

Hemvati Nandan Bahuguna Garhwal University, Srinagar, Uttarakhand

Documentation of Flagship Schemes/Programmes/Initiatives aligned with Mission LiFE Themes

Name of the Ministry: Ministry of Education

S.No	Name of the Scheme/ program/Mission/ Initiative aligned with seven themes of Mission LiFE	Primary Goal	Key relevant outcomes aligned with Mission LiFE	Mission LiFE theme(s) aligned with Column (2)	Impact created due to implementation (for eg, Extent of energy saved, extent of water saved, reduced waste, etc., with comparison with baseline data of any particular year, preferably 2024-25 if data available)	Best practices that can be showcased globally	Any Relevant inputs
1	Solarization & Energy Management (HNBGU)	Reduce grid dependency & carbon emissions	760 KW solar panels (2020); 804,421 units/year to grid; reduced CO2	Energy Saving	Lower electricity bills; significant carbon reduction	Rooftop solar, hostel solar heaters, smart energy	Photo 4
2	Rainwater Harvesting & Water Management	Sustainable water use & river ecosystem	>6000 m ³ /year rainwater harvested; spring conservation	Water Conservation	Secured campus/community supply; better resilience	Rainwater tanks, integrated management	Photo 5
3	Sparsh Ganga / UMANG River Cleanliness	River cleanliness & awareness	Plastic-free, river clean-ups, water monitoring	Water Conservation/ Reduce Single-Use Plastic	Cleaner river, reduced plastic	Legal awareness drives, SSR documentation	Photo 4
4	Sustainable Food: MAPs, Millets	Livelihood & food security	3800 trainees; millet conference; MAPs value chain	Sustainable Food Systems	Rural income increase; tech transfer	Ghesh model village, pharma MoUs	Photo 4
5	Solid Waste Management & Composting	Waste minimization, recycling	Campus bins, compost pits, zero-burning	Reduce Waste	Less landfill, healthier environment	Awareness, signage, bio- compost	Photo 5
6	Yoga, Naturopathy & Wellness	Health, preventive lifestyle	Yoga Pakhwada, health camps; MoU	Healthy Lifestyles	Community health improvement	Free yoga camps, yoga rallies	Photo 7
7	E-waste Management Drives	Safe e-waste disposal	SDC MoU; authorized recycling	Reduce E-Waste	Reduced hazard; improved recycling	Collection drives, responsible disposal	Photo 8

Photo Reference:

Photo 1: Solar panels, rooftop

Photo 2: Rainwater system

Photo 3: River cleanliness drive

Photo 4: Millet/MAPs training

Photo 5: Compost & bins

Photo 6: CHITRA garden, afforestation

Photo 7: Yoga & health camp

Photo 8: E-waste drive

Save Energy

HNBGU has implemented robust initiatives to conserve energy through solarization and smart energy management. As of 2020, the university had installed approximately 760 KW of solar power panels at the Chauras campus, resulting in significantly reduced electricity bills and a substantial decrease in carbon emissions, particularly CO₂. The Himalayan adaptation model demonstrates successful deployment of more than 80 solar photovoltaic systems and solar street lighting, optimized for the high-altitude, geographically challenging campus environment. These initiatives align with the national goal of reducing grid dependency and promoting sustainable energy consumption in ecologically sensitive areas. Key impacts and measurable outcomes include energy cost savings, a reduction in carbon footprint, and the potential for replication by other institutions in the mountain region.

Harnessing solar energy into electricity

Solar energy is radiant light and heat from the Sun that is harnessed using a range of technologies such as solar power to generate electricity, solar thermal energy (including solar water heating), and solar architecture. Solar energy based decentralized and distributed applications have benefited millions of people in urban, semi urban, and rural landscapes in India by meeting their cooking, lighting and other energy needs in an environment friendly manner.

