



**119<sup>TH</sup> BOARD OF REGENTS MEETING**

**BOR RESOLUTION NO. S2**

Series of 2025

**APPROVING THE LINIS VSU: LEVERAGING INTEGRATED WASTE MANAGEMENT SYSTEM TO NURTURING INTEGRITY AND SUSTAINABILITY OF VSU's ECOSYSTEM FRAMEWORK AND PLAN CY 2025-2028, THE DETAILS OF WHICH ARE REFLECTED IN THE DOCUMENT HERETO ATTACHED AND MADE PART HEREOF**

**WHEREAS**, under Section 4 (a) of Republic Act No. 8292, otherwise known as the "Higher Education Modernization Act of 1997, empowers the Governing Board to enact rules and regulations not contrary to law as may be necessary to carry out the purposes and functions of the university;

**WHEREAS**, Republic Act No. 11898, also known as the Extended Producer Responsibility (EPR) Act of 2022, is an act that mandates large enterprises to take responsibility for the management of post-consumer plastic packaging waste in the Philippines. It amends the Ecological Solid Waste Management Act of 2000 (RA 9003) and aims to promote waste reduction, recovery, recycling, and environmentally sound disposal;

**WHEREAS**, the Clean Water Act of 2004, officially known as Republic Act No. 9275, aims to provide a comprehensive approach to water quality management in the Philippines. It focuses on preventing, controlling, and abating pollution from land-based sources and establishes water quality standards and regulations for all water bodies;

**WHEREAS**, Republic Act No. 8749 or the Philippine Clean Air Act of 1999 recognizes that the State's responsibility of cleaning the habitat and that a clean and healthy environment is for the good of all and should, therefore, be the concern of all;

**WHEREAS**, the Board of Regents recognizes the importance of sustainable environmental practices and the need to minimize the organization's environmental footprint;

**WHEREAS**, it is the responsibility of the organization to create a cleaner, more cost-effective and environmentally conscious campus;

**WHEREAS**, in alignment with the university's vision to become a global green University, LINIS VSU framework and plan for CY 2025-2028 outlines a comprehensive and sustainable approach to managing solid waste across all university campuses, departments, and facilities;

**WHEREAS**, the system would benefit the university community, contribute to national and global sustainability goals (SDGs) and create a model for other educational institutions and local communities to follow;

**WHEREAS**, the proposal has been thoroughly reviewed and evaluated by the University Administrative Council (UADCO) at the March 10, 2025, meeting and recommended for approval;

**WHEREAS**, the Board has reviewed the LINIS VSU proposal encompassing waste reduction, reuse, recycling, safe disposal, infrastructure development for processing and treatment, awareness, technology integration and continuous monitoring of waste-related practices;

**WHEREAS**, finding the recommendation in order, the Governing Board agreed to approve the proposal;


**NOW, THEREFORE**, on motion, duly seconded, and unanimously approved, be it;

**RESOLVED**, as it is hereby resolved, that the Board of Regents of Visayas State University approves the LINIS VSU: Leveraging Integrated Waste Management System to Nurturing Integrity and Sustainability of VSU's Ecosystem Framework and Plan CY 2025-2028, the details of which are reflected in the Annex "CC" hereto attached and made part of this resolution.

**IN WITNESS** of our approval thereof, we affix our signatures this 29th day of April 2025 at VSU, Baybay City, Philippines.



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**HON. ETHEL AGNES P. VALENZUELA**  
CHED Commissioner and Chairperson  
VSU-Board of Regents

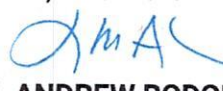
  
**HON. PROSE IVY G. YEPES**  
VSU President, Vice Chairperson  
VSU-Board of Regents


(Absent)

**HON. BERNADETTE REMALLA-MAYBITUIN**  
Representing Hon. **ALLAN PETER S. CAYETANO**  
Chairperson, Senate Committee on Higher,  
Technical and Vocational Education  
Member, VSU BOR


  
**HON. CARL NICOLAS C. CARI**  
Representing Hon. **MARK O. GO**  
Chairperson, Committee on Higher & Technical  
Education, House of Representatives  
Member, VSU BOR

  
**HON. MEYLENE C. ROSALES**  
Regional Director, Department of Economy,  
Planning and Development, RO VIII  
Member, VSU BOR

