473-3.ch012
5.	A comparative investigation of ultrasonication and magnetic stirring methods for green synthesis of zinc oxide nanoparticles using Punica granatum peels	10.1038/s41598-025-04926-0
6.	Harnessing nanotechnology for sustainable agriculture: From seed priming to encapsulation	.1016/j.plana.2024.100124
7.	The Human Side of Sustainability: Behavioural Economics in Climate Action and Neutrality	10.1007/978-3-031-83250-5_15
8.	Hospital-associated effluents: the masked environmental threat that needs urgent attention and action	10.1007/s42452-024-06456-2
9.	Analysis of Smart City Solutions for Sustainable Urban Growth in India	0.1109/CE2CT64011.2025.10939348
10.	Plant-microbes-nano fertilizers and their interactions for plant growth promotion and stress management	10.1016/B978-0-443-22285-6.00007-0

11.	Design expert based optimization of the pyrolysis process for the production of cattle dung bio-oil and properties characterization	10.1038/s41598-024-57843-z
12.	Study of radiation exposure to radon in groundwater using scintillation-based RnDuo technique: A statistical analysis for risk assessment	10.1016/j.apradiso.2025.111789
13.	Environmental restoration of poly aromatic hydrocarbon-contaminated soil through sustainable rhizor emediation: insights into bio economy and high-throughput systematic analysis	10.1039/d4va00203b
14.	Correction to: Advancements in energy storage applications: harnessing the potential of fish industry waste	10.1007/s43939-025-00187-w
15.	ANODIZING PROCESS FOR ENHANCING CORROSION RESISTANCE OF ALUMINIUM ANODES IN 1M NaOH ALKALINE SOLUTION	10.31788/RJC.2025.1819076
16.	Exploring Papaya By products: A Step toward Circular Economy and Sustainability	10.1021/acsfoodscitech.4c00872

17.	Synthesis and characterization of sustainable hybrid bio-nanocomposite of starch and polypropylene for electrical engineering applications	10.1515/jmbm-2025-0038
18.	Green chemistry revolutionizing sustainability in the food industry: A comprehensive review and call to action	10.1016/j.scp.2024.101774
19.	Spatial analysis and soft computational modeling for hazard assessment of potential toxic elements in potable groundwater	10.1038/s41598-024-76147-w
20.	Integrating circular economy in smart cities: Challenges and pathways to sustainable urban development	10.1108/978-1-83797-957-820241006
21.	Slaughterhouse blood: A state-of-the-art review on transforming by-products into valuable nutritional resources and the role of circular economy	10.1016/j.fbio.2024.104644
22.	Green Synthesis of Al2O3 Nanoparticles from Agro-Waste as a Sustainable Approach	10.1109/HISET61796.2024.00045
23.	Impact of Artificial Intelligence (AI) in Bioremediation of Dairy Effluent by	10.1002/9781394272266.ch11

	Microalgae and the Potential Application of the Produced Lipid Byproducts	
24.	A novel study on IoT and machine learning-based transportation	10.4018/979-8-3693-5271-7.ch001
25.	Nanoparticles as a Tool for Alleviating Plant Stress: Mechanisms, Implications, and Challenges	10.3390/plants13111528
26.	Advanced technologies for realizing sustainable development goals: 5G, AI, big data, blockchain, and Industry 4.0 application	10.2174/9789815256680124010 1
27.	Micro-algae: Revolutionizing food production for a healthy and sustainable future	10.1016/j.jafr.2023.100939
28.	Harnessing the potential of microbial keratinases for bioconversion of keratin waste	10.1007/s11356-024-34233-6
29.	Biochar production methods and their transformative potential for environmental remediation	10.1007/s42452-024-06125-4

30.	Numerical analysis of the return flow solar air heater (RF-SAH) with assimilation of V-type artificial roughness	10.1016/j.enbenv.2022.09.002
31.	Optimizing microbial strain selection for pyrethroid biodegradation in contaminated environments through a TOPSIS-based decision-making system	10.1038/s41598-024-59223-z
32.	Green human resource management and environmental performance: mediating role of green innovation – a study from an emerging country	10.1108/FS-04-2021-0094
33.	United nations sustainable development goals in the context of hydrological extremes	10.1016/B978-0-443-21499-8.00014-3
34.	Sustainable solutions for food security: Evaluating pre-treatment technologies in the growing fruits and vegetables industry of India	10.1016/j.scp.2024.101580
35.	Exploring the potential of novel Bacillus sp. G6: Isolation, characterization, and optimization of biosurfactant production from oil-contaminated soil	10.1016/j.molliq.2024.124013

