



HEMVATI NANDAN BAHUGUNA GARHWAL UNIVERSITY

(A Central University)

Srinagar Garhwal, Uttarakhand – 246174, INDIA

WASTE MANAGEMENT POLICY

HNBGU - Waste Management Policy

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1. Policy Statement

Hemvati Nandan Bahuguna Garhwal University (HNBGU) — a Central University situated in the ecologically sensitive Himalayan region of Uttarakhand — acknowledges its responsibility to protect the environment through sustainable waste management. The University is committed to reducing waste, promoting reuse and recycling, ensuring safe disposal, and fostering an environmentally conscious campus culture among all stakeholders.

HNBGU aspires to be a Zero Waste University, serving as a model for other educational institutions by integrating environmental responsibility into teaching, research, administration, and campus life. This policy aligns with the following national regulations:

- Solid Waste Management Rules, 2016
- Plastic Waste Management Rules, 2018
- E-Waste Management Rules, 2016
- Biomedical Waste Management Rules, 2016
- Hazardous and Other Wastes Management Rules, 2016

2. Purpose

This policy establishes a safe, sustainable, and compliant management framework for all waste generated across university laboratories, departments, hostels, canteens, and residential areas. Specifically, it aims to:

- Establish a systematic framework for waste collection, segregation, transportation, treatment, and disposal of Chemical, Biochemical/Biomedical, Laboratory and E-waste.
- Strengthen the evaluation National Assessment and Accreditation Council (NAAC) under the criteria of Institutional Values and Best Practices for waste management at the University level.
- Promote sustainable utilization and safe uses of the laboratory items and adoption of the best practices for the laboratory waste management.
- Encourage the principles of Reduce, Reuse, and Recycle and safe disposal of waste.
- Foster environmental awareness and behavioural change among students, researchers, faculty, and staff members.
- Ensure compliance with all applicable environmental laws and institutional safety standards and enhance the University reputation as a green, safe and sustainable institution.

3. Scope and Applicability

This policy is mandatory for all stakeholders operating within the jurisdiction of HNBGU across its Birla (Srinagar and Chauras), BGR (Pauri), and SRT (Tehri) campuses.

3.1 Stakeholder Applicability

- University Administration, including offices of Directors, DSW, Proctor, and Warden

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- Academic Departments and Research Laboratories
- Administrative and Examination Offices
- Hostels, Canteens, and Guest Houses
- Residential Quarters and Staff Housing
- Central Facilities (Library, Health Centre, Sports Complex, etc.)
- Students, Faculty Members, Non-teaching Staff, Contract Workers, and Visitors
- Vendors, Contractors, and Service Providers operating within campus premises

3.2 Waste Categories

Table 1: All waste generated within HNBGU is classified into the following categories:		
Category	Category S. No.:	Description & Handling
Regular / General Waste	01	Everyday non-hazardous waste (e.g., packaging, stationery). Managed per existing HNBGU standard protocols.
Biodegradable Non-Hazardous Waste	02	Food scraps, garden trimmings, paper. Must be segregated at source from laboratory waste; NOT routed through the University-level disposal cycle.
Non-Biodegradable Waste	03	Plastics, metals, glassware, and chemical/biochemical containers directly associated with laboratories.
Hazardous Waste	04	Laboratory chemicals, solvents, paints, batteries, and other e-wastes that pose chemical, biological, or reactive risks.
Dry Non-Contagious / Non-Hazardous Waste	05	Laboratory plasticware, glassware, Petri dishes, culture plates, syringes/filters treated with bleach or disinfectant to render them non-hazardous prior to disposal.
Biomedical /Biochemical Waste	06	Waste from the Health Centre including syringes, bandages, and medical disposables and biochemical waste from laboratories. Managed per Biomedical Waste Management Rules, 2016.
E-Waste	07	Obsolete computers, printers, cables, UPS units, batteries, and other electronic equipment.
Construction & Demolition Waste	08	Generated during renovation or maintenance. Stakeholders involved in the activity are responsible for segregation and disposal.