University has installed Solar panels to harness the solar energy in to electricity at Srinagar, Chauras and Tehri campuses. Besides, the solar heaters for water heating were installed in most of the Hostels of the University which help in reducing the dependency on electricity and consequently reducing the cost of electricity bills.

The solar panel installed in the rooftops of the buildings of different departments in three campuses (Tehri campus, Birla campus Srinagar and Chauras) generate about a total of 804421-unit (kWh) which is directly transmitted to the national grid.



Save Water

Hemvati Nandan Bahuguna Garhwal University (HNBGU), a Central University situated on the banks of the sacred **Alaknanda River**, plays a crucial role in advancing India's national mission of river and water conservation. Being located in the **Garhwal region of Uttarakhand — the land of origin of the Ganga River** — the University and its community share a deep emotional, cultural, and ethical connection with water. For the people of this Himalayan state, *Jal* (water) is not merely a natural resource but a **symbol of purity, heritage, and spiritual responsibility**. Guided by this ethos, HNBGU has implemented several academic, research, and outreach initiatives to promote sustainable water management and protect river ecosystems.

Water conservation efforts at HNBGU focus on integrated rainwater harvesting and springhead management initiatives. The annual water harvesting capacity exceeds 6000 cubic meters, monitored and approved via institutional mechanisms. A comprehensive mountain water management model combines high-volume rural supply with research-backed springhead conservation and erosion control, safeguarding water security for vulnerable ecosystems and communities within the university's operational area. Ongoing data collection and impact assessment support continued water resource management and resilience building.

Sparsh Ganga to UMANG: Evolution of a River Awareness Movement

As documented in the University's Self Study Report (SSR), the journey began with the Sparsh Ganga Program, initiated by the NSS units of HNBGU to promote Ganga cleanliness and public awareness. Over time, this initiative evolved into a more structured and institutionally recognized mission named UMANG — University Mission for Awareness on Namami Gange.

Under UMANG, the University conducts legal awareness drives, plastic-free campaigns, river cleanliness events, and water quality monitoring programmes in collaboration with local communities, schools, and government departments.

“Himalayan Ninad” — Cultural Awareness for Environmental Conservation

According to the Annual Quality Assurance Report (AQAR, 2021–22), the Namami Gange Cell of HNBGU organized a cultural workshop titled “Himalayan Ninad.” This unique event brought together Himalayan folk artists, students, and environmental activists to highlight the interlinkage between mountain culture, river ecology, and sustainable living practices.

The workshop served as a platform to integrate traditional wisdom with modern environmental consciousness.

3. Publication: “Prakriti Path, Ganga Path”

HNBGU published a book titled “Prakriti Path, Ganga Path,” which documents the Himalayan journey of the Ganga River and explores its ecological, cultural, and spiritual significance. The publication emphasizes environmental sustainability through cultural narratives, inspiring readers to view river conservation as both a scientific and moral obligation.

4. Research Initiative: Namami Gange – SPMG Project

The Department of Environmental Sciences at HNBGU is actively engaged in applied research for the Namami Gange Programme. One of its key projects, sponsored by the State Program Management Group (SPMG), Namami Gange, is titled: “Social and Environmental Audit of 10 Sewage Treatment Plants (STPs).” This project involves scientific monitoring and assessment of wastewater treatment systems to ensure that river pollution

is minimized and treated water meets environmental standards. This signifies the University's direct research contribution to the national river rejuvenation efforts.

5. Academic Integration and Student Engagement

HNBGU has incorporated environmental stewardship into its academic framework.

- The University has introduced a compulsory “Self and Social Development” (SSD) two-credit course for all undergraduate students, promoting community engagement and environmental awareness, including Ganga and water conservation activities.
- As per the National Education Policy (NEP 2020) alignment, HNBGU has reoriented its curricula to reflect Sustainable Development Goals (SDGs), especially Goal 6: Clean Water and Sanitation and Goal 15: Life on Land.

