

Report on

# Sustainable Development

Goal 13



CLIMATE ACTION



#### SDG 13: Climate Action

Swami Rama Himalayan University (SRHU) actively aligns its initiatives with Sustainable Development Goal 13: Climate Action, emphasizing environmental stewardship and resilience. The university integrates sustainability into its academic and research programs, fostering awareness and innovation in climate solutions. SRHU has implemented energy-efficient practices, including renewable energy adoption and waste reduction measures, to minimize its carbon footprint. Through tree plantation drives, water conservation projects, and eco-friendly infrastructure, the university demonstrates its commitment to environmental preservation. Additionally, SRHU engages students, faculty, and the community in climate literacy programs, encouraging collective action to combat climate change and build a sustainable future.

#### 13.1.1 Climate Action: Cite Score

The University is committed to advancing sustainability-focused research and contributing to global climate action. The University's faculty and researchers regularly publish in top-rated, peer-reviewed journals, demonstrating SRHU's dedication to academic excellence and impactful scholarship that supports sustainable development and climate resilience.

The publication dataset highlights a diverse research portfolio with varied citation influence. Cite Scores range from 0.6 to 10, reflecting contributions in well-recognized journals such as Reproductive Health, Food Production Processing and Nutrition, Journal of Agriculture and Food Research, and Current Research in Microbial Sciences. (Table 1)

#### 13.1.2 Climate Action: FWCI

Article Field Weighted Citation Impact (FWCI) indicates how the number of citations received by an article compares to the average or expected number of citations received by other similar publications. Similar publications are determined by year, type, and discipline. FWCI values show notable differences in global impact, with several papers—such as Micro-algae... (15.18), Born Too Soon... (11.96), and The Human Side of Sustainability... (5.91)—performing far above world averages. Others show moderate but steady impact. A few entries lack metrics due to indexing limitations. Overall, the dataset demonstrates strong and influential research performance (Table 1).

#### 13.1.3 Climate Action: Publications

The University is committed to tackling climate change through research, policy, and partnerships, aligning its initiatives with Sustainable Development Goal 13: Climate Action. At SRHU, education and research are central to addressing climate challenges, fostering innovative solutions, and building resilience against its effects. Through scholarly research, publications, and collaborative efforts, the university promotes global cooperation to combat climate change. Faculty members and researchers consistently publish their findings in peer-reviewed journals, showcasing innovative approaches to environmental challenges and climate change (Table 1).



Table 1: List of publications in alignment with SDG 13: Climate Action

S.No	Paper Title	Authors	Journal / Book Name	Year	Cite Score	FWCI	DOI
1	Born Too Soon: learning from the past to accelerate action in the next decade	Gruending, A.; Lawn, J.E.; Reid, A.; Kinney, M.V.; Dube, Q.F.	Reproductive Health	2025	7	11.96	10.1186/s12978- 025-02044-8
2	The Human Side of Sustainability: Behavioural Economics in Climate Action and Neutrality	Trivedi, A.; Juyal, S.A.; Kandpal, V.	Climate Change Management	2025	1.4	5.91	10.1007/978-3- 031-83250-5_15
3	Urban Health Resilience: Strategies for Strengthening Public Health Systems in Response to Urbanization Challenges	Mathur, M.; Wani, V.J.; Basu, R.; Verma, A.; Singh, S.	Indian Journal of Community Medicine	2024	1.4		10.4103/ijcm.ijc m_755_24
4	Himalayan fruit and circular economy: nutraceutical potential, traditional uses, challenges and opportunities	Ritika; Bora, B.; Ismail, B.B.; Kumar, H.; Gupta, A.K.	Food Production Processing and Nutrition	2024	7	1.74	10.1186/s43014- 023-00220-6
5	Micro-algae: Revolutionizing food production for a healthy and sustainable future	Naik, B.; Mishra, R.; Vijay, K.; Bhatt, S.C.; Rizwanuddin , S.	Journal of Agriculture and Food Research	2024	7.5	15.18	10.1016/j.jafr.202 3.100939



S.No	Paper Title	Authors	Journal / Book Name	Year	Cite Score	FWCI	DOI
6	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
7	An overview of renewable energy sources: technologies, applications and role of artificial intelligence	Singh, V.; Prasad, M.; Aswal, R.S.; Sharma, T.; Patel, N.K.	Computer Vision and Machine Intelligence for Renewable Energy Systems	2024		2.49	10.1016/B978-0- 443-28947- 7.00001-X
8	Microbiological dimensions and functions in constructed wetlands: A review	Rani, A.T.; Chauhan, M.; Sharma, P.K.; Mitra, D.; Joshi, S.	Current Research in Microbial Sciences	2024	10	0.84	10.1016/j.crmicr. 2024.100311
9	Traditional and Underutilized Fruits and Vegetables for Attaining Zero Hunger	Ritika; Mansi; Rizwana; Ranjan, R.; Gupta, A.K.	Advances in Science Technology and Innovation	2024	0.6	1.16	10.1007/978-3- 031-51647-4_8
10	Novel food materials: Fundamentals and applications in sustainable food systems for food processing and safety	Gupta, A.K.; Nayak, P.; Das, T.; Ranjan, R.; Mishra, S.	Food Bioscience	2023	6.8	0.89	10.1016/j.fbio.20 23.103013



S.No	Paper Title	Authors	Journal / Book Name	Year	Cite Score	FWCI	DOI
11	A Perspective Review on Green Nanotechnology in Agro-Ecosystems: Opportunities for Sustainable Agricultural Practices & Environmental Remediation	Bhandari, G.; Dhasmana, A.; Chaudhary, P.; Malik, S.M.; Sláma, P.	Agriculture Switzerland	2023	6.3	2.83	10.3390/agricultu re13030668
12	Plant Abiotic and Biotic Stress Alleviation: From an Endophytic Microbial Perspective	Kumar, V.; Nautiyal, C.S.	Current Microbiology	2022	4.8	1.21	10.1007/s00284- 022-03012-2
13	Microbial potential and biofuel production	Teotia, P.; Kumar, M.K.; Kumar, V.R.	Sustainable Green Technologies for Environment al Management	2019			10.1007/978-981- 13-2772-8_12

Evidence: https://srhu.edu.in/wp-content/uploads/2025/11/SDG-Publications.pdf

#### 13.2 Low-Carbon Energy Use

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<sub>2</sub> emissions.

**Renewable Energy Usage**: The rooftop solar installation offsets a significant portion of the University's grid power dependency, preventing the emission of hundreds of tonnes of CO<sub>2</sub> annually.

**Tree Cover & Greenery**: SRHU maintains over 6,000 trees across its 200-acre campus. These trees function as natural carbon sinks, absorbing CO<sub>2</sub> 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.

#### 13.2.1 Low-Carbon Energy Tracking

SRHU regularly measures and monitors the amount of carbon-based and low-carbon energy used across the university to support its sustainability goals and reduce greenhouse gas emissions. The university promotes the use of renewable sources such as solar power and energy-efficient systems to lower carbon intensity. Regular tracking helps evaluate progress, identify high-consumption areas, and guide strategies for energy optimization and transition toward a more sustainable, low-carbon campus.

Monitoring and Governance: Formation of a Carbon Management Committee (CMC) under SRHU's Sustainability Cell to:

- Conduct annual carbon audits.
- Track progress on emission reduction and offset programs.
- Report annually to university management and accreditation bodies.

#### 13.2.2 Low-Carbon Energy Use

Low-carbon energy use	Value
Total energy used	54233.03 GJ
Total energy used from low-carbon sources	7746.92 GJ
(Biogas, Solar)	





ISO 50001:2018 Certification Demonstrates SRHU's Commitment to Energy Efficiency and Sustainable Resource Management in Support of Climate Action





ISO 14001:2015 Certification Demonstrates SRHU's Commitment to Efficient Environment Management System in Support of Climate Action

Evidence: https://iqac.srhu.edu.in/wp-content/uploads/2024/12/SRHU-Quality-Management-System.pdf



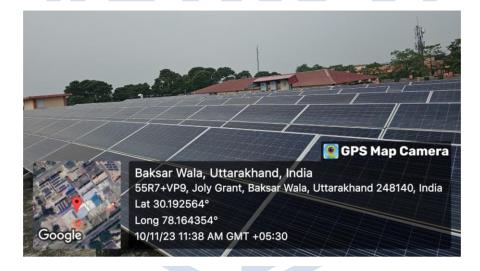




Aerial View of Solar Panels at HIMS (Google Maps)



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



Use of Solar energy in the campus for Carbon management

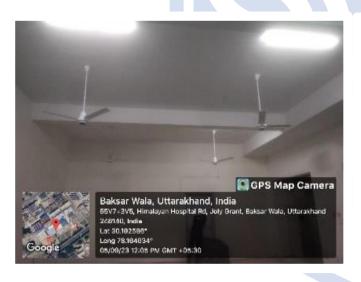
Evidence: <a href="https://garhwalpost.in/srhu-installs-1500-kw-rooftop-solar-plant-in-jollygrant/">https://garhwalpost.in/srhu-installs-1500-kw-rooftop-solar-plant-in-jollygrant/</a>

SRHU has implemented several energy efficiency initiatives to reduce its environmental footprint and promote sustainability on campus. One of the key efforts includes the widespread installation of LED lighting across the university, which has significantly reduced energy consumption and greenhouse gas emissions. This transition has led to a reduction in the electrical load of conventional lighting from 380 kW to 219 kW. Additionally, motion sensor-based LED lights have been installed in the college and hostel corridors, further minimizing energy wastage.