  
**HON. ANDREW RODOLFO T. ORAIS**  
Regional Executive Director, Department of  
Agriculture-RO8  
Member, VSU BOR

  
**HON. ERNESTO F. BULAYOG**  
Faculty Regent - VSU System Faculty Union of  
Baybay Leyte  
Member, VSU BOR

  
**HON. OSCAR B. POSAS**  
President, VSU Federated Alumni Association  
Member, VSU BOR

  
**HON. RYAN C. ILAIDA**  
Student Regent - VSU Student Council Federation  
Member, VSU BOR

### Private Sector Representatives:

  
**HON. ALAIN CHARLES J. VELOSO**  
Member, VSU BOR  
Villaba, Leyte

  
**HON. RUPERTO O. APPARRI, III**  
Member, VSU BOR  
Tacloban City, Leyte

## **LINIS VSU Framework and Plan for 2025-2028**

**Project Title:** ***LINIS VSU: Leveraging Integrated Waste Management System to Nurturing Integrity and Sustainability of VSU's Ecosystem Framework and Plan, 2025-2028***

**Proponents:**

<b>Project Leader:</b>	Prose Ivy G. Yepes
<b>Co-Project Leader:</b>	Moises Neil Serino
<b>Members:</b>	Rotacio S. Gravoso
	Santiago T. Pena, Jr.
	Glenn Pajares, III
	Aleli Villocino
	All Campus Chancellors

**Project Duration:** CY 2025- 2028

### **Introduction**

The establishment of an Integrated Waste Management (IWM) system in a university is a critical step toward fostering environmental sustainability and promoting proper and responsible waste disposal practices within the campus community. Universities as centers of knowledge and innovation, are ideal settings for implementing comprehensive waste management solutions which will not only address the growing and pressing concerns of waste generation but also contribute to the reduction of environmental footprints.

Visayas State University (VSU), established in 1924 as an agricultural school, has constantly progressed in terms of quality, relevance, recognition and influence. The significant increase in the university's activities and population throughout its existence, can be translated into a growing concern about environmental sustainability and the increasing volume of waste generated which underscores the need for an integrates waste management system.

The overarching goal of this project is to develop and implement an efficient and effective IWM system that includes waste reduction, recycling, composting, proper disposal, ensuring minimal impact on the environment while promoting awareness and engagement among employees, students, and other university stakeholders.

This initiative will involve a multifaceted approach addressing various types of waste generated in the campus, including paper, plastics, glass, metals, food and agricultural waste, waste water and hazardous chemicals. Various strategies will be employed to minimize waste generation, maximize resource recovery, ensure public health and protect the environment. Moreover, this

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project will optimize the collection, sorting, recycling, revenue generation and proper disposal processes while fostering and nurturing a culture integrity and sustainability.

Through collaboration with all stakeholders across the university, this initiative will not only contribute to cleaner and greener surroundings but also serve as a model for other institutions looking to establish similar systems. Ultimately, the establishment of the IWM aspires long term environment benefits, enhance waste management efficiency, enhance economic opportunities, promote circular economy and improve public health within the university setting.

## Rationale

Establishing an integrated waste management system within the university is not just a necessity for environmental integrity and sustainability but also a strategic initiative to create a cleaner, more cost-effective, and environmentally conscious campus. This system would benefit the university community, contribute to national and global sustainability goals (SDGs) and create a model for other educational institutions and local communities to follow, being a global green university.

## Objectives

1. To conduct assessment and planning that includes waste characterization and auditing, need assessment, goal setting, policy and regulatory framework and stakeholders engagement.
2. To promote sustainability by adopting holistic approaches to waste management.
3. To enhance awareness and education among university employees, students and other stakeholders.
4. To reduce waste disposal costs.
5. To comply and align with environmental laws and regulations.
6. To support research and innovation.
7. To improve campus cleanliness and public image.

## Key Principles

1. **Hierarchy of waste management.** Prioritize waste reduction, reuse and recycling, with disposal as the last resort.
2. **Pollution prevention.** Minimize environmental impacts throughout the waste management process.
3. **Economic viability.** Develop a system that is economically sustainable and cost-effective.
4. **Social equity.** Ensure that the system is fair and equitable for all members of the community.
5. **Public participation.** Involve the public in all stages of the planning and implementation process.
6. **Collaboration.** Encourage collaboration among government agencies, businesses and community organizations.

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7. **Flexibility.** Design a system that can adapt to changing circumstances and new technologies.