6. Research on Himalayan Aquatic Biodiversity

The University houses a dedicated Department of Himalayan Aquatic Biodiversity, which conducts research on river ecosystems, aquatic fauna, and water quality assessment of Himalayan rivers including the Alaknanda and its tributaries.

Through advanced laboratory facilities and field research, the department contributes to understanding freshwater biodiversity, pollution patterns, and climate change impacts, directly supporting conservation of the Ganga basin.

7. Commitment to Ethical and Cultural Responsibility

HNBGU's proximity to the Alaknanda River reinforces its cultural and spiritual obligation toward water preservation.

For the academic and local community alike, protecting the river is not only an environmental duty but a moral and emotional commitment to sustain the sacred Himalayan waters that form the lifeline of northern India. Through consistent research, education, and outreach, HNBGU continues to act as a guardian of Himalayan water heritage and sustainable development.

Say No to Single-Use Plastic

In an effort to reduce plastic waste, HNBGU enforces strict bans on single-use plastics accompanied by frequent cleanliness drives to raise awareness. Complementary strategies include campus-wide organic waste recycling and a plastic-free campus policy. These efforts feature zero-burning policies and involved staff to ensure proper composting and enforcement of the plastic ban. This theme's initiatives contribute to substantial reductions in campus-generated plastic waste and promote environmentally responsible behaviours throughout the community. Further quantitative evaluation of plastic waste reduction is encouraged.

Adopt Sustainable Food Systems

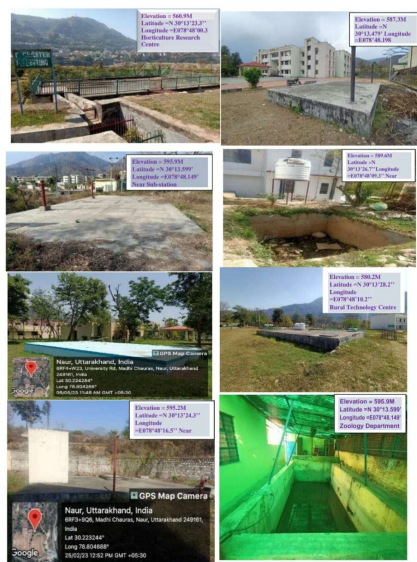
The university's sustainable agriculture program, centering on the Himadya agri-resource and extension initiatives, targets livelihood improvement and food security. Over 3800 villagers receive training in the cultivation of medicinal and aromatic plants (MAPs), facilitating a transition to high-value, eco-friendly crop production. The land-to-land mountain agricultural model has successfully transferred technology and protected indigenous

seeds and food varieties, merging traditional knowledge with modern sustainability principles. Comprehensive documentation of crop yields and food security metrics is presently being compiled.

The National Conference on "Millets Diversity, Productivity, Value Chain and Startup Possibilities in Uttarakhand: Opportunities and Key Challenges" was organized from March 14-16, 2024, by the Department of Rural Technology at Hemvati Nandan Bahuguna Garhwal University (HNBGU), Srinagar Garhwal, Uttarakhand. The conference focused on promoting sustainable farming systems in the mountainous region of Uttarakhand, addressing critical themes such as sustainable agriculture, indigenous knowledge systems, value addition in millets, and the promotion of millet-based startups.

Reduce Waste

HNBGU has developed multiple practices aimed at minimizing waste, with a particular emphasis on organic waste and plastics. Institutional policies enforce the elimination of single-use plastics and the adoption of biodegradable alternatives. Waste diversion activities include effective organic waste recycling and composting upheld by a zero-burning policy. Staff participation ensures that waste management protocols are followed and improved continuously. Ongoing updates on waste reduction volumes and operational efficiency are needed.



