Shoolini University

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

SDG 12
Responsible Consumption and Production

Progress Report
2025



Shoolini University of Biotechnology and Management Sciences, Solan, Himachal Pradesh-173229

Introduction

Sustainable Development Goal 12 (SDG 12)—Responsible Consumption and Production—calls for the efficient use of natural resources, prevention of waste and adoption of sustainable practices throughout the procurement, use and disposal of materials. Shoolini University advances these objectives by integrating **ethical sourcing, resource conservation and responsible waste management into campus operations, education and community engagement**. The University's approach is supported by seven complementary policies: the Ethical Sourcing Policy; Waste Disposal Policy for Hazardous Materials; Waste Disposal and Landfill Policy; Policy for Minimisation of Plastic Use; Policy for Minimisation of Disposable Items; Disposal Policy Extended to Services; and Minimisation Policies Extended to Suppliers. Together, these policies establish expectations for responsible purchasing, safe handling and disposal of waste, reduced dependence on single-use products, and participation by service providers and suppliers in sustainable institutional practices.

During 2025, Shoolini University supported this policy framework through waste tracking, reusable alternatives, sustainability awareness and research relevant to responsible consumption and production. Coordinated efforts involving the Centre of Excellence in Energy Science and Technology (CEEST), the Sustainability Cell and the wider university community connect institutional commitments with practical action. These efforts strengthen a culture of shared responsibility, encouraging resource efficiency and waste reduction across the University's operations and partnerships.

Research and Innovation for Sustainable Consumption and Production

Shoolini University advances SDG 12: Responsible Consumption and Production through research, innovation and technology-driven solutions that support the sustainable use of resources. Its research ecosystem brings together faculty and students to address waste reduction, resource efficiency, renewable energy and green technologies, translating academic knowledge into practical environmental solutions. Research in energy, environment and sustainability strengthens this commitment through work on circular economy models, sustainable materials and pollution control technologies. Projects involving bio-based materials, organic fertilizers, eco-friendly packaging and low-carbon innovations seek to reduce environmental impacts across production and consumption cycles. These efforts support India's sustainability priorities while building the knowledge and technologies needed for a more resource-efficient future.

List of Publication for SDG 12 (Year 2025)

Title	Authors	Year	Cite Score (publication year)
Ferulic acid: extraction, estimation, bioactivity and applications for human health and food	Kumar, M.| Kaushik, D.| Shubham, S.| Kumar, A.| Kumar, V.| Oz, E.| Brennan, C.| Zeng, M.| Proestos, C.| Çadırcı, K.| Bayrak, M.| Elobeid, T.| Karav, S.| Oz, F.	2025	8.1
Utilizing citrus peel waste: a review of essential oil extraction, characterization, and food-industry potential	Grover, S.| Aggarwal, P.| Kumar, A.| Kaur, S.| Yadav, R.| Babbar, N.	2025	10
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.	2025	7.9
Green nanocarriers and Biodegradable Systems for sustainable drug delivery solutions	shirzad, M.| Salahvarzi, A.| Fathi-karkan, S.| Rahdar, A.| Guettari, M.| Pandey, S.	2025	9.3
Applications of citrus peels valorisation in circular bioeconomy	Kumar, H.| Guleria, S.| Kimta, N.| Nepovimova, E.| Dhanjal, D.S.| Sethi, N.| Suthar, T.| Shaikh, A.M.| Bela, B.K.| Harsányi, E.	2025	9.8
Metal-free defects in 2D Nanocarbons toward photocatalytic processes: Revolutionizing solar-to-energy conversion	Poonia, K.| Soni, V.| Sonu| Singh, P.| Chaudhary, V.| Thakur, S.| Nguyen, V.-H.| Le, Q.V.| Raizada, P.	2025	22.1
Artificial intelligence in sustainable food design: Technological, ethical consideration, and future	Harikrishnan, S.| Kaushik, D.| Rasane, P.| Kumar, A.| Kaur, N.| Reddy, C.K.| Proestos, C.| Oz, F.| Kumar, M.	2025	27.3
Nanocomposite-based agricultural delivery systems: a sustainable approach to enhanced crop productivity and soil health	Ray, A.| Das, P.| Chunduri, R.| Kumar, D.| Dulta, K.| Kaushal, A.| Gupta, S.| RJ, S.| Yadav, A.N.| Nagraik, R.| Sharma, A.	2025	4.9
Multi-mechanism synergistic adsorption of lead and cadmium in water by structure-functionally adapted modified biochar: A review	Zhang, D.| Wu, B.| Wang, T.| Yılmaz, M.| Sharma, G.| Kumar, A.| Shi, H.	2025	4.2

The Combination of α-Fe2O3 NP and Trichoderma sp. Improves Antifungal Activity Against Fusarium Wilt	Sharma, S.| Kumari, P.| Shandilya, M.| Thakur, S.| Perveen, K.| Sheikh, I.| Ahmed, Z.| Sayyed, R.| Mastinu, A.	2025	7.3
Recent updates on full solar spectrum metal sulphides photocatalyst for hydrogen peroxide generation: Modification strategies and mechanistic insights	Soni, V.| Malhotra, M.| Singh, P.| Khan, A.A.P.| Bawazir, W.A.| Nguyen, V.-H.| Ahamad, T.| Van Le, Q.| Raizada, P.| Alzahrani, K.A.	2025	10.2
Pulsed electric fields for sustainable meat, poultry, and fish processing: Recent advances, prospects, and industry challenges	Ahmed, M.| Ranjan, H.| Roy, S.	2025	12
Enhancing post-harvest sustainability in temperate crops through smart IoT-integrated indirect solar dryer	Sharma, B.B.| Vaidya, P.| Kumar, N.| Tiwari, A.| Bansal, S.| Faruque, M.R.I.| Al-mugren, K.S.	2025	6.4
Plant-Driven Soil Dynamics: Exploring the Role of Roots, Fungi and Soil Traffic in Shaping the Soil Structure	Negi, M.| Sharma, S.| Singh, M.	2025	3.5
Biology and Application of Chaetomium globosum as a Biocontrol Agent: Current Status and Future Prospects	Sharma, S.| Pandey, S.| Kulshreshtha, S.| Dubey, M.	2025	8.2
Smart nano-fertilizers: a path to sustainable agriculture	Gupta, P.| Dhar, H.| Bagal, Y.S.| Jaglan, S.	2025	7
In Vitro Mutagenesis: A Non-invasive Technology for Effective Crop Improvement to Assure Food and Nutritional Security—Current Trends, Advancements and Future Perspectives	Sharma, V.| Thakur, M.| Maan, S.S.| Verma, K.| Thakur, A.| Penna, S.	2025	9.9
Bacteriogenic metallic and semiconducting nano-system as a potential sustainable solution for one health complexities	Chaudhary, V.| Sonu, S.| Raizada, P.| Kaushik, A.	2025	33.5
Conventional and cutting-edge advances in plant virus detection: emerging trends and techniques	Singh, A.| Yasheshwar| Kaushik, N.K.| Kala, D.| Nagraik, R.| Gupta, S.| Kaushal, A.| Walia, Y.| Dhir, S.| Noorani, M.S.	2025	5.7
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.|	2025	15.2

	Wang, L.| Hou, D.| Siddique, K.H.M.| Bolan, N.		
Engineered boron-doped biochar for sustainable environmental remediation and circular energy systems: A review	Quang, H.H.P.| Nguyen, P.K.T.| Singh, P.| Raizada, P.| Nguyen, V.-H.	2025	10.2
Doubly pertinent p-nitrobenzaldehyde-grafted chitosan for adsorptive sequestration of aqueous anionic surfactant and gaseous CO2	Rathi, T.| Gomase, V.| Saravanan, D.| Pandey, S.| Jugade, R.	2025	10.3
Alginate-based magnetic adsorbents for the adsorption of organic and inorganic pollutants	Verma, A.| Dhiman, P.| Kumar, A.| Maria, H.J.| Thomas, S.| Sharma, G.	2025	12.4
Development of antimicrobial nanoemulsion edible coating of xanthan gum incorporated with pomelo peel extract for cheese preservation	Joshi, M.| Singh, G.P.| Bose, I.| Yang, T.| Babaei, A.| Sharma, S.| Aayush, K.	2025	10.7
The Revolutionary Role of Blockchain Technology in the Agri-Food Sector Focusing on the Food Supply Chain	Pal, T.| Bommisetti, V.| Suvarnakanti, P.| Dudala, S.S.| Asha, S.| Jaiswal, V.	2025	20.6
Metabolic adaptations in plants: navigating heavy metal stress for sustainable plant growth	Sharma, N.| Negi, N.| Kaur, H.| Sharma, V.| Kumari, V.| Thakur, N.	2025	4.1
Commercial utilization of bacteriocins: tackling challenges and exploring their potential as alternatives to antibiotics	Selvan, S.A.| Ghalsasi, V.V.| Bandyopadhyay, A.| Pal, T.	2025	4.2
Recent advances, materials resources and mechanism insight for designing of renewable photocatalysts and green photocatalytic processes for energy production	Sharma, P.| Rana, S.| Dhiman, P.| Wang, T.| Mola, G.T.| Sharma, G.	2025	10.2
Applications of Solid Waste-Derived Carbon Nanomaterials in Fuel Cell	Sharma, V.| Kumar, S.| Kainthla, I.| Shandilya, M.| Thakur, S.	2025	2.2
A Critical Review of Microplastic Contamination in High Altitude Ecosystems, Transport Pathways, Ecological Risks, And Imminent Solutions	Chauhan, A.| Banerjee, R.	2025	5.3
Applications of Solid Waste-Derived Carbon Nanomaterials in Solar Cell	Kumar, S.| Kumari, N.| Thakur, R.| Kainthla, I.| Shandilya, M.	2025	2.2

Biofloc technology for sustainable aquaculture: Microbial regulation, nutrient dynamics, and integrated system approaches	Rai, N.| Panigrahi, A.| Julka, J.M.| Nan, F.-H.| Das, S.P.	2025	9.6
Macronutrients-availing microbiomes: biodiversity, mechanisms, and biotechnological applications for agricultural sustainability	Kaur, T.| Devi, R.| Negi, R.| Kour, H.| Singh, S.| Khan, S.S.| Kumari, C.| Kour, D.| Chowdhury, S.| Kapoor, M.| Rai, A.K.| Rustagi, S.| Shreaz, S.| Yadav, A.N.	2025	6.5
Biochar-based technologies for sustainable aquaculture: A review of synthesis, properties, and application in water quality improvement and nutrient management	Rai, N.| Kachore, A.| Julka, J.M.| Das, S.P.	2025	9.6
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.	2025	10
An overview of home composting: configurations and design of bin, process parameters, and benefits	Ganji, A.| Hajrajabi, A.| Babaei, A.| Aayush, K.| Sharma, S.| Shayegan, J.	2025	6.4
Advancements in biogenic nanoparticles synthesis, characterization and its mechanism in disease management	Thakur, N.| Tapwal, A.| Kumari, K.| Thakur, R.K.| Ganesamoorthy, R.| Thirugnanasambandham, K.	2025	9.3
Sulfur vacancy modified S-scheme AgFeO2/ZnIn2S4 heterojunction with dual functionality for photocatalytic degradation of tetracycline and hydrogen evolution	Kumar, A.| Sharma, P.| Dhiman, P.| Raj, D.| Verma, P.| Lai, C.W.	2025	10.7
Applications of Solid Waste-Derived Carbon Nanomaterials in Catalysis	Mehta, S.| Kumar, R.| Kumar, S.| Kaur, G.A.| Kainthla, I.| Shandilya, M.	2025	2.2
Eco-friendly sustainable farming: Enhancing summer tomato (Lycopersicon esculentum mill.) yield with jute non-woven agro textile Mulch	Mridha, N.| Nayak, D.| Yadav, A.| Mondal, T.| Ghosh, R.K.| Bhowmick, M.| Singha, A.| Ray, D.P.| Manjunatha, B.S.| Das, A.| Shakyawar, D.B.| Paul, S.| Das, A.| Mukherjee, S.| Kumar, R.	2025	7.8
Harnessing Nanoparticles to Overcome Antimicrobial Resistance: Promises and Challenges	Mishra, A.| Jyoti, A.| Aayush, K.| Saxena, J.| Sharma, K.	2025	5.8

