SDG 12

RESPONSIBLE CONSUMPTION AND PRODUCTION

SDG 12 Content Overview

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01 Strategic Partnership

Strategic Partnership to Advance Kuala Lumpur's Zero Waste Zone Programme

Universiti Malaya (UM), through the Universiti Malaya Sustainable Development Centre (UMSDC), has been recognised as a strategic partner of Dewan Bandaraya Kuala Lumpur (DBKL) for the Program Zon Sifar Sisa di Wilayah Persekutuan Kuala Lumpur (Zero Waste Zone Programme), specifically supporting the Lembah Pantai zone, where UM's main campus is located. The programme covers all 11 parliamentary constituencies in Kuala Lumpur and aims to strengthen collaborative efforts towards waste reduction and more sustainable waste management practices.



Representing UM at the programme's launch and partnership recognition ceremony were Dr Archina, UMSDC's Zero Waste Coordinator, and Dr Najah, a member of the Zero Waste Campaign – University of Malaya Living Lab team. Through this strategic partnership, UM contributes its expertise and experience in campus-based zero-waste initiatives to support wider community engagement and sustainable waste management efforts. The collaboration provides an opportunity to extend zero-waste practices beyond the university campus by engaging local communities and other stakeholders in Lembah Pantai and across Kuala Lumpur, supporting the transition towards more responsible consumption and production.

02 Waste Management Education Outreach

Food Awareness for Young Learners

Students from the Faculty of Law and the Faculty of Education, UM, collaborated on a SULAM project at Tadika Al-Husna, Petaling Jaya, to introduce young children to mindful eating and responsible food habits. Through interactive games, storytelling, songs and hands-on activities, the programme helped children understand the value of food, basic nutrition, portion control and simple ways to reduce food waste. A total of 45 kindergarteners took part in short talks and activity stations designed to deliver these messages in a fun and age-appropriate manner.

The project combined educational and legal perspectives to address gaps in early awareness on nutrition and food wastage. With guidance from both faculties, the students developed all teaching materials in-house and engaged parents by distributing simple pamphlets on healthy eating and food waste awareness. This interdisciplinary collaboration demonstrated how student-led initiatives can translate academic knowledge into meaningful community engagement while nurturing positive habits from an early age.



UM Supports Community in Recycling Used Cooking Oil

A team of lecturers, postgraduate students and support staff from the Faculty of Science, UM, carried out a community outreach programme under the CAKnA (Citra Akademik untuk Komuniti dan Alam) initiative to educate rural residents on recycling used cooking oil into environmentally friendly handmade soap with commercial potential. Through interactive workshops and live demonstrations, participants learned proper oil filtration techniques, safety procedures, and basic soap-making processes using safe and accessible materials. The programme also included awareness sessions on choosing suitable cooking oil, assessing oil quality, and adopting healthier and more responsible cooking practices. Involving UM students as facilitators and demonstrators further strengthened knowledge transfer while enhancing students' real-world learning experiences and community engagement through practical, science-based solutions.









Transforming Durian Waste into Sustainable Packaging

Waste2Wonder, a SULAM student project themed "Inspiring Action through Waste Innovation," was conducted at SK Sri Kelana in May 2025 to promote sustainability awareness among school students. Through an engaging Waste Innovation Talk, participants learned how waste materials, particularly durian husks, can be transformed into eco-friendly packaging solutions. Interactive quizzes and discussions further encouraged students to explore innovative approaches to waste reduction and environmental conservation. The programme also featured a hands-on DIY Workshop where students experienced the process of creating sustainable packaging from durian waste.

"Bag Your Meds" Promotes Reusable Alternatives at UMMC Pharmacy

The Department of Pharmacy, UMMC, has strengthened its long-standing initiative to reduce single-use plastics through the "Bag Your Meds" project. Since 2009, the department has discontinued the provision of plastic bags for medication collection. In January 2025, the Green Initiative Team introduced a dedicated rack supplying donated paper and reusable cloth bags for patients collecting their medicines.