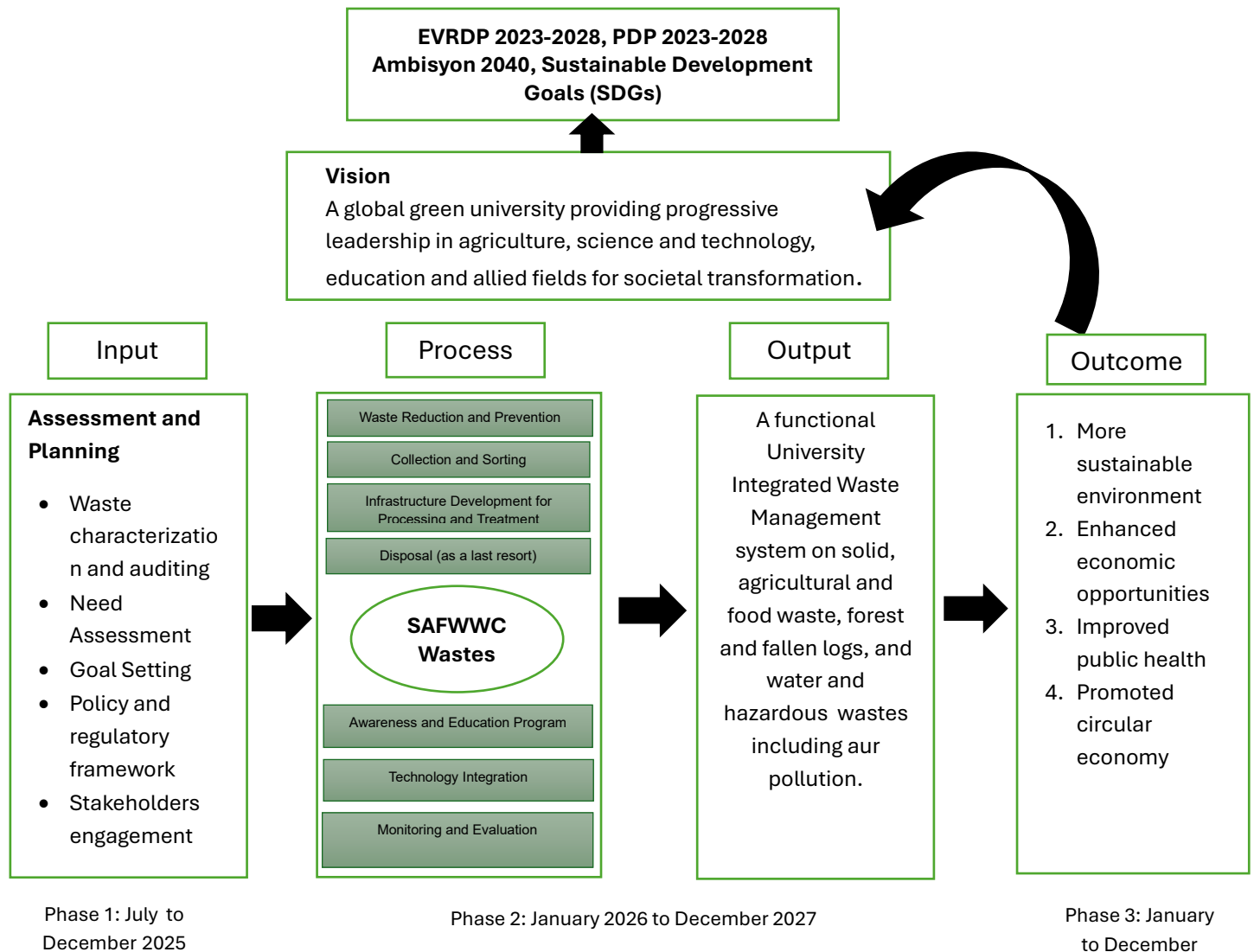
### **Legal Bases**

1. Republic Act No. 9003: "An Act Providing for An Ecological Solid Waste Management Program"
2. Republic Act No. 11898: " An Act Institutionalizing the Extended Producer Responsibility on Plastic Packaging Waste of 2022"
3. Republic Act No. 9175: "Clean Water Act"
4. Republic Act No. 8749" Clean Air Act"

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## LINIS VSU Framework



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## **Process and Implementation Strategies**

### **1. Assessment and Planning**

#### ***Waste Characterization and Auditing***

Purpose: Determine the types, quantities and sources of waste generated. This involves conducting waste audits to analyze the composition of the waste stream (e.g, paper, plastics, food waste, recyclables, hazardous materials).