Emergence of potassium solubilizing microbes-assisted crop processing for sustainable food production and microbial complexities	Damathia, B.| Pathania, D.| Jha, A.| Sable, H.| Sonu| Singh, P.| Singh, V.| Rustagi, S.| Chaudhary, V.	2025	6.1
Advances and perspectives of nanomaterials for photocatalytic degradation of biological ethylene toward the postharvest improvement of agricultural products	Nguyen, L.H.| Dinh, D.A.| Thi, L.-A.P.| Pham, P.V.| Singh, P.| Raizada, P.| Lin, K.-Y.A.| Nguyen, V.-H.	2025	12.1
Hybrid cerium oxide nanoparticle and melanin nanoparticle-based composite films for food packaging: a perspective review	Bose, I.| Aayush, K.| Joshi, M.| Roy, S.| Tolun, A.| Purohit, S.D.| Sharma, S.| Yang, T.	2025	13.4
Microalgae-Based Remediation of Contaminated Water: A Way Forward to Achieve SDG Goal 6	Kumar, S.| Utkarsh, K.| Nivedita| Kumar, P.| Khan, A.	2025	-
Gossypium arboreum (L.): A review on its agronomic and industrial potential for sustainable cotton production	Gogari, S.| Radha	2025	5.3
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.	2025	2.6
Application of carbon dots in food packaging	Ahmed, M.| Roy, S.	2025	-
Proactive approach to biofertilizers for sustainable agriculture	Sharma, N.| Dixit, B.| Kayastha, R.	2025	4
Electrodeposited Ni-Se on recycled steel substrate as eco-friendly electrodes with enhanced electrocatalytic activity towards urea oxidation reaction	Ojha, S.K.| Kamlesh| Tiwari, S.| Mudgal, M.| Raizada, P.| Singh, P.| Singh, A.	2025	5.6
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.	2025	1.8
Meat Products with Low Salt/Sodium	Sharma, R.	2025	-

Polyphenol-rich extract from Cyamopsis tetragonoloba straw: Characterization, bioactivity, cytotoxicity, and anti-obesity potential	Rani, R.| Kaushik, D.| Oz, F.| Avila-Quezada, G.D.| Abd_Allah, E.F.| Hashem, A.| Kumar, M.	2025	13.3
Metal Oxides: Advances in Sustainability and Nanotechnology	Khanna, V.| Jasrotia, R.| Singh, T.| Singh, G.	2025	-
Ethical, societal issues, and future challenges of plant CRISPR technologies	Prakash, A.| Mandal, S.| Ranjan, S.| Sood, N.| Singh, R.B.| Kumar, S.| Kumari, N.	2025	-
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.	2025	-
Addressing Fluoride Contamination: A Holistic Review on Its Occurrence, Sources, Health Effects, Detection, Remediation, Cost Analysis, and Waste Management	Choudhary, D.| Gupta, D.K.| Sharma, S.| Patidar, R.| Raizada, P.| Singh, A.	2025	3.1
Impact of Biochar addition for odor emission reduction and compost quality enhancement	Van Tung, T.| Kim, H.T.| Mai, L.T.T.| Tri, N.T.| Linh, D.T.T.| Duy, N.H.| My, P.L.| Mukherjee, S.| Tran, H.-T.	2025	3.8
Bioprospecting and Biodiscovery for Sustainable Development	Sonia| Banerjee, R.| Yadav, S.| Mishra, S.| Jaiswal, K.	2025	-
Role of Fungi in Biogenic Synthesis of Nanofertilizers and Nanopesticides	Khatua, S.| Ghosh, S.	2025	-
Integrated Framework of Blockchain Technology and Artificial Intelligence for Sustainable Supply Chain Optimization	Dar, A.A.| Reegu, F.A.| Ahmed, S.| Hussain, G.| Thakur, R.	2025	-
Impact of bulky manures and fermented liquid formulations in enhancing the quality parameters of sweet pepper	Brar, P.S.| Bhardwaj, G.| Kaushal, R.	2025	4
Sustainable Solution: Harnessing Artificial Intelligence, Internet of Things and Design Thinking for Climate Action	Sharma, R.| Thakur, V.	2025	-
Impact of Combined Application of Swine Manure Liquid and Phosphorus Fertilizers on Soil Phosphorus and Microbial Communities	Pu, M.| Zhang, Y.| Mukherjee, S.| Alharbi, S.F.| Singh, R.K.| Abou-Elwafa, S.F.| Trindade, H.| Zhang, T.	2025	8.9

Tomato Plant Disease Detection Using YOLO11	Sharma, G.| Sharma, G.| Sharma, B.B.	2025	-
Evaluating the impact of pre- and post-emergence herbicides on weed dynamics and sustainable Maize cultivation practices	George, A.| Singh, A.| Kritika| Sai, G.P.| Sana, Z.A.| Sarkar, S.| Thakur, S.| Fatima, I.	2025	0.9
Green-synthesized nano-fertilizers: a sustainable approach to enhancing crop productivity and stress tolerance	Thanta, S.| Bhanwala, G.| Kimta, N.| Rajput, V.D.| Malik, T.	2025	8.6
Effect of zinc oxide (ZnO) nanoparticles on morphological traits, yield and uptake in tomato (Solanum lycopersicum) and bell pepper (Capsicum annuum)	Bhardwaj, G.| Brar, P.S.| Chauhan, A.| Kaushal, R.| Sharma, U.	2025	1.8
Parametric Optimisation for Extraction of the Nanosized Cathodic Material from the Lithium-Ion Battery Waste Material	Sharma, V.K.| Sharma, G.| Singh, V.P.| Jain, S.	2025	1.7
Bioprospecting and Biomimicry	Fishta, A.| Sobti, R.C.| Thakur, R.	2025	-
Approach to Agrobiodiversity Preservation and Sustainable Agriculture in a Changing World	Barsola, B.| Kumari, P.| Yadav, S.| Mishra, S.| Jaiswal, K.	2025	-
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.	2025	-
Harnessing Information Systems for Sustainable Enterprise Development: A Systematic Literature Network Analysis	Ranjan, R.| Singh, R.| Tripathi, S.	2025	1.1
Future Trends and Implementation in Events and Festivals: A Focus on Himachal Pradesh's Festive Culture and Traditions	Thakur, D.J.| Dayal, G.| Verma, P.| Sehgal, S.	2025	-
Fodder quality analysis of Hippophae salicifolia D. Don (Seabuckthorn) in the Western Himalayas of India	Nangla, S.| Sankhyan, H.P.| Rana, N.| Ahluwalia, S.| Thakur, S.| Rachappanavar, V.| Sharma, S.	2025	1.6
Deep learning approach for food science and bioprocess optimizations	Kumar, A.| Pillai, M.| Khanal, S.| Mishra, E.| Kumar, D.| Roy, S.| Biswas, D.	2025	-

The Interplay of Pollutants: Unraveling the Threads of Biodiversity Degradation	Sharma, S.| Raghuvanshi, K.| Banerjee, R.	2025	-
Introduction to Bioresources and Sustainable Utilization	Thakur, N.| Kumari, P.| Yadav, S.| Mishra, S.| Jaiswal, K.	2025	-

Policy on Ethical Sourcing of Food and Supplies

2024



Shoolini University of Biotechnology and Management Sciences,

Solan, Himachal Pradesh, India-173229

1. Introduction

Shoolini University's Sustainable Ethical Sourcing Policy emphasizes key focus areas such as Sustainability, Quality Product Selection, Seasonality, Provenance, Equal Opportunity, and Ethical Dealings with external supplier agencies. The University collaborates with a diverse network of suppliers to meet its day-to-day procurement requirements responsibly and efficiently. This policy underscores the importance of building mutually beneficial and long-term partnerships to ensure the quality, safety, and reliability of all food and non-food products across the entire supply chain beginning from the assessment of requirements and product selection to the evaluation of suppliers and the timely delivery of goods meeting the desired quality standards.

In alignment with its commitment to responsible consumption and production (SDG 12), the University also promotes sustainable operational practices. It employs a solar cooking system that utilizes renewable solar energy to significantly reduce LPG consumption and carbon emissions.

2. Policy Statement

Shoolini University shall procure all food products, materials, and services ethically and sustainably, in compliance with government regulations, food safety laws, and institutional procurement guidelines.

The university ensures that sourcing practices:

- Comply with applicable Food Safety and Standards Authority of India (FSSAI) norms
- Uphold fairness, transparency, and accountability
- Encourage local sourcing from farmers and micro-enterprises where feasible
- Promote value for money without compromising on safety, quality, or ethical considerations.

3. Aims and Objectives

The Ethical Sourcing Policy of Shoolini University aims to:

- Ensure that all food and supply procurement processes follow ethical and sustainable standards.
- Promote transparency and trust between the university and its suppliers.
- Evaluate suppliers on environmental, social, and governance (ESG) parameters.

- Reduce carbon emissions by minimizing transport distances ("food miles").
- Support local producers and encourage agro-based entrepreneurship in the region.
- Foster green initiatives such as campus-based organic farming and waste-to-compost programs.
- Promote awareness among campus stakeholders on responsible consumption practices.

4. Scope of the Policy

This policy applies to:

- Procurement of food, beverages, and catering services;
- Purchase of stationery, maintenance materials, and general consumables;
- Engagement with vendors, contractors, and service providers supplying goods or food-related items to Shoolini University.

The policy covers all transactions made through university-approved systems and extends to partnerships with suppliers who align with Shoolini sustainability framework.

5. Supplier Expectations

Shoolini University expects all suppliers and contractors to:

- Adhere to ethical business practices, avoiding corruption, child labor, or discrimination.
- Ensure safe and fair working conditions in compliance with Indian labor laws.
- Maintain full traceability of food items, ensuring authenticity and freshness.
- Follow relevant FSSAI Regulations including:
  - Food Products Standards & Additives (2011)
  - Contaminants, Toxins & Residues (2011)
  - Packaging & Labelling (2011)
  - Nutraceuticals & Special Dietary Uses (2016)
  - Organic Foods (2017)
  - Fortification of Foods (2018)
- Supply materials that are environmentally responsible, recyclable, or biodegradable where possible.
- Provide invoices and documentation transparently with each supply transaction.
- Participate in sustainability awareness and supplier engagement programs organized by the university.

