SDG 12 Responsible Consumption & Production

ITS SDG Report 2025



ITS contributes to SDG 12 by promoting resource efficiency, improving waste management, encouraging responsible consumption, and developing technologies that address environmental challenges. The university's approach combines campus practices with research, student participation, and community engagement. In 2025, initiatives included refillable-water practices, the development of a centralised temporary storage facility for hazardous waste, and sustainability-oriented student activities. Research and innovation also provide opportunities to develop solutions for waste reduction and resource recovery. These activities demonstrate that responsible consumption and production require both institutional systems and changes in everyday behaviour. By integrating resource management with education and innovation, ITS can extend sustainability principles beyond the campus. Quantitative evidence on waste, water, materials, and resource recovery would help establish progress.

434
publications

89%
proportion of waste recycled

670 mt
amount of waste generated

74 mt
amount of waste sent to landfill

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Research

ITS research explores technologies and processes that can improve resource efficiency and reduce environmental impacts. Prof. Yatim Lailun Ni'mah's research reported in August 2025 converted agricultural residues and discarded glass into adsorbents for wastewater treatment, achieving up to 99% removal of selected heavy metals under optimum experimental conditions. Complementary research by Prof. Maya Shovitri presented in October identified plastic-degrading bacteria from Wonorejo mangroves, reporting a 12% reduction in plastic dry weight over 16 weeks. Our PET reverse-logistics research also evaluated collection systems, education, incentives and enforcement to inform circular-economy strategies.

Teaching

ITS introduces responsible resource use through student activities, practical projects, and sustainability education. New-student programmes have encouraged environmentally responsible practices, including bringing refillable bottles and participating in campus environmental activities. Also, through WasteTrack 2025, organised with Coca-Cola Europacific Partners Indonesia, students developed digital solutions for waste-bank management and traceability. The competition attracted 50 teams from 7 universities, with 10 finalists receiving incubation and professional mentoring. ITS' AITIES team won first place with an application supporting waste-management activity, transactions, and statistical records. Our teaching also expanded through the introduction of a Sustainable Fisheries course in semester one of 2025–2026.

Stewardship

ITS promotes responsible resource use through recycling and coordinated waste management, with 89% of campus waste recycled in 2025. On 25 July 2025, ITS inaugurated its centralised hazardous and toxic waste temporary-storage facility to serve laboratories, research activities and campus operations. Its management arrangements include cooperation with licensed waste-management providers and integrated recording and reporting through Fastronik, strengthening traceability and accountability in hazardous-waste handling.

Outreach

ITS extends responsible-consumption practices through community programmes and the transfer of environmental technology. In Sidoarjo, Aksi Sobat Bumi ITS collected 109 kilograms of household waste, encouraging residents to exchange sorted waste for groceries or seedlings and use organic waste to feed maggots for fish cultivation. On 13 October 2025, SBEC ITS trained fisheries communities in Blitar to recover useful products from processing residues, including liquid fertiliser from fish viscera. ITS also launched a public Water Station with BSI and the Indonesian Navy on 1 August 2025, providing drinking-water refills as an alternative to disposable plastic bottles.