Energy Efficient VFD Driven Pumps are Being Used in Water Cooled Chillers in Central Air Conditioning





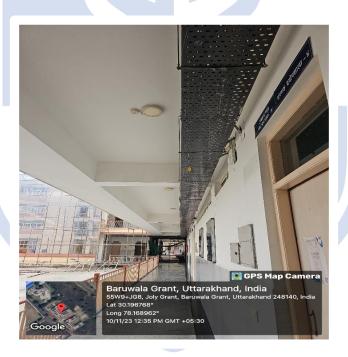
Use of energy efficient LED, Fans and BEE star-rated ACs

In the past three years, the university has made substantial progress in replacing conventional ceiling fans with energy-efficient 32-watt BLDC fans. This replacement of 2000 fans have saved a total of 3,04,608 kWh of electricity. Another significant step in energy conservation has been the replacement of old desktop computers with energy-efficient 120-watt models, resulting in a saving of 177.8 kWh per day (equivalent to 53,340 kWh annually). The university has also embraced high-efficiency BEE star-rated air conditioners, which provide energy savings of 20-45%. In addition, heat-reflective glass and heat-reflective paint have been used in air-conditioned areas and on rooftops, respectively, to improve air conditioning efficiency. To further reduce energy consumption, energy-saving message slips are displayed at electrical switchboards across the campus, encouraging responsible energy use.



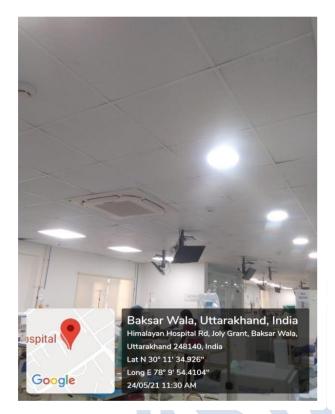


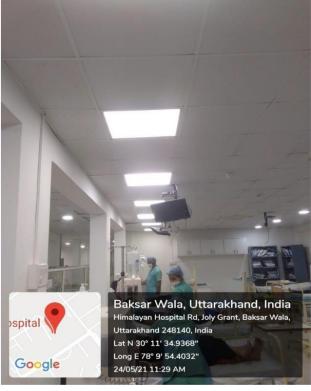
Use of Energy-saving Message Slips to Save Energy and Reduce Carbon emissions



**Motion Sensor Based Sensor LED Lights for Energy Conservation** 









Installation of LED Lights throughout the Campus to Save Energy

Looking ahead, the university has several forward-thinking energy conservation measures in place, including the installation of an EV charging station for campus electric vehicles, the introduction of an app-based cycle service for commuting within the campus, and the proposal for a 500 kW solar power plant. Additionally, the ongoing installation of PNG-powered dual-fuel DG sets will further reduce dependence on conventional fossil fuels. These combined efforts demonstrate SRHU's ongoing commitment to energy efficiency and sustainability, making the campus a model for energy-conscious institutions.



#### **Biogas Generation for Carbon Management**

The University has strengthened its commitment to sustainable energy practices by setting up an in-house biogas plant on campus. Biogas, a renewable biofuel, is produced through the process of anaerobic digestion. Located behind the university guest house, the biogas plant has a daily capacity of 4 cubic meters (m3) and operates using cow dung from the campus dairy and vegetable waste from the guest house kitchen as feedstock. The biogas generated is efficiently utilized for cooking in the guest house kitchen, offering an eco-friendly alternative to conventional fuels. This initiative has led to an annual saving of 685.44 kg of LPG, which is equivalent to approximately 36 commercial LPG cylinders. Beyond energy savings, the project plays a crucial role in organic waste recycling, promoting a circular approach to resource management and contributing meaningfully to the nation's energy conservation goals.



Biogas Plant located behind the guest house in the University

#### **Sustainable Transportation and Mobility**

SRHU demonstrates its commitment to Sustainable Development Goal 13: Climate Action by integrating electric vehicles (EVs) into its campus operations. This initiative significantly reduces greenhouse gas emissions by replacing fossil fuel-powered vehicles with eco-friendly EVs, thereby lowering the university's carbon footprint and contributing to a cleaner, healthier environment. EVs now serve as an efficient and sustainable mode of transportation for faculty, staff, campus shuttles, and maintenance activities. To further encourage the adoption of EVs, SRHU has strategically installed charging stations at key locations across the campus, facilitating the transition to greener transportation solutions and reinforcing its dedication to environmental sustainability.





**Battery Powered Vehicle to Reduce Carbon Emission** 



#### 13.3 Environmental Education Measures

The University demonstrates a strong commitment to Sustainable Development Goal 13: Climate Action by embedding climate action perspectives into its academic programs, research, and extension activities. The university's Environmental Science course is meticulously designed to formulate and implement academic programs and campus-based projects that focus on environmental sustainability.

#### 13.3.1 Local Education Programmes on Climate

As part of its holistic educational approach, SRHU mandates a core course on 'Environmental Studies' for all undergraduate programs, ensuring that students gain a foundational understanding of environmental issues, sustainability, and climate change in their very first year. This course also highlights the critical connections between climate change and the Sustainable Development Goals (SDGs), fostering climate literacy and empowering students to become proactive contributors to global climate action. Through these initiatives, University integrates sustainability into its educational framework, equipping students with the knowledge and skills necessary to address the challenges of climate change. The specific course in various programs of the university that also address the climate change and environmental issues are listed below in the Table 2.

Table 2: List of courses in alignment with SDG 13: Climate Action

Program Name	Course Code	UG/PG	Course Title	Course Description
B.Com(Hons.)	BCM207	UG	Environment Studies	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change and promote sustainable development for a balanced future.
B.Sc Nursing	N- COMH (I) 310	UG	Community Health Nursing I including Environmental Science & Epidemiology - Theory	It focuses on health promotion, disease prevention, and community care. It includes Environmental Science and Epidemiology to understand health determinants, environmental impacts like climate change and disease patterns for effective public health practice.



Program Name	<b>Course Code</b>	UG/PG	Course Title	Course Description
Post Basic B.Sc. Nursing	PBN207	UG	Environmental Science	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
BRT	EVS301	UG	Environmental Science	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
BRIT	EVS301	UG	Environmental Science	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
BMLT	EVS301	UG	Environmental Science	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.



Program Name	<b>Course Code</b>	UG/PG	Course Title	Course Description
B.Optom.	EVS301	UG	Environmental Science	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
BASLP	EVS301	UG	Environmental Science	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
ВОТ	EVS301	UG	Environmental Science	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
BBA	BBA 107	UG	Environment Studies	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental like climate change.



Program Name	<b>Course Code</b>	UG/PG	Course Title	Course Description
MBBS		UG	Community Medicine	This course focuses on preventing disease, promoting health, and improving community well-being through education and public health initiatives. It aligns with SDG-13 by addressing climate-related health impacts and promoting resilience to environmental changes.
B.Sc. (H) Biotechnology	AECC 111	UG	Environmental Science-I	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
B.Sc. (H) Biotechnology	BBTC 233	UG	Chemistry-I	It introduces fundamental concepts of matter, chemical reactions, and their applications in daily life. It aligns with SDGs by promoting sustainable chemical practices, reducing environmental pollution, and supporting climate action through green chemistry innovations.
B.Sc. (H) Biotechnology	BBTOE 231	UG	Bioethics and Biosafety	This course focus on ethical principles, safety measures, and responsible conduct in biological research and biotechnology. It aligns with the SDGs by promoting sustainable scientific practices, protecting human and environmental health, and ensuring ethical innovation for global well-being.
B.Sc. (H) Biotechnology	BBTSE 231	UG	Microbial Quality Control in Food and Pharmaceutical Industries	It focuses on detecting, preventing, and managing microbial contamination to ensure product safety and quality. It aligns with SDGs by promoting sustainable production, reducing waste, and



Program Name	<b>Course Code</b>	UG/PG	Course Title	Course Description
				minimizing environmental impact through eco-friendly quality assurance practices.
B.Sc. (H) Biotechnology	AECC 231	UG	Environmental Sciences-II	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
B.Sc. (H) Biotechnology	BBTOE 241	UG	Beverage biotechnology	It explores the microbial and biochemical processes involved in producing beverages like beer, wine, and juices. It aligns with SDGs by promoting sustainable production methods, reducing resource waste, and minimizing environmental impact in the beverage industry.
B.Sc. (H) Biotechnology	BBTOE 242	UG	Biotechnology and Human Welfare	This course explores the application of biotechnological tools to improve health, agriculture, and industry. It aligns with SDGs by promoting sustainable biotechnological practices and developing solutions to address environmental and climate challenges.
B.Sc. (H) Biotechnology	BBTSE 241	UG	Nano Biotechnology	The application of nanotechnology in biological systems for medicine, agriculture, and industry. It advances targeted drug delivery, diagnostics, and sustainable technologies, contributing to innovative solutions for health and environmental challenges.



