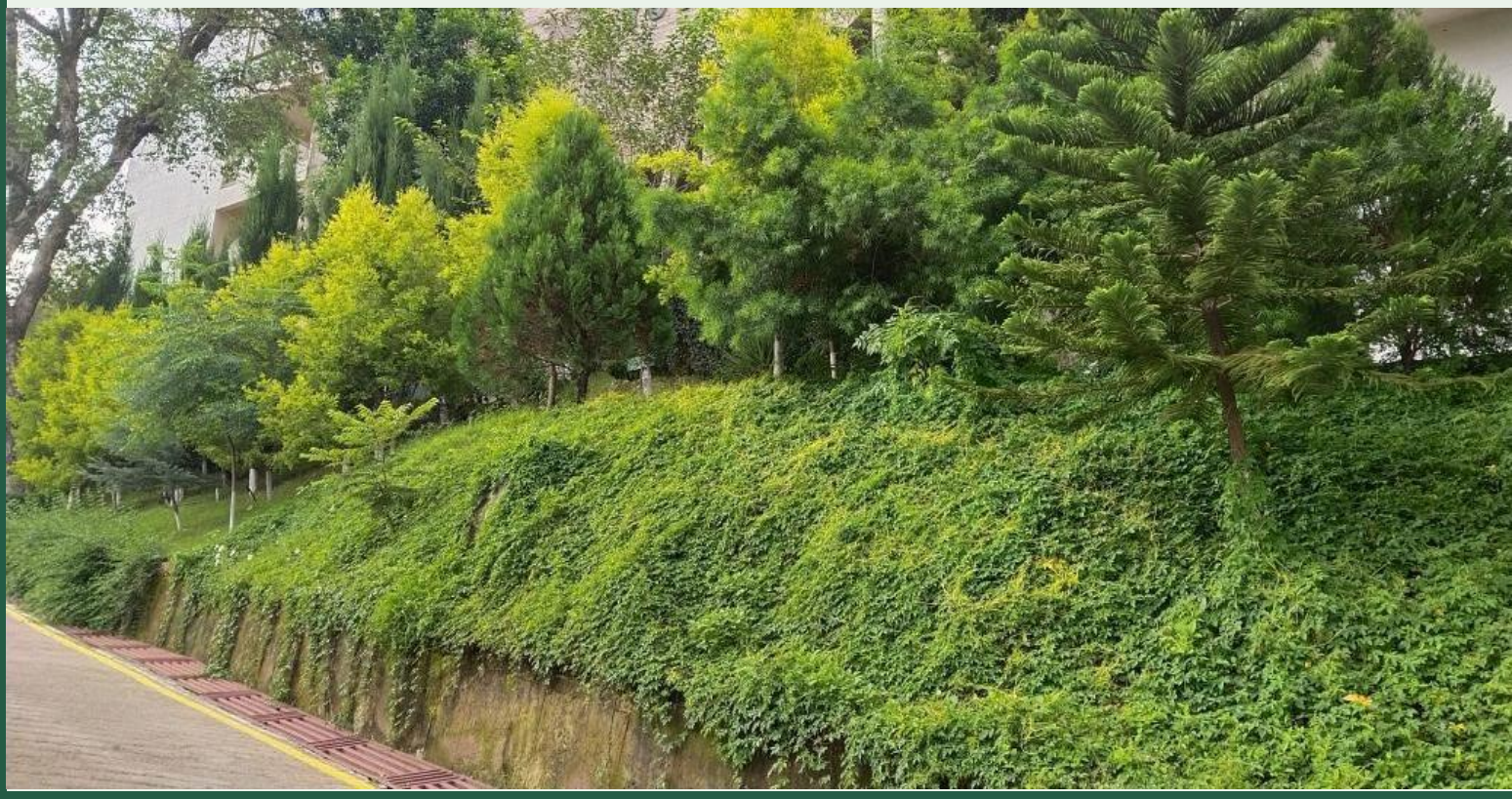
SUSTAINABLE DEVELOPMENT GOAL

15 Life on Land

Progress Report

2025



Shoolini University

Shoolini University of Biotechnology and Management Sciences

Bajhol, Solan, Himachal Pradesh - 173229

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1. Introduction

Shoolini University's contribution to SDG 15: Life on Land begins with the landscape in which it operates. Its Himalayan campus brings education into close contact with forests, planted slopes, gardens and agricultural learning spaces. Caring for these living systems connects campus planning with biodiversity conservation, responsible land use and the well-being of surrounding communities.

The University's approach combines research with practical stewardship. Plantation and landscape management support green cover; soil and agricultural research examine the conditions that sustain productivity; and community engagement connects scientific knowledge with local experience. Students participate through field learning, clean-up activities and service initiatives that build awareness of the relationship between everyday choices and terrestrial ecosystems.

This report presents the 2025 record through five connected areas: campus biodiversity and planting, soil and land management, research, community and rural engagement, and environmental governance. It draws on the annual species record, publications dated 2025, the Social Project Report for January–June 2025, Unnat Bharat Abhiyan activities, and the renewed environmental management certificate.

Reporting scope

Continuing institutional practices are redrafted from the previous report. Dated activity accounts relate to 2025; earlier conferences and plantation figures are not carried forward as new annual achievements. Photographs with supplied 2025 overlays retain those markings. Added overlays identify event dates and approximate venue locations; unrecorded capture times are not invented.