Constructed from recycled materials such as wooden pallets and used medicine bottles, the rack is placed at the outpatient pharmacy waiting area to encourage responsible consumption practices. Patients and visitors are also invited to donate clean, reusable paper or cloth bags to support the initiative. This effort reduces plastic waste, promotes reuse, and fosters a culture of shared responsibility in minimising resource consumption within the healthcare setting.



03 Waste Tracking

Summary of Waste Generated and Recycled, 2025

Across all three waste streams (organic, inorganic non-toxic and toxic), UM generated 2,869.1 tonnes of waste in 2025 and recycled or recovered about 354.2 tonnes, or about 12.3% of the total.

Waste stream	Generated (t)	Recycled (t)
Organic	1,652.3	46.0
Inorganic non-toxic	1,135.0	242.81
Paper	511.0	113.76
Plastic	352.0	108.41
Aluminium and tin	272.0	20.64
Toxic (scheduled)	81.8	about 65.4
Total	**2,869.1**	**about 354.2 (12.3%)**

Recycled includes reuse, recycling and resource recovery. Toxic waste recovery is estimated from the reported 79.9% recovery rate.

A University-Wide Waste Measurement System

UM tracks waste at whole-university level, not for selected buildings. Each stream has a named unit responsible for measuring and recording it, and the UM Sustainable Development Centre (UMSDC) compiles and validates the combined figures each year.

Waste stream	What is measured	Recorded by
Organic	Food waste, leaves and small branches, bulky garden waste; tonnes generated and composted	Cleaning Section, Office of the Chief Facility Officer (CFCO); Zero Waste Section, UMSDC
Inorganic non-toxic	Paper, plastic, aluminium and tin; tonnes generated and recovered for recycling	Cleaning Section (CFCO) and UM Zero Waste Campaign (UM ZWC)
Toxic (scheduled)	Chemical, clinical and electronic waste; monthly tonnes by waste code and disposal route	Infrastructure Services Centre (chemical, clinical); Asset Division (e-waste)

UM's waste contractors collect waste daily and separate recyclables at the UM Waste Transfer Station. Recyclables gathered through UM ZWC's Monthly Buy-Back and Recycling Day are combined with the contractors' recovery figures to give the campus total. Scheduled waste is logged monthly by waste code before transfer to premises licensed by the Department of Environment (DOE), as the Environmental Quality (Scheduled Wastes) Regulations 2005 require.

Waste Generated and Recycled in 2025

Organic waste fell 3.6% to 1,652.3 tonnes. Food waste dropped from 890 to 806 tonnes, helped by segregation at source and green event practices. Leaves and small branches (16.3 tonnes) and 29.7 tonnes of food waste were composted at the UM Zero Waste site using the Takakura method. Bulky garden waste (830 tonnes) was not composted.

Inorganic non-toxic waste rose to 1,135 tonnes: paper 511, plastic 352, and aluminium and tin 272. Of this, 242.81 tonnes were recovered for recycling: 113.76 tonnes of paper and cardboard, 108.41 tonnes of plastic and 20.64 tonnes of aluminium and tin. The increase tracks campus growth; staff rose 7.4% to 7,009, students 17.3% to 33,151, and hosted events 60.5% to 1,266.

Toxic (scheduled) waste totalled 81.8 tonnes: 26.7 tonnes chemical, 30.1 tonnes clinical and 25.0 tonnes electronic (3,333 units). All of it went to DOE-licensed premises, and about 79.9% underwent resource recovery, recycling or downcycling. The rest received approved final treatment and disposal.

Recycling Channels

UM's recycling channels in 2025 included recycling bins in buildings, residential colleges and along main roads; the UM ZWC drop-off point and monthly buy-back; textile bins with LifeLine Clothing; RVMPlus reverse vending machines; and SecondLife@UM, which redistributed 176.2 kg of reusable items in September 2025.

Public Evidence

UM publishes its waste management information through the following channels:

- UM Zero Waste Campaign page and annual reports, UMSDC
- Utilities page, Office of the Chief Facility Officer
- UM Zero Waste Campaign on Instagram
- Integrated Solid Waste Management in Universiti Malaya (video)
- UM Sustainability Policy 2021–2030, which commits UM to monitoring its waste streams

The 2025 figures in this section are also published in this UM Sustainability Report 2025 chapter on SDG 12.