Waste, in simple terms, is any material that is no longer useful to us. It is what we discard or throw away after we have no use for it anymore. The waste mostly comes from classrooms, offices, laboratories, hostel kitchen/canteen, and school grounds. Different areas generate different kinds of waste. Solid wastes are generally of two kinds: (a) degradable organic matter (such as food waste, plant litter, cloth, paper, excreta, etc.) and (b) non-degradable matter (both mineral matter and organic matter) such as construction waste, metal cans, plastic, polythene, glass, etc.). The scavenger animals, fungi and bacteria can utilize and break down only the degradable organic matter into simple substances that return for nature's cycling. The non-



degradable wastes accumulate on the land surface, and usually provide refuges to disease-causing and harmful organisms. Disease-causing waste is such a huge problem because we do not manage the waste we create. To begin with, it is a nuisance, an environmental hazard, and adversely affects green campus and surrounding natural environment. The sustainable solution to address the issue of waste is to begin by reducing waste in the first place, and forming new attitudes and habits regarding waste generation, management and disposal. In this regard we are creating awareness among the students to understand various aspects of waste and its management, and the necessary individual and collective efforts and actions needed in dealing with waste in campus and outside the campus. Every department in the university have separate disposal bins for different kinds of wastes and placed at the proper location. In most of the places of the university campus as well as hostel kitchens/ canteen or other important places the waste

generated usually segregated at the source into biodegradable and non-biodegradable in the disposal bins and further disposed properly at the required sites for the decomposition (bio-compost pits used for making manure) where signed board placed for the final disposal.

Lab to Land programme has got a great success in the area and has got acceptability in the society. Adopting the agro-technology developed by the HAPPRC, numbers of farmers have initiated the cultivation of MAPs in their agriculture/waste land. Village Ghesh in Deval block of District Chamoli is a model village for cultivation of Kutki. The centre also helped in establishing MoU between MAPs growers and Pharma Companies for marketing of raw produce, thus ensuring income generation. During 2018-19, more than 30,570 seedlings of MAPs were distributed/ planted. Also, around 400 farmers and 600 students from different districts of Uttarakhand attended the awareness programmes organized by HAPPRC.

GREEN CAMPUS INITIATIVES

Department of Forestry and Natural Resources is doing extensive work in the area of afforestation and plantation activities within and outside of the campus. The Department is providing seeds and planting material to various stockholder's and for afforestation programme activities and also sharing the package of practice and related knowledge to the the people. The Department has already developed a herbal garden of trees (i.e. Terminalia chebula, Terminalia bellirica and Emblica officinalis) with the aim to provide future demand of market and other purposes.

Department of Horticulture has also taken lot of initiative in the many programmes of the campus for their organic products. Department of Horticulture with their planted fruit trees (Mango, kino, kiwi, Guava etc.) is developing many organic products and selling to them in open market using the Hole mark of the University. The Department is actively participating and planting various valuable species in the campus under Green Campus programme and providing species and knowledge to the farmers, institutions, colleges for plantations purposes. HAPPRC, since its inception has been consistently undertaking fundamental and applied research on mountain plants focusing more on high altitude plants and the centre has established an Alpine Research Station at Tung Nath (3400 m altitude).

Last so many years the HAPPRC is working on highly valued medicinal plants that are facing varying degree of threat and has developed the agro-technology of several highly valued endangered high altitude medicinal plant species. The centre has also successfully promoted cultivation of some of these species through transfer of technology and training to the farmers of the region and demonstration in farmers' field.

CHITRA Garden: Campus Horticulture Initiatives Through Reforming Activities (CHITRA) is one of the notable initiatives has been taken by



the university under the green campus and the major objectives behind the initiative is to develop the degraded /abandoned land into forest by planting diverse plant species having ecological and economic values. Besides, this initiative also adds aesthetic value of nature, increase calmness, improve physical health reduce loneliness, encourage social cohesion, culture and educational services. About a total of 2330 plants of different species particularly medicinal and aromatic, horticultural and other multipurpose species were planted in the CHITRA garden between 2020 to 2022 (Pl. see annexure no. 5 & 6).