Public evidence links

Agriculture workshop: farmer interaction and soil management

ICSSR conference on agri-entrepreneurship, March 2025

World Environment Day: campus plantation and green choices

UBA: rural livelihoods workshop, 14 July 2025

2. Biodiversity Conservation and Ecosystem Restoration

Biodiversity conservation at Shoolini University links the protection of living systems with the generation of knowledge about them. The University's established environmental work brings together the Centre for Environment, Energy and Sustainability, the School of Agriculture and research groups concerned with Himalayan biodiversity. Campus planting and field research provide complementary ways of understanding ecological relationships.

Understanding Himalayan habitats

The earlier institutional framework emphasised medicinal plants, traditional botanical knowledge, forest organisms and species-distribution studies. The 2025 publication record extends this focus through research on the endangered medicinal plant Aconitum heterophyllum, Himalayan plant communities, ethnomedicinal knowledge, soil fauna and forest habitats associated with Taxus contorta. These studies build knowledge relevant to conservation planning and habitat management.

A campus that supports ecological learning

Green belts, botanical areas and planted slopes create opportunities for students to observe plant diversity and the interaction between vegetation, soil and water. The annual planting record adds detail to this landscape through species-wise counts and a separate list of plants identified as drought-tolerant. Such documentation supports decisions about maintenance, future planting and the suitability of species for local conditions.

From planting to sustained care

The contribution of a plantation programme depends on the survival and development of its plants. Water availability, soil conditions, species choice and continuing maintenance influence the ecological value of each planting. Recording these factors alongside planting numbers provides a stronger basis for assessing long-term outcomes.

The University's wider partnerships and extension activities connect this campus-based work with environmental awareness and agricultural practice in nearby communities. In 2025, documented clean-up and plantation activities provided practical settings for student participation, while farmer-training programmes addressed sustainable crop management and resource use.

3. Tree Plantation and Water-Conscious Landscaping

The 2025 campus plantation record covers 22 named plant and tree species, including ornamental, fruit-bearing and landscape varieties. Koelreuteria accounts for the largest recorded quantity, followed by Wild Cherry and Weeping Willow. The planting programme strengthens the landscape while creating a documented basis for species selection and future maintenance.

The source narrative reports 1,284 saplings. The 22 species-wise entries sum to 1,275, leaving a difference of nine saplings that requires reconciliation. The table preserves the original species names and quantities; its reported total is shown separately from the calculated row total.

SR No.	Plant / tree species	Saplings planted
1	Araucaria	48
2	Bottle Brush	39
3	Drake	45
4	Eugenia	38
5	Gooseberry	48
6	Golden Bottle Brush	37
7	Jamun	49
8	Jacaranda	56
9	Kachnar	53
10	Koelreuteria	246
11	Lagerstroemia	29
12	Nerium	37
13	Paltoform	32
14	Pencil Juniper	55
15	Punica	51
16	Putranjiva	44
17	Populur	43
18	Silver Oak	63
19	Tuni	37
20	Thuja	30
21	Weeping Willow	82
22	Wild Cherry	113

Reported source total: 1,284. Sum of listed rows: 1,275. Difference: 9. Species labels follow the supplied record; they are not a taxonomic verification.

Drought-tolerant planting

The source identifies 661 saplings across ten recorded species as drought-tolerant. These plants can support water-conscious landscaping once established, subject to local climate, soil conditions and suitable maintenance. The drought-tolerant list is a subset of the overall plantation record and must not be added to the total again.

SR No.	Species identified as drought-tolerant	Saplings
1	Koelreuteria	246
2	Silver Oak	63
3	Pencil Juniper	55
4	Kachnar	53
5	Punica (Pomegranate)	51
6	Gooseberry (Amla)	48
7	Bottle Brush	39
8	Golden Bottle Brush	37
9	Nerium	37
10	Paltoform	32
	Total	661

Plant selection is complemented by the University's documented rainwater harvesting, groundwater recharge, permeable surfaces and reuse of harvested water for landscape care. The combined approach connects vegetation management with responsible water use. Continued survival monitoring and irrigation records will help assess the benefits beyond the initial planting stage.

3.1 Campus Landscapes and Planted Areas



Landscape area below Yogananda Library



Plants and trees near Yogananda Library

Campus photographs and their existing 2025 overlays are reproduced from the supplied species document.



Landscape area outside A Block



Drought-tolerant planting at the Academic Block

The existing photograph overlays are retained as supplied; capture metadata have not been independently verified.

4. Sustainable Land Management and Soil Conservation

Healthy soil is central to the resilience of Himalayan landscapes. Shoolini University's established approach to land management links organic-waste recovery, soil research and agricultural extension. These activities address the need to maintain productive soils while reducing avoidable pressures from waste, poorly matched inputs and unsustainable land use.

Organic matter and resource recovery

The continuing campus framework includes composting of biodegradable material from gardens and other university operations through vermicomposting and aerobic processes. Returning suitable organic matter to landscaped and cultivated areas supports resource circulation. The 2025 research portfolio also includes food-waste conversion to compost and the use of organic and biochar amendments in contaminated soils.