Note: The disposal procedure described in this waste management policy document is application only to the Waste Category S. Nos. 03, 04, 05, 06, and 07 (Table 1). Regular / General Waste, Biodegradable Non-Hazardous, Construction & Demolition Waste shall be handled as per the existing procedures of the HNB Garhwal University.

4. Policy Objectives

The University is committed to:

- Minimising waste generation through conscious and efficient use of resources.
- Segregating waste at the source into distinct categories for effective downstream management.
- Promoting composting and recycling practices across all campuses.
- Eliminating open dumping and ensuring safe, scientific disposal of all waste types.
- Prohibiting single-use plastics and encouraging eco-friendly alternatives.
- Ensuring proper handling of hazardous, biomedical, and electronic waste through authorised recyclers.
- Developing and maintaining adequate waste management infrastructure on all campuses.
- Engaging the University community in cleanliness, environmental conservation, and waste-reduction initiatives.
- Regularly reviewing and updating waste management practices for continuous improvement.
- Contributing to national missions including Swachh Bharat Abhiyan and Mission LiFE (Lifestyle for Environment).

5. Assignment of Responsibilities for Waste Management Policy

5.1 Administrative offices including Directors, DSW, Proctor, and Warden Offices

- Create awareness about the Waste Management Policy by communicating its objectives, procedures, roles, and responsibilities to all students, faculty, staff, and other stakeholders.
- Facilitate the implementation and adoption of the Waste Management Policy by promoting compliance, encouraging waste segregation, reduction, reuse, and recycling practices, and providing necessary guidance.
- Ensure timely notification and follow-up regarding waste collection and disposal schedules, communicate the procedures prescribed in the Waste Management Policy, and report any issues or instances of non-compliance to the concerned authorities for corrective action
- The responsibilities of the **University Administration (Store & Purchase and Finance Sections)** are described in detail in Section 5.6 of this Policy document.

5.2 University Research and Development Cell (RDC)

- Promote the integration of sustainable waste management practices in the planning, implementation, and execution of research and development projects in accordance with the University's Waste Management Policy.
- Ensure that research projects and laboratory activities incorporate appropriate waste minimization, segregation, storage, handling, and disposal practices, while complying with institutional policies and applicable statutory regulations.

- Coordinate with Principal Investigators (PIs), researchers, and laboratories to ensure timely notification of waste collection and disposal requirements, facilitate compliance with prescribed waste management procedures, and monitor adherence to the Waste Management Policy throughout the project lifecycle.

5.3 University Waste Management Committee (UWMC)

The UWMC is the apex body responsible for making implementing plans and monitoring of the policy. **Key functions of the UWMC include:**

- Overseeing policy implementation and reviewing compliance reports from all departments.
- Developing operational guidelines, standard operating procedures (SOPs), and review mechanisms for waste management at the University.
- Reviewing annual waste management reports and audits.
- Initiating corrective administrative action in cases of non-compliance.

5.4 Principal Investigator / Supervisor / Class Instructor

The Principal Investigator (PI) or Supervisor is the first line of responsibility for waste compliance within the laboratory. Duties include:

- **Waste Segregation at Source:** Categorise waste at the point of generation into hazardous, non-hazardous, recyclable, sharps, or biological fractions.
- **Pre-Treatment of Hazardous Waste:** Where feasible, undertake in-lab procedures (drying, neutralisation, deactivation, or disinfection with bleach/chemicals) to convert hazardous waste to a safe, non-contagious form before storage.
- **Segregation of General & Biodegradable Waste:** Ensure food waste, garden waste, and similar biodegradable materials are separated from laboratory waste at source to minimise the volume submitted for institutional disposal.
- **Container Standards:** Collect waste in appropriately sized containers (25–30 litres or kg). Avoid multiple small containers or excessively heavy ones that create handling difficulties. Any re-used container is acceptable, provided it is labelled as per Annexure 1.
- **Safe Temporary Storage:** Store segregated waste in leak-proof, labelled containers with secondary containment until departmental collection.
- **Labelling & Documentation:** Label all containers with: waste type, date of generation, hazard category, and responsible person's name. Maintain digital or manual records for each batch.
- **Compliance:** Ensure all laboratory personnel follow institutional waste management SOPs. Prior IBSC approval is required for the generation and disposal of waste from rDNA work.

