



# 12 RESPONSIBLE CONSUMPTION AND PRODUCTION

**1,780 ton**

Amount of Waste  
Generated

**86%**

Proportion of  
Waste Recycled

**250 ton**

Amount of Waste  
Sent to Landfill

## Stewardship

### Comprehensive Sustainability Policies on Procurement and Waste

ITS demonstrates a strong institutional commitment to SDG 12 through integrated policies on ethical sourcing, sustainable procurement, and responsible waste management. Guided by the 2021 Rector's Statement Letter on Achieving SDGs and the 2024 Rector's Circular Letter on Green and Sustainable Campus, these policies promote ethical and environmentally friendly practices across campus operations.

ITS prioritizes the use of locally sourced and ethically produced food and supplies, minimizes single-use plastics and disposable items, and implements a Sustainable Canteen Management policy that extends sustainability standards to all tenants and suppliers.

ITS also enforces a comprehensive procedure for Hazardous Waste and Wastewater Management, ensuring proper sorting, secure storage, and certified third-party transport of hazardous materials. Furthermore, campus-wide waste reduction initiatives—such as digitalization, refill stations, and recycling programs—support the minimization of landfill waste and plastic use.

## Outreach



### ITS Launches Smart Composting for Zero-Emission Waste at Punggul Village under IEEE Tech4Good

ITS reaffirmed its leadership in sustainability innovation through a project under the IEEE Tech4Good 2024. Led by the Faculty of Intelligent Electrical and Informatics Technology, the initiative introduced a smart, eco-friendly composting system that integrates advanced technology with local wisdom to support Bali's zero-carbon mission.

The project was supported by the IEEE Humanitarian Technologies Board (HTB). It featured an IoT-based system with Arduino-powered sensors to monitor composting conditions in real time via the ComMonS mobile app, and solar panels providing 3,480 WP of renewable power to replace diesel engines.

Implemented in Punggul Village, Bali, the project processes up to 1,000 kilograms of ceremonial waste daily, transitioning from diesel to clean energy. This project, conducted in collaboration with Unika Atma Jaya, BINUS, UMM, UDINUS, Undiksha, and UNUD, highlights ITS' leadership in multi-institutional innovation, demonstrating how technology and cultural values can drive sustainable waste management and empower local communities.

## Teaching



### Integrating Sustainability into Learning: GPBL ITS–SIT–IHI 2024 on Waste and Water Management

ITS continues to integrate sustainability principles into its teaching and learning activities through international and industry collaborations. One notable initiatives is the Global Project-Based Learning (GPBL) ITS–SIT–IHI 2024, organized by ITS, Shibaura Institute of Technology, Nihon University, IHI Corporation, and the Government of Surabaya.

This program serves as a platform for students to learn real-world challenges, combining academic knowledge with industrial expertise. The program brought together students from Indonesia and Japan to engage in lectures, discussions, and projects focused on waste management and water management, two critical aspects of sustainable production and resource efficiency.

The program's highlight was a site visit to Surabaya Regional Company for Waterworks (PDAM Surya Sembada Surabaya), where students observed wastewater and water management practices, learning how municipal and industrial sectors collaborate responsibly. Combined with expert lectures, the program offered both theoretical and practical insights on sustainability. This initiative strengthens students' technical and collaborative skills while fostering awareness of responsible production and consumption.

## Research



### ITS 3R: Transforming Plastic Waste into Sustainable Products

The ITS 3R team, led by Rio Tria Hardhitya, transforms plastic bottle waste into durable products such as boards, tables, chairs, and souvenirs. Using a systematic recycling process, the team analyzed 16 big in-campus events and estimated up to 424 kilograms of potential plastic waste, highlighting the need for effective waste management. Collaborating with other departments and units, they implemented a digital collection system for departments and event organizers to submit waste efficiently.

This research-driven initiative earned Third Place at Inovboyo 2024 that exemplifies ITS' commitment to turning research into practical solutions, advancing circular economy practices, and strengthening the university's role as a leader in campus sustainability.