

WASTE MANAGEMENT POLICY



Karnataka Samskrit University

(Established by Govt. of Karnataka)

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CONTENTS

1. Introduction	-1
2. Policy Statement	-1
3. Policy Objectives	-2
4. Organization and Management	-2
5. Action Plan	-4
6. Glossary	-6

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1. Introduction

Karnataka Samskrit University, Bengaluru is committed to transform lives and serve the society through pursuit of excellence in teaching, innovation, lifelong learning, cultural enrichment, and outreach services. KSU came into existence by an Act of Karnataka Government 2009 with the objective to promote inter-disciplinary higher education and research in the fields of Sanskrit language and allied disciplines.

Karnataka Samskrit University realizes sustainable and holistic waste management essential in reducing its environmental footprint and providing a safe and healthy work environment for teaching and non-teaching employees, students, and visitors.

The University has a duty to ensure that all the campus wastes are disposed of responsibly by using proper waste segregation mechanism at the source and if possible, converting it into value added environment friendly product. Furthermore, the hazardous waste should be disposed or managed by government approved, registered waste contractors. The purpose of the policy is to facilitate implementation of the action plan brought out in "National Environment Policy 2006" on management aspects of hazardous waste including their minimization, environmentally sound management and active promotion of transfer and use of cleaner technologies.

2. Policy Statement

The University will adopt the principles of the 'best practicable environmental option' in the delivery of its waste management services. The University will apply a 'waste hierarchical approach', to reduce, reuse, recycle and recover waste products in preference to the disposal of waste to landfill.

The University recognizes the importance of meeting these legal requirements and to manage its waste responsibly, reduce the volume of waste sent to landfill and maximize, reuse and recycling where possible.

The University requires all the teaching and non-teaching staff, students, guests, and anyone else making use of the premises to comply with this Policy and associated "University Environmental


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Guidance” to ensure compliance with all waste legislations. Any solid waste generated in the campus shall be managed and handled in accordance with the compliance criteria and the procedure laid down in Municipal Solid Wastes (Management and Handling) Rules, 1999, published under the notification of the Government of India in the Ministry of Environment and Forests number S.O. 783(E), dated, the 27th September, 1999 in the Gazette of India, Part II, Section 3, Sub-section (ii).

There is a legal requirement for all who produce, keep or dispose hazardous/radioactive waste/chemical waste of any type to comply with the various regulations under national and international environmental protection legislation.

3. Policy Objectives

The objectives of this policy are:

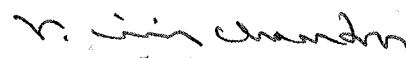
- (a) To ensure that waste management is performed in accordance with all waste legislative requirements, including the duty of care, and to plan for future legislative changes and to mitigate their effects.
- (b) To minimize waste generation at source and facilitate repair, reuse and recycling over the disposal of wastes in a cost-effective manner.
- (c) To provide clearly defined roles and responsibilities to identify and co-ordinate each activity of the waste management.
- (d) To promote environmental awareness to increase and encourage waste minimization, reuse, and recycling.
- (e) To invest into the expansion of recycling opportunities on the University campus and transform waste into value added products.
- (f) To ensure the safe handling and storage of wastes in university campus.
- (g) To provide appropriate training for teacher, resident, staff, students, and other stakeholders on waste management issues.
- (h) To promote holistic approach of waste management in the campus.

4. Organization and Management

The responsibilities and organizational arrangements for this Waste Management Policy lie with a variety of personnel within the University.

I. Advisory Board

- | | |
|---|-------------|
| a. Vice-Chancellor | - Chairman |
| b. Two outside expert
(to be nominated by the Vice Chancellor) | - Member(s) |
| c. Director (IQAC) | - Member |
| d. Dean (Academics) | - Member |


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e. Representative (Engg. Cell)	- Member
f. Project Officer	- Member
g. Registrar	- Member Secretary

II. Function of Advisory Board


- (a) Coordinating the provision of a central waste and recycling contract service for use by all facilities on the campus.
- (b) Ensuring that all contractors are advised that they must comply with the Duty of Care; that they must comply with the University's Waste Management Policy.
- (c) Ensuring that all contractors appointed to carry out works are from the government 'approved list'.