5.5 Departments / Centres / Research Facilities

Departments are the first level of institutional oversight. Department Heads shall:

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- **Nodal Officer:** Nominate a faculty member as Waste Nodal Officer for data reporting and management of hazardous waste within the department.
- **Training & Capacity Building:** Conduct regular training sessions for laboratory staff, students, and research personnel on safe waste handling, segregation, and emergency response.
- **Designated Storage Areas:** Provide infrastructure for temporary storage of segregated hazardous waste prior to centralised collection. Ensure proper labelling, secondary containment, and adequate ventilation.
- **Safety & Compliance Monitoring:** Maintain and periodically update departmental safety standards; conduct regular checks to ensure adherence to institutional SOPs.
- **Data Management & Reporting:** Aggregate waste data and submit quarterly compliance reports to the UWMC. Submit waste inventory information (per Table 2 below) to the Store & Purchase Section after the 9th month of each collection cycle.
- **Periodic Audits:** Schedule and conduct departmental audits; maintain records of inspections, corrective actions, and follow-ups.

5.6 University Administration (Store & Purchase and Finance Sections)

The University administration coordinates the institutional disposal cycle through the following steps:

- **Month 9 – Data Collection:** Notify all Department HoDs to submit waste inventory information (Table 2). Aggregate and assess total quantities per waste category across all three campuses.
- **Months 10–11 – Tender Process:** Prepare tender or Expression of Interest (EOI) documents in accordance with GFR 2017. Include waste descriptions and estimated annual quantities (template in Annexure 2). Require vendors to submit unit rates (Rs. per kg or litre) to purchase the collected waste. Specify permissible measurement units for consistent and comparable bids.
- **Month 12 – Waste Pick-up & Transpiration:** Finalise the contract and arrange for authorised vendor(s) to collect and dispose of accumulated waste from all campuses.
- **Multi-year Contracting:** The UWMC recommends a minimum three-year contract with selected vendor(s) to ensure operational continuity once waste-generation patterns are established.
- **Contract Administration:** Reserve the right to adjust quantities during the contract period. Use submitted rates for evaluation, award, and payment calculations.

6. Waste Inventory — Department Submission Form (Table 2)

Each department must complete and submit the following table to the **Store & Purchase Section** after the 9th month of each waste collection cycle. Quantities represent the total aggregated weight/volume across all containers — not per individual container.

Name of Department / Centre: _____

Waste Collection Period: _____ to _____

S. No.	Description of Waste	No. of Containers / Boxes	Total Weight / Volume (kg or L)
1.	Laboratory plastic waste — bottles/containers, Petri dishes, culture plates, pipettes, syringes, filters, pipette tips, centrifuge tubes (Polystyrene, PET, and other plastics)		
2.	Empty glass bottles, vials, laboratory glassware, and other glass materials		
3.	Sharps (e.g., syringe needles)		
4.	Chemical waste containing water		
5.	Chemical waste containing halogenated solvents		
6.	Chemical waste containing non-halogenated solvents		
7.	Used oil (pump oil)		
8.	Dry chemical waste (including silica gel)		
9.	E-Waste: computers, accessories, stabilisers, printers, cartridges, small electronic machines, UPS units with batteries, etc.		

Note: Containers should be 25–30 litres/kgs. Any re-used container is acceptable if labelled per Annexure 1.

7. Vendor Requirements and Scope of Services

7.1 Scope of Services

- Collect all categorised waste from designated collection points across all three campuses on the agreed schedule.
- Transport collected waste to duly authorised treatment, recycling, or disposal facilities.
- Provide all necessary vehicles, covers, safety equipment, packing materials, and trained personnel for transport and disposal.