Program Name	Course Code	UG/PG	Course Title	Course Description
B.Sc. (H) Biotechnology	BBTC 502	UG	Industrial Biotechnology	It applies biological systems, organisms, and processes to produce chemicals, fuels, and materials sustainably. It promotes eco-friendly manufacturing, resource efficiency, and reduced environmental impact, supporting SDG goals.
B.Sc. (H) Biotechnology	BBTC 503	UG	Environmental Biotechnology	This course focuses biological processes and organisms to address environmental challenges, such as pollution control, waste management, and ecosystem restoration. It supports SDG-12 and SDG-13 by promoting sustainable resource use and climate-resilient environmental solutions.
B.Sc. (H) Biotechnology	BBTE 501 B	UG	Bioprocess Engineering	This course explores Bioprocess Engineering, focusing on the design, optimization, and scale-up of biological production systems for sustainable industrial applications.
B.Sc. (H) Biotechnology	BBTE 501 C	UG	Food Biotechnology	This course covers Food Biotechnology, exploring the use of microorganisms and enzymes to enhance food quality, safety, and sustainability.
B.Sc. (H) Biotechnology	BTBC 601	UG	Biostatistics, Bioethics, Biosafety, IPR & Computers	This course focus on ethical principles, safety measures, and responsible conduct in biological research and biotechnology. It aligns with the SDGs by promoting sustainable scientific practices, protecting human and environmental health, and ensuring ethical innovation for global well-being.
B.Sc. (H) Biotechnology	BBTE 601 A	UG	Molecular Farming	This course explores molecular farming using genetically engineered plants to sustainably produce biomolecules like pharmaceuticals



Program Name	Course Code	UG/PG	Course Title	Course Description
				and enzymes advancing eco-efficient biomanufacturing in line with SDGs.
B.Sc. (H) Biotechnology	BBTE 601 B	UG	Downstream Processing	This course covers Downstream Processing, focusing on the separation, purification, and recovery of bioproducts from complex mixtures. It emphasizes sustainable, efficient bioprocess design.
B.Sc. (H) Biotechnology	BBTE 601 C	UG	Industrial Waste Management	This course focuses on Industrial Waste Management, emphasizing waste minimization, treatment, and resource recovery strategies for sustainable industry practices.
B.Sc. (H) Microbiology	BMBSE 111	UG	Mushroom Farming	This course focuses on Mushroom Farming, covering cultivation methods, substrate formulation, and value-added processing to promote sustainable food production and waste utilization.
B.Sc. (H) Microbiology	AECC 111	UG	Environmental Science-I	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
B.Sc. (H) Microbiology	BMBC 122	UG	Industrial Microbiology	This course explores the use of microorganisms in industrial processes for producing biochemicals, enzymes, and biofuels. It emphasizes sustainable biotechnological practices supporting SDG-13 through ecofriendly innovations.



Program Name	<b>Course Code</b>	UG/PG	Course Title	Course Description
B.Sc. (H) Microbiology	BBTC 233	UG	Chemistry-I	It introduces fundamental concepts of matter, chemical reactions, and their applications in daily life. It aligns with SDGs by promoting sustainable chemical practices, reducing environmental pollution, and supporting climate action through green chemistry innovations.
B.Sc. (H) Microbiology	BBTOE 231	UG	Bioethics and Biosafety	This course focus on ethical principles, safety measures, and responsible conduct in biological research and biotechnology. It aligns with the SDGs by promoting sustainable scientific practices, protecting human and environmental health, and ensuring ethical innovation for global well-being.
B.Sc. (H) Microbiology	BBTSE 231	UG	Microbial Quality Control in Food and Pharmaceutical Industries	It focuses on detecting, preventing, and managing microbial contamination to ensure product safety and quality. It aligns with SDGs by promoting sustainable production, reducing waste, and minimizing environmental impact through eco-friendly quality assurance practices.
B.Sc. (H) Microbiology	AECC 231	UG	Environmental Sciences-II	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.



Program Name	Course Code	UG/PG	Course Title	Course Description		
B.Sc. (H) Microbiology	BBTOE 242	UG	Biotechnology and Human Welfare	This course explores the application of biotechnological tools to improve health, agriculture, and industry. It aligns with SDGs by promoting sustainable biotechnological practices and developing solutions to address environmental and climate challenges.		
B.Sc. (H) Microbiology	BBTSE 241	UG	Nano Biotechnology	The application of nanotechnology in biological systems for medicine, agriculture, and industry. It advances targeted drug delivery, diagnostics, and sustainable technologies, contributing to innovative solutions for health and environmental challenges.		
B.Sc. (H) Microbiology	BMBC 503	UG	Industrial Microbiology	This course introduces the use of microorganisms in large-scale production of enzymes, biofuels, and pharmaceuticals, promoting sustainable bioprocessing.		
B.Sc. (H) Microbiology	BMBC 504	UG	Environmental Microbiology	This course covers the roles of microorganisms in ecosystems, bioremediation, and pollution control, fostering sustainable environmental management.		
B.Sc. (H) Microbiology	BMBE 501 B	UG	Food & Dairy Microbiology	This course covers the role of microorganisms in food production, preservation, and safety, promoting sustainable and hygienic practices.		
B.Sc. (H) Microbiology	BMBE 501 C	UG	Microbiological Analysis of Air and Water	This course focuses on microbiological analysis of air and water, teaching techniques to detect, quantify, and control microbial contaminants, supporting safe, sustainable environmental management.		



Program Name	Course Description			
B.Sc. (H) Microbiology	BMBE 601 A	UG	Bio-fertilizers and Bio-pesticides	This course covers bio-fertilizers and bio-pesticides, exploring the use of beneficial microorganisms to enhance soil fertility and pest management sustainably.
Bachelor of Pharmacy	BP206T	UG	Environmental Sciences	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
B.Tech CSE	HST112	UG	Environmental Studies	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
B.Tech CSE	GES471	UG	Disaster Management	It covers preparedness, response, recovery, and mitigation strategies to reduce the impact of natural and human-made disasters. It aligns with SDG-13 by enhancing community resilience to climate-related hazards and promoting climate-adaptive disaster planning.
BCA	HS112T	UG	Environmental Studies	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.



Program Name	Course Code	UG/PG	Course Title	Course Description
BCA	BCA309	UG	Disaster Management	Disaster Management focuses on preparedness, response, recovery, and mitigation strategies to reduce the impact of natural and humanmade disasters. It aligns with SDG-13 by enhancing community resilience to climate-related hazards and promoting climate-adaptive disaster planning.
B.Sc. Data Science	MD121T	UG	Environmental Studies	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
B.Sc. Yoga Science and Holistic Health	BYSC105	UG	Public Health and Hygiene	This course covers the principles of public health, disease prevention, and community hygiene practices. It promotes environmental health strategies aligned with SDG-13 to mitigate climate-related health risks.
B.Sc. Yoga Science and Holistic Health	BYS603	UG	Fundamentals of Environmental Science	This course explores the relationships between humans and the natural world. It covers ecological principles, environmental issues, sustainability, conservation, and the impact of human activities on ecosystems, address global environmental challenges like climate change.
MSc Epidemiology	CMEC001	PG	Environmental and Occupational Epidemiology	This course covers Environmental and Occupational Epidemiology, focusing on the study of disease patterns related to environmental and workplace exposures, promoting health risk reduction.



