SDG 12

12.1 Research on SDG 12: Responsible Consumption and Production

Parameter	Data
Scholarly Output	310
Field-Weighted Citation Impact	1.66
Citation Count	2,643

From 2022 to 2024, Amrita Vishwa Vidyapeetham made remarkable advancements in supporting United Nations Sustainable Development Goal 12 — Responsible Consumption and Production, through high-impact research that promotes circular economy, waste reduction, and sustainable resource management. With 310 scholarly outputs and a Field-Weighted Citation Impact of 1.66, Amrita's research reflects global relevance and excellence in driving responsible and efficient production systems. The university's studies span critical areas such as Waste Management, Plastic Recycling, Electronic Waste, and Carbon Footprint Reduction, demonstrating a holistic approach to minimizing environmental impact and fostering sustainability. By integrating Artificial Intelligence, Deep Learning, and Supply Chain Optimization, Amrita develops innovative models that enhance sustainability across agricultural and industrial sectors. Supported by 82 international collaborations, 16,850 views, and 2,643 citations, Amrita's SDG 12 research underscores its global leadership in advancing responsible production, sustainable consumption, and climate-resilient development practices.

International Workshop on Waste-to-Wealth

Amrita's International Workshop on Waste-to-Wealth convened researchers, innovators, and social entrepreneurs to examine how waste can be reimagined as a resource. Participants explored practical models for converting organic, industrial, and agricultural residues into compost, biogas, and marketable by-products. The sessions featured case studies on community composting, decentralized waste segregation, and the use of recycled inputs in production systems. Group discussions focused on policy incentives, financing models, and strategies for inclusive participation of informal waste workers. The workshop concluded with plans for collaborative pilot projects to measure waste diversion, establish local recycling enterprises, and promote circular value chains. By linking research and entrepreneurship, the program highlighted how circular economy models can generate both income and environmental resilience.

Campus Food Waste Tracking and Reduction Program

Amrita's Campus Food Waste Tracking and Reduction Program measures and manages food waste across dining halls, hostels, and canteens to reduce avoidable losses. The system includes regular audits, waste segregation, and composting units that convert organic waste into fertilizer for campus gardens. Data gathered from these audits inform kitchen practices such as portion control, improved storage, and menu optimization. Surplus food that remains safe for consumption is redirected to local community kitchens, linking the program to hunger relief efforts. Workshops and campaigns engage students in understanding the social and environmental impact of food waste. Through continuous tracking and awareness, Amrita has achieved measurable reductions in plate waste and established a replicable model for sustainable food management in higher education.

Chemical Waste Disposal Procedure and Hazardous Waste Management

Amrita's Chemical Waste Disposal Procedure defines the protocols for safe handling and disposal of hazardous laboratory waste across its campuses. The document outlines responsibilities for researchers, laboratory assistants, and waste management staff, ensuring accountability at every stage. It specifies methods for labelling, storage, and transportation, and lists authorised disposal contractors who manage final treatment and reporting. Training sessions are regularly conducted for staff and students to reinforce safety standards and emergency preparedness. Periodic audits verify compliance and maintain detailed logs of chemical waste generation and disposal. This procedure ensures environmental protection, promotes occupational safety, and demonstrates Amrita's adherence to responsible laboratory management practices.

Sustainable Food Purchases and Responsible Procurement

Amrita's food procurement system incorporates sustainability principles into its purchasing decisions. The university prioritises local and seasonal produce to shorten supply chains and support small-scale farmers. Suppliers are encouraged to follow eco-friendly practices, reduce packaging, and provide transparency in sourcing. Vendor evaluation criteria include environmental performance, ethical labour standards, and compliance with food safety guidelines. Procurement teams monitor supplier practices through periodic reviews and awareness sessions. This policy enables Amrita to use its purchasing power to drive sustainability in the food industry and reinforces its commitment to responsible consumption within campus operations.

Institutional Environmental Sustainability Initiatives

The School for Sustainable Futures coordinates Amrita's environmental programs that integrate education, research, and campus operations. Students, faculty, and community members collaborate on projects involving energy efficiency, water conservation, solid waste management, and biodiversity restoration. Academic courses embed sustainability themes across disciplines, encouraging students to design practical interventions.

Outreach initiatives, including repair cafés, plastic-free campaigns, and recycling drives, promote behavioural change both on and beyond campus. Partnerships with local government and non-profit organisations extend these initiatives to nearby communities. The program demonstrates Amrita's institutional commitment to embedding sustainable consumption and production principles across every aspect of campus life.

SPARC Project 1707: Ethical Circular Economies in Textiles (South India)

The SPARC Project on Ethical Circular Economies in Textiles brings together researchers, textile producers, artisans, and social enterprises to develop sustainable practices within South India's textile clusters. The project investigates material flows, labour conditions, and waste patterns to design interventions that reduce textile waste and promote fair working conditions. Key outcomes include a digital product passport to trace materials through the production process, a sustainability dashboard for monitoring factory performance, and a greenhouse gas inventory prepared with Fairtrade India. The project also conducted capacity-building workshops for factory workers and management teams to support the adoption of ethical and circular practices. Collaborative pilots with local manufacturers are now testing closed-loop recycling systems and take-back models. Through these efforts, Amrita is shaping a new textile ecosystem that values resource efficiency, transparency, and social equity.