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- Maintain chain-of-custody documentation and submit periodic reports (monthly/quarterly/annually) to the University.
- Assist in loading containers onto vehicles; the waste generator shall also assist in loading to minimise additional personnel costs.

7.2 Compliance and Permits

- Maintain valid licences, permits, and authorisations under all applicable environmental, waste, transport, and health-and-safety laws.
- Ensure all disposal facilities are duly authorised; provide waste manifests and transfer notes to the University as proof of lawful disposal.
- Indemnify the University against penalties, fines, or liabilities arising from the vendor's non-compliance, improper handling, or unauthorised disposal.

7.3 Transportation Routes and Costing

Vendors must declare their base location and calculate total round-trip distance for pricing. A sample route (assuming vendor based in Haridwar) is provided for illustration:

Leg	Route	Approx. Distance
1.	Haridwar → Pauri Garhwal (BGR Campus, HNBGU)	~134 km
2.	Pauri → Srinagar / Chauras Campuses (HNBGU)	~40–45 km
3.	Srinagar → Tehri Garhwal (SRT Campus, HNBGU)	~76 km
4.	Tehri Garhwal → Haridwar	~91 km
Total Round Trip (indicative)		~341 km

The rate for transportation must be quoted in Rs. per km. Vendors must provide their own location and actual round-trip distance in their bid.

7.4 Waste Generator Obligations

- Provide safe, unobstructed vehicle access to designated collection points.
- Ensure waste is segregated, labelled, and ready for pick-up at the scheduled time.
- Notify the section in advance of any changes in waste volume, type, or access conditions.
- Liquid waste must be collected in suitable 25-litre containers; laboratory plastic waste in good-quality bags; empty bottles in cartons/boxes for safe loading and transport.

7.5 Missed Pick-ups and Deficiencies

- If the vendor fails to pick up waste at the scheduled time without prior notice, collection must be rescheduled within two weeks at no additional cost.

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- If waste is found mis-segregated or non-compliant, the vendor may refuse pick-up (after notifying the University) until corrected; any rework costs are borne by the Generator.

7.6 Records, Reporting and Audit

- Vendors must maintain records of quantities, waste types, transport routes, disposal facilities, and chain-of-custody documentation.
- The University or its authorised representatives may audit vendor records and inspect disposal sites upon reasonable notice.

7.7 Contractual Provisions

- Services shall commence on the agreed start date and run for the specified contract term, renewable by mutual agreement.
- Either party may terminate for cause (breach of obligations or regulatory violation) with the agreed notice period.
- Changes in waste volume, composition, schedule, or disposal method must be agreed in writing.
- Upon termination, the vendor must transfer all records and manifests to the successor vendor and ensure no unlawful waste remains on university premises.
- Force majeure: neither party is liable for delay due to causes beyond reasonable control (e.g., natural disasters, government action); the affected party must notify the other promptly.
- The laws and regulations of the Central Pollution Control Board (CPCB) and the Uttarakhand State Pollution Control Board (SPCB) shall govern the contract.

8. Monitoring and Compliance

- The UWMC shall oversee policy implementation and review quarterly compliance reports from all departments.
- Annual audits will be conducted to evaluate adherence and recommend improvements.
- Non-compliance shall attract administrative corrective action as per institutional safety regulations formulated by the UWMC.
- General Financial Rules (GFR) 2017 (Rule 217 and 218) should be followed to dispose of the laboratory waste and e-waste through only authorised recycler/agencies/vendors with valid registration. The vendor make sure that the material is being disposed of through suitable method to prevent health hazards, pollution or misuse.

9. Policy Review and Update

This policy shall be reviewed annually or as required by changes in statutory regulations. Recommendations from supervisors, departments, and the UWMC will be considered and incorporated in subsequent versions where appropriate.