Program Name	Program Name   Course Code		Course Title	Course Description
M.Sc. Clinical Research	CMCR517	PG	Environmental & Regulatory Physiology	This course covers Environmental & Regulatory Physiology, focusing on how environmental factors influence physiological processes and regulatory mechanisms, promoting climate-conscious health and sustainability practices.
MD Community Medicine	1101509	PG	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.	This course covers integrated strategies for sustainable community health, resource-efficient healthcare delivery, and leadership in public health.
Master of Hospital Administration	MHA122	PG	Hospital Planning and Operations	This course covers Hospital Planning and Operations, focusing on the design, management, and sustainable operation of healthcare facilities to optimize resource use, reduce environmental impact, and enhance patient care.
Master of Hospital Administration	MHA126	PG	Human Resource Management	This course covers Human Resource Management, focusing on effective workforce planning, development, and organizational leadership to optimize productivity and sustainability.
M.Sc. Microbiology	MMBT 302	PG	Industrial Microbiology	This course explores Mushroom Farming, focusing on cultivation techniques, substrate preparation, and post-harvest management for sustainable food and income generation.



Program Name	Course Code	UG/PG	UG/PG Course Title Course Descri				
M.Sc. Microbiology	MMBE 301	PG	Microbial Technology	This course covers the application of microorganisms in industry, agriculture, and environmental management for sustainable production and pollution mitigation.			
M.Sc. Microbiology	MMBE 302	PG	Industrial Waste Management	This course focuses on methods for minimizing, treating, and recycling industrial waste to protect ecosystems. It integrates sustainable waste management practices supporting SDG-13 through pollution reduction and resource conservation.			
M.Sc. Microbiology	MMBE 304	PG	Soil and Agriculture Microbiology	This course covers the role of microorganisms in soil fertility, crop productivity, and sustainable farming practices.			
M.Sc. Microbiology	MMBE 309	PG	Nano Biotechnology	The application of nanotechnology in biological systems for medicine, agriculture, and industry. It advances targeted drug delivery, diagnostics, and sustainable technologies, contributing to innovative solutions for health and environmental challenges.			
M.Sc. Microbiology	MMBE 310	PG	Bioprocess Technology	This course covers the use of biological systems for sustainable production of biochemicals, pharmaceuticals, and biofuels, promoting eco-efficient practices.			
M.Sc. Biotechnology	MBTT 303	PG	Food and Industrial Biotechnology	This course covers the application of biological processes and microorganisms to produce food, enzymes, and bio-based products.			
M.Sc. Biotechnology	MBTE 302	PG	Advanced Environmental Biotechnology	This course covers advanced environmental biotechnology, focusing on cutting-edge microbial and bioprocess strategies for pollution control, waste treatment,			



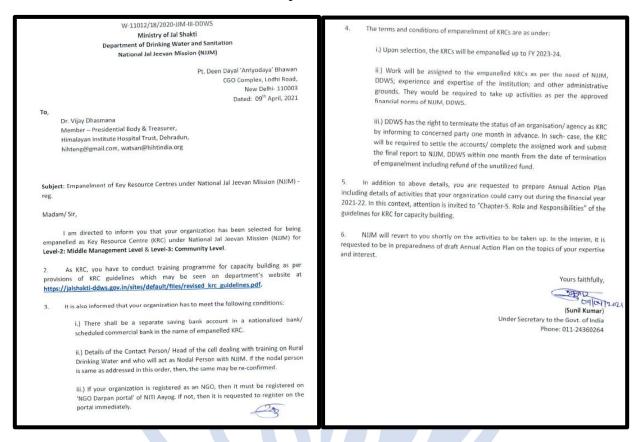
Program Name	<b>Course Code</b>	UG/PG	Course Title	Course Description
				and ecosystem restoration, promoting sustainable solutions.
M.Sc. Biotechnology	MBTE 305	PG	Agrobiotechnology	It covers the use of biotechnological tools to improve crop yield, resistance, and supporting ecofriendly agricultural practices
M.Sc. Biotechnology	MBTE 306	PG	Metabolic Engineering	It covers the optimization of cellular pathways for enhanced production of biofuels, pharmaceuticals, and biochemicals, promoting resource-efficient bioprocesses
M.Sc. Biotechnology	MBTE 308	PG	Nanobiotechnology	This course focusing on the application of biotechnological tools to enhance crop productivity, pest resistance, and sustainable agriculture production.
M.Sc. Biotechnology	MBTE 310	PG	Energy & Environment	This course covers sustainable energy production, environmental conservation, and the mitigation of climate impacts, promoting practices aligned with SDGs.
M.Sc. Biotechnology	MBTE 311	PG	Synthetic Biology	This course focusing on the design and engineering of biological systems for innovative, sustainable applications in medicine, industry, and the environment.
M.Sc. Biochemistry	MBCT 301	PG	Environmental Biochemistry & Toxicology	This course focusing on the biochemical impacts of pollutants and toxic substances on ecosystems and human health, promoting sustainable environmental management.

 ${\bf Evidence:}\ \underline{https://srhu.edu.in/wp-content/uploads/2025/11/Course-Mapping-SDGs.pdf}$ 

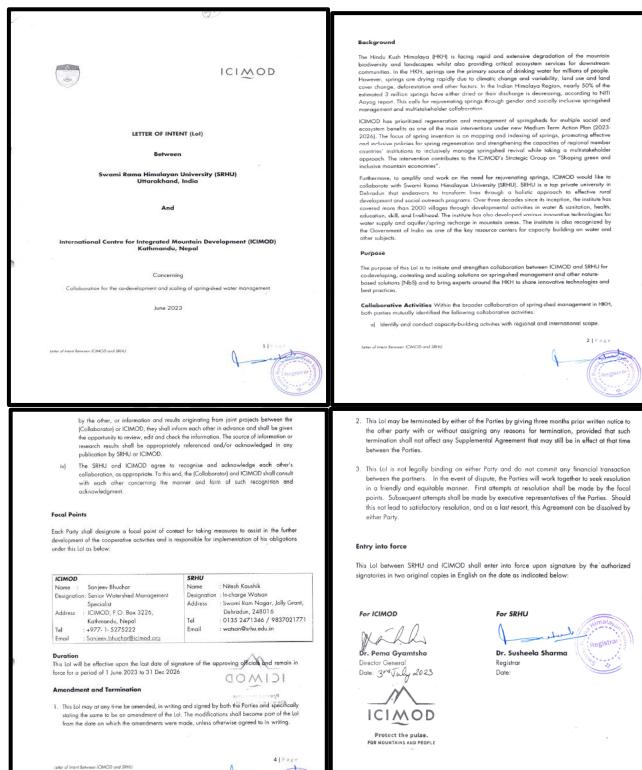


#### 13.3.2 Climate Action Plan, Shared

The University has actively collaborated with academic and government organizations to promote climate resilience and sustainability initiatives. The Memoranda of Understanding (MoUs) have been signed with these bodies to facilitate environmental education & awareness, capacity-building programs, and community outreach related to climate change mitigation and adaptation strategies. These partnerships reflect the university's commitment to implementing effective climate action plans and fostering interdisciplinary efforts toward environmental conservation and sustainable development.







Evidence: https://srhu.edu.in/wp-content/uploads/2025/09/53-LOI-A-ICIMOD.pdf

Letter of Intent Between ICIMOD and SRHU

5 | Page



#### 13.3.3 Co-operative Planning for Climate Change Disasters

The University actively promotes such collaborative and sustainable approaches through education, research, and community engagement in disaster resilience and climate action. Co-operative planning for climate change disasters involves collaborative efforts among governments, communities, NGOs, and private sectors to effectively prepare for, respond to, and recover from climate-related hazards. By sharing resources, data, and expertise, stakeholders can develop integrated strategies that enhance resilience, reduce vulnerabilities, and ensure sustainable recovery. This approach emphasizes participatory decision-making, early warning systems, and adaptive infrastructure, fostering collective responsibility to mitigate the impacts of floods, droughts, storms, and other climate-induced disasters.