III. Co-Ordinator, Environment Sustainability Management Cell (ESMC), Karnataka Samskrit University is responsible for:

- (a) Provision of advice and guidance to the University on waste management.
- (b) Setting Environmental Performance Indicators for waste management.
- (c) Reporting annually to the University on progress against the 'Environmental Performance Indicators'.
- (d) Monitoring and auditing the management systems for all wastes, to ensure safety and legal compliance.
- (e) Monitoring and auditing all waste contractors working for the University.
- (f) Provision of appropriate training for all personnel who have responsibilities for waste management.
- (g) Coordinating the gathering of, and supplying all relevant information to appropriate enforcement agencies, when information relating to waste management is requested.
- (h) Investigation of any incidents or spillage relating to all type of hazardous and general waste management.

IV. Support staff is responsible for:

- (a) Overseeing the day-to-day delivery of general waste and their recycling services.
- (b) Monitoring the performance of the university contractor against the contact agreements.


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- (c) Liaising with the "Environment Sustainability Management Cell" to establish standard procedures for managing waste on the University campus.
- (d) Operational monitoring of waste management systems across the campus.
- (e) Compiling waste transfer data and statistics notes for centrally managed waste and recycling collections.

V. Directors of Campuses/Heads of Department are responsible for:

(A) Non-hazardous Wastes

Ensuring that no hazardous waste is disposed of through the general or waste recycling streams.

(B) Hazardous Wastes

Nominating a 'responsible person' within their department to coordinate waste disposal for any hazardous or laboratory wastes.

(C) Informing the Environment Sustainability and Management Cell, about the nominated 'responsible person' and updating the cell when the 'responsible person' changes. The tenure of the person will be minimum two year.

VI. Staff/Supervisor (contractual) will be responsible for:

- (a) Disposing of waste responsibly (at both office and residence), through the appropriate waste disposal system (segregation of waste), in accordance with university policy and procedures.
- (b) Reporting any problems with waste collection schemes to ESMC of the University.

VII. Students will be responsible for:

- (a) Disposing of waste responsibly, through the appropriate waste disposal system, in accordance with university policy and procedures.
- (b) Reporting any problems related department/laboratory waste or waste collection procedure to the 'Head of Department'.

5. Action Plan

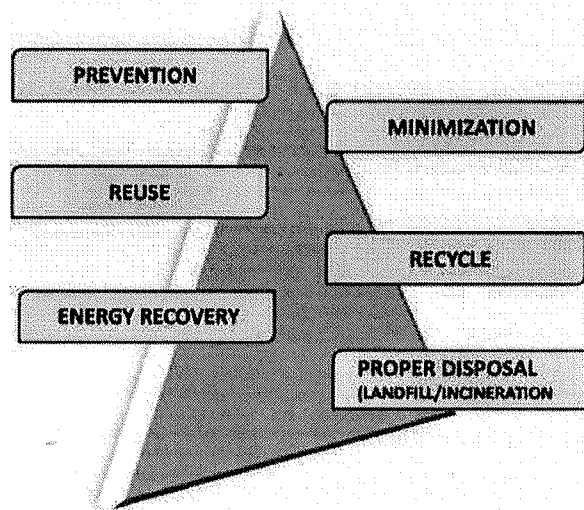
It will be mandatory on the part of the Head of the department/ department/Principal Investigator (Project) to report changes/ additions in hazardous waste generation and steps taken to reduce generation of waste per unit of production. As per the Hazardous Waste regulations, University can store hazardous waste for a period not exceeding 90 days and shall maintain a record of sale, transfer, storage, recycling and reprocessing of such wastes unless the concerned State Pollution Control Board has


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extended the stipulated period. The waste could either be recycled/reused or disposed of in captive or common treatment, storage and disposed facilities available in the campus or incinerated, as proposed in the waste hierarchy list (Fig. 1). Inventories of 'end of life' consumer products such as e-waste are also required to be made.

Fig. 1. Waste Hierarchy list in order of preference from the most favourable (top) to the least (bottom).