10. Definitions

Term	Definition
Waste	All chemical and e-waste materials, refuse, by-products, residues, or discarded items generated in the course of operations by a waste Generator (as defined in Table 2).
Treated Hazardous Waste	Hazardous waste that has been processed (chemically, physically, biologically, or thermally) at the generator site so that its toxicity, infectivity, corrosivity, or reactivity is reduced to acceptable legal levels, rendering it safe to handle, transport, and dispose of as non-hazardous waste.
Pick-up	Collection of waste from designated premises by the authorised vendor.
Disposal / Final Disposal	Lawful treatment, processing, recycling, or deposit of waste in an approved facility (landfill, incinerator, recycling plant, etc.) in compliance with all applicable environmental laws.
Vendor	The waste pick-up and disposal service provider engaged by the University.
Generator	The PI/Supervisor or Department whose premises produce the waste.
Regular Waste	Everyday non-hazardous refuse from normal daily activities (food scraps, paper, packaging, garden trimmings). Not included in the laboratory waste disposal cycle.
UWMC	University Waste Management Committee — the apex body for policy implementation and oversight.

Annexure 1 — Waste Container Labelling Standard

All containers used for the collection and temporary storage of laboratory waste must be clearly labelled. Labels may be hand-written, printed, or stickered, provided all required information is legible.

Minimum required label information:

- **Type of Waste:** e.g., Chemical Waste — Halogenated Solvents; Chemical waste containing water; Chemical waste containing non-halogenated solvents; Laboratory plastic waste - bottles/containers, Petri dishes, culture plates, pipettes, syringes, filters, pipette tips, centrifuge tubes (Polystyrene, PET, and other plastics); Empty glass bottles, vials, laboratory glassware, and other glass materials; Sharps (e.g., syringe needles); Used oil (pump oil); Dry chemical waste (including silica gel); E-Waste: computers, accessories, stabilisers, printers, cartridges, small electronic machines, UPS units with batteries, etc.
- **Hazard Category:** Hazardous / Non-Hazardous / Biomedical / E-Waste
- **Date Opened:** Date on which the container was first used for collection
- **Date Sealed / Closed:** Date on which the container was sealed for storage
- **Responsible Person:** Name and contact of PI/Supervisor
- **Department / Laboratory:** Name of waste generating department and lab

Container Sizing: Containers must be 25–30 litres or kg. Multiple very small containers or containers that are excessively heavy create handling difficulties for pick-up teams and should be avoided. Any re-used container is acceptable if it is clean, leak-proof, and correctly labelled.

Annexure 2 — Tender / EOI Template for Waste Pick-up and Transportation

The Store & Purchase Section shall use this template to prepare the tender or Expression of Interest (EOI) document for waste pick-up and transportation services. Estimated quantities are based on information collected from all departments after the 9th month of each cycle.

Tender / EOI Reference No.: _____ **Date:** _____

S. No.	Description of Waste	Total Quantity / Year (kg or L)	Vendor Rate (Rs. / kg or L)
1.	Laboratory plastic waste — bottles/containers, Petri dishes, culture plates, pipettes, syringes, filters, pipette tips, centrifuge tubes (Polystyrene, PET, and other plastics)		
2.	Empty glass bottles, vials, laboratory glassware, and other glass materials		
3.	Sharps (e.g., syringe needles, glasses)		
4.	Chemical waste containing water		
5.	Chemical waste containing halogenated solvents		
6.	Chemical waste containing non-halogenated solvents		
7.	Used oil (e.g., pump oil)		
8.	Dry chemical waste (including silica gel)		
9.	E-Waste: computers, accessories, stabilisers, printers, cartridges, small electronic machines, UPS units with batteries, etc.		

Important Points to be Considered for Waste Pick-up and Transportation:

- The vendor must provide the purchase rate for each item based on the total quantity specified in the table in Annexure 2.
- Vendors must declare their base location and quote transportation rates in Rs. per km.
- The University will provide the estimated route distances (see Section 7.3).
- Vendor pricing must include transportation and pick-up costs, unless these costs are fully offset by the purchase value of the waste items listed in Annexure 2.

Vendor Name & Location: _____ **Total Round-trip Distance (km):** _____

Note: *The University reserves the right to adjust quantities during the contract period based on actual generation, in accordance with contract terms. The vendor shall be responsible for waste disposal at the vendor's site.*