Scientific crop and nutrient management

Farmer engagement in 2025 addressed soil testing, nutrient application, pest and disease management, and protected cultivation. The workshop record links expert advice with farmers' questions, allowing scientific approaches to be discussed in the context of local crops and growing conditions. The relevance to SDG 15 lies in informed land management and the responsible use of agricultural inputs.

Research for resilient landscapes

Publications on Himalayan soil-fauna communities, agri-silvicultural systems, persistent pollutants and landslide-susceptibility mapping extend the University's contribution beyond campus maintenance. These studies examine the physical and biological processes that shape soil function, habitat quality and land-use decisions.

The University's environmental approach therefore combines practical action with the evidence needed to improve it. Planting, waste reduction and farmer training are valuable interventions; documenting survival, soil condition and adoption of recommended practices remains essential to evaluating their lasting effects.

5. Research and Innovation for Ecosystem Protection

Shoolini University's 2025 research portfolio connects terrestrial conservation with soil processes, environmental remediation and sustainable resource management. The supplied SDG 15 dataset contains 40 publications dated 2025, including articles, reviews and book chapters. Their themes range from endangered medicinal plants and Himalayan forest fauna to biochar, bioremediation, agricultural systems and habitat restoration.

The full export contains 139 publications across its stated 2021–2025 window. Only records with publication year 2025 appear below. Titles, author lists, publication sources and document types follow the supplied dataset. Scopus is identified as the data source, with an update date of 18 October 2026 and export date of 27 October 2026.

Selected research directions

Conservation-focused work includes population and habitat-suitability assessment of Aconitum heterophyllum, studies of Himalayan plant communities, earthworm and ant distributions, and the conservation implications of invasive species. Soil and restoration research addresses organic amendments, pollutant remediation, microbial processes and biomass recovery. These publications provide a knowledge base for further investigation and application; publication counts alone do not measure field-level ecological recovery.

Publications published in 2025

SR No.	Publication title and authors	Source / type / year
1	Sustainable management of post-phytoremediation biomass Mukherjee, S.; Leri, A.C.; Bandaranayaka, C.; Vázquez-Núñez, E.; Barros, R.; Khan, A.H.A.; Zhou, P.; Zhang, T.; Bernal, M.P.; Clemente, R.; Bolan, N.	Energy, Ecology and Environment Review | 2025
2	Probiotics and Synbiotics: Applications, Benefits, and Mechanisms for the Improvement of Human and Ecological Health Bhatia, A.; Sharma, D.; Mehta, J.; Kumarasamy, V.; Begum, M.Y.; Siddiqua, A.; Sekar, M.; Subramaniyan, V.; Wong, L.S.; Mat Rani, N.N.I.	Journal of Multidisciplinary Healthcare Review | 2025
3	Multi-mechanism synergistic adsorption of lead and cadmium in water by structure-functionally adapted modified biochar: A review Zhang, D.; Wu, B.; Wang, T.; Y■lmaz, M.; Sharma, G.; Kumar, A.; Shi, H.	Desalination and Water Treatment Review | 2025
4	Advances in microbial fuel cell technologies for bioremediation and energy recovery from wastewater Bose, D.; Bhattacharya, R.; Gopinath, M.; Sarkar, A.; Pandya, R.S.; Jaiswal, A.	Sustainable Chemistry for the Environment Review | 2025
5	Bioremediation of pharmaceuticals waste and pesticides using various microorganisms: A review Bhaskaralingam, A.; Sharma, G.; Wang, T.; Kumar, A.; Dhiman, P.; Kumar, D.; Shi, H.	Process Safety and Environmental Protection Review | 2025

SR No.	Publication title and authors	Source / type / year
6	Population assessment and habitat suitability modelling of endangered medicinal plant, Aconitum heterophyllum Wall. ex Royle in the western Himalaya Tomar, S.; Thakur, S.; Kanwal, K.S.; Bhatt, I.D.; Puri, S.	Scientific Reports Article | 2025
7	Microalgae-based remediation of pharmaceutical contaminants: Emerging strategies and technological synergies Narayanan, I.; Rajamanickam, R.; Singh, R.K.; Singh, P.; Prabhu, A.A.; Pandey, A.; Pradhan, N.; Nancharaiah, Y.V.; Kumar, V.; Selvasembian, R.; Mal, J.	Discover Applied Sciences Review | 2025
8	Barium distribution, dynamics and fate in terrestrial and aquatic environments Sharma, S.; Bolan, S.; Mukherjee, S.; Guimarães Guilherme, L.R.; Gomes Viana, D.; Duim Ferreira, A.; Bakke Myrvang, M.; Almås, Å.R.; Folven Gjengedal, E.L.; Cappuyns, V.; Bueno Guerra, M.B.; de Oliveira, C.; Lamb, D.; Siddique, K.H.M.; Bolan, N.	Environmental Research Review | 2025
9	Role of Organic and Biochar Amendments on Enhanced Bioremediation of Soils Contaminated with Persistent Organic Pollutants (POPs) Sharma, S.; Bolan, S.; Mukherjee, S.; Petruzzelli, G.; Pedron, F.; Franchi, E.; Fonseka, W.; Wijesekara, H.; Wang, L.; Hou, D.; Siddique, K.H.M.; Bolan, N.	Current Pollution Reports Review | 2025
10	Decoding oxidative stress regulation in food crops exposed to heavy metals: interdisciplinary strategies for sustainable mitigation Thakur, N.; Sharma, P.; Negi, N.; Sharma, N.; Sharma, P.	Discover Sustainability Review | 2025
11	Growth and yield responses of common bean (Phaseolus vulgaris L.) to tree lopping and organic manure under Morus-based agri-silvicultural system Saakshi; Thakur, C.L.; Bhardwaj, D.R.; Sharma, U.; Bhatia, A.K.; Sharma, S.; Sharma, S.; Gudeta, K.; AlNadhari, S.; Alansi, S.	Trees, Forests and People Article | 2025
12	Microbial-based conversion of food waste for sustainable bioremediation and utilization as compost Hamid, B.; Yatoo, A.M.; Sayyed, R.Z.; Dineshkumar, R.; Al-Khayri, J.M.; Bashir, Z.; Sillanpää, M.; Majeed, N.	Biomass Conversion and Biorefinery Review | 2025
13	Optimizing the conditions of biowastes hydrothermal treatment and predicting phosphorus fate in the hydrochar and liquid phase using machine learning Ge, X.; Zhang, T.; Mukherjee, S.; Chen, Y.; Wang, X.; Chen, X.; Liu, M.; Ali, E.F.; Rinklebe, J.; Lee, S.S.; Shaheen, S.M.	Biochar Article | 2025