Failure to comply with ethical sourcing standards may lead to review, suspension, or removal from the approved supplier list.

6. Relationship with Existing Policies

This policy complements and aligns with:

- Shoolini University Procurement Manual
- Green Campus Policy and Sustainability Charter
- Waste Management and Recycling Policy
- Campus Food Safety and Hygiene Standards

Through this Ethical Sourcing Policy, Shoolini University reaffirms its dedication to creating a responsible, fair, and sustainable food ecosystem. This initiative integrates ethics into procurement, sustainability into operations, and awareness into education empowering every stakeholder to contribute toward a more equitable and environmentally conscious future.

Review

This policy shall be communicated to students, employees, and other relevant stakeholders through the University's internal communication channels, Radio Shoolini TV, and the official institutional website. The policy, its objectives, and associated targets shall be reviewed periodically to ensure their continued relevance, effectiveness, and alignment with applicable regulatory requirements.

REGISTRAR

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

SHOOLINI UNIVERSITY

AND

MAXIMUS HOTEL CATERING SERVICES PVT. LTD.

SHETTY SONS
HOSPITALITY PAR EXCELLENCE

Shoolini University

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

MAXIMUS HOTEL CATERING SERVICES PVT. LTD.

and

SHOOLINI UNIVERSITY

Maximus Hotel Catering Services Pvt. Ltd. and Shoolini University of Biotechnology and Management Sciences Solan (herein referred to as Shoolini University), hereby agree to cooperate and become knowledge partners based on the principle of reciprocity.

This Memorandum of Understanding (MOU) encourages academic partnership e.g., exchange of students and faculty, upgradation of curriculum, joint research and consultancy.

The scope of this MOU is expandable: specific issues and terms will be mutually agreed upon on a case-by-case basis. This MOU shall take effect from the date of the latest signature below and will remain in effect for five years hence. This MOU is subject to revision or modification by mutual agreement. It is also understood that either institution may terminate the MOU at any time, although such action will only take place after mutual consultation in order to avoid any possible inconvenience to the parties.

This MOU is non-binding and has no legal monetary implication to either party.

On behalf of the
Maximus Hotel Catering Services Pvt. Ltd.
A5 Laxman Niwas, 11th Road, Santa Cruz East
Mumbai

(Mr Sathyaprasad Shetty)
Managing Director
Date: 23-06-2023

On behalf of the Shoolini University,
Solan, Himachal Pradesh, India

(Prof Atul Khosla)
Vice Chancellor
Date: 23-06-2023

FSSAI LICENCE (FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA)

OF

MAXIMUS HOTEL CATERING SERVICES PVT. LTD.

Form C
Government of Himachal Pradesh
Department Of Health Safety and Regulations
Food Safety and Standards Authority of India
License under FSS Act, 2006

अनुज्ञप्ति संख्या / License Number: **10922011000110**

1.	Name & Registered Office address of Licensee / अनुज्ञप्तिधारी के पंजीकृत कार्यालय का नाम और पता:	M/S MAXIMUS HOTEL CATERING SERVICES PRIVATE LIMITED SHOOLINI UNIVERSITY P.O. OACHGHAT KUMARHATTI HIGH WAY BAJHOL SOLAN H.P., Solan, Himachal Pradesh-173212
2.	Address of Authorized Premises / प्राधिकृत परिसरो का पता:	SHOOLINI UNIVERSITY P.O. OACHGHAT KUMARHATTI HIGH WAY BAJHOL SOLAN H.P., Solan Town, Solan, Himachal Pradesh-173212
3.	Kind of Business / कारोबार का प्रकार:	Food Services - Caterer
4.	Dairy Business Details / डेयरी कारोबार विवरण हेतु :	No
5.	Category of License / अनुज्ञप्ति का वर्ग:	**State License**

This license is granted under and is subject to the provisions of FSS Act, 2006 all of which must be complied with by the licensee. / यह अनुज्ञप्ति खाद्य संरक्षा और मानक अधिनियम, 2006 के अधीन अनुदत्त की गई और वह अधिनियम के उपबंधो के अध्यादीन है जिनका अनुज्ञप्तिधारी द्वारा अवश्य पालन किया जाना चाहिए.

Place / स्थान: Solan

Designated Officer

Issued On / दिनांक: 21-02-2025 (Renewal License)

Valid Upto: / वैधता: 09-03-2026 (For details, refer Annexure)

Annexures:

1. Product Annexure
2. Validity Annexure
3. Non-Form C Annexure
4. Conditions Of License

Note:

1. **Application for renewal of License can be filed as early as 180 days prior to expiry date of License. You can file application for renewal or modification of License by login into FSSAI's Food Safety Compliance System(https://foscos.fssai.gov.in) with your user id and password or call us at 1800112100 for any clarification.**
2. **This License is only to commence or carry on food businesses and not for any other purpose.**
3. **This is computer generated license and doesn't require any signature or stamp by authority.**
4. **Communications from FoSCoS are being sent to luxxxxxxxxxxxxxxxxxcom , luxxxxxxxxxxxxxxxxxcom , luxxxxxxxxxxxxxxxxxcom and 95xxxxx202 , 95xxxxx202 , 95xxxxx202.To update these details, visit FoSCoS portal.**

Form C
Government of Himachal Pradesh
Department Of Health Safety and Regulations
Food Safety and Standards Authority of India
License under FSS Act, 2006

अनुज्ञप्ति संख्या / License Number: **10922011000110**

Kind Of Business: Food Services - Caterer

Sl.No.	Food Product Category
1	16 - Prepared Foods

Validation And Renewal Annexure

Form C
Government of Himachal Pradesh
Department Of Health Safety and Regulations
Food Safety and Standards Authority of India
License under FSS Act, 2006

अनुज्ञप्ति संख्या / License Number: **10922011000110**

Validity From	Validity Upto	Issued On	Fee Paid	Type	Issuing Authority
10-03-2022	09-03-2024	10-03-2022	4000 INR	New	State Licensing Authority
10-03-2024	09-03-2025	04-12-2023	2000 INR	Renewal	State Licensing Authority
10-03-2025	09-03-2026	21-02-2025	2000 INR	Renewal	State Licensing Authority

Suspension History

S.No	History	Date
N/A		

Current Status of License: License Issued

Note:

1. **Application for renewal of License can be filed as early as 180 days prior to expiry date of License. You can file application for renewal or modification of License by login into FSSAI's Food Safety Compliance System(https://foscos.fssai.gov.in) with your user id and password or call us at 1800112100 for any clarification.**
2. **FSSAI vide order number 15(31)2020/FoSCoS/RCD/FSSAIpt1-Part(4) dated 11th January 2023 allowed Instant Renewal of License / Registration.**
3. **FSSAI vide order number 15(31)2020/FoSCoS/RCD/FSSAI dated 29th October 2021 has allowed the renewal of Licenses / Registration till 180 days of the expiry date subject to payment of penalty.**
4. **Modification* (if any) denotes the change in the Authority. Issuing Authority mentioned along with Modification* is the Jurisdictional Authority with effect from the date of issuance of modified license.**

Non-Form C Annexure

Government of Himachal Pradesh
Department Of Health Safety and Regulations
Food Safety and Standards Authority of India
License under FSS Act, 2006

अनुज्ञप्ति संख्या / License Number: **10922011000110**

Person in charge of operations

Name:	LAXMAN SINGH	Qualification:	10TH
Contact No:	N/A	Mobile No:	9561524202
Email-ID:	luckhegi154@gmail.com		
Address :	shoolini university oachghat kumarhatti distt. solan hp.		
State:	Himachal Pradesh	District:	Solan
Pin Code:	173212	Photo Id Card:	Aadhar Card
Photo Id No:	246809634480	Photo Id Expiry Date:	N/A
FoSTaC No:	Not Provided		

Person responsible for complying with conditions of license(The person must be same as mentioned in Form IX, as per FSS Regulations, 2011)

Name:	LAXMAN SINGH	Qualification:	10TH
Contact No:	N/A	Mobile No:	9561524202
Email-ID:	luckhegi154@gmail.com		
Address :	shoolini university oachghat kumarhatti distt. solan hp.		
State:	Himachal Pradesh	District:	Solan
Pin Code:	173212	Photo Id Card:	Aadhar Card
Photo Id No:	246809634480	Photo Id Expiry Date:	N/A

Place / स्थान: Solan

Designated Officer

Issued On / दिनांक: 21-02-2025 (Renewal License)

Note: Any change in above details shall be immediately communicated to authorities. You can apply for modification of license for updation of details without any cost through Food Safety Compliance System (https://foscos.fssai.gov.in**)**

Form C

Government of Himachal Pradesh

Department Of Health Safety and Regulations
Food Safety and Standards Authority of India
License under FSS Act, 2006

अनुज्ञप्ति संख्या / License Number: **10923011000153**

1.	Name & Registered Office address of Licensee / अनुज्ञप्तिधारी के पंजीकृत कार्यालय का नाम और पता:	M/S NAKUS CAFE SHOOLINI UNIVERSITY, VILLAGE BAJHOL P.O. OACHGHAT TEH. AND DISTT. SOLAN H.P., Solan, Himachal Pradesh-173229
2.	Address of Authorized Premises / प्राधिकृत परिसरो का पता:	SHOOLINI UNIVERSITY, VILLAGE BAJHOL P.O. OACHGHAT TEH. AND DISTT. SOLAN H.P., Solan Town, Solan, Himachal Pradesh-173229
3.	Kind of Business / कारोबार का प्रकार:	Food Services - Food Vending Establishment
4.	Dairy Business Details / डेयरी कारोबार विवरण हेतु :	No
5.	Category of License / अनुज्ञप्ति का वर्ग:	**State License**

This license is granted under and is subject to the provisions of FSS Act, 2006 all of which must be complied with by the licensee. / यह अनुज्ञप्ति खाद्य संरक्षा और मानक अधिनियम, 2006 के अधीन अनुदत्त की गई और वह अधिनियम के उपबंधो के अध्यादीन है जिनका अनुज्ञप्तिधारी द्वारा अवश्य पालन किया जाना चाहिए.