36.	Investigating chemical pre-treatment methods: Valorization of wheat straw to enhance polyhydroxyalkanoate (PHA) production with novel isolate Bacillus paranthracis RSKS-3	10.1016/j.heliyon.2024.e31572
37.	Agricultural Innovations using IOT - A Comprehensive Review	10.1109/ICAC2N63387.2024.10895646
38.	Microbial Technology for Agro-Ecosystems: Crop Productivity, Sustainability, and Biofortification	10.1016/C2021-0-03424-6
39.	Effect of Engineered Nanoparticles on Rhizospheric Microbes	10.1007/978-981-97-2355-3_3
40.	Valorization of wastewater through bioremediation approach	10.1016/B978-0-443-27376-6.00010-4
41.	Intelligent IoT-Enabled Real-Time Monitoring System for Logistics Management	10.1109/ICCSC62048.2024.10830332
42.	An overview of renewable energy sources: technologies, applications and role of artificial intelligence	10.1016/B978-0-443-28947-7.00001-X

43.	Microbiological dimensions and functions in constructed wetlands: A review	10.1016/j.crmicr.2024.100311
44.	Revolutionizing Communication: The Dynamic Shift with 5G Technology	10.1109/HISET61796.2024.00059

Community-based Research & Outreach

SRHU connects climate research with **local community needs** through field projects and extension activities:

- As part of its community-based outreach and climate resilience efforts, SRHU's KRC-HIHT conducted two residential training programs in Gangtok, Sikkim, in May 2024, focusing on the Operation & Maintenance (O&M) of Rural Water Supply Schemes and the Source Sustainability & Recharge of Spring Water Sources. These programs trained 102 grassroots stakeholders—including Village Water and Sanitation Committee members, Gram Panchayat representatives, ASHAs, Anganwadi Workers, Junior Engineers, and Implementing Support Agencies—from across the state. By strengthening the capacity of community-level actors to manage rural water systems and protect vulnerable spring sources, the initiative contributes to climate adaptation and water security in the Himalayan region

Community training sessions on rural water supply management and spring source sustainability conducted in Sikkim

- The organization is conducting an Environmental and Social Audit of Sewage Treatment Plants (STPs) and Interception & Diversion (I&D) projects under the Namami Gange Programme at nine locations across Uttarakhand, focusing on their environmental sustainability and social impact. This audit evaluates how these projects affect local communities' health, sanitation, and living standards, as well as their influence on water and air quality, noise levels, and aquatic ecosystems. By ensuring sustainable design and operation of STPs, the initiative helps reduce pollution and protect ecosystems, contributing to climate resilience and supporting SDG 13's goals of combating climate change and promoting sustainable environmental management.

Left: Sewage Treatment Plant (STP) facility at Uttarakhand site Right: Field testing and monitoring of STP performance to ensure environmental compliance.

Conferences, Seminars, and Capacity Building

SRHU hosts and participates in multiple knowledge-sharing forums to promote climate awareness:

Guest Lectures & Webinars: On global climate governance, sustainable development, green technologies, and climate-resilient urban planning.

On April 23, 2024, a guest lecture was organized under the auspices of the National Academy of Sciences, Uttarakhand Chapter. Distinguished environmentalist and

historian Mr. Ajay Sharma delivered a keynote address, wherein he contextualized the anthropogenic causes of ecological degradation and underscored the importance of environmental stewardship. The lecture also offered a historical and geographical perspective on the evolution of Dehradun's urban and ecological landscape. Vice-Chancellor Dr. Rajendra Dobhal highlighted the relevance of the 2024 Earth Day theme, *"Planet vs. Plastic"*, emphasizing SRHU's institutional initiatives such as the establishment of a plastic bank to support the reduction of single-use plastics and enhance waste management systems.

Distinguished environmentalist Mr. Ajay Sharma delivers the keynote address during the Earth Day guest lecture at SRHU, highlighting the historical, geographical, and ecological evolution of Dehradun

On June 5, 2024, SRHU hosted an inter-institutional seminar on environmental protection, with a focus on river conservation and drought preparedness. Eminent speakers including Dr. Lokesh Ohri (Been There Doon That), Dr. Brij Mohan Sharma (SPECS), and Dr. Vinod Bhatt (Navdanya Biodiversity Farm) addressed critical themes such as biodiversity preservation, ecosystem resilience, and indigenous knowledge systems for sustainable agriculture. Select faculty members and researchers were also formally recognized for their contributions to environmental sustainability.