SR No.	Publication title and authors	Source / type / year
14	Sustainability of Plant Communities in the Himalayas: Issues and Prospects Rana, B.; Thakur, M.; Jamwal, K.	Plant Tissue Culture Technology: An Innovative Tool for the Propagation, Management, and Conservation of Himalayan Biodiversity Chapter | 2025
15	Distribution and abundance of a soil centipede, Tygarrup nepalensis Shinohara, 1965 (Mecistocephalidae: Geophilomorpha: Chilopoda) in a moist temperate forest in Northwest Himalaya Negi, D.; Ahmed, S.; Sambyal, D.; Stašiov, S.; Julka, J.M.	Folia Oecologica Article | 2025
16	Exploration of ethnomedicinal plants of Western Himalayas used in the management of gastrointestinal disorders Dadhwal, R.; Sharma, S.; Banerjee, R.	Phytochemistry Reviews Article | 2025
17	CURRENT STATUS OF EARTHWORM FAUNA (CLITELLATA: MEGADRILI) OF PARAMBIKULAM TIGER RESERVE, WITHIN THE WESTERN GHATS OF KERALA, INDIA Narayanan, S.P.; Paliwal, R.; Thomas, A.P.; Julka, J.M.	Journal of the Bombay Natural History Society Article | 2025
18	Investigation of nutritional and phytochemical properties of wild medicinal plant species Kumari, M.; Singh, S.; Puri, S.; Thakur, N.; Thakur, A.; Dulta, K.; Shukla, R.K.; Dehghani, M.H.; Ghosh, S.	Scientific Reports Article | 2025
19	A review on the bioweathering and bioremediation of asbestos containing waste materials in soils Mukherjee, S.; Sharma, S.; Bolan, S.; Wang, L.; Berry, T.-A.; Wallis, S.L.; Blanchon, D.; Hou, D.; Geoffroy, V.A.; Siddique, K.H.M.; Bolan, N.	Soil Research Review | 2025
20	Growth response of cabbage (Brassica oleracea) to TiO2 nanoparticles exposure in Inceptisol of north-western mid-hills of Himachal Pradesh Brar, P.S.; Bhardwaj, G.; Kaushal, R.; Bhardwaj, R.K.; Singh, U.; Sharma, U.	Indian Journal of Agricultural Sciences Article | 2025
21	Bioremediation processes for the treatment and reuse of water and wastewater Yadav, D.; Khare, N.; Sharma, I.; Singh, A.; Chakraborty, M.; Pandey, S.; Mehta, D.	Water Remediation Methods and Wastewater Treatment Chapter | 2025
22	Integrating AHP Decision-Making Tool for Landslide Susceptibility Zone Mapping: Insights from Mandi, Himachal Pradesh Mahato, P.; Srivastava, S.; Pandey, S.	Operations Research Forum Article | 2025