Designated Officer

Place / स्थान: Solan
Issued On / दिनांक: 20-07-2026 (Renewal License)
Valid Upto: / वैधता: 29-07-2029 (For details, refer Annexure)

Annexures:
1. Product Annexure
2. Validity Annexure
3. Non-Form C Annexure
4. Conditions Of License

To download 'Food Safety Connect' App, Scan the below QR

Android iOS

Note:

1. **Application for renewal of License can be filed as early as 180 days prior to expiry date of License. You can file application for renewal or modification of License by login into FSSAI's Food Safety Compliance System (https:// foscos.fssai.gov.in) with your user id and password or call us at 1800112100 for any clarification.**
2. **This License is only to commence or carry on food businesses and not for any other purpose.**
3. **This is computer generated license and doesn't require any signature or stamp by authority.**
4. **Communications from FoSCoS are being sent to haxxxxxxxxxxxxxxxxxxxxxcom , raxxxxxxxxxxxxxxxxxcom , HAxxxxxxxxxxxxxxxxxxxxxCOM and 98xxxxx825 , 98xxxxx825 , 98xxxxx825.To update these details, visit FoSCoS portal.**

Registration Certificate
Government of Himachal Pradesh
Department Of Health Safety and Regulations
Food Safety and Standards Authority of India
Registration Certificate under FSS Act, 2006

पंजीकरण संख्या / Registration Number: **20921011000124**

License



1. Name and permanent address of Food Business Operator (FBO) / खाद्य व्यापार ऑपरेटर का नाम और स्थायी पता: SARITA BHARDWAJ M/S PINE AND DINE CAMPASS IN SHOOLINI UNIVERSITY SOLAN H.P. , Solan (MCl) , Solan Town, Solan, Himachal Pradesh-173212
2. Address of location where food business is to be conducted / premises / स्थान का पता जहां खाद्य व्यापार / परिसर है: CAMPASS IN SHOOLINI UNIVERSITY SOLAN H.P., Solan (MCl), Solan Town, Solan, Himachal Pradesh-173212
3. Kind of Business / कारोबार का प्रकार: Food Vending Establishment
4. Photo Identity Card / फोटो पहचान पत्र(विवरण) : N/A

This Registration certificate is issued under and is subject to the provisions of FSS Act, 2006 all of which must be complied with by the petty food business. / यह पंजीकरण खाद्य संरक्षा और मानक अधिनियम, 2006 के अधीन अनुदत्त की गई और वह अधिनियम के उपबंधो के अध्यादीन है जिनका अनुज्ञप्तिधारी द्वारा अवश्य पालन किया जाना चाहिए.

Place / स्थान: Solan
Issued On / दिनांक: 31-01-2021 (New Registration)
Valid Upto: / वैधता: 30-01-2026 (For details, refer Annexure)

Registering Authority
पंजीयन प्राधिकारी

Annexures:
1. Product Annexure
2. Validity Annexure
3. Registration Id Card

Note:

1. **Application for renewal of Registration Certificate can be filed as early as 180 days prior to expiry date of Registration Certificate. You can file application for renewal or modification of Registration Certificate by login into FSSAI's Food Safety Compliance System(https://foscos.fssai.gov.in) with your user id and password or call us at 1800112100 for any clarification.**
2. **This Registration Certificate is only to commence or carry on food businesses and not for any other purpose.**
3. **This is computer generated Registration Certificate and doesn't require any signature or stamp by authority.**
4. **This Registration Certificate is allowed to conduct food businesses activities having annual turnover upto Rs. 12 Lacs only.**

Validation And Renewal Annexure

Registration Certificate

Government of Himachal Pradesh

Department Of Health Safety and Regulations

Food Safety and Standards Authority of India

Registration Certificate under FSS Act, 2006

पंजीकरण संख्या / Registration Number: **20921011000124**

Validity From	Validity Upto	Issued On	Fee Paid	Type
31-01-2021	30-01-2026	31-01-2021	500 INR	New

Note:

1. **Application for renewal of Registration Certificate can be filed as early as 180 days prior to expiry date of Registration Certificate. You can file application for renewal or modification of Registration Certificate by login into FSSAI's Food Safety Compliance System(https://foscos.fssai.gov.in) with your user id and password or call us at 1800112100 for any clarification.**

Product Annexure

Registration Certificate
Government of Himachal Pradesh
Department Of Health Safety and Regulations
Food Safety and Standards Authority of India
Registration Certificate under FSS Act, 2006

पंजीकरण संख्या / Registration Number: **20921011000124**

Detail(s) of Food Item

[**Note:**Only standardised food products are allowed to be manufactured as per the list available on FoSCoS.]

Sl. No	Food Item(s)
1	16 - Prepared Foods
2	15 - Ready-to-eat savouries

MEDICAL CERTIFICATE BY THE GOVT. MEDICAL ATTENDENT FOR THE GRANT OF FOOD LICENCE UNDER FOOD SAFETY AND STANDARDS ACT, 2006.

I, Dr Tarun Shastri Medical Officer of R.H / PHC / CH / Solan herby examined Sh./ Smt Sarita Bhardwaj S/O. D/O Sh Kripa Ram R/O Vill. Kathon P.O Shanti. Teh Solan Distt Solan H.P., who applied for the grant of food licence under Food Safety and Standards Act, 2006 and declare him/her fit after carefully examination and also declare that he/she is not suffering from any infectious disease.

Bhardwaj
Signature of Applicant

Medical Officer
Regional Hospital, Solan (H.P.)
Medical Officer

Photograph



Medical Officer
Regional Hospital, Solan (H.P.)

Dated:- 24/04/23

Policy on Waste Disposal and Management of Hazardous Materials

2024



Shoolini University of Biotechnology and Management Sciences,

Solan, Himachal Pradesh, India-173229

1. Introduction

Shoolini University is committed to fostering an environmentally responsible campus through sustainable waste management practices that prevent pollution, minimize risk, and promote campus hygiene. The Waste Disposal and Hazardous Materials Policy establishes a systematic framework for the collection, segregation, storage, transport, and disposal of hazardous and non-hazardous waste generated on campus. The policy supports Shoolini University broader sustainability vision and aligns with the UN Sustainable Development Goals (SDG 12 and SDG 13), ensuring that waste management practices contribute to responsible production, environmental protection, and climate resilience.

2. Policy Statement

The University shall ensure that all categories of waste—biomedical, chemical, e-waste, solid, and recyclable materials—are collected, handled, transported, and disposed of in a scientific, safe, and environmentally compliant manner.

All operations shall conform to the provisions of:

- The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016
- The Biomedical Waste Management Rules, 2016
- The Solid Waste Management Rules, 2016
- The E-Waste Management Rules, 2022
- The Plastic Waste Management (Amendment) Rules, 2022

3. Objectives of the Policy

- To establish a systematic waste management process for all categories of waste.
- To ensure compliance with environmental and safety regulations.
- To minimize waste generation through reduce, reuse, and recycle (3Rs) strategies.
- To promote safe handling, segregation, and disposal of hazardous materials.
- To enhance campus cleanliness, hygiene, and environmental awareness.
- To encourage the use of green alternatives and eco-friendly materials in laboratories and operations.

4. Scope of the Policy

This policy applies to:

- All teaching and research laboratories generating chemical, biological, or electronic waste.
- All administrative offices, hostels, and canteens generating solid or recyclable waste.
- Maintenance and housekeeping units managing municipal and sanitary waste.
- External contractors or agencies engaged in waste collection or treatment.

5. Categories of Hazardous Waste

Hazardous waste generated at the university is categorized based on its characteristics and potential environmental impact:

5.1 Ignitable Waste

- Flammable liquids (e.g., alcohols, acetone, ethyl acetate, mineral spirits)
- Oxidizers (e.g., nitrates, perchlorates, bromates, peroxides)
- Organic peroxides (e.g., benzoyl peroxide, methyl ethyl ketone peroxide)

5.2 Corrosive Waste

- Liquids with pH <2 or >12.5 (e.g., hydrochloric acid, sulfuric acid, sodium hydroxide)
- Acids and bases capable of corroding metals or containers

5.3 Reactive Waste

- Materials reacting violently with water or producing toxic gases (e.g., sodium, potassium, cyanides, peroxides)
- Compounds prone to explosive polymerization or crystal formation

5.4 Toxic Waste

- Substances leaching harmful elements such as arsenic, mercury, cadmium, chromium, lead, or pesticides during disposal processes.

Note: Disposal of hazardous substances into sinks, drains, or sewage systems is strictly prohibited.

6. Biomedical Waste Management

Shoolini University follows a robust biomedical waste management protocol in accordance with the Biomedical Waste Management Rules (2016).

- Biomedical waste is segregated at the point of generation using color-coded containers (Yellow, Red, Blue, White) as per regulatory norms.
- A fixed collection point is maintained at the University Health Centre, where waste is temporarily stored.
- The waste is collected weekly by the authorized agency Enviro Engineers Pvt. Ltd., recognized by the Himachal Pradesh State Pollution Control Board.
- The waste is then transported to the Sandli Biomedical Waste Treatment Plant for eco-safe processing and disposal.
- The designated Biomedical Waste Management In-Charge, Dr. Rohit Sharma, oversees compliance, record-keeping, and coordination with the authorized disposal agency.

7. Waste Collection and Disposal System

Shoolini University has implemented a systematic and sustainable process for waste collection and disposal:

Segregation at Source:

- Waste is segregated at the generation point labs, hostels, canteens, or administrative areas into biodegradable, non-biodegradable, recyclable, and hazardous categories.

Collection Mechanism:

- The University uses handcrafted bamboo wooden "Kilta" baskets, symbolizing sustainability and Himachali cultural heritage, for waste collection.
- These baskets are durable, renewable, and environmentally friendly, minimizing plastic use on campus.

Storage and Labeling:

- Dedicated color-coded and labeled bins are provided for different waste categories.
- Special containers are installed in laboratories and health centers for hazardous and biomedical waste.

Authorized Disposal:

- General waste is sent for segregation and recycling, while hazardous and biomedical waste is handed over to licensed agencies for safe treatment and disposal.

8. Training and Awareness

To ensure effective implementation, Shoolini University conducts:

- Workshops and training programs for laboratory staff and students on hazardous waste handling.
- Campus-wide awareness campaigns under the themes “Green Shoolini,” “Zero Waste Campus,” and “Clean Lab Initiative.”
- Emergency drills and safety orientations to prevent accidents or chemical exposure incidents.

Shoolini University’s waste management practices reflect its strong dedication to sustainability, environmental compliance, and public health. Through a combination of traditional, eco-friendly collection methods, scientific waste handling, and continuous education, the University ensures a clean, safe, and green campus for all stakeholders.

REGISTRAR

सत्यमेव जयते

INDIA NON JUDICIAL

Government of Himachal Pradesh

e-Stamp

Certificate No.	:	IN-HP45199368622766X
Certificate Issued Date	:	21-Apr-2025 10:23 AM
Account Reference	:	NEWIMPACC (SV)/ hp19054804/ SOLAN/ HP-SL
Unique Doc. Reference	:	SUBIN-HPHP19054804839717802099 17X
Purchased by	:	SHOOLINI UNIVERSITY BAJHOL SOLAN
Description of Document	:	Article 5 Agreement or Memorandum of an Agreement
Property Description	:	AGREEMENT
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	ENVIRO ENGINEERS CBWTF SANDLI SOLAN THR HET RAM
Second Party	:	SHOOLINI UNIVERSITY BAJHOL SOLAN
Stamp Duty Paid By	:	SHOOLINI UNIVERSITY BAJHOL SOLAN
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)

Tak Cha... (Stamp Vendor)
District Co... Solan (H.P.)
Date ...21-04-2025
Sr. No....6572/25...

Please write or type below this line

For Enviro Engineers

Registrar
Shoolini University of Biotechnology
& Management Sciences
Solan (H.P.)