(a) Waste avoidance and waste minimization at source

In the hierarchy of waste management, waste avoidance and waste minimization must be attempted first, for which dissemination of information on technological options should be a continuing exercise. Promote implementation of recovery of resources such as solvents, other reagents, and by-products as well as re-generation of spent catalysts in a time frame manner.

(b) Reuse, recovery, and recycling of non-hazardous waste

University will explore options/ opportunities of reusing, recovery, and recycling of non-hazardous waste in an environmentally sustainable manner. Paper waste will be recycled to make paper board and packing material. The toxic inks and dyes of the paper will be treated with enzyme technology, which is environmentally benign.

(c) Safe disposal of hazardous waste

For the waste which cannot be recycled/ reused, safe and environmentally sound disposal will be adopted depending upon waste category. Design and operation norms of disposal facilities should be

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strictly adhered to as per the guidelines framed by CPCB. Setting up of common Treatment, Storage and Disposal Facilities

Common treatment plant for the departmental and household waste will be established and the degradable and non-biodegradable waste will be segregated and treated according to their physical nature.

Note:

- a) Activities concerning establishment and utilization of nuclear facilities and use of radioactive sources are to be carried out in India in accordance with the relevant provisions of the Atomic Energy Act, 1962.
- b) Animal house/bio-medical waste management and disposal will be governed by Bio-Medical Waste (Management and Handling) Rules, 1998, MoEF, Gov. of India.

6. Glossary Hazardous Waste

Waste that causes substantial or potential threats to public health or the environment e.g., Acids, Pesticides, Fluorescent Tubes, Alkaline Solutions, Photographic Chemicals, Batteries Waste Oils Paint, Solvents, Computer Monitors, radioactive substances.

(a) Recycling

The diversion of waste away from landfill or incineration and the reprocessing of those wastes either into the same product or a different one. This mainly includes non-hazardous wastes such as organic waste, wood, paper, glass, cardboard, plastic and scrap metal.

(b) Responsible person


The person who oversees the wastes to be removed from the premises at which it was produced or is being held.

(c) Waste

According to United Nations Statistics Division (UNSD), waste is "materials that are not prime products (that is, products produced for the market) for which the generator has no further use in terms of his/her own purposes of production, transformation or consumption, and of which he/she wants to dispose. Wastes may be generated during the extraction of raw materials, the processing of raw materials into intermediate and final products, the consumption of final products, and other human activities. Residuals recycled or reused at the place of generation are excluded."

(d) Incident

Events that are distinguished from accidents in terms of being less severe.


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(e) Segregation

An activity where waste or materials are separated or are kept separate according to radiological, chemical and/or physical properties to facilitate waste handling and/or processing.

(f) Treatment and disposal of "Biomedical Waste"

(i) Bio-medical waste shall be treated and disposed of in accordance with Schedule I, and in compliance with the standards prescribed in Schedule V, Bio-Medical Waste (Management and Handling) Rules, 1998, MoEF, Gov. of India.

(ii) Every occupier, where required, shall set up in accordance with the time-schedule in Schedule VI, requisite bio-medical waste treatment facilities like incinerator, autoclave, microwave system for the treatment of waste, or ensure requisite treatment of waste at a common waste treatment facility or any other waste treatment facility.

(g) Biomedical waste

Waste which is generated during the diagnosis, treatment or immunization of human beings or animals or in research activities pertaining thereto or in the production or testing of biologicals, and including categories mentioned in Schedule I, (Management and Handling) Rules, 1998, MoEF, Gov. of India.

Cytotoxic waste may be contaminated with a cytotoxic, pharmaceuticals, laboratory chemicals used in preparation, transportation, and administration.

Chemical waste is generated from the use of chemicals in laboratories for teaching and research

Radioactive waste is contaminated with radioactive substances which arises from medical, or research uses.

General waste includes paper, plastics, glass, liquids, and organics.

Hazardous Waste, bulk of which is generated by the industries, can cause environmental pollution and adverse health effects if not handled and managed properly. Its effective management, with emphasis on minimization of generation and recycling/ reuse, considering economic aspects, is therefore essential.

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