#### Exposure visit at Dam area, Dikchu, Gangtok

The HIHT has been given a three-day training program titled 'WASH Services during Disaster and Emergencies and Ensuring Climate Resilience System' was organized from 20th to 22nd March 2024 at Hotel Maple Wood, Gangtok, Sikkim. A total of 55 mid-level officials from Rural Development Department (RDD) of Sikkim participated in this program. The major objective of the program was to draw the attention of Rural Development Department Engineers towards planning the preparedness and mitigation measures regarding WASH services during disaster and emergencies and ensuring climate resilience system and to deliver understanding on direct injection technology. On day- 2 (21st March 2024) participants were carried out for the field exposure on the Second day of the training. Details of the activity conducted on the second day are as follows:

Date/Duration	Details	Resource Person
		(Internal/External)
21 March 2024	Exposure Visit at following sites;	1. Er. N.B. Thapa (External)
	1). Dam area, Dikchu, Gangtok (affected due	Executive Engineer
(9:30 am- 2:30 pm)	to flash flood in Teesta River)	RDD, Govt. of Sikkim
	2). Springshed intervention site at G. B. Pant	and
	institute of Himalayan Environment	2. Er. Atul Uniyal (Internal)
		Scientist, SRHU, Dehradun
21 March 2024	Group work and Presentation of the learning	Mr. Vivek Anand (Internal)
	of Field Exposure Visit	Course Coordinator/
(3:30 pm- 4:30 pm)		CMDRR- Capacity Development Expert/
		Deputy Project Manager, HIHT

Key Resource Centre of HIHT, Dehradun conducted Second day of L-2 Training on "WASH Services during Disaster & Emergencies and ensuring Climate Resilience System" on 21st March 2024 at Gangtok. Field exposure visits were organized at two sites in Gangtok. As per theme of the program, firstly visited at Dickchu, Gangtok site near the Teesta River which was heavily affected with Flash flood last year. Participants were briefed about impact of disaster incidence on WASH services. Impact of disaster was severe at the water supply was damaged and fully interrupted. 3- 4 building structures including school were completely washed away. The existing piped water supply line was damaged. Though, in later phase water and sanitation were handled with support of rescue and relief teams from the State Disaster Management bodies like SDMA and DDMA and recovery was done in collaboration with the line departments and mitigation and prevention measures were taken.

Subsequently, another site of G.B. Pant institute of Himalayan Environment and Sustainable Development, Gangtok visited. At this participant were taken to springshed initiatives and intervention site. Participants were shared the water recharge and source sustainability measures.







Field Exposure Visit at Dam area, Dikchu, Gangtok (Affected due to Flash Flood in Teesta River)

After field exposure, group work on findings and learnings from field visit was conducted by Mr. Vivek Anand, Course Coordinator/ Deputy Project Manager, HIHT. All participants were discussed and briefed about preparing the presentation in their groups based on their learning and findings from field exposure visit. Each group was assigned the specific component of disaster management, i.e. preparedness, response, recovery, mitigation including operation & maintenance of water supply, water quality and facilitation of WASH services during disaster and emergencies.



Group Work and Presentation of the Learning of Field Exposure Visit

#### Exposure Visit at dam sites in Bhopal at Kerwa Dam and Kaliasot Dam

On on 30th January 2024, Field exposure visits were conducted at two dam sites in Bhopal, firstly at Kerwa Dam where Er. Ravindra Shrivastav, SE, PHED shared technical details & resilient measures and on another site was Kaliasot Dam where Er. Yadav, SE, PHED facilitated dam's utility towards water management and its role in handling floods. During field visit it was explained that how gates are operated during flood risk and early warning system is used. At Kerwa dam, it is operated by 8 gates which are auto- mechanically operated and at Kaliasot dam, there is 13 spill way gates of radial type. Its use is basically as containment of water which is used for water recharge purposes. The dam has its utility mainly in flood situation. After lunch, the participants prepared the details and presentation on field exposure visit. Subsequently, they presented their learnings from the site visits.







Field Exposure Visit at Dam Sites in Bhopal

#### 13.3.4 Inform and Support Government

The university regularly conducts knowledge sessions and training programmes to enhance disaster preparedness, including WASH services during disasters and emergencies and ensuring a climate resilience system. The details of the training programs are given below.

	luming 110	Si annines C	Conducted by Key Resou	(Uttarakhand		ayan monute				
	Dates						Total Participants (India)			
S.No.	From	То	Topic of training	Participant Level	Funded by	Mode	Utta rakh and	Sikk im	Ma dh ya Pr ad esh	Total
1	29-Jan- 24	31-Jan- 24	WASH Services during Disaster and Emergencies and Ensuring Climate Resilience System	L-2	MoJS	Residential			51	51
2	14-Mar- 24	16-Mar- 24	WASH Services during Disaster and Emergencies and Ensuring Climate Resilience System	L-2	MoJS	Residential	43			43
3	20-Mar- 24	22-Mar- 24	WASH Services during Disaster and Emergencies and Ensuring Climate Resilience System	L-2	MoJS	Residential		55		55
	Total							55	51	149

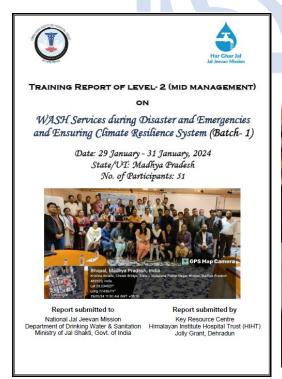


#### **Training**

## WASH Services during Disaster and Emergencies and Ensuring Climate Resilience System (29th to 31st January 2024 at Hotel Atishay, Bhopal, Madhya Pradesh)

Jal Jeevan Mission (JJM) is envisaged by the Government of India to provide drinking water supply to every rural household in adequate quantity of prescribed quality at affordable service delivery charges on regular and long-term basis, thereby improving the standard of living of rural communities can be improved. The mission is also focused on to implement source sustainability measures as mandatory elements that include recharge and reuse through grey water management, water conservation and rain water harvesting among the others. Extensive information, education, stakeholder training and communication are the key components of the mission. Key Resource Centers are nationwide recognized by the Ministry of Drinking Water and Sanitation with a mandate to undertake capacity building trainings of various stakeholders. The HIHT has been given mandate a three-day training program titled 'WASH Services during Disaster and Emergencies and Ensuring Climate Resilience System' was organized from 29th to 31st January 2024 at Hotel Atishay, Bhopal, MP.

A total of 51 mid-level officials from Public Health Engineering Department (PHED) of MP participated in this program. The major objective of the program was to draw the attention of Public Health Engineers towards planning the preparedness and mitigation measures regarding WASH services during disaster and emergencies and ensuring climate resilience system in the country





Three-day Training Program WASH Services During Disaster and Emergencies and Ensuring Climate Resilience System' was Organized from 29th to 31st January 2024 at Hotel Atishay, Bhopal, MP



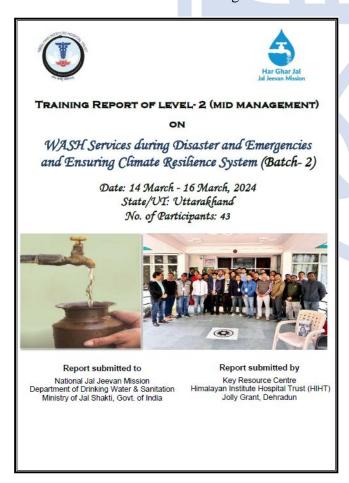
#### **Training**

## WASH Services during Disaster and Emergencies and Ensuring Climate Resilience System' (14th March to 16th March 2024 in Rudraprayag, Uttarakhand)

Jal Jeevan Mission (JJM) is envisaged by the Government of India to provide drinking water supply to every rural household in adequate quantity of prescribed quality at affordable service delivery charges on regular and long-term basis, thereby improving the standard of living of rural communities can be improved. The mission is also focused on to implement source sustainability measures as mandatory elements that include recharge and reuse through grey water management, water conservation and rainwater harvesting among the others. Extensive information, education, stakeholder training and communication are the key components of the mission. Key Resource Centers are nationwide recognized by the Ministry of Drinking Water and Sanitation with a mandate to undertake capacity building trainings of various stakeholders.

The HIHT has been given mandate a three-day training program titled "WASH Services during Disaster and Emergencies and Ensuring Climate Resilience System" was organized from 14th March to 16th March 2024 in Rudraprayag, Uttarakhand.

A total of 43 mid-level government officials including Executive engineer, Assistant engineers & Junior engineers from Uttarakhand Jal Sansthan, Jal Nigam and Irrigation department along with Officials from Panchayati Raj Department have participated in these 3 days residential training program. The major objective of the program was to convey the attention of participants on the cross-cutting issues of rural water supply schemes and water resource management in the country.





Three-day Training Program WASH Services During Disaster and Emergencies and Ensuring Climate Resilience System' was Organized from 14th March to 16th March 2024 in Rudraprayag, Uttarakhand

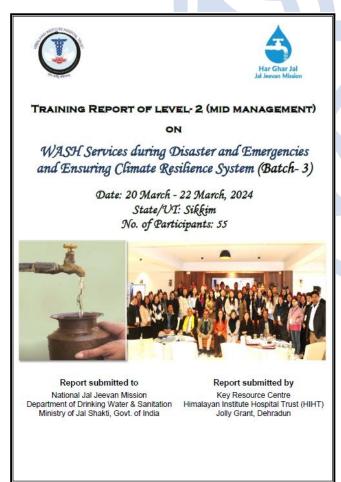


#### **Training**

# WASH Services during Disaster and Emergencies and Ensuring Climate Resilience System (20th to 22nd March 2024 at Hotel Maple Wood, Gangtok, Sikkim)

Jal Jeevan Mission (JJM) is envisaged by the Government of India to provide drinking water supply to every rural household in adequate quantity of prescribed quality at affordable service delivery charges on regular and long-term basis, thereby improving the standard of living of rural communities can be improved. The mission is also focused on to implement source sustainability measures as mandatory elements that include recharge and reuse through grey water management, water conservation and rain water harvesting among the others. Extensive information, education, stakeholder training and communication are the key components of the mission. Key Resource Centers are nationwide recognized by the Ministry of Drinking Water and Sanitation with a mandate to undertake capacity building trainings of various stakeholders.