Statutory Alert:

...e Stamp Mobile App of Stock Holding.

SHOOLINI UNIVERSITY BAJHOL SOLAN SHOOLINI UNIVERSITY BAJHOL SOLAN SHOOLINI UNIVERSITY BAJHOL SOLAN SHOOLINI UNIVERSITY BAJHOL SOLAN SHOOLINI UNIVERSITY BAJHOL SOLAN

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GOVERNMENT OF HIMACHAL PRADESH
e-Stamp
Certificate No. IN-HP45199368622766X, dated 21-04-2025.

CONTRACTUAL AGREEMENT

This contractual agreement is entered on 21st April 2025 at Sandli, Solan (H.P).

BY AND BETWEEN:

Enviro Engineers, CBWTF Sandli Solan (H.P.) here in after, called as 1st party duly authorized by the H.P. State Pollution Control Board, Paryavaran Bhawan, New Shimla 171009 for the compliance of Bio-Medical Waste (Management & handling) Rules, 2016 through Mr. Het Ram Thakur, CEO, Enviro Engineers, who has been duly authorized to execute and sign this agreement for and on behalf of Enviro Engineers, on the one part.

AND

Shoolini University, Bajhol, Solan-Oachghat-Kumarhatti Highway, Solan H.P. 173229, hereinafter as 2nd Party, on the other part and is also referred to as **Lab/Clinic.**

Now the following terms of reference have been agreed upon by both the parties.

Responsibilities of Lab/Clinic

- Will take all steps to ensure that the waste is handled without adverse effect to human health and environment before collection by taking the steps to segregate the west at the point of generation in accordance with schedule 1 & 2 of Bio-Medical Waste (Management & handling) Rule, 2016 incompliance with the standard prescribed.
- Will maintain the record of Bio-Medical Waste Generated/Handed over.
- Will fix a Bio-Medical Waste lifting point (collection and point) and will also authorize a person, whose name designation will be submitted to 1st Party in writing to interact with Enviro Engineers/collection van staff and will sign the Enviro Engineers daily rout chart as acknowledgement of the visit/BMW handed over.
- Will intimate the absentee, if any, very next day to Enviro Engineers office.
- Will destroy, disinfect sharps and mutilate them in puncture proof containers before collection.
- Will provide color coded bags for BMW collection along with barcodes to

For Enviro Engineers

- Will renew their contractual agreement one month before the date of expiry.
- Will provide BMW by weight/electronic weig hing machine.

Responsibilities of Enviro Engineers

- Will receive, collect and transport the BMW handed over by **Lab/Clinic** in color coded bags.
- Will hand over the incinerable waste to Bio Medical Waste Treatment plant site at Sandli for final disposal.
- Will submit the monthly report of the waste collected/continuation of the services of related **Lab/Clinic** to the prescribed authority and also submit the annual report to the prescribed authority.

GENERAL TERMS AND CONDITIONS.

- The terms of this agreement shall be from **1st April 2025 to 31st March 2027.**
- Registration No. of this agreement is EE/25-26/..450..... on dated.1-4-2025
- Enviro-Engineers will charge Rs. 6050/month from unit for collection, Transportation and Disposal of the Bio Medical Waste.
- Manifest will be provided by the authorized person of collection team with date and weight.
- If the concerned unit don't hand over the waste up to 60 days, the agreement will be considered deem expired.
- Enviro-Engineers will discontinue the services of the waste generator in the event the waste generator is at default in responsibilities/payments with seven days prior notice.
- Bio Medical Waste should be segregated, leveled, tagged and tied in proper color & bar-coded bags i.e.: -
- **Yellow Bags:** (a) Human Anatomical (b) Human Anatomical Waste (c) Soiled waste: Items contaminated with blood, body fluids like dressings, plasters casts, cotton swabs and bags containing residual or discarded blood and blood components. (d)Expired or Discarded Medicines: Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.
- **Red bags:** Contaminated Waste (Recyclable) Waste generated from disposable items such as tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes (without needles and fixed needle syringes) and vacationers with their needles cut and gloves.

For Enviro Engineers

other contaminated sharp object that may cause puncture and cuts. This includes used, discarded and contaminated metal sharps.

- The 1st party will not stop the services of collection without written intimation to HPSPCB **Parwanoo/Shimla/Paonta Sahib** in case of temporary closure/holidays of unit.
- As per NGT/ office order HPSPCB/BMW/02 notification/-27395-99 Dated 19/12/2019 and no waste will be lifted without barcode.
- Before handing over the Bio Medical waste the Lab/Clinic certificate of non-Chlorinated & thickness of micron must be given by 2nd party to 1st party.
- The service of collection & transportation will be started from 8:00 am to onward.
- The duplicate copy of agreement will be provided after written request along with Rs. 400/- in the shape of draft/cheque.
- Cheque bounce charges (in any shape) will be recovered from 2nd party i.e Rs.400/.
- No change or modification or waiver of any of the terms and conditions of this agreement shall be effective, unless agreed to in writing and shall be in force as agreed upon by the both parties here to.
- Neither party shall transfer and nor assign the rights granted under the contract agreement without the prior assignee/transferee agreeing to assume all the said parties obligations and covenants contained herein.
- In case of any dispute arising out of or in connection with this agreement, the courts of Shimla shall have exclusive jurisdiction.
- This agreement shall be governed by the law of India and shall be interpreted and construed in accordance with the laws of India and shall be in writing and delivered by hand against receipt, or send by registered post to the address of any of the parties.
- Any such notice or communication shall be deemed to have been duly given and served at the date and time or (1) delivery or of first refusal of delivery, if send by registered mail or delivered by hand or (2) either the date sent (if send during the receiving party's normal business hours) or next succeeding day, if sent by telefax.
- **Enviro Engineers will not pick up the Bio-medical Waste from Lab/Clinic if it is not segregated, packed and tied in proper color-coded bags marked with Bar code No. or mixed with other general waste as per the Bio-Medical (M&H) Rules,2016.**

IN WITNESS WHEREOF THE PARTIES HERETO HAVE SET THEIR HAND AND SEAL, THE DAY OF MONTH AND YEAR FIRST ABOVE WRITTEN.

On behalf of Lab/Clinic

Authorized Signatory

On behalf of Enviro Engineers

For Enviro Engineers

Authorized Signatory

Shoolini University of Biotechnology

Policy on Waste Disposal – Landfill Management

2024



Shoolini University of Biotechnology and Management Sciences,

Solan, Himachal Pradesh, India-173229

1. Preamble

Shoolini University is committed to sustainable waste management practices that protect the environment, reduce greenhouse gas emissions, and promote responsible consumption. The Landfill Policy aims to minimize the volume of waste sent to landfills by encouraging waste segregation, recycling, composting, and reuse. As part of its broader sustainability framework, the University prioritizes the "Zero Waste to Landfill" vision, ensuring that only non-recyclable and inert materials reach final landfill destinations. This policy is aligned with the Solid Waste Management Rules (2016) and the Himachal Pradesh State Pollution Control Board guidelines.

2. Policy Statement

Shoolini University shall implement and maintain a structured and environmentally responsible waste disposal system that:

- Minimizes landfill use through effective segregation and recovery.
- Promotes campus-wide awareness on sustainable waste practices.
- Ensures scientific disposal of residual waste in compliance with environmental regulations.
- Supports the University's commitment to becoming a carbon-neutral and zero-waste campus.

3. Objectives of the Policy

To establish a systematic process for waste disposal, ensuring minimal waste ends up in landfills.

- To promote waste segregation at source and strengthen recycling initiatives.
- To reduce the University's carbon footprint by optimizing waste management operations.
- To ensure compliance with government waste management regulations.
- To develop awareness and accountability among students, staff, and stakeholders toward waste reduction and responsible disposal.

4. Scope of the Policy

This policy applies to:

- All academic and research departments, laboratories, offices, and canteens.

- Student hostels and residential areas.
- Maintenance, landscaping, and construction units.
- Vendors and contractors involved in waste collection, transportation, or disposal.

5. Landfill Waste Management Hierarchy

Shoolini University follows a 4R-based hierarchy to manage landfill waste effectively:

1. Reduce:

Minimize waste generation through efficient consumption and responsible procurement practices.

2. Reuse:

Encourage reuse of materials such as glass containers, metal objects, stationery, and furniture wherever possible.

3. Recycle:

Segregate recyclable waste (paper, plastic, glass, and metal) at the source and send it to authorized recyclers.

4. Responsible Disposal (Landfill):

Ensure only inert, non-recyclable, or non-compostable waste is sent to designated landfill sites through authorized agencies.

6. Landfill Waste Reduction Strategies

To minimize landfill dependency, the University undertakes the following measures:

- On-campus composting units for biodegradable waste.
- Promotion of plastic-free campus initiatives.
- Use of bamboo and wooden collection baskets (kilta) for waste segregation.
- Regular waste audits to identify high landfill-generating areas.
- Collaboration with municipal and private waste management agencies for safe disposal.
- Encouragement of student-led projects on waste upcycling and green innovations.

7. Partnerships

Shoolini University ensures full compliance with:

- Solid Waste Management Rules, 2016
- Plastic Waste Management Rules, 2022
- E-Waste Management Rules, 2022
- Hazardous Waste Management Rules, 2016

The University collaborates with the Municipal Corporation Solan, and authorized waste management agencies for environmentally safe transportation and landfill disposal of residual waste.

Through the implementation of this policy, Shoolini University reaffirms its commitment to environmental excellence, campus hygiene, and zero landfill vision.

REGISTRAR

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Government of Himachal Pradesh

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₹20

e-Stamp

Certificate No.	:	**IN-HP45383063775406X**
Certificate Issued Date	:	22-Apr-2025 12:22 PM
Account Reference	:	CSCACC (GV)/ hpcsceg07/ HP-SLHAR0360/ HP-SL
Unique Doc. Reference	:	SUBIN-HPHPCSCEG0784334858418697X
Purchased by	:	Pawan Kumar son of Sh Devinder Kumar
Description of Document	:	Article 5 Agreement or Memorandum of an Agreement
Property Description	:	Agreement
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	Shoolini University Through Pro Vice Chancellor
Second Party	:	Pawan Kumar son of Sh Devinder Kumar
Stamp Duty Paid By	:	Pawan Kumar son of Sh Devinder Kumar
Stamp Duty Amount(Rs.)	:	20 (Twenty only)

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CSC ID: 661437350019
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Sign.........

Please write or type below this line

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Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate
3. In case of any discrepancy please inform the Competent Authority

AGREEMENT

This agreement is made at Solan on 22nd day of April, 2025, between Shoolini University Bhajol Campus Sultanpur Solan, Tehsil and District Solan [H.P.] through its Pro Vice-Chancellor of Shoolini University (hereinafter called the first party/landlord)

And

Sh. Pawan Kumar S/o Sh. Devinder Kumar R/o Dhobighat, Adharsh Nagar, Ward No 7, Solan, Tehsil and District Solan (H.P.), hereinafter called the tenant/second party), which expression include their representative, successors and assigns.

And whereas Mr. Pawan Kumar is entrusted for the daily Garbage Collection of the University premises and approve by Pro Vice Chancellor of the Shoolini University.