Method: Sort and weigh waste samples, analyze the results and identify major waste contributors (e.g., staff housing, student dormitories, research centers, laboratories, academic buildings, administrative office buildings, etc.).

#### ***Needs Assessment***

Purpose: Evaluate the current waste management infrastructure and equipment, identify gaps, and determine the needs of the university. This involves analyzing existing collection systems and policies, treatment facilities and disposal options.

Method: Review existing policies, regulations and infrastructure; assess public awareness and participation in waste reduction efforts; analyze demographic and geographic factors.

#### ***Goal Setting***

Purpose: Define specific, measurable, achievable , relevant and time-bound (SMART) goals for waste reduction, recycling, composting, and diversion from landfills. These goals provide a framework for the integrated system.

Method: Establish targets for reducing waste generation, increasing recycling rates, diverting organic waste from landfills and minimizing greenhouse gas emissions.

#### ***Policy and Regulatory Framework***

Purpose: Develop or revise policies and regulations that support the integrated waste management system. This involves establishing waste reduction mandates, recycling requirements , landfill bans, and economic incentives.

Method: Review existing policies, conduct stakeholder consultations, draft legislation and implement enforcement mechanism.

#### ***Stakeholder Engagement***

Purpose: Engage with all stakeholders (residents, business establishments, agencies, waste management companies, potential funders, others) throughout the planning and implementation process. This ensures that the system meets the needs of expectation of the community.

Method: Conduct public fora, workshops, surveys and information campaigns to gather inputs and build support for the integrated waste management system.

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## 2. Waste Reduction and Prevention

### **Source Reduction**

Purpose: Reduce the amount of waste generated at the source (before it becomes to waste).

Strategies:

- a. "No to Single Use Plastic Policy". Regularly monitor and evaluate implementation of the University policies on the use tumblers instead of buying or selling bottled drinks, use of 'tarp papel' in lieu of plastic tarpaulin, among others.
- b. Promote consumption reduction. Encourage academic community to buy less, choose durable goods, and repair items instead of replacing them.
- c. Reduce packaging. Encourage manufacturers to use less packaging material, use reusable packaging, and design packaging that is easily recyclable.
- d. Promote product design for durability and recyclability. Encourage manufacturers to design products that are durable, long-lasting, and easily recyclable at the end of their life.
- e. Use of eco-friendly products. Encourage the use of products that are made from recycled materials that are biodegradable or that have a low environmental impact.
- f. Reduce food waste. Implement programs to reduce food waste at the housing facilities, restaurants/canteens/cafeteria (e.g., portion control, food donation, composting).

### **Reuse**

Purpose: Extend the life of products by using them more than once.

Strategies:

- a. Encourage reuse of items. Promote the reuse of items such as bondpaper, containers, bags, furniture, others.
- b. Establish reuse centers. Set up a center where people can donate and purchase used items (e.g., clothing, furniture, electronics, others).
- c. Promote repair and refurbishment. Encourage people to repair items instead of throwing them away.

## 3. Collection and Sorting

### **Collection Systems**

Purpose: Efficiently and effectively collect waste from academic and administrative buildings, housing units, commercial, research centers, laboratories, farm sources, others.

Strategies:

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- a. Curbside collection. Provide separate bins for recyclables, organics and landfill waste.
- b. Drop-off centers. Establish locations where office or building in-charge, residents, commercial facility tenants and others can drop off recyclables, food scraps, agri-wastes, laboratory wastes and other materials.

#### ***Material Recovery Facilities (MRFs)***

Purpose: Sort and process commingled recyclables (mixed recyclables) to separate different materials (e.g., papers, plastics, glass, metals, others)

Strategies:

- a. Purchase and install or fabricate and install automated sorting equipment. Advanced technologies may be used such as optical sorters and eddy current separators to efficiently sort materials.
- b. Implement quality control measures. Ensure that the sorted materials meet the specifications of end markets.

### **4. Processing and Treatment**

#### ***Recycling***

Purpose: Transform used materials into new products and properly treat waste water and hazardous chemicals before disposal and/or reuse.