The HIHT has been given mandate a three-day training program titled 'WASH Services during Disaster and Emergencies and Ensuring Climate Resilience System' was organized from 20th to 22nd March 2024 at Hotel Maple Wood, Gangtok, Sikkim. A total of 55 mid-level officials from Rural Development Department (RDD) of Sikkim participated in this program. The major objective of the program was to draw the attention of Rural Development Department Engineers towards planning the preparedness and mitigation measures regarding WASH services during disaster and emergencies and ensuring climate resilience system and to deliver understanding on direct injection technology.





Three-day Training Program WASH Services During Disaster and Emergencies and Ensuring Climate Resilience System' was Organized



# Training Programmes Conducted by Key Resource Center (KRC)- Himalayan Institute Hospital Trust, Dehradun (Uttarakhand)

S.	Dates		- Topic of training	Participant	Funde	Mode	No. of Participant
N.	From	То	- Topic of training	Level	d by	Mode	s s
1	04-Dec- 23	06-Dec- 23	Dec- Grey water management: Reduce, Reuse, Recycle and Recharge for enhancing water use efficiency  L-2		MoJS	Residentia 1	52
2	21-Dec- 23	23-Dec- 23	Grey water management: Reduce, Reuse, Recycle and Recharge for enhancing water use efficiency	L-2	MoJS	Residentia	52
3	10-Jan- 24	12-Jan- 24	Grey water management: Reduce, Reuse, Recycle and Recharge for enhancing water use efficiency	L-2	MoJS	Residentia 1	53

Training Summary: The HIHT has been given mandate a three-day training program titled "Grey water management: Reduce, Reuse, Recycle and Recharge for enhancing water use efficiency (Circular economy and net-zero concept), Nature based Solutions and Technologies for Grey Water Management" was organized from





04th to 06th December, 2023 Dadar & Nagar Haveli and Daman & Diu.

**Training Summary**: The HIHT has been given mandate a three-day training program titled "Grey water management: Reduce, Reuse, Recycle and Recharge for enhancing water use efficiency (Circular economy and net-zero concept), Nature based Solutions and Technologies for Grey Water Management" was organized from 21th to 23th December, 2023 for Kerala. Total of 52 participants were from different designations such as Executive Engineers, Assistant Engineers, District Coordinators and Junior Engineers etc. of Kerala have participated in this program. The objective of the training was to provide in depth knowledge and insight of the concepts, of management of greywater at village level, community level and Household level and understand the basic issues related to grey water management in context of Jal Jeevan Mission.







# Training Report of Level- 2 (mid management)

ON

Grey water management: Reduce, Reuse, Recycle and Recharge for enhancing water use efficiency (Circular economy and net-zero concept), Nature based Solutions and Technologies for Grey Water Management (Batch-2)

> Date: 21 December - 23 December 2023 State/UT: Kerala No. of Participants: 51



Report submitted to

National Jal Jeevan Mission
Department of Drinking Water & Sanitation
Ministry of Jal Shakti, Govt. of India

Report submitted by

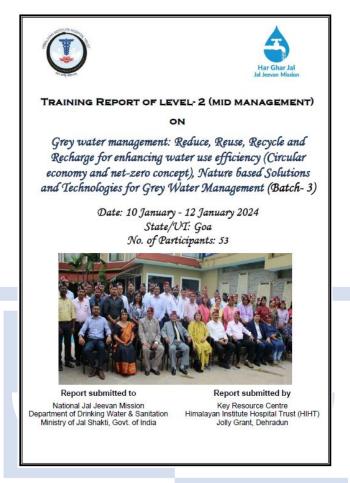
Key Resource Centre

Himalayan Institute Hospital Trust (HIHT)

Jolly Grant, Dehradun

**Training Summary**: The HIHT has been given mandate a three-day training program titled "Grey water management: Reduce, Reuse, Recycle and Recharge for enhancing water use efficiency (Circular economy and net-zero concept), Nature based Solutions and Technologies for Grey Water Management" was organized from 10th January to 12th January, 2023 for Goa. Total of 53 participants were from different designations such as Executive Engineers, Assistant Engineers, District Coordinators and Junior Engineers etc. of Goa have participated in this program. The objective of the training was to provide in depth knowledge and insight of the concepts, of management of greywater at village level, community level and Household level and understand the basic issues related to grey water management in context of Jal Jeevan Mission.



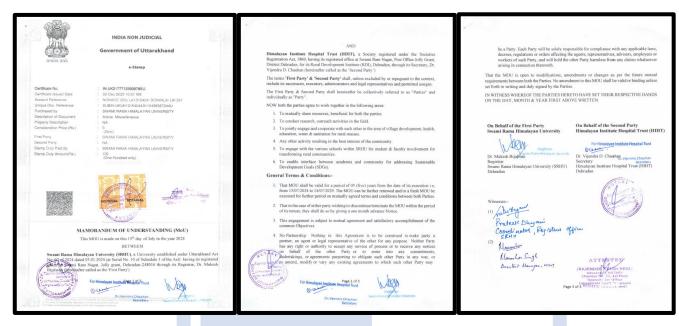


**Training Report – Level 2 (Mid Management)** 

# 13.3.5 Environmental Education Collaborate with NGO

The University actively organizes Climate Action events and celebrations while engaging students community, academicians and staff, through networking with stakeholders including government agencies and NGOs, to raise awareness and inspire collective action toward sustainability. The campus commemorates global observances such as Earth Day, World Environment Day, and the COP climate summits. These events include climate action campaigns, tree plantation drives, clean-up initiatives, and interactive workshops focused on environmental conservation and sustainable living. By fostering dialogue through Conference, seminars and exhibitions, SRHU creates a platform for learning and collaboration, empowering the university community to contribute meaningfully to global climate action efforts. The details of the organized activities are summarized below:





Evidence: https://srhu.edu.in/wp-content/uploads/2025/09/104-MoU-A-HIHT%20(RDI).pdf

Name of Activity: Session on 'Environment and Sustainability'

Date: 22nd September 2023

Time: 11:00 AM – 12:00 PM

Venue: Department of Community Medicine, HIMS, SRHU

Resource Person: Dr Ashutosh Kumar Choudhary, Department of Applied Sciences & Humanities, HSST,

SRHU

Summary: On 22rd September 2023, a session was delivered by Dr. Ashutosh Kumar Choudhary on the topic 'Environment and Sustainability. He interacted with the newly admitted students on environmental issues and sensitized them towards environmental responsibilities. He also briefed about the importance of sustainable use of natural resources and the role of an individual in attaining sustainability.

Rama F	limalayan University		
	Himalayan Ins Swami Ram Orientation Program B MSc Clinical Re	of Community Medicin titute of Medical Scient a Himalayan University atch 2023-25 (21 Sept -22 3 esearch/ MSc Epidemiolog artment of Community Medici	ces , Sept 2023)
S. No	Sessions	Name of faculty	Time
		1, 21 Sept 2022	
1	Course Registration & Document Verifications	Dr Nikku Yadav/ Dr Neha Sharma	09.30-10.30 hr
2	Address from HOD Code of Conduct	Prof AK Srivastava	10.30-10.45 hr
3	Yoga & Health	Dr Somlata Jha	10.45-11.45 hr
4	Professional Ethics	Prof DC Dhasmana	11,45-13,30 hr
5	Lunch	-	13.30-14.30 hr
6	Gender Sensitization	Dr Ekta Rao	14.30-15.30 hr
7	Entrepreneurship	Dr Ekta Rao	15,30-16,30 hr
		2, 22 Sept 2023	
1	Human Value: Learn, Serve, Remember	Prof Sanjoy Das	09.00-10.00 hr
2	Personal and Professional Strengths	Mr Ashish Gupta	10.00 to 11.00 hr
3	Environment & Sustainability	Dr Ashutosh Choudhary	11.00 to 12.00 hr
4	University Visit Visit to Hospital, SRC, Library, CRI etc	Dr Neha Sharma/ MSc Senior Students	12.00 to 13.30 hr
5	Lunch .	-	13.30-14.30 hr
6	Field visit: Environment & Sewage Treatment plant .	Dr Ashutosh Choudhary	14.30- 16.30 hr
		Mi	Dr AK Srivastava  Dr AK Srivastava  (Prof & Head)  spartment of Community Medical Scient  swami Rama Himalayan Universite  bivadum 248016, Utstrakhand, Im-



# Name of Activity: Session on Sustainability and Environment

Date: 03 August 2023

Time: 9:30am-10:30am

Venue: Auditorium, HSST

Resource Person: Dr Ashutosh Kumar Choudhary, Department of Applied Sciences & Humanities, HSST,

**SRHU** 

Summary: On 03rd August 2023, a session was delivered by Dr. Ashutosh Kumar Choudhary on the topic 'Sustainability and Environment'. He interacted with the newly admitted students on environmental issues and sensitized them towards environmental responsibilities. He also brief about the importance of sustainable use of natural resources and the role of an individual in attaining sustainability.