Adopt Healthy Lifestyles

Holistic health promotion is anchored in integrating yogic science and wellness programs institutionally. Regular university-wide awareness campaigns and yoga sessions, including an annual yoga Pakhwada, nurture preventive physical and mental well-being. Wellness has been incorporated as an academic discipline, blending yoga, naturopathy, and wellness education into a formal curriculum, thereby fostering lifestyle changes aligned with health and environmental consciousness. 172 persons from the UBA adopted villages availed the facility of the health camp (38 got their diabetes tested, 64 eye tests, and 9 ECGs). Free medicines were provided to all the beneficiaries on the spot. Department of Naturopathy & Yoga HNBGU MoU with Yog Peeth Rishikesh for Five. Every month Yoga training programmed organized for international student's participants and Departments teachers participated as yoga trainer. Department of Naturopathy & Yoga has been making efforts to spread awareness about yoga and its benefits, in the local community. Free yoga camps were organized for students and teachers of and villages, free Yoga health camps were organized in the many villages of Pauri district adopted by the University. Yoga rally was organized by the department in collaboration with stakeholders. Yoga awareness camp organized by department every year January to June for yoga day celebration different palace of society like school. Villages, ghat, and Badrinath and Kedarnath.



Photograph of Yoga Department

Hemvati Nandan Bahuguna Garhwal University, Srinagar, Uttarakhand (HNBGU) has signed a Memorandum of Understanding (MoU) with Rishikesh Yogpeeth to collaborate on various activities related to Yoga training and Yoga certifications. Both parties will collaborate to take up the approved Yoga Course (Certificate, Undergraduate and Postgraduate) at Rishikesh Yogpeeth's campus.

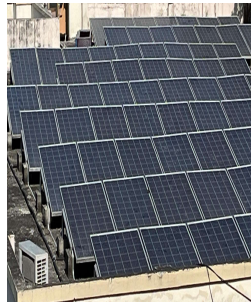
The Department of Economics at Hemvati Nandan Bahuguna Garhwal University (HNBGU), Srinagar Garhwal, organized a program on February 27, 2024, titled "Millets Cultivation in Uttarakhand: Value Addition & Startup Possibilities." The program highlighted livelihood generation, entrepreneurship development, and women empowerment through the production and processing of millets in Uttarakhand.

Millet cultivation in the state is gaining renewed focus due to its nutritional benefits and climate resilience. Value addition through processing technologies, such as millet de-hulling and flour production, is creating new market opportunities and enhancing income for small farmers, especially women. This initiative fosters women-led self-help groups and rural entrepreneurship, reducing drudgery and supporting economic independence.

Additionally, the university conducted a health awareness outreach workshop "Sanjeevani" on September 21, 2023, at BGR campus and Srinagar Garhwal, which included topics like cancer awareness and related health issues, contributing to community health education efforts. Together, these initiatives by HNBGU promote sustainable agriculture, rural entrepreneurship, and community health empowerment in Uttarakhand.

Reduce E-Waste

Focused e-waste management efforts include university-organized collection drives, particularly coordinated by the Computer Science and Engineering departments. HNBGU has instated time-to-time disposal practices for electronic and scrap hardware, coupled with a strategic partnership formalized through an MoU with the SDC Foundation. This collaboration aims to enhance sustainable disposal and recycling lifecycle management, addressing environmental impacts linked with electronic waste accumulation. Future reports on e-waste volume reductions and recycling efficiency are anticipated. To handle non-degradable electronic waste (e-waste) such as old computers, printers, and electronic gadgets, the university has a tendering system where E-waste is usually disposed of through authorized e-waste recyclers.