Strategies:

- a. Process recyclable materials. Prepare collected recyclables (e.g., papers, plastics, glass, metals and others) for sale to manufacturers. This may include baling, shredding and cleaning.
- b. Support recycling infrastructure. Invest in recycling facilities and promote the development of end markets for recycled materials.
- c. Promote “buy recycled” programs. Encourage academic community to purchase products made from recycled materials.
- d. Implement wastewater treatment that is aimed to remove contaminants from water to make it safe for discharge or reuse. This involves multi-step process (primary, secondary, tertiary and sludge treatments).
- e. Employ specific safety protocols in handling hazardous chemical wastes due their toxicity, reactivity or corrosiveness of the materials involved. The treatment methods may vary based on the nature of the chemicals to include but not limited to : neutralization, incineration, chemical treatment, physical treatment, bioremediation, secure landfilling (for heavy metals or chemical sludges that cannot be treated by other means).

#### ***Composting and Anaerobic Digestion (for organic wastes)***

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Purpose: Break down organic wastes (food scraps, yard and agricultural wastes) into a nutrient-rich soil amendment (compost) or biogas.

Strategies:

- a. Collect organic waste separately. Implement collection programs for food waste, yard and agricultural wastes.
- b. Establish composting facilities. Build facilities to process organic waste using methods such as open-air composting, in-vessel composting and vermicomposting.
- c. Implement anaerobic digestion. Use anaerobic digestion to break down organic waste in the absence of oxygen, producing biogas (methane) that can be used for energy.

***Waste-to-Energy (for non-recyclable and non-compostable wastes)***

Purpose: Convert non-recyclable waste into energy (e.g., electricity, heat)

Strategies:

- a. Incineration with energy recovery. Burn wastes in controlled incinerators and capture the heat generated to produce steam, which can then be used to generate electricity or heat.
- b. Gasification and pyrolysis. Use high temperatures to convert waste into gases (e.g., syngas) that can be used for energy production.

**5. Disposal (as a last resort)**

Purpose: Safely dispose of wastes that cannot be recycled, composted or converted to energy.

Strategies:

- a. Establish partnership with LGU that has a landfill space.
- b. Implement collection programs for non-recyclable wastes for disposal to landfill areas.

**6. Awareness and Education Program**

***Public Awareness Campaigns***

Purpose: Educate the public about the benefits of waste reduction, recycling and composting.

Strategies:

- a. Develop educational materials. Create brochures, websites, social media content and other materials to inform the public about waste management programs.
- b. Conduct workshops and presentations. Offer educational workshops and presentations to schools, community groups and others.
- c. Promote participation in programs. Encourage people to participate in recycling, composting and other waste management programs.

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## 7. Monitoring and Evaluation

### ***Performance Measurement***

Purpose: Track the performance of the integrated waste management system and assess progress toward goals.

Strategies:

- a. Collect data. Gather data on waste generation, recycling rates, composting rates, landfill disposal rates and program costs.
- b. Analyze data. Analyze the data to identify trends, measure progress and evaluate effectiveness of the system.

### ***Continuous Improvement***

Purpose: Use the data and analysis to improve the integrated waste management system over time.

Strategies:

- a. Adjust programs. Modify waste management programs based on performance data and stakeholder feedback.
- b. Implement new technologies. Adopt new technologies to improve efficiency and effectiveness.
- c. Adapt to changing conditions. Adjust the system to respond to changes in waste generation patterns, market conditions and regulations.

## Implementation Plan

PPAs	Action/s	Steps	Timeframe	Focal Persons/Technical Working Committee
Phase 1. Assessment and Planning	Conduct waste characterization and auditing.	<ul style="list-style-type: none"><li>Determine the types, quantities and sources of waste generated (e.g, paper, plastics, food waste, recyclables, hazardous materials).</li></ul>	July to December 2025	Yepes, PIG Serino, MNV Pajares, GA Burlas, M Acob, JR _____ (chemist) _____ Marine bio) Padilla, CA _____ (DALL faculty)
		<ul style="list-style-type: none"><li>Sort and weigh waste samples</li></ul>		

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		<ul style="list-style-type: none"> <li>Analyze the results and identify major waste contributors (e.g., staff housing, student dormitories, research centers, laboratories, academic buildings, administrative office buildings, etc.).</li> </ul>		
	Organize needs assessment.	<ul style="list-style-type: none"> <li>Evaluate the current waste management infrastructure and equipment, identify gaps, and determine the needs of the university. This involves analyzing existing collection systems and policies, treatment facilities and disposal options.</li> <li>Review existing policies, regulations and infrastructure.</li> <li>Assess public awareness and participation in waste reduction efforts.</li> <li>Analyze demographic and geographic factors.</li> </ul>	May to December 2025	

