SRM UNIVERSITY – AP, ANDHRA PRADESH

Events and Initiatives

Talks, Industry Visits, School Outreach and Campus Initiatives for Responsible Consumption and Production

SRM University-AP, Amaravati, Andhra Pradesh

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

OVERVIEW

Events and Initiatives for SDG 12

Responsible consumption and production is learned as much as it is engineered. Alongside its waste, chemical and purchasing systems, SRM University-AP runs lectures, industry visits and workshops on waste, circular materials and sustainable manufacturing, takes waste-segregation and plastic-free messages into neighbouring schools through the Samaj Seva programme, and keeps up campus initiatives such as electric vehicles, on-site sewage treatment and treated-water reuse. This page features the events and initiatives from the SDG 12 annual reports for AY 2024-25 and AY 2025-26 that are documented with photographs.

EVENTS

Featured Events

Atmanirbhar Bharat: Innovations in Lean Manufacturing for the Automotive Industry (16 April 2025)

The Department of Mechanical Engineering held this one-day workshop (9:30 AM to 5:30 PM) in the Tiered Classroom, Homi J. Bhabha Block, with two industry speakers. It covered lean manufacturing principles, electric-vehicle manufacturing, Industry 4.0 and automation, with strategies for waste reduction to raise productivity and insights into sustainable manufacturing practices that reduce the carbon footprint. Attendance was 15 faculty, 20 PhD scholars, 12 PG and 50 UG students. Participants gained an understanding of lean concepts for improving efficiency and reducing costs and of how automation integrates with lean systems, and the event opened opportunities for internships and projects.



Image 1: Speaker honoured at the workshop



Image 2: Audience in the Tiered Classroom, Homi J. Bhabha Block

Industrial Visit to Jindal Urban Waste Management, Guntur

Commerce students visited an operating urban waste management facility to see waste-processing operations, segregation and recycling workflows first-hand. Beyond bridging classroom learning with industrial practice, the visit built

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awareness of pollution control, resource-efficient operations and the professional pathways available in environmental and waste management.



Image 3: Students at the Jindal Urban Waste Management facility

Green Metallurgy and Circular Materials Recovery

Dr Dina Magdy Abdo (CMRDI, Egypt) delivered this lecture under an active MoU to 56 attendees. It introduced environmentally responsible metal extraction and the circular recovery of materials from industrial and e-waste streams, addressing SDGs 9, 12 and 13 and opening avenues for research collaboration in sustainable metallurgy.



Image 4: Green Metallurgy and Circular Materials Recovery: lecture in progress

Industrial Decarbonisation: From GHG Accounting to Net-Zero Roadmap

This Department of Environmental Science and Engineering lecture covered corporate GHG accounting and net-zero pathways, drawing on live industry roadmap work. It gave 28 student and faculty attendees a working grasp of how emissions inventories translate into concrete decarbonisation and resource-efficiency strategies.



Image 5: Industrial Decarbonisation lecture

The Role and Opportunities for ESG Managers in Various Industries

Mr Karthick V, Sustainability Manager at Rialto Enterprises, spoke to 28 attendees on how ESG functions are shaping industrial decision-making, including waste governance and responsible-production reporting. The talk linked classroom sustainability concepts to an emerging industry career path.

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Image 6: Talk on the role of ESG managers

Sustainable Catalysis for Molecular Complexity

Dr Suman Dana (University of Basel) gave this chemistry guest lecture to 340 attendees on catalytic methods engineered for resource economy, waste minimisation and energy efficiency in organic synthesis. It showed how green-chemistry principles apply from bench-scale synthesis to biomolecular applications.



Image 7: Guest lecture on sustainable catalysis

Guest Expert Lecture: Toward Greener Phenolic Resins

Dr Seng Hua Lee (Universiti Teknologi MARA, Malaysia) presented research on replacing phenol with renewable precursors in wood-adhesive manufacturing to a mixed audience of postgraduate and undergraduate students. It illustrated how substituting sustainable raw materials for petrochemical inputs supports more responsible production in the materials industry.



Image 8: Guest lecture on greener phenolic resins

SCHOOL OUTREACH

Samaj Seva: Waste and Plastic Awareness in Schools

Through the Samaj Seva community engagement programme, SRM University-AP students run structured outreach activities in neighbouring schools. Four of them are directly aligned with SDG 12: waste segregation, reuse of materials and reduction of single-use plastics.

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Image 9: Waste segregation awareness programme



Image 10: Newspaper craft: reuse over waste



Image 11: Cleanliness and waste management programme

Waste segregation: delivered as an interactive session with relatable examples and small rewards for participation, it left students able to distinguish waste categories and understand why segregation matters for cleanliness and environmental sustainability. Newspaper craft: framed around reusing materials, it paired creativity and teamwork with a practical lesson in resource reuse. Cleanliness programme: interactive, age-appropriate discussion helped students connect cleanliness practices to environmental sustainability and responsible disposal. Plastic-free drive: a presentation and pre-awareness questionnaire were followed by a poster-making task on “Plastic-Free Awareness”.



Image 12: Plastic-Free Awareness Drive with students of ZPHS Mothadaka

CAMPUS INITIATIVES

Campus Initiatives

Electric vehicles and lower emissions

The campus has 6 electric vehicles, a choice made with local pollution in mind (the 2024-25 report). A battery-operated vehicle used mainly for campus tours runs for nearly 4–5 hours a day, is charged daily at a charging point inside the campus and covers nearly 30–40 km on a single charge. Some faculty members also use electric two-wheelers for official visits. Total annual greenhouse gas emissions are 11,968 metric tons of CO2 equivalent, with an annual reduction target of 3.83% (1,197 metric tons) and a reduction of 86.97 metric tons achieved against the previous year. Four carbon offset programmes are in place (an EV cart, a biogas plant, tree plantation and solar PV units), and emissions are monitored quarterly. The 2025-26 report records 8 electric vehicles and 95 buses in the fleet and 16,310 t CO2e of Scope 1+2 emissions monitored.

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Image 13: Electric cart used for campus tours



Image 14: Electric mini-buses and cart

Biopipe sewage treatment plant

The campus operates a Biopipe sewage treatment plant, a biological system that treats domestic and industrial wastewater without added chemicals and without mechanical aeration. It is odour-free and free of excess sludge, compact and modular so that it can be expanded as needed, low in power consumption compared with conventional aeration-based plants, and low in maintenance. The treated water is suitable for non-potable uses such as irrigation and flushing, so that the university reuses water instead of drawing fresh supply for every purpose. Good practice includes keeping records of the STP water input, treatment and wastewater and of the sludge quantity and its reuse.



Image 15: Biopipe plant shed



Image 16: Treatment modules arranged in racks

Treated-water reuse in campus landscaping

Treated water is reused to irrigate the campus, which keeps it green without added fresh-water demand.



Image 17: Lawn irrigated with treated water through sprinklers



Image 18: Sprinkler on a grassy slope beside a paved path

Energy-efficient lighting

The 2025-26 report records 27,783 LED fixtures across academic blocks, hostels and common areas, and 1,303 sensor-based devices that regulate lighting and equipment use automatically. The 2024-25 report records 9,704 LEDs in its equipment count. The 959 kWp rooftop solar installation meets 4.8% of campus energy demand.

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Responsible use of cooking fuel

A cylinder tag system tracks the LPG used in the kitchens. Each cylinder carries a history tag showing its weight at purchase, the dates of service and relief, and its empty weight. Each month the cylinders completed and in line, with the kilograms of gas remaining, are converted into a financial value (Rs./kg) and displayed so that users are motivated to save fuel.

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