उद्यमिता के माध्यम से सशक्त बन सकते हैं युवा

गढ़वाल विवि में उद्यमिता सत्र के दौरान बोले अधिकाता छात्र कल्याण प्रो. ओपी गुप्ताई

मंसूर युव दलेशी

श्रीगंगा। हमेशा के लिए युवाओं को सशक्त बनाने के लिए हमें उद्यमिता को बढ़ावा देना चाहिए। उद्यमिता के माध्यम से युवा सशक्त हो सकते हैं। उद्यमिता के माध्यम से युवा सशक्त हो सकते हैं। उद्यमिता के माध्यम से युवा सशक्त हो सकते हैं।



उद्यमिता के माध्यम से युवा सशक्त हो सकते हैं। उद्यमिता के माध्यम से युवा सशक्त हो सकते हैं। उद्यमिता के माध्यम से युवा सशक्त हो सकते हैं।

विवि परिसर हरभरा बनाने को बीज बम और बीज बाल बनाए

गढ़वाल विवि परिसर हरभरा बनाने को बीज बम और बीज बाल बनाए। गढ़वाल विवि परिसर हरभरा बनाने को बीज बम और बीज बाल बनाए। गढ़वाल विवि परिसर हरभरा बनाने को बीज बम और बीज बाल बनाए।



हमेशा के लिए युवाओं को सशक्त बनाने के लिए हमें उद्यमिता को बढ़ावा देना चाहिए। उद्यमिता के माध्यम से युवा सशक्त हो सकते हैं। उद्यमिता के माध्यम से युवा सशक्त हो सकते हैं।



Hemvati Nandan Bahuguna Garhwal University (HNBGU)

01. Yoga for the World

The Rishikesh Extension Centre of the Department of Naturopathy & Yoga has been running monthly yoga programmes for five years, taking India's knowledge traditions global.

02. Global Outreach

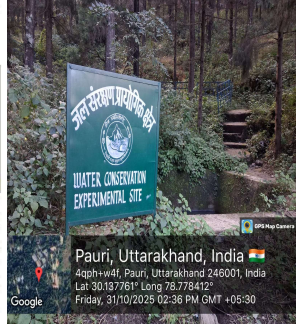
Completed 44 one-month batches, training 315 students from 68 countries.

03. Academic Leadership

The yoga programme is led by VC Prof. Shripokash Singh, with support from Dr. Vinod Nautiyal, Dr. Rishi Nautiyal, Dr. Anuja Rawat (H&D) and faculty.

पर्यावरण विज्ञान विभाग के छात्रों ने चलाया स्वच्छता अभियान

श्रीगंगा। गढ़वाल विश्वविद्यालय के पर्यावरण विज्ञान विभाग द्वारा चौरस परिसर में स्वच्छता अभियान चलाया गया। स्वच्छता अभियान चलाया गया। स्वच्छता अभियान चलाया गया।



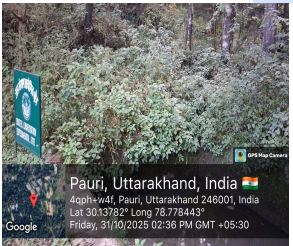
छात्रों ने किया बीज बम एवं बीज गैर का निर्माण

छात्रों ने किया बीज बम एवं बीज गैर का निर्माण। छात्रों ने किया बीज बम एवं बीज गैर का निर्माण। छात्रों ने किया बीज बम एवं बीज गैर का निर्माण।



छात्रों ने बैलून उड़ा कर किया बीज बम अभियान सप्ताह 2024 का शुभारंभ

छात्रों ने बैलून उड़ा कर किया बीज बम अभियान सप्ताह 2024 का शुभारंभ। छात्रों ने बैलून उड़ा कर किया बीज बम अभियान सप्ताह 2024 का शुभारंभ। छात्रों ने बैलून उड़ा कर किया बीज बम अभियान सप्ताह 2024 का शुभारंभ।





बागवानी और जैव प्रौद्योगिकी क्षेत्रों में शोध कार्यो को मिलेंगे नए आयाम
गढ़वाल विवि और आइसीएआर इंस्टीट्यूट में हुआ एमओयू

Prof. M S. Negi
Prof. Seema Dhawan
Dr. Shankar Singh
Dr. Sumanlata
Mr. Vipin Singh