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	Develop and enforce waste management regulations and policies.	<ul style="list-style-type: none"> <li>• Draft regulations supporting waste segregation, recycling and composting.</li> <li>• Set up guidelines for waste disposal in public spaces, housing facilities, commercial spaces, etc.</li> <li>• Introduce incentives for responsible waste management and penalties for non-compliance.</li> <li>• Create monitoring and reporting mechanisms for waste management performance.</li> </ul>	May to December 2025	
	Set goals for the implementation of IVM in the university.	<ul style="list-style-type: none"> <li>• Define specific, measurable, achievable, relevant and time-bound (SMART) goals for waste reduction, recycling, composting, and diversion from landfills. These goals provide a framework for the integrated system.</li> <li>• Establish targets for reducing waste generation, increasing recycling rates, diverting organic</li> </ul>	May to December 2025	
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		waste from landfills and minimizing greenhouse gas emissions		
	Promote effective stakeholders engagement and partnerships and engagements with public and private sectors.	<ul style="list-style-type: none"> <li>• Advocate environmental awareness and waste management practices among employees, students, alumni, guests and other stakeholders.</li> <li>• Collaborate on research for improved waste management technologies.</li> <li>• Provide regulatory support, policy guidance, and funding.</li> <li>• Collaborate on monitoring waste management performance.</li> <li>• Partner with private sectors and LGUs for waste processing and recycling initiatives.</li> <li>• Seek help from LGUs and other benefactors for the development of infrastructure facilities (e.g. sorting and recycling plants).</li> </ul>	May to December 2025	
Waste Segregation, Sorting and Minimization	Implement policies and programs to encourage	<ul style="list-style-type: none"> <li>• Awareness campaigns on the benefits of waste segregation</li> </ul>	January to December 2026	TWCs for Solid Waste Management, Agricultural and Food Waste Management,

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	segregation at source (housing, dormitories, commercial center, academic building, research centers, administrative offices, etc.	<ul style="list-style-type: none"> <li>• Distribution of color-coded or properly labeled bins</li> <li>• Develop a waste minimization guide for academic and administrative buildings, housing and dormitories, research centers and laboratories, commercial center, etc.</li> <li>• Provide incentives/awards to the units or centers that reduce waste generation.</li> </ul>	Every Recognition Program (to start in FY 2026)	Wood Scraps and Fallen Logs Waste Management, Water and Hazardous Chemical Waste Management
Collection and Transportation Systems	Improve waste collection systems to support segregation and ensure timely disposal	<ul style="list-style-type: none"> <li>• Establish efficient collection routes and schedule.</li> <li>• Invest in specialized vehicles for waste types (e.g. separate trucks for recyclables, compostables, etc)</li> <li>• Use technology (e.g. RFID, GPS) for tracking waste collection and management</li> <li>• Set up a regular waste pickup with appropriate containers at every housing unit, dormitory, commercial facilities, academic,</li> </ul>	January to December 2026	TWCs for Solid Waste Management, Agricultural and Food Waste Management, Wood Scraps and Fallen Logs Waste Management, Water and Hazardous Chemical Waste Management  
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		research and administrative offices		
Infrastructure Development for the Processing and Treatment	Develop and establish facilities for waste processing, recycling, and energy recovery.	<ul style="list-style-type: none"> <li>Establish sorting centers and recycling plants.</li> <li>Develop composting facilities for organic wastes.</li> <li>Establish waste-to-energy plants where appropriate.</li> <li>Build transfer stations for waste collection and transportation when necessary.</li> <li>Upgrade landfill facilities for wastes that cannot be recycled or processed and/or forge Co-Creation partnership with LGUs for the disposal of non-recyclables (the last resort).</li> </ul>	January to December 2027	TWCs for Solid Waste Management, Agricultural and Food Waste Management, <b>Wood Scraps and Fallen Logs Waste Management</b> , Water and Hazardous Chemical Waste Management
Recycling and Resource Recovery	Strengthen recycling systems and promote resource recovery	<ul style="list-style-type: none"> <li>Partner with private sectors for processing and selling recycled materials.</li> <li>Set up collection points for recyclable materials at strategic locations.</li> <li>Develop a product labeling system that encourages</li> </ul>	January 2026 to December 2027	TWCs for Solid Waste Management, Agricultural and Food Waste Management, <b>Wood Scraps and Fallen Logs Waste Management</b> , Water and Hazardous Chemical Waste Management