Hereby Grants its approval for the collection of the garbage from the Shoolini University Premises for the period of one year i.e. from **01.04.2025 to 31.03.2026** on the following terms and conditions:

TERMS AND CONDITIONS:

1. Contract period is for 1 years and shall be renewed on mutual consent for another period of 1 years in the larger interest of the institution.
2. It is expressly clarified that although Mr. Pawan Kumar has entered into an agreement with Shoolini University for the daily collection of the Garbage no. other vender can do the similar work in the University Premises.

3. Rupees **80,000/- (Rs. Eighty Thousand Only)** per month is settled with Shoolini University towards the daily collection of the Garbage collection.
4. The second party shall not hike the without the consent of Authorities of Shoolini University.
5. The second party must collect the garbage daily failing which falls with cost him a penalty of Rs. 2,000/-.
6. During the validity period of this agreement second party shall not enter into any similar agreement with any other company or person.
7. The second party will only dump the garbage including from the animal house and e waste in authorized dumping place as declare by the Govt. authorities and produce NOC.
8. Garbage is to be collected Six days a week i.e Monday to Saturday (there will be only one holiday i.e Sunday) and stated holidays and national holidays will be the working days. In case of second absence due to any emergency, he is to assign the routine job to inform the first party in advance mentioned penalty as said above.
9. Any of the parties of this agreement may discontinue this agreement giving 30 days written period notice to the either on expiry of which, this agreement shall come to an end for all the purpose.
10. That all the question and disputes arising out of the agreement or the entitlement of the parties arising during the terms of the agreement, thereafter shall be referred to a sole arbitrator

mutually agreed between the parties, failing which to a sole arbitrator nominated by the Indian Council of Arbitrator on a joint application. The award of the arbitrator shall be final, conclusive and binding on the both parties.

11. That the second party will be wholly responsible for ensuring all government compliances including payment of salaries, arrears, gratuity, PF and any other allowances etc. to the employees appointed by the said second party and the university will not be responsible for such employees appointed by the second party.

IN WITNESSES whereof both the parties hereto have signed this agreement at Solan (H.P.) in the presence of witness as a token of its acceptance correctness of its contents.

WITNESSES:

1. _____

_____

First Party

2. Prince

Adarsh Nagar Dhobighat

Road W/No-7 Solan (H.P.)

Second Party

Pawan Kumar

Policy for Minimisation of Plastic Use

2024



Shoolini University of Biotechnology and Management Sciences,

Solan, Himachal Pradesh, India-173229

1. Preamble

Shoolini University, as a leading green campus, recognizes the urgent global need to reduce plastic pollution and promote sustainable alternatives. In alignment with the United Nations Sustainable Development Goal 12 – Responsible Consumption and Production, the University has adopted this Policy for Minimisation of Plastic Use to systematically reduce single-use plastic and encourage eco-friendly materials across all university operations. The policy reflects the University's long-standing commitment to environmental conservation, circular economy practices, and waste reduction. It serves as a guiding framework to eliminate avoidable plastic use and foster a culture of sustainability within the campus community.

2. Policy Statement

Shoolini University is committed to the gradual elimination of single-use plastic and the promotion of sustainable alternatives such as biodegradable, compostable, or reusable materials.

The University aims to:

- Discourage the procurement and use of single-use plastic materials within the campus.
- Replace plastic with sustainable alternatives (e.g., bamboo, jute, paper, metal, or glass).
- Promote a "Plastic-Free Campus" through awareness, capacity building, and policy enforcement.
- Support the state and national plastic management frameworks, including the Plastic Waste Management (Amendment) Rules, 2022.

3. Objectives

- To minimize the generation and usage of plastic materials in all university activities.
- To promote the use of environmentally friendly alternatives in academic, administrative, and residential areas.
- To sensitize students, faculty, and staff on the harmful effects of plastic waste and encourage behavioral change.
- To collaborate with vendors and suppliers to ensure compliance with the plastic minimisation policy.
- To integrate sustainability principles into the university's procurement, waste management, and event organization processes.

4. Scope

This policy applies to:

- All academic, research, administrative, and residential premises within the university.
- Cafeterias, food stalls, and hostels operating on the campus.
- Students, faculty, staff, contractors, and visitors.
- All vendors, suppliers, and event organizers associated with the university.

5. Implementation Guidelines

The University shall adopt the following strategies to minimize plastic use:

5.1 Elimination of Single-Use Plastic

- Ban single-use plastic items such as straws, cutlery, plastic cups, stirrers, bottles (below 1L capacity), and disposable bags.
- Prohibit the use of thin plastic carry bags (<75 microns) across campus.
- Replace single-use items with reusable alternatives (e.g., metal bottles, glass containers, or bamboo straws).

5.2 Green Procurement

- Mandate all purchase departments to prioritize sustainable materials over plastic-based items.
- Vendors and suppliers shall comply with the university's "no single-use plastic" procurement clause.
- Encourage local sourcing of goods with minimal plastic packaging.

5.3 Waste Segregation and Recycling

- Install color-coded bins for segregation of recyclable plastic waste at source.
- Partner with authorized recyclers for the collection and recycling of plastic materials.
- Conduct regular waste audits to monitor plastic consumption patterns.

5.4 Awareness and Capacity Building

- Organize awareness drives, workshops, and campaigns such as "Plastic-Free Shoolini," "Refuse Single Use," and "Bring Your Own Bottle."

- Encourage student clubs and green committees to promote behavioral change and sustainability habits.

5.5 Research and Innovation

- Promote research projects focusing on biodegradable alternatives, plastic waste management, and circular economy models.
- Collaborate with external agencies, NGOs, and startups developing innovative waste reduction technologies.

6. Infrastructure and Support Initiatives

- Establish bottle refilling stations to discourage plastic bottle use.
- Provide cloth and jute bags for university stores and events.
- Encourage the use of handcrafted bamboo "kilta" baskets for waste collection, preserving local culture while promoting sustainability.
- Ensure canteens and hostels adopt reusable utensils and sustainable food packaging

Shoolini University commits to creating a sustainable, plastic-free campus through innovation, education, and community participation. By eliminating single-use plastics, and fostering awareness, the University aims to lead as a model institution for environmental responsibility in higher education.

REGISTRAR

Evidence:

Shoolini University is **committed to reducing plastic consumption on campus by promoting reusable and environmentally friendly alternatives** to conventional plastic products. The University has adopted several initiatives to minimise plastic use in day-to-day activities, as illustrated by the available photographic evidence:

Practical measures to minimise plastic use in day-to-day activities:

1. Reusable Water Bottles

Shoolini University promotes the use of reusable, wood-finished stainless-steel water bottles as an alternative to single-use plastic bottles. These bottles support waste reduction by encouraging repeated use and reducing dependence on disposable beverage containers in daily campus activities.



Reusable wood-finished stainless-steel water bottles used at Shoolini University

2. Reusable Carry Bags

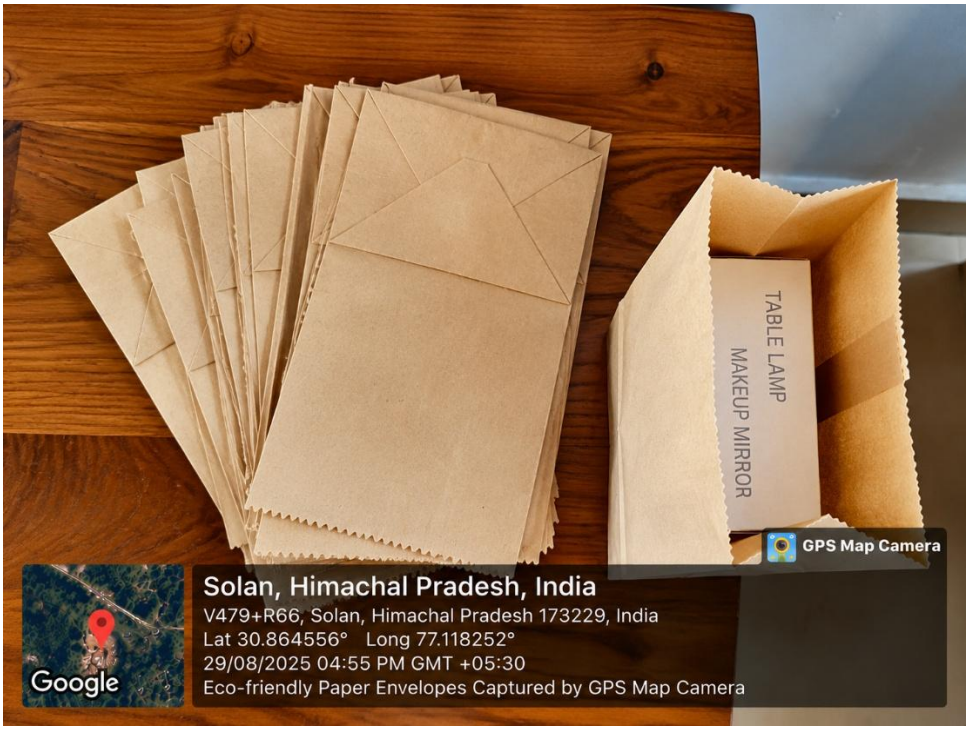
Shoolini University promotes jute and cloth-based carry bags as sustainable alternatives to conventional plastic bags. These reusable bags help reduce plastic consumption and encourage environmentally responsible practices among the university community.



Reusable jute and cloth-based carry bags

3. Paper-Based Packaging

University uses paper bags for packaging and carrying small items as an alternative to plastic packaging materials. This initiative supports the reduction of unnecessary plastic use and encourages the adoption of alternative packaging materials in routine activities.



Paper bags for packaging and carrying small items

4. Eco-Friendly Pens

The University uses cardboard-bodied pens as alternatives to conventional plastic pens. This initiative encourages the use of alternative materials in stationery and supports efforts to reduce reliance on plastic-based products in academic and administrative activities.



Eco-friendly cardboard-based pen

5. Bamboo Waste Baskets:

Shoolini University uses bamboo kiltas as alternatives to conventional plastic dustbins. By incorporating these natural-material alternatives into campus waste management, the University promotes sustainable material choices and supports its broader efforts to reduce plastic use.