SR No.	Publication title and authors	Source / type / year
23	Waste Biomass to Bioenergy with Regulatory Framework for a Sustainable Economy Bose, D.; Bhattacharya, R.; Raj, R.; Ganti, L.S.P.; Sarkar, A.; Gopinath, M.	Digital Twins and ESG Chapter | 2025
24	Effects of soil and climatic variables on earthworm community structure at altitude in the Himalayan forest ecosystem Ahmed, S.; Hussain, N.; Rajan, R.S.P.; Julka, J.M.; Marimuthu, N.	Community Ecology Article | 2025
25	Challenges of water remediation, waste-water treatment, and its future direction Saruchi; Kumar, V.; Muskan; Dhiman, J.; Pandey, S.	Water Remediation Methods and Wastewater Treatment Chapter | 2025
26	Bioprospecting and Biodiscovery for Sustainable Development Sonia; Banerjee, R.; Yadav, S.; Mishra, S.; Jaiswal, K.	Biotechnological Innovations for Sustainable Biodiversity and Development Chapter | 2025
27	Numerical investigation of the oxygen transfer rate in an open channel system Puri, D.; Sihag, P.; Thakur, M.S.	Water Practice and Technology Article | 2025
28	Synthetic Biology and Its Application in Biodiversity Conservation Radha; Sharma, N.; Kumari, N.; Prakash, S.; Pundir, A.; Puri, S.	Biotechnological Innovations for Sustainable Biodiversity and Development Chapter | 2025
29	Spatial distribution of exotic lumbricid earthworm Octolasion tyrtaeum in endangered Taxus contorta stands across Northwest Himalayan moist temperate forests Negi, D.; Ahmed, S.; Julka, J.M.; Alotaibi, M.O.; Gudeta, K.; Sharma, U.; Sharma, S.	Scientific Reports Article | 2025
30	Characterization of unique Himalayan rice germplasm: DUS evaluation, morphological profiling, and molecular fingerprinting Rachappanavar, V.; Sharma, J.K.; Sharma, M.K.	Journal of Crop Science and Biotechnology Article | 2025
31	From source to solution: Addressing microplastic pollution through advanced remediation strategies Koul, S.; James, A.; Suvedi, D.; Shard, S.; Nanda, R.R.; Verma, S.; Sharma, A.; Nagraik, R.	Journal of Applied Biology and Biotechnology Article | 2025
32	Invasive Species and Biodiversity: A Global Challenge for Conservation Dadhwal, R.; Yadav, P.; Banerjee, R.	Biotechnological Innovations for Sustainable Biodiversity and Development Chapter | 2025

SR No.	Publication title and authors	Source / type / year
33	Food Security and Biodiversity Priyanka; Chauhan, P.; Chaurasia, M.	Biotechnological Innovations for Sustainable Biodiversity and Development Chapter | 2025
34	Screening of selected compounds against Enterocytozoon hepatopenaei (EHP) in shrimps: an in silico and in vitro approach Kamal, M.T.; Satheesh, N.; Sharma, S.; Parmar, A.	Aquaculture International Article | 2025
35	Microbial Innovations for Sustainable Biocontrol and Bioremediation: Exploring Strategies in Wastewater Treatment and Environmental Restoration Rana, S.; Sharma, G.	Microbial Insights into Wastewater Treatment and Environmental Sustainability Chapter | 2025
36	Disease and Biodiversity Decline Sharma, D.; Siwach, S.; Puri, S.	Biotechnological Innovations for Sustainable Biodiversity and Development Chapter | 2025
37	A Machine Learning-based Smart Water Management Framework for Agricultural Irrigation using a Stacked Ensemble Model Kannan, N.; Krishna, E.; Josephson, P.J.; Kant, R.; Rathnamma, M.V.; Bharathi, A.	Proceedings of 5th International Conference on Trends in Material Science and Inventive Materials, ICTMIM 2025 Conference Paper | 2025
38	Metal Detoxification in Land Plants: From Bryophytes to Vascular Plants Kumar, V.; Sharma, N.; Singh, S.; Laller, R.	Plant-Microbe Interaction under Xenobiotic Exposure Chapter | 2025
39	Spatial distribution of ants in mixed temperate forest with endangered tree species Taxus contorta Griff stands in himalayan biodiversity Hotspot Devi, S.; Sehar, A.; Julka, J.M.; Rilta, J.S.	Tropical Ecology Article | 2025
40	Microorganisms for Habitat Restoration Guleria, S.; Singh, K.; Sobti, R.C.; Yadav, S.; Mishra, S.; Jaiswal, K.	Biotechnological Innovations for Sustainable Biodiversity and Development Chapter | 2025

6. Community Participation and Environmental Awareness

Community engagement translates environmental principles into visible action. The 2025 Social Project Report documents litter removal, plastic-waste collection and sustainability education, while the Unnat Bharat Abhiyan report adds a plantation and cleaning drive. These activities vary in their connection to SDG 15: forest clean-up and planting are direct interventions; reuse and awareness initiatives provide supporting contributions.

SR No.	Activity	Date	Location
1	Clean Trails, Clear Minds: Jakhu Cleanliness Drive	6 February 2025	Jakhu Temple trail, Shimla
2	Eco-Innovation at Moksh	28–30 March 2025	Badminton Court, Shoolini University
3	Bottles for Change: Campus Cleaning Drive	22 April 2025	Shoolini University campus
4	Our Power, Our Planet: Earth Day Eco-Challenge	24 April 2025	Covered Parking, Shoolini University
5	Roots of Change: Plantation and Cleaning Drive	2 October 2025	Campus and nearby areas, Shoolini University

The accounts below retain the dates and places recorded in the source reports. Activities originally associated with other SDGs are included only where their content has a clear connection to terrestrial environmental care. Attendance, waste weight and survival outcomes are not estimated where the source provides no figures.

6.1 Clean Trails, Clear Minds: Jakhu Cleanliness Drive

6 February 2025 | Jakhu Temple trail, Shimla

Shoolini University worked with the Healing Himalayas Foundation on a clean-up of the Jakhu Temple path and surrounding forest. Student volunteers and faculty collected plastic and discarded material, encouraged responsible visitor behaviour, and segregated the collected waste. The activity contributed to terrestrial stewardship by addressing litter in a forested visitor landscape.