Session on Sustainability and Environment at HSST, SRHU

Name of Activity: National Conference on Environment, Water, Agriculture, Sustainability, and Health (EWASH 2023)

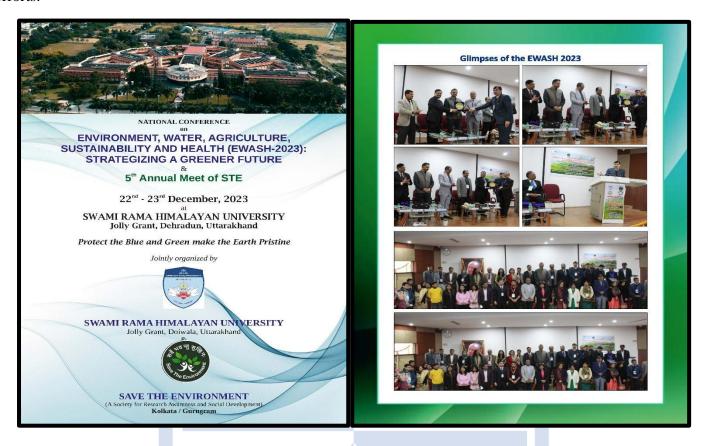
Date: December 22-23, 2023

Venue: Adi Kailash Auditorium, SRHU

Summary: Swami Rama Himalayan University (SRHU) successfully organized EWASH 2023: National Conference on Environment, Water, Agriculture, Sustainability, and Health on December 22-23, 2023. Themed "Protect the Blue and Green, Make the Earth Pristine," the two-day conference brought together experts, academicians, students, and policy makers to strategize for a greener future. Jointly hosted with Save the Environment (STE), DAV PG College Dehradun, and the National Academy of Sciences, Prayagraj, the event focused on innovative strategies for environmental conservation, water management, climate change, and sustainability. Highlights included the conferral of prestigious awards to faculty members of SRHU, recognizing their significant contributions. Dr Rajendra Dobhal received the STE Dr Praloy O. Basu Life time Achievement Award, Dr Sanjay Gupta was honoured with the STE Meritorious Award for Excellence in Academics and Research, Dr Archana Dhasmana received the STE Young Researcher Award, and Dr Nikku Yadav was awarded the STE Clinical Diagnosis and Research Award. The conference concluded with a collective resolution to implement sustainable practices and foster collaborations across all stakeholders to address pressing



environmental challenges, ensuring impactful reforms in water management, agriculture, and conservation efforts.



Name of Activity: Celebration of World Ozone Day

Date: Sep 16th, 2023

Venue: Himalayan School of Biosciences, SRHU

Summary: The School of Biosciences organized a science-based competition for the students on 'World Ozone Day' on Sep 16th, 2023. The United Nations marks 16th Sept as the international day for the preservation of the Ozone layer. This year Ozone Day was held under the theme Montreal Protocol: fixing the ozone layer and reducing climate change. The principal aim of the Montreal Protocol is to protect the ozone layer by taking measures to control total global production and consumption of substances that deplete it. Wide participation of the students was witnessed on the occasion. Students came out with innovative ideas for preservation of the Ozone layer that protects us from harmful radiations. Students expressed their ideas in the form of beautiful Rangoli drawings, posters, on-spot oral presentations and very innovative scientific models. Dr C.S. Nautiyal, scientific advisor to the university gave a brief lecture on the significance of saving the environment and measures that can be practiced in real life situations. Dr Sanjay Gupta, Principal, along with all the faculty members evaluated the student's participants and prizes were distributed to meritorious students' winners.







Glimpses of World Ozone Day on Sep 16th 2023 at HSBS

Name of activity: NASI's Popular Lecture on Earth Day - 2024

Date: 22 April 2024

Facilitator: Dr. Bindu Dev

Venue: Aadi Kailash Auditorium, Near Emergency, SRHU

No. of Participants: 200

**Objective:** The primary objective of the lecture was to highlight the critical need for environmental protection to address the looming crisis on earth.

**Summary:** The Hon'ble Vice Chancellor Dr. Rajendra Dobhal mentioned that this year's World Earth Day theme is "Planet Vs Plastic". The aim of this theme was to end the use of single-use plastics and to find alternatives. As an example for environmental conservation, a plastic bank has been established for plastic disposal. The keynote speaker renowned historian and environmentalist Ajay Sharma stated that earth was home not only to humans but also to millions of animals and plants. However, humans were continuously harming the Earth to fulfill their needs, leading to natural disasters.

**Outcome:** The outcome of an Earth Day lecture could vary depending on the content, audience, and goals of the lecture. Here were a few potential outcomes:

**Increased awareness**: The lecture has successfully raised awareness about environmental issues such as climate change, pollution, deforestation, or habitat loss among the audience.

**Education**: Attendees had learned new information about the environment, sustainability practices, or ways they can reduce their ecological footprint.

**Inspiration:** The lecture had inspired attendees to take action to protect the environment, whether through individual lifestyle changes, community initiatives, or advocacy efforts.

**Behavior change**: Some attendees may have been motivated to adopt more sustainable behaviors in their daily lives, such as recycling more, reducing energy consumption, or supporting environmentally-friendly policies and businesses.



**Networking and collaboration**: The lecture had provided an opportunity for like-minded individuals to connect, share ideas, and collaborate on environmental projects or initiatives.

**Policy impact**: In some cases, Earth Day lectures may have influence policymakers or stakeholders to take action on environmental issues, whether through legislation, corporate policies, or community initiatives.

Overall, the outcome of an Earth Day lecture is ideally a combination of increased awareness, education, inspiration, and action towards creating a more sustainable and environmentally friendly world.









# Name of activity: Celebration of World Environment Day - 2024

Date: 5th June 2024

**Panellist:** Dr. Rajendra Dobhal, Hon'ble Vice Chancellor, SRHU; Dr. Lokesh Ohri, Chief Executive Office and Founder, Been There Doon That, Dehradun; Dr Brij Mohan Sharma, Chief Functionary in Society of Pollution and Environment Conservation Scientists (SPECS); Dr Vinod Bhatt, Executive Director, Navdanya Biodiversity Farm.

Venue: BC Roy Conference Hall, Himalayan Institute of Medical Sciences, SRHU

**Summary**: The Celebration of World Environment Day 2024 was held on 5th June 2024 at the BC Roy Conference Hall, Himalayan Institute of Medical Sciences, SRHU. The event featured an esteemed panel of environmental experts, including Dr. Rajendra Dobhal, Hon'ble Vice Chancellor, SRHU; Dr. Lokesh Ohri, Chief Executive Officer and Founder of Been There Doon That, Dehradun; Dr. Brij Mohan Sharma, Chief Functionary, Society of Pollution and Environment Conservation Scientists (SPECS); and Dr. Vinod Bhatt, Executive Director, Navdanya Biodiversity Farm. The program emphasized the importance of environmental conservation, sustainable practices, and collective responsibility in addressing global ecological challenges and climate change issues.







# **Celebration of World Environment Day-2024**





# 13.4 Commitment to Carbon Neutral University

SRHU promotes usage of carbon neutral solar energy, E-vehicles in the University campus, climate-smart practices, such as sustainable waste and water management, and green infrastructure development, to mitigate vulnerabilities. Research and academic programs are geared toward developing innovative solutions for climate adaptation, empowering students and communities with the knowledge and tools to thrive in a changing environment. Through partnerships and policy advocacy, SRHU strengthens local and regional resilience, contributing to global efforts to combat climate change and fostering a sustainable future for all. Landscaping plays a crucial role in promoting a green and sustainable campus at the University. By incorporating native plants, eco-friendly designs, and sustainable practices, the University enhances its aesthetic appeal while supporting biodiversity and environmental conservation. Thoughtfully designed green spaces, including gardens, tree-lined pathways, and water features, help reduce the carbon footprint, improve air quality, and create a tranquil environment that supports learning and well-being. Furthermore, initiatives such as organic waste composting, rainwater harvesting systems, and the use of low-maintenance plants further reinforce the University's commitment to sustainability and ecological responsibility. These efforts reflect SRHU's dedication to achieving a harmonious balance between growth and environmental stewardship, ensuring a sustainable and thriving campus for future generations.