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		customers to choose recyclable products.		
		<ul style="list-style-type: none"> <li>Promote Extended Producer Responsibility (EPR) to encourage manufacturers to take back used products.</li> </ul>		
		<ul style="list-style-type: none"> <li>Encourage the academic community to buy and use reusable items to promote reduction of wastes.</li> </ul>		
Awareness and Education Program	Conduct public awareness campaigns to change consumption and waste disposal behaviors.	<ul style="list-style-type: none"> <li>Develop IEC materials on waste reduction and recycling.</li> <li>Conduct workshops and training programs for VSU stakeholders.</li> <li>Utilize media (TV, radio, social media) to raise and advocate awareness.</li> <li>Launch a university engagement initiative (e.g. "Zero Waste City", "May Pera sa Basura", ect) competitions and waste audits.</li> </ul>	January to December 2027	TWCs for Solid Waste Management, Agricultural and Food Waste Management, <b>Wood Scraps and Fallen Logs Waste Management</b> , Water and Hazardous Chemical Waste Management
Technology Integration	Leverage technology to improve waste management practices.	<ul style="list-style-type: none"> <li>Implement an Integrated Waste Management Information System (IWMIS)</li> </ul>	January 2026 to December 2027	TWCs for Solid Waste Management, Agricultural and Food Waste Management, <b>Wood Scraps and Fallen</b>

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		for tracking, evaluation, monitoring and reporting.		Logs Management, and Chemical Waste Management
		<ul style="list-style-type: none"> <li>• Use sensor technology in waste bins for real-time monitoring of waste levels.</li> </ul>		
		<ul style="list-style-type: none"> <li>• Implement waste collection apps that help stakeholders report waste issues and schedule pickups.</li> </ul>		
		<ul style="list-style-type: none"> <li>• Conduct research and implement technologies for advanced waste-to-energy and composting systems.</li> </ul>		

## Monitoring and Evaluation

To ensure that the implementation of the LINIS VSU is efficient and effective, tracking the performance of the integrated waste management system and assessing its progress toward set goals is necessary. The university will implement evaluation methods such as: conduct of annual audits of waste collection and processing systems; survey university stakeholders participation and satisfaction levels; and monitor progress towards reduction and recycling targets.

The key performance indicators include the following:

1. Number of waste audits
2. Approved university policy and regulatory framework
3. Reduction in total waste generation (kilos)
4. Increase in recycling rates (percentage of total wastes)
5. Volume of recycled and reused waste
6. Compliance rates for segregation and waste disposal
7. Reduction in waste to landfills (percentage)
8. Reduced environmental footprint
9. Number of awareness campaigns conducted

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10. Number of employees, students and stakeholders who are given the opportunity to engage in sustainable practices
11. Percentage of employees, students and stakeholders who rated their awareness and education on the university's IWM is at least Very Satisfactory
12. Decreased operating costs in waste handling
13. Number of environmental laws and regulations complied
14. Number of certifications/recognitions/awards received
15. Number of research programs/projects/activities implemented related to waste reduction, recycling technologies and the development of new sustainable materials
16. Number of collaborative research engagements with faculty and students from within the university, industry partners and other universities
17. Number of innovations/technologies generated
18. Number of Scopus-indexed publications
19. Number of local and international partnerships forged

### Financial Sustainability

The university will develop a financial plan to support the short-term and long-term sustainability of LINIS VSU efforts which includes but not limited to allocating funds for the Phase 1 implementation of this project, establishing environmental/waste management fees that are fair, incentivization of waste minimization, secure funding from the national government, international grants, and partnerships, explore alternative revenue mechanisms such as selling recyclable materials or energy recovered from wastes and monitor and optimize the cost-effectiveness of waste collection, processing and disposal.