Volunteers collecting litter along the Jakhu trail



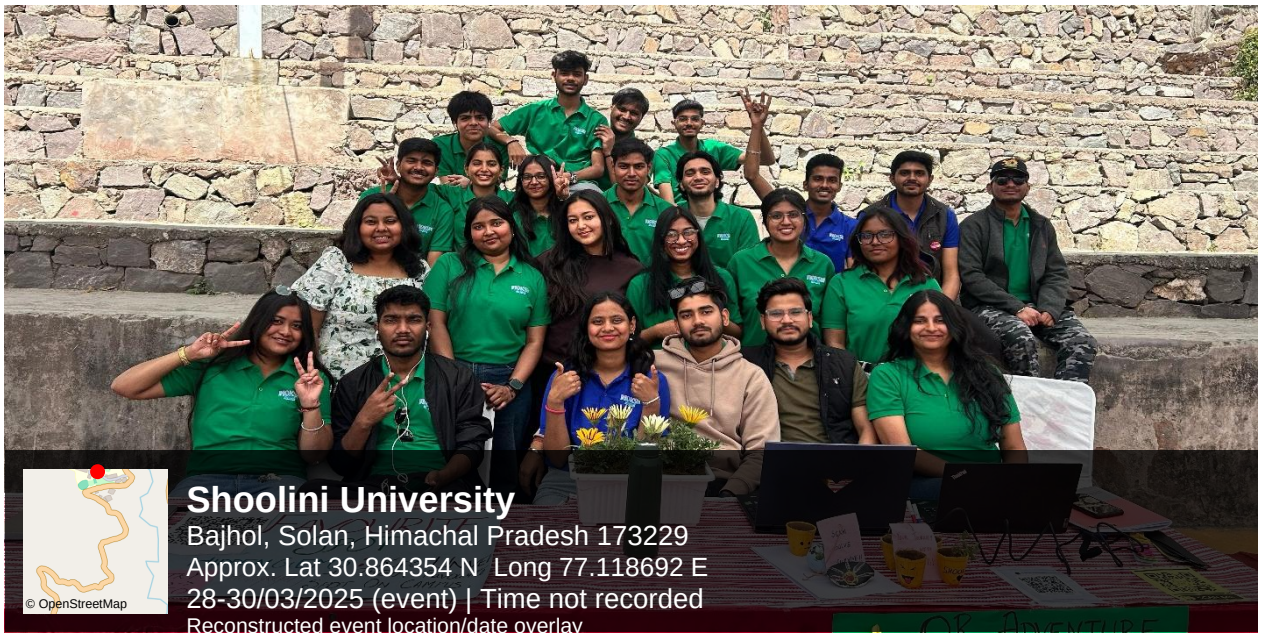
Forest-trail clean-up at Jakhu

Social Project Report, pages 27–28.

6.2 Eco-Innovation at Moksh

28–30 March 2025 | Badminton Court, Shoolini University

A sustainability stall at Moksh used handcrafted, recycled and natural materials to demonstrate alternatives to waste-intensive practices. Student exhibits combined upcycling with practical conversations about resource use. The activity supported environmental learning relevant to land protection by encouraging reuse and reducing the disposal of materials into the surrounding environment.



Student sustainability stall during Moksh 2025



Student participation in the sustainability initiative

Social Project Report, pages 80–83.

6.3 Bottles for Change: Campus Cleaning Drive

22 April 2025 | Shoolini University campus

Student volunteers joined Bisleri's Bottles for Change initiative to collect plastic waste across the campus. The activity emphasised segregation and recycling as practical alternatives to littering and disposal. Its contribution to Life on Land lies in reducing plastic pressure on campus spaces and encouraging responsible care of the local environment.



Volunteers participating in the campus plastic-waste collection drive



Plastic collection and segregation on campus

Social Project Report, pages 104–106.

6.4 Our Power, Our Planet: Earth Day Eco-Challenge

24 April 2025 | Covered Parking, Shoolini University

Nine schools participated in an inter-school challenge covering clean-energy demonstrations, waste-to-wonder projects, a green bazaar and poster-making. The programme connected creative learning with reuse, natural materials and responsible consumption. Its SDG 15 relevance is supporting environmental awareness and resource stewardship; it is not counted as a separate habitat-restoration project.



Earth Day displays on responsible materials and sustainable living



Student displays at the Earth Day programme

Social Project Report, pages 113–120.

6.5 Roots of Change: Plantation and Cleaning Drive

2 October 2025 | Campus and nearby areas, Shoolini University

NSS, NCC and Shoolinians for You combined plantation with a clean-up of university roads and nearby surroundings during Daan Utsav. Volunteers planted saplings, collected plastic waste and segregated recyclable materials. The activity connected student service with continuing care for planted areas and a cleaner terrestrial environment. No separate sapling count is stated for this activity, so it is not added to the annual species total.



Student volunteers undertaking plantation during Daan Utsav



Volunteers cleaning campus surroundings

Unnat Bharat Abhiyan Report 2025, pages 18–24.

6.6 World Environment Day: Awareness and Plantation

5 June 2025 | Shoolini University and online participation

The January–June Social Project Report records an online World Environment Day session on 5 June 2025. Hosted on Zoom, it combined discussion of plastic alternatives with an eco-quiz, student experiences and an “I Switch, I Ditch” challenge. The session reinforced the role of everyday choices in reducing environmental waste. As an online activity, it has no single physical participant location.