Green campus @SRHU

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.







**Plantation Drives for Green Campus** 



**Carbon Footprint Certificate** 

# Water Conservation Practices at SRHU: A Sustainable Approach

At SRHU, a robust set of water conservation initiatives is in place, aimed at reducing water usage, enhancing sustainability, and preserving precious water resources for future generations. The university has implemented various strategies, including rainwater harvesting, groundwater recharging, the installation of waterless urinals, and innovative approaches to water usage in toilets and other facilities.







Installation of rainwater harvesting & Groundwater recharging system

SRHU benefits from an annual rainfall of 2073.3 mm, which is harnessed through a well-planned rainwater harvesting system. The rainwater collected from different surfaces including rooftops, road/ paved areas, open areas and green belts across the campus contributes significantly to water conservation. This brings the total annual volume of rainwater available for harvesting to 3,77,892.7 cubic meters. To complement this, the university has constructed 13 recharge pits and 2 borewell recharge structures, contributing to 796.73 cubic meters of groundwater recharging.

### Waterless Urinals: A Game Changer

In an effort to conserve groundwater, SRHU has installed 150 waterless urinals across the campus. Each waterless urinal saves an impressive 151,000 liters of water annually, resulting in a total water saving of 2.26 crore liters per year.



Installation of waterless urinals to save water and energy

### **Smart Water Usage in Toilets**

SRHU has also implemented water-saving measures in its toilets. Sand bottles (1 liter each) are placed in cisterns, saving 15 liters per day for each of the university's 2000 toilets. This innovation has resulted in a total savings of 1.09 crore liters of water annually, based on 15 flushes per toilet each day.



### **Condensed Water Collection**

SRHU efficiently utilizes the condensed water collected from air conditioning units for cleaning purposes, contributing to water conservation efforts. This innovative practice helps reduce overall water consumption on campus, further supporting sustainability goals.





Condensed water collected from AC units used for cleaning purposes

# **Awareness Campaigns and Behavioural Change**

To further promote water conservation, SRHU has conducted a variety of awareness campaigns focused on water conservation. Pamphlets are distributed across the campus, and initiatives like Leakage Proof Campaigns and Water Day Celebrations engage the campus community in responsible water use. The university also promotes cleanliness through Swachhta Campaigns and utilizes condensed water collected from air conditioning units for cleaning purposes, contributing further to reducing overall water consumption.



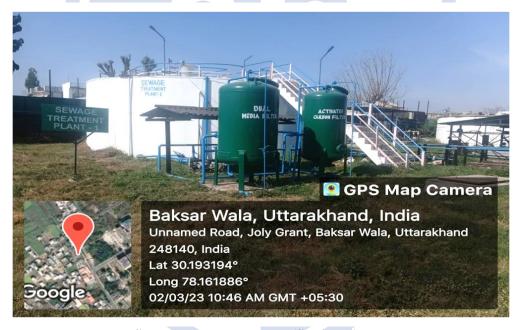


These collective efforts highlight SRHU's commitment to water conservation and sustainable campus operations. Through rainwater harvesting, groundwater recharging, the use of waterless urinals, and awareness campaigns, SRHU continues to lead by example in its mission to conserve water and protect natural resources for future generations.



# **Greywater Recycling**

The university has implemented greywater recycling systems that repurpose water from sinks and showers for non-potable uses such as landscape irrigation. This approach significantly reduces overall water usage while promoting resource efficiency and environmental stewardship. By adopting such sustainable water management strategies, SRHU not only minimizes its ecological footprint but also sets an example of responsible resource utilization, demonstrating its commitment to addressing the challenges of climate change through practical and scalable solutions. The campus operates an advanced Sewage Treatment Plant (STP) with a capacity of 1 MLD, utilizing MBBR technology and an extended aeration-activated sludge process to treat sewage effectively. The treated water complies with state pollution control board standards and is repurposed for irrigation in parks and green spaces, promoting sustainability and environmental compliance. Additionally, SRHU has implemented a 90 KLD Effluent Treatment Plant (ETP) to address wastewater from campus activities, including laboratories and laundry facilities. This treated wastewater is reused for non-potable purposes such as irrigation, conserving precious freshwater resources while minimizing environmental impact. These initiatives underscore SRHU's dedication to environmental stewardship, sustainable campus management, and proactive measures to combat climate change.



Sewage Treatment Plant (STP) at SRHU





Effluent Treatment Plant (ETP) at SRHU



**Recycling of Water from STP Aligning with SDG Goals** 

# 13.4.1 Commitment to Carbon Neutral University

The University is fulfilling its Sustainable Development Goal (SDG) 13 for indicators 13.4.1 (Commitment to Carbon Neutral University) and 13.4.2 (Target Year for Achieving Carbon Neutrality).

The analysis demonstrates that SRHU has not only shown a strong commitment toward carbon management but has also achieved carbon neutrality, with a net positive carbon balance during the audit year.

The Green Audit Report for SRHU University assessed the greenhouse gas (GHG) emissions across all three scopes as per the GHG Protocol and ISO 14064 standards.

SRHU University demonstrates a robust institutional commitment to climate action and carbon neutrality through the following initiatives:

- 1. **Renewable Energy Leadership:** Installation of a 2.5 MW solar photovoltaic system that meets the majority of campus electricity demand, reducing dependence on grid-based power and fossil fuels.
- 2. **Green Campus Infrastructure:** Energy-efficient building design, LED retrofitting, and continuous monitoring of energy consumption.



- Transportation Management: Promotion of EVs, shuttle services, and carpooling to minimize vehicular emissions.
- 4. **Biodiversity Conservation:** Maintenance of 6,000 trees and continuous afforestation efforts across campus.
- 5. **Solid Waste and Water Management:** Composting, waste segregation, and wastewater recycling that reduce indirect emissions.
- 6. **Institutional Policy Commitment:** Regular sustainability audits, internal awareness drives, and integration of SDGs into university operations and academics.

Emission Scope	Description	Emissions (tCO2e)
Scope 1	Direct emissions from stationary and mobile combustion (diesel generators, LPG, institutional vehicles, etc.)	921.38
Scope 2	Indirect emissions from purchased electricity	9.21
Scope 3	Other indirect emissions (waste, employee commuting, purchased goods, and services)	2,381.74
Total Emissions		3,312.33

# 13.4.2 Achieved by Date

Based on the verified results of the 2024 audit, SRHU has already achieved a carbon-positive status, meaning its offsets exceed its total greenhouse gas emissions. Therefore, SRHU can officially declare that it has achieved carbon neutrality in 2024. For policy continuity and strategic enhancement, Ecoscience Consultancy recommends the following framework to maintain and strengthen carbon neutrality until 2029 and beyond.

# Carbon Neutrality Policy Framework (2024-2029)

To sustain and enhance SRHU's carbon-neutral status through continuous reduction of GHG emissions and expansion of offset mechanisms.



Scope	Key Actions (2024-2029)	Expected Outcome
Scope 1 (Direct Emissions)	Transition to electric vehicles and renewable-fueled DG alternatives	Improve fuel efficiency in logistics and campus transport
	Promote biogas and LPG optimization	Reduction in direct fossil fuel use by 30%
	•	•
Scope 2 (Indirect Emissions)	Implement smart metering and energy efficiency upgrades	Expand solar PV capacity by 20%
	Ensure 100% renewable power procurement	Maintain zero Scope 2 emissions
	•	•
Scope 3 (Other Indirect Emissions)	Develop green procurement policy	Promote public transport and cycling among staff/students
	Strengthen waste management and recycling systems	Reduction in Scope 3 by 25%
Offsets and Sequestration	Expand campus afforestation (additional 4,000 trees)	Participate in verified carbon credit mechanisms
	Implement soil carbon enhancement projects	Maintain positive carbon balance (>+2,000 tCO2e/year)

The SRHU, in alignment with India's Nationally Determined Contributions (NDCs) under the Paris Agreement and the United Nations Sustainable Development Goals (SDG 13), hereby declares its commitment to sustain its carbon-neutral status from the year 2024 onwards, with continued improvement in emission reductions and climate-positive practices.

# **Target Year for Carbon Neutrality**: 2024 (Achieved)

SRHU shall continue to maintain carbon neutrality through 2029 and beyond, with an ongoing commitment to transparent reporting, verified audits, and environmental stewardship. This milestone is not an endpoint but a foundation for greater accountability and innovation in the years ahead. Our goal is to sustain this carbon-neutral status through 2029 and beyond, further strengthening our efforts across Scope 1, 2, and 3 emissions.