Bamboo Kiltas inside the campus

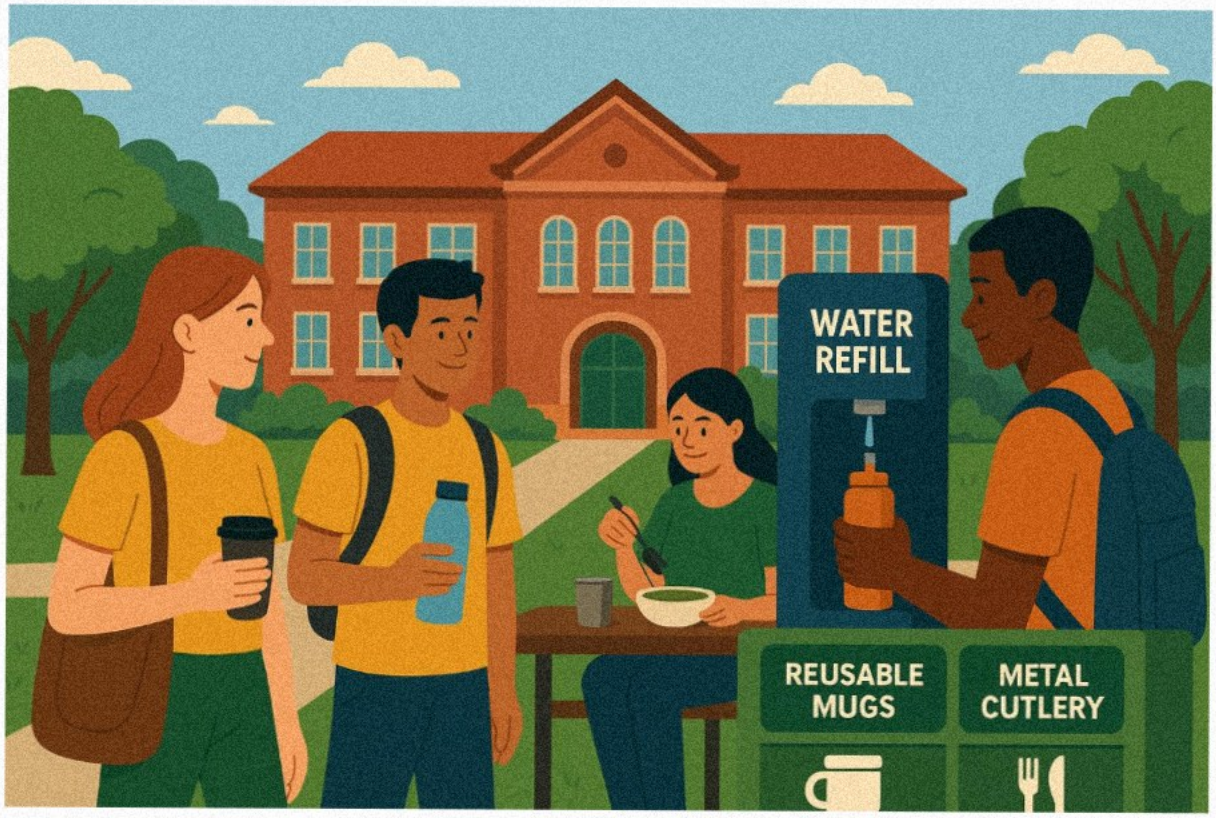
These initiatives reflect the University's efforts to encourage sustainable consumption practices and reduce dependence on single-use plastic products. The photographs provide supporting evidence of these alternatives being available at the University.

Conclusion

Shoolini University’s Policy for Minimisation of Plastic Use demonstrates its commitment to sustainable consumption and environmental protection in alignment with SDG 12: Responsible Consumption and Production. The University promotes alternatives to single-use plastics through reusable stainless-steel water bottles, jute and cloth bags, paper-based packaging, cardboard-bodied pens, and bamboo kilta waste baskets. These initiatives encourage responsible purchasing, reduce dependence on disposable plastic products, and promote environmentally conscious practices across campus. Continued implementation, awareness campaigns, waste audits, and monitoring of plastic consumption will help strengthen the effectiveness of the policy and support the University’s long-term sustainability objectives.

Policy for Minimisation of Disposable Items

2024



Shoolini University of Biotechnology and Management Sciences,

Solan, Himachal Pradesh, India-173229

1. Preamble

Shoolini University is dedicated to fostering an environmentally responsible and sustainable campus by promoting mindful consumption and waste reduction practices. The Policy for Minimisation of Disposable Items has been formulated in alignment with the United Nations Sustainable Development Goal 12 (Responsible Consumption and Production), reflecting the University's commitment to reducing its environmental footprint. The policy aims to discourage the use of single-use and disposable items, promote reusable and sustainable alternatives, and cultivate a culture of environmental consciousness among students, staff, and stakeholders.

2. Policy Statement

Shoolini University is committed to eliminating or significantly reducing disposable items across all its departments, offices, and facilities. The University shall ensure that all operational activities prioritize reusability, recyclability, and sustainability over convenience-driven disposables. This includes the phasing out of plastic cutlery, disposable cups, plates, and packaging materials and replacing them with eco-friendly alternatives such as metal, bamboo, glass, paper, or biodegradable materials.

3. Objectives

The key objectives of this policy are to:

- Reduce campus dependency on single-use disposable items.
- Promote reusable alternatives through infrastructure and awareness.
- Encourage responsible purchasing and vendor compliance with eco-friendly standards.
- Ensure waste minimisation through sustainable event and cafeteria practices.
- Integrate environmental sustainability into daily operations and procurement systems.

4. Scope of the Policy

This policy applies to:

- All academic, research, and administrative departments.
- Hostels, cafeterias, and canteens operating within the campus.
- University events, meetings, and conferences.
- All students, faculty, staff, vendors, and contractors associated with the University.

5. Implementation Strategies

5.1 Elimination of Single-Use Disposable Items

- Prohibit the use of single-use plastics, paper cups, plates, straws, and cutlery across campus.
- Introduce reusable alternatives such as stainless-steel tumblers, ceramic plates, or glass bottles in cafeterias and offices.
- Encourage "Bring Your Own Mug/Bottle" practices among students and staff.

5.2 Green Procurement

- Ensure that procurement departments prioritize biodegradable or reusable items in purchase orders.
- Vendors and suppliers must comply with the University's Green Procurement Guidelines and avoid plastic or non-biodegradable packaging.
- Preference shall be given to local suppliers promoting sustainable materials.

5.3 Sustainable Cafeteria and Event Practices

- All food vendors and canteen operators shall use washable and reusable utensils instead of disposables.
- Events and seminars organized on campus must be zero-waste, prohibiting disposable plates, bottles, and decorations.
- Drinking water stations shall be installed at event venues to eliminate packaged water bottles.

5.4 Awareness and Capacity Building

- Conduct periodic awareness campaigns, workshops, and sustainability drives to promote reusable habits.
- Launch initiatives such as "No to Disposables Week," "Green Cafeteria Drive," and "Zero Waste Events."
- Display posters and digital messages around campus encouraging reduction of disposable waste.

5.5 Waste Segregation and Recycling

- Segregate and collect any unavoidable disposable waste in color-coded bins.

- Partner with authorized recyclers or waste management agencies for responsible disposal.
- Periodically track the quantity of disposable waste generated to monitor progress.

6. Awareness

- Organize training programs and green campaigns to promote reusable alternatives.
- Collaborate with local NGOs and government initiatives working on waste minimisation.
- Celebrate Environment Day, World Cleanup Day, and Swachh Campus Drive to encourage community participation in waste-free initiatives.

Shoolini University remains steadfast in its mission to become a zero-waste and sustainable campus. Through this policy, the University seeks to lead by example—promoting eco-friendly consumption, discouraging disposables, and nurturing a community that values environmental responsibility and sustainable living.

REGISTRAR

Evidence:

Minimisation of Disposable Items at Shoolini University

Shoolini University promotes the minimisation of disposable items by encouraging reusable products and environmentally preferable alternatives across campus facilities. Initiatives include replacing single-use plastic cutlery with wooden alternatives where appropriate, using reusable plates and crockery in dining areas, promoting reusable water bottles and cloth or jute carry bags, and reducing unnecessary packaging. These measures aim to minimise disposable waste, reduce dependence on single-use plastics, and promote responsible consumption practices across the University. Shoolini University can include the following initiatives:

Initiatives Taken at Shoolini University

1. Use of Reusable Plates and Crockery

Shoolini University promotes the use of reusable plates, cups, bowls, and stainless-steel cutlery in dining facilities in hostel mess and campus events (Ceramic crockery plates). These items can be washed and reused, reducing dependence on single-use disposable serving products. This initiative supports waste minimisation and responsible consumption.



Reusable stainless-steel plates, trays, and cutlery

2. Wooden Cutlery Alternatives

The University promotes recycled wooden spoons, plates and forks as alternatives to single-use plastic cutlery in campus cafeterias. These alternatives help reduce reliance on conventional plastic serving items. Their use can contribute to minimising plastic waste generated during food service and campus events.



University promotes wooden spoons and forks in cafeterias

3. Reusable Water Bottles

Shoolini University promotes the use of reusable, wood-finished stainless-steel water bottles as an alternative to single-use plastic bottles. These bottles support waste reduction by encouraging repeated use and reducing dependence on disposable beverage containers in daily campus activities.



Reusable wood-finished stainless-steel water bottles

4. Reusable Carry Bags

Shoolini University promotes jute and cloth-based carry bags as sustainable alternatives to conventional plastic bags. These reusable bags help reduce plastic consumption and encourage environmentally responsible practices among the university community.



Reusable jute and cloth-based carry bags

5. Paper-Based Packaging

University uses paper bags for packaging and carrying small items as an alternative to plastic packaging materials. This initiative supports the reduction of unnecessary plastic use and encourages the adoption of alternative packaging materials in routine activities.



Paper bags for packaging and carrying small items

Conclusion

Shoolini University is committed to minimising disposable items and fostering a sustainable, environmentally responsible campus through the implementation of its Policy for Minimisation of Disposable Items. The University promotes the use of stainless-steel plates in hostel mess facilities, reusable stainless-steel water bottles, paper-based packaging, cardboard-bodied pens, jute and cloth bags, bamboo *kilta* waste baskets and recyclable wooden spoons, forks and plates. These initiatives encourage responsible purchasing, reduce dependence on disposable plastic products, and promote environmentally conscious practices across the campus. Collectively, these efforts support waste minimisation, resource conservation, and the principles of Sustainable Development Goal 12: Responsible Consumption and Production.

Shoolini University

Ref. No.: SUBMS-24-4110

Dated: 07/11/2024

DISPOSABLE POLICIES-EXTENSION TO SERVICES

I. Objective

Shoolini University aims to ensure that its commitment to sustainability, ethical sourcing, responsible waste disposal, and minimization of plastics extends beyond campus operations to outsourced services and the supply chain. This policy ensures that all vendors, suppliers, and contractors align with the university's sustainability goals and practices in all activities, including procurement of equipment, stationery, building contracts, and related services.

II. Policy Statement

1. **Ethical Sourcing Compliance**:
    - All suppliers of goods, such as food, stationery, equipment, and building materials, must adhere to the **Ethical Sourcing Policy**. This includes a commitment to fair labour practices, traceability of goods, and a ban on sourcing from suppliers that exploit labour or operate in unsafe working conditions.
2. **Plastic Minimization**:
    - The use of plastics, particularly single-use plastics, is restricted on campus as per the **Minimization of Plastics/Disposables Policy**. Vendors supplying goods to Shoolini University must comply by replacing plastics with sustainable alternatives such as cloth, paper, or biodegradable packaging.
    - Vendors must ensure that food transported to campus is in reusable, insulated containers, and all disposable items like plates and straws are biodegradable.
    - No plastic bags are to be provided on campus, and any plastic used must be below 100 microns.
3. **Waste Management Practices**:
    - Suppliers and contractors must comply with the **Waste Disposal to Landfills and Recycling Policy**, ensuring that waste is segregated, stored safely, and disposed of responsibly. Vendors must color-code waste disposal containers and ensure proper sorting at the source.