A separate University account published on 10 June 2025 describes a World Environment Day plantation drive organised by the Faculty of Legal Sciences and Legal Aid Club with the District Legal Services Authority, Solan. More than 100 saplings were planted in and around the campus. Participants also pledged to reduce plastic use. The account highlights the planting of a Golden Rain Tree and a Deodar, connecting the observance with practical greening and biodiversity awareness.



Plantation associated with World Environment Day 2025

The drive count is reported separately and is not added to the species inventory because overlap has not been resolved.

Source: Shoolini University, “Shoolini Makes Green Choices This World Environment Day”

7. Unnat Bharat Abhiyan and Rural Sustainability

Shoolini University's rural outreach connects environmental responsibility with the realities of farming and household livelihoods. Under the Western Himalayan rural sustainability initiative and Unnat Bharat Abhiyan, practical training provides a route for sharing knowledge about crop management, cultivation and resource use.

SR No.	Programme	Date	Location
1	Farmers' Problems and Their Solutions	17 January 2025	Kundla Village, Gram Panchayat Shamti
2	Hands-on Dhingri Mushroom Cultivation	14 May 2025	Crop Cafeteria, Shoolini University
3	Rural Livelihoods and Sustainable Agriculture Workshop	14 July 2025	Shoolini University, Bajhol, Solan

These programmes support the conditions for more informed land-based production. Their direct outputs are training and engagement; changes in soil condition, farm-level adoption and long-term biodiversity outcomes require separate follow-up. The report therefore distinguishes capacity building from measured ecological restoration.

7.1 Farmers’ Problems and Their Solutions

17 January 2025 | Kundla Village, Gram Panchayat Shamti

More than 20 farmers joined an extension workshop focused on protected cultivation and greenhouse farming. Experts discussed insect pests, disease control, fertiliser application and sustainable crop management through field visits and direct interaction. The programme connected local farming challenges with scientific advice and practical decisions about crop care.



Farmers’ Problems and Their Solutions at Kundla Village, Gram Panchayat Shamti



Farmers and agricultural experts at Kundla

Unnat Bharat Abhiyan Report 2025, page 6.

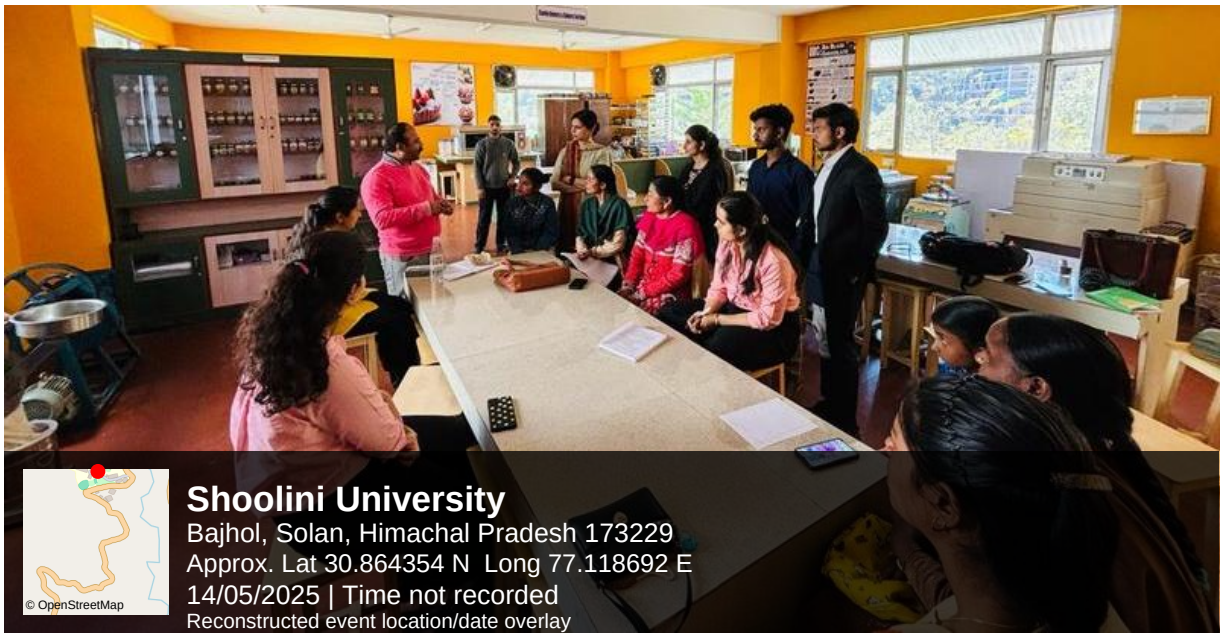
7.2 Hands-on Dhingri Mushroom Cultivation

14 May 2025 | Crop Cafeteria, Shoolini University

Women from the Pragati Self-Help Group received practical training in oyster mushroom cultivation at the MS Swaminathan School of Agriculture. The programme introduced stages of cultivation and low-cost agri-enterprise skills. Its contribution is primarily sustainable livelihoods and resource-conscious agriculture, complementing the University's broader work on responsible land-based production.