Eminent speakers and participants at the inter-institutional seminar on World Environment Day 2024 at SRHU, which focused on river conservation, drought preparedness, and sustainable ecological practices

In September 2024, SRHU's Himalayan School of Pharmaceutical Sciences (HSPS) and Rural Development Institute (RDI) jointly hosted a special session featuring Padma Bhushan awardee Shri Chandi Prasad Bhatt. Drawing upon his decades of experience in grassroots environmental activism, Mr. Bhatt contextualized the challenges confronting Himalayan ecosystems—such as deforestation, resource overuse, and

climate vulnerability—and advocated for collaborative, interdisciplinary responses involving policymakers, scientists, and communities. He also emphasized the role of higher education institutions in fostering ecological literacy, sustainable development, and student-led environmental initiatives.

Padma Bhushan awardee Shri Chandi Prasad Bhatt addresses SRHU students on Himalayan environmental challenges and the importance of collaborative and sustainable action for environmental protection

Climate Action Events and Celebrations

Swami Rama Himalayan University (SRHU) actively promotes climate awareness and sustainable practices by organizing a wide range of climate action events and observances throughout the year. These events aim to engage the University community—students, faculty, and staff—in meaningful environmental action and education.

SRHU commemorates key international days such as Earth Day, World Environment Day, and major United Nations Climate Conferences (COPs) with diverse and impactful activities. These include tree plantation drives, clean-up campaigns, climate awareness rallies, and interactive workshops focused on sustainable living and conservation practices.

Poster Presentations and Slogan Competitions

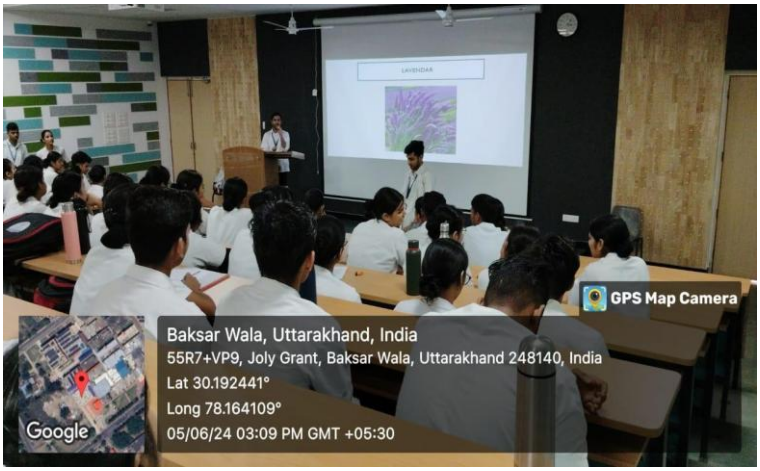
The Himalayan College of Nursing (HCN) marked World Environment Day through a creative engagement initiative involving poster and slogan competitions. Under the supervision of Ms. Preeti Prabha, and guided by Principal Dr. Sanchita Pugazhendi, students produced 16 entries highlighting core environmental themes such as deforestation, pollution, climate change, and biodiversity loss. The initiative served as a pedagogical tool to integrate environmental discourse into nursing education while fostering cross-disciplinary awareness.

Students of the Himalayan College of Nursing (HCN) actively engage in a poster-making competition, creatively expressing themes of environmental protection and sustainability

Environmental Quiz Competition

An inter-semester environmental quiz was conducted with participation from 145 B.Sc. Nursing students, focusing on ecological principles, current environmental challenges, and

climate policy frameworks. The competition sought to promote informed citizenship among future healthcare professionals and was coordinated by the Literary Committee of HCN.



B.Sc. Nursing students of Himalayan College of Nursing (HCN) participate in an inter-semester environmental quiz aimed at enhancing ecological literacy and awareness of climate policy

“Green Future” – Earth Day 2025 (IEEE SRHU Student Branch)

On April 22, 2025, the IEEE Student Branch at SRHU hosted a multidisciplinary event titled “Green Future: Celebrating World Earth Day”. Activities included a quiz competition, environmental skit, wellness and sustainability session, and a campus-wide plantation drive. The program, attended by 132 students, effectively bridged scientific discourse with civic action and cultural expression, demonstrating the value of experiential learning in environmental education.

Students of SRHU's IEEE Student Branch take a collective pledge to protect the environment during the 'Green Future: Celebrating World Earth Day' event on April 22, 2025

Awareness Drive in Thano Village

The Department of Community Health Nursing (HCN) conducted a targeted environmental awareness campaign in Thano village, engaging local schoolchildren through theatrical performances and poster exhibitions. The event also included a tree plantation ceremony led by faculty members, reinforcing the role of community-based participatory models in environmental education.

HCN faculty and students lead environmental awareness and tree plantation activities with schoolchildren in Thano village