### Risk Management

Initially, the following are the identified risks and possible mitigations:

Risks	Proposed Mitigations
Resistance from the academic community and other stakeholders from adopting segregation practices.	Launch awareness campaigns and offer incentives for compliance.
Insufficient infrastructure for processing and recycling.	Secure funding and build partnerships with private sectors and IWM advocates.
Non-compliance by university IGP tenants and guests.	Enforce stricter regulations and provide support for compliance

### Timeline and Phases

- Phase 1 (0-7 months – May to December 2025): Planning, assessment and initial set-up. This phase includes inventory, assessment, planning, policy development, preparation of full-blown proposals for solid waste, agricultural and food waste, wood scraps and fallen logs, waste water and hazardous chemical management. **BOR ACTION: APPROVAL**

- Phase 2 (24 months – January 2026 to December 2027): Pilot projects and infrastructure development. This covers the full implementation of waste segregation at the university level, start with pilot waste processing facilities, and others. These will be conducted from January to December 2026. The full roll-out of Phase 2 will be done in January to December 2027. This phase includes the expansion of waste segregation programs university-wide, establish full-scale recycling facilities and programs, technology integration, others.
- Phase 3 (January to December 2028): Monitoring and Evaluation. Regular monitoring, refining the IWM system will be done based on feedback and KPIs.

## The Technical Working Committees

The university will create Technical Working Committees (TWCs) to perform critical roles in supporting the planning, implementation, oversight of the approved waste management policies and practices, namely: **Solid Waste TWC, Agricultural and Food Waste TWC, Wood Scraps and Fallen Logs TWC** and **Waste Water and Hazardous Chemicals TWC**. The specific functions may vary depending on the needs and nature of the TWC but generally, the following functions May be carried out;

### 1. Policy and Strategy Development

- **Formulation of Waste Management Policies:** The committee assists in the development of national, regional, or local waste management policies and strategies.
- **Sustainability Initiatives:** It plays a role in defining sustainable waste management practices that align with environmental protection goals, such as reducing waste generation, promoting recycling, and managing hazardous materials.

### 2. Planning and Program Design

- **Waste Management Plans:** The TWG helps in creating comprehensive waste management plans, addressing all stages of waste management—collection, transportation, processing, disposal, and recycling.
- **Capacity Building:** It may provide guidance on the need for infrastructure, equipment, and human resources required to implement waste management programs effectively.

### 3. Technical Assistance and Expertise

- **Advising on Technologies:** The committee provides expert advice on appropriate technologies for waste treatment, recycling, disposal, and resource recovery.
- **Innovation and Best Practices:** The committee identifies and promotes the use of innovative solutions, such as waste-to-energy technology, or best practices from other regions or countries.

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#### 4. Regulation and Compliance

- **Standards Development:** It helps in establishing and enforcing technical standards for waste management, including those related to waste sorting, recycling, treatment, and landfill operation.
- **Regulatory Oversight:** The committee supports ensuring that waste management systems comply with relevant local, regional, and national regulations, ensuring safe and environmentally responsible waste disposal.

#### 5. Monitoring and Evaluation

- **Data Collection and Analysis:** The committee is involved in tracking waste generation trends, system performance, and program effectiveness through regular data collection, analysis, and reporting.
- **Performance Assessment:** The committee evaluates the outcomes of waste management programs to identify areas for improvement and recommend corrective actions.

#### 6. Stakeholder Engagement

- **Community and Public Awareness:** It helps design and implement community engagement programs, raising awareness about proper waste disposal practices, recycling, and waste minimization.
- **Collaboration with Other Agencies:** The committee coordinates with government departments, private companies, NGOs, and other stakeholders to ensure the waste management system operates smoothly and efficiently.

#### 7. Resource Allocation and Budgeting

- **Financial Planning:** The committee assists in determining the financial resources required for waste management systems, advising on budgeting and allocation of funds.
- **Fundraising and Investment:** It may also play a role in identifying potential sources of funding or investment opportunities to support solid waste management infrastructure and projects.

#### 8. Research and Development

- **Innovative Solutions:** The committee encourages research into new methods for waste reduction, recycling, and energy recovery.
- **Environmental Impact Studies:** It may also support or conduct studies to assess the environmental impacts of waste management practices and propose solutions to mitigate those impacts.

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## 9. Capacity Building and Training

- **Training Programs:** The TWC helps develop and implement training programs for waste management personnel, including waste collectors, operators, and policymakers.
- **Skill Development:** It identifies skill gaps in the workforce and promotes the development of technical skills required to improve waste management practices.

## 10. Emergency Response and Contingency Planning

- **Crisis Management:** In cases of natural disasters, pandemics, or other emergencies, the TWC may provide expertise in emergency waste management protocols, helping design contingency plans to handle large volumes of waste efficiently and safely.

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