Hands-on Dhingri Mushroom Cultivation at Crop Cafeteria, Shoolini University



Pragati participants in the cultivation training

Unnat Bharat Abhiyan Report 2025, pages 11–12.

7.3 Rural Livelihoods and Sustainable Agriculture Workshop

14 July 2025 | Shoolini University, Bajhol, Solan

A rural capacity-building workshop introduced sustainable agricultural practices and income-generating opportunities through expert interaction. The programme aimed to strengthen practical knowledge, informed agricultural decisions and links between farmers and institutions. The UBA record describes particular relevance for women and marginalised communities in the Western Himalayan region.



Rural Livelihoods and Sustainable Agriculture Workshop at Shoolini University, Bajhol, Solan



Rural participants attending the livelihoods workshop

Unnat Bharat Abhiyan Report 2025, pages 12–13; corroborated by the national UBA portal.

8. Conferences, Workshops and Knowledge Exchange

Knowledge exchange complements field engagement by bringing researchers, practitioners, students and public agencies into dialogue. The following 2025 programmes have a documented connection with sustainable agriculture, soil management or the Himalayan rural economy. Their relevance to SDG 15 is assessed through these themes rather than through event titles alone.

Agriculture expert interactions | reported January–February 2025

The MS Swaminathan School of Agriculture organised a two-day farmer-interaction programme described in a University article dated 13 February 2025. Experts visited Shivathal, Kundla and Shamti, discussing soil testing, micronutrients, pruning, disease management, insect control and fertiliser use. Farmers contributed questions and local experience. The account connects agricultural extension with more informed crop and input management. Exact dates for both workshop days are not stated consistently in the article, so no precise capture date is assigned to its photographs.

Source: Farmers Gain Expert Insights at Agriculture Workshop

ICSSR International Conference on Agri-Entrepreneurship | 25–26 March 2025

Shoolini University and Rajkiya Kanya Mahavidyalaya, Shimla, organised the conference with the Departments of Agriculture and Industries. Discussions addressed capacity building, innovation and youth engagement in agriculture. Six agri-entrepreneurs shared experiences, alongside academic and government participants. The University's account links the initiative with sustainable agriculture and the Himalayan ecosystem. Its SDG 15 contribution is enabling knowledge and collaboration around responsible land-based livelihoods.



ICSSR conference on agricultural entrepreneurship

Source: Shoolini University conference report, 26 March 2025

9. Policy Implementation and Environmental Governance

Environmental stewardship requires responsibilities, documentation and regular review as well as visible campus activities. Shoolini University's continuing governance framework links green-campus practices with resource management, waste reduction and attention to biodiversity. Academic and operational teams provide complementary contributions through research, planning, maintenance and community engagement.

Environmental Management System: ISO 14001:2015

The supplied Quality Austria certificate confirms an Environmental Management System complying with ISO 14001:2015 for Shoolini University of Biotechnology and Management Sciences. It is dated 20 November 2025, records an initial issue date of 24 November 2022, and states validity until 23 November 2028. Its registration number is U-04711/0.

The certified scope covers education services across the listed undergraduate, postgraduate and doctoral programmes, including sciences, engineering, pharmacy, legal sciences, biotechnology, management, liberal arts, yoga and agriculture. The certificate specifies annual surveillance audits and a renewal audit after three years as conditions for maintaining validity.

The certificate provides an institutional management framework relevant to environmental responsibility. It is not a measurement of biodiversity gains, restored habitat area or carbon removal. Those outcomes require their own monitoring records. The complete certificate is reproduced on the following page.

Monitoring priorities

A consistent species register, reconciled planting totals, survival checks and site-specific maintenance records would strengthen the annual account. Linking this information with irrigation demand, soil condition and community follow-up can improve the connection between management processes and ecological outcomes.

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Valid until: 23 November 2028

Vienna, 20 November 2025

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10. Outcomes and Continuing Priorities

The 2025 record brings together campus planting, research, public engagement and environmental management. The species schedule records 22 named species, while its drought-tolerant subset reconciles to 661 saplings. Forty publications dated 2025 contribute to the supplied SDG 15 research portfolio. Community programmes include forest-path cleaning, campus plastic collection, plantation and sustainable agricultural training.

SR No.	Documented indicator	2025 record
1	Plant / tree species in annual schedule	22
2	Sum of species-wise sapling entries	1,275
3	Total stated in source narrative	1,284; difference of 9 pending reconciliation
4	Drought-tolerant subset	661 saplings across 10 recorded species
5	Publications dated 2025	40
6	Environmental Management System	ISO 14001:2015; certificate dated 20 November 2025

These figures describe documented activity and institutional capacity. They should not be interpreted as independently measured survival rates, restored hectares or reductions in biodiversity loss. The World Environment Day drive is not added to the annual planting schedule because the available records do not establish whether the counts overlap.

The next stage of improvement is to connect participation and planting with continued care: reconcile the sapling inventory, record survival by species and location, monitor irrigation and soil needs, and follow up with participating farmers. These steps can make the annual record more useful for decisions about campus landscapes and community programmes.

Through its educational mission and environmental responsibilities, Shoolini University continues to connect knowledge with stewardship of the land. Sustained care for planted areas, responsible resource use and collaboration with surrounding communities provide a practical foundation for advancing Life on Land in the Himalayan setting.