- Vendors are responsible for minimizing waste generation and promoting recycling of materials wherever possible.

4. **Hazardous Waste Handling**:
   - Contractors working on projects involving hazardous materials must follow Shoolini University's **Hazardous Waste Disposal Policy**. They must ensure the safe handling, storage, and disposal of any hazardous waste, using approved disposal methods in compliance with local regulations.
5. **Health and Safety Protocols**:
   - All personnel involved in outsourced services (e.g., canteen, cleaning, maintenance) must adhere to safety protocols, including the use of appropriate gear like caps, aprons, masks, and gloves during work on campus.
   - Suppliers of laboratory equipment and chemicals must agree to recycle, or refill used containers instead of discarding them.
6. **Monitoring and Penalties**:
   - Regular monitoring of outsourced services and suppliers will be conducted to ensure adherence to the policy. Non-compliance may result in penalties, including contract termination or other corrective actions.

III. Applicability

This policy extends to all outsourced services, suppliers, and contractors involved with Shoolini University, including but not limited to suppliers of food, equipment, stationery, and construction services. All such entities must adhere to these guidelines to ensure compliance with the university's sustainability objectives.

IV. Review

This policy will be regularly reviewed by the Centre of Excellence in Energy Science and Technology, which is responsible for its effective implementation. Updates to the policy will be communicated via internal channels such as Radio Shoolini TV, the institutional website, and emails to all relevant stakeholders.

Registrar

Copy for information and necessary action forwarded to:

Sh. Pawan Kumar, R/O Dhobhighat , Adarsh Nagar, Ward No.7, Solan, Tehsil and District Solan (H.P)

Enviro Engineers, CBWTF Sandli Solan (H.P)

All Deans/Directors/HOS Shoolini University

Secretary to Vice Chancellor

Director CEEST

Form C121

Vendor Compliance Checklist: *Disposable Policies - Extension to Service*

Checklist	**Fully compliant**	**Partial compliance (Yes, with some exceptions)**	**Non-compliant**	**Remarks**
Ethical Sourcing Compliance- Do you adhere to fair labour practices in all sourcing activities?				
Do you avoid sourcing from suppliers that exploit labour or operate in unsafe working conditions?				
Plastic Minimization Are single-use plastics avoided or minimized in your operations?				
Are hazardous materials stored, handled, and disposed of according to approved, safe methods?				
Do your personnel wear appropriate safety gear (caps, aprons, masks, gloves) during operations on campus?				

Shoolini University

Ref. No.: SUBMS-24-4110

Dated: 07/11/2024

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Secretary to Vice Chancellor

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Form C121

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Do you avoid sourcing from suppliers that exploit labour or operate in unsafe working conditions?				
Plastic Minimization Are single-use plastics avoided or minimized in your operations?				
Are hazardous materials stored, handled, and disposed of according to approved, safe methods?				
Do your personnel wear appropriate safety gear (caps, aprons, masks, gloves) during operations on campus?				

12.3.1 Waste tracking

12.3.1 Waste tracking

Shoolini University considers waste management an integral part of its sustainability initiatives. During the year 2025, the **University tracked and measured waste generated across the campus** to support responsible resource management, improve waste-handling practices, and identify opportunities for waste reduction.

The University maintains formal arrangements for waste collection and disposal through separate agreements for biomedical waste and general campus garbage. Shoolini has signed an agreement with **Enviro Engineers;** responsible for the collection, transportation and authorised disposal of biomedical waste, while a separate **agreement (*Sh. Pawan Kumar son of Sh. Devinder Kumar*)** governs routine campus garbage collection. These arrangements support systematic waste handling and provide a framework for monitoring waste collection and disposal.

Evidence:

Waste Collection details:

Parameter	Units	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Total
Solid waste generation	Kgs	890	805	680	815	880	1165	665	830	1395	2375	1785	1918	**14,203**
Food waste Generation	Kgs	3900	8300	12706	9692	7480	1993	2868	9074	8964	9135	12880	8466	**95,458**
e-Wastage														**759 Kgs**

Waste Measurement Data (Jan–Dec 2025)

Based on the monthly environmental monitoring conducted across the University campus, the following waste-related observations were recorded form the year 2025:

1. Solid Waste Generation:

Solid waste, including paper, cardboard, plastic, packaging materials, and other general non-hazardous waste generated in administrative offices, classrooms, hostels, and common campus areas, is monitored at Shoolini University. During the year 2025, the University recorded monthly solid waste generation ranging from 665 kg to 2,375 kg. The lowest quantity was recorded in August (665 kg), potentially reflecting variations in campus population and occupancy, which may have influenced waste-generation patterns during the month.

2. Food waste Generation

Shoolini University was monitored monthly during the year 2025, with recorded quantities ranging from 1,993 kg to 12,880 kg. The lowest food waste generation was recorded in June (1,993 kg), potentially reflecting variations in food consumption and campus occupancy.

3. E-Waste Generation

Shoolini University is committed to the responsible management of electronic waste (e-waste), which includes discarded or non-functional electronic equipment such as computers, printers, and mobile phones. During the year 2025, **759 Kgs e-waste generation was reported by the University**. The University committed to monitoring e-waste generation and ensuring its proper collection, segregation, and transfer to authorised recyclers or disposal agencies in accordance with applicable environmental regulations.

Calculation:

Waste category	Total generated (kg)	Total (metric tonnes)
Solid waste	14,203	14.203
Food waste	95,458	97.458
E-waste	759	0.759
Total	**110,420 Kg**	**110.42 metric tonnes**

Proportion of waste recycled

Data Collected	Total generated (kg)	Total (metric tonnes)
Amount of waste generated	110,420	110.42
Amount of waste recycled	97,514.61	97.51
Amount of waste sent to landfill	12,841.85	12.84

Additional Environmental Resource Consumption and Generation Parameters:

Parameter	Units	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Recycled Waste water	Liters	38,32,352	80,13,176	99,32,096	90,76,752	82,27,808	31,60,296	40,81,696	1,07,64,555	1,02,46,688	95,56,973	1,08,90,053	90,73,470
STP Sludge generation	Kgs	47	139	268	249	261	39	46	248	258	266	214	203

In addition to monitoring solid waste, Shoolini University systematically tracks wastewater recycling and sewage treatment plant (STP) sludge as part of its campus waste and resource management practices. During the year 2025, the University **recycled 96,855,915 litres of wastewater**, against a total **water consumption of 125,280,870 litres**, representing a calculated **wastewater recycling ratio of 77.31%.** The University also recorded 2,281 kg of STP sludge during the reporting period. Monthly records indicate variations in wastewater generation and sludge production throughout the year, reflecting changes in wastewater flows and treatment operations. Systematic monitoring of these parameters supports the assessment of treatment performance, identification of resource-efficiency opportunities, and continuous improvement in sustainable campus management.

Sustainable Waste Collection

The University promotes environmentally responsible waste-collection practices across academic, residential and common campus areas. Sustainable alternatives to conventional plastic-based collection systems are encouraged as part of the University's broader efforts to reduce unnecessary material consumption.

- **Bamboo Kilta System** Plastic dustbins have been replaced with handcrafted bamboo wooden kiltas (traditional Himachali baskets) for waste collection across academic blocks, hostels, and open spaces. These biodegradable containers not only reduce plastic dependency but also promote local craftsmanship and sustainable livelihoods.



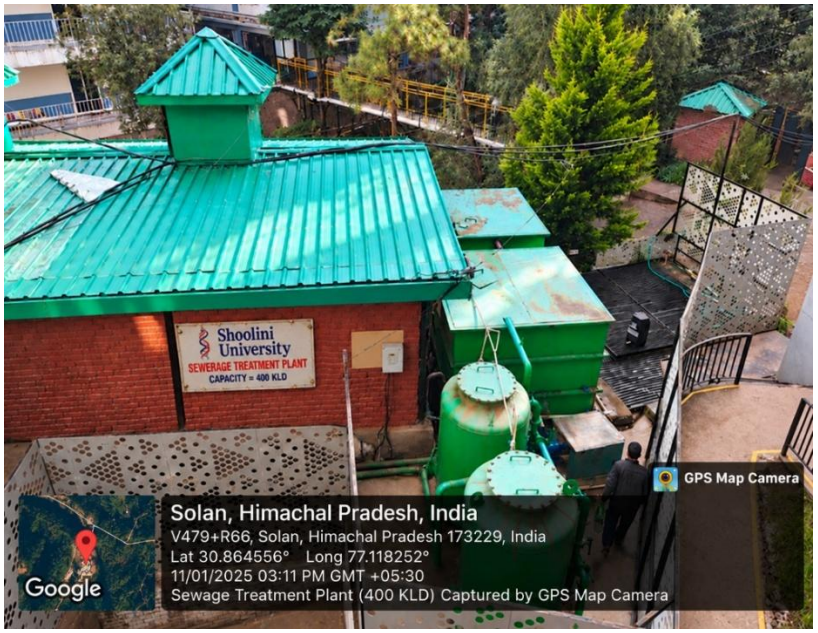
Bamboo Kiltas inside the campus

Wastewater Treatment and Recycling

Shoolini University treats wastewater generated across the campus through its Sewage Treatment Plant (STP) and recycles the treated water for various non-potable requirements. This approach reduces dependence on freshwater and supports efficient water-resource management.

- Horticulture: Treated wastewater is reused for campus gardening and horticultural activities.
- Landscaping: Recycled water supports the maintenance of campus green areas.
- Flushing: Treated water is reused for toilet flushing.
- Other non-potable uses: Recycled water is utilised for suitable campus applications where potable water is not required.

- Water conservation: Recycling reduces freshwater demand and promotes sustainable resource utilisation.



Sewage Treatment Plant having 400 KLD capacity

Future Plans

Shoolini University aims to strengthen its waste monitoring system by introducing more comprehensive tracking of waste that is recycled, reused, composted, or diverted from landfills. This approach will enable the University to quantify the outcomes of its waste management initiatives, assess resource recovery more accurately, and identify opportunities for further improvement. The University also aims to maintain systematic records of waste generation and disposal, supporting transparent sustainability reporting and continuous progress towards United Nations Sustainable Development Goal 12 (Responsible Consumption and Production).

Conclusion

Shoolini University remains committed to responsible waste management and sustainable resource utilisation in alignment with **SDG 12: Responsible Consumption and Production**. During the calendar year 2025, the University recorded **14,203 kg of solid waste, 97,458 kg of food waste, and 759 kg of e-waste**. It also recycled **96,855,915 litres of wastewater**, representing a calculated recycling ratio of **77.31%** against the reported annual water consumption. The University promotes sustainable waste collection through bamboo kiltas, manages wastewater through its **400 KLD Sewage Treatment Plant (STP)**, and maintains arrangements for waste collection and authorised disposal. These initiatives support resource conservation and environmentally responsible campus operations. Going forward, strengthening the documentation of waste recycling, reuse, composting, and disposal will help the University measure recovery outcomes more accurately, improve transparency, and identify further opportunities to minimise waste generation.