University : Karunya Institute of Technology and Sciences
Country : India
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[1] Setting and Infrastructure (SI)

[1.24] Impact of Setting and Infrastructure programs in supporting the Sustainable Development Goals (SDGs)

Description:

Karunya Institute of Technology and Sciences has undertaken several infrastructure and environmental initiatives that significantly contribute to the achievement of the United Nations Sustainable Development Goals (SDGs). The major programs include:

- **Development of energy-efficient and green buildings** designed with natural lighting, ventilation systems, and solar panels to harness renewable energy.
- **Expansion of green open spaces (GOS)** across the campus to enhance air quality and preserve local biodiversity.
- **Implementation of rainwater harvesting and groundwater recharge systems** such as infiltration wells to promote sustainable water management.
- **Provision of eco-friendly and inclusive sanitation facilities**, including accessible toilets and waste segregation systems to ensure hygiene and sustainability.
- **Promotion of low-emission mobility** through the development of pedestrian pathways, dedicated bicycle lanes, and connectivity with public transportation systems.
- **Adoption of smart digital technologies** for real-time monitoring of energy and water consumption, enabling efficient and sustainable infrastructure management.
- **Designation of vehicle-free zones** in key campus areas to encourage green mobility and reduce carbon emissions.
- **Construction of inclusive learning environments and open spaces** that ensure accessibility for all, including persons with disabilities.
- **Collaboration with government bodies and external partners** in formulating and implementing a comprehensive Sustainable Campus Master Plan.

These initiatives actively advance SDGs **1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, and 17**, promoting inclusive growth, health and well-being, quality education, gender equality, clean water and energy, sustainable infrastructure, reduced inequalities, climate action, responsible

resource use, and the protection of both terrestrial and aquatic ecosystems—while fostering strong global partnerships for sustainable development.

Pedestrian Walkways

Natural Lighting and Ventilation

Rainwater Harvesting Systems

Infiltration Wells

E- Vehicle inside the Campus

Rainwater Harvesting Systems

30 numbers of Solar Water Heaters Across the Campus

95kW Solar Power Plant in Admin Block

20kW Solar Power Plant in EVR/OPRAH mess building

Biogas Plants across the campus - 5

Water flow meter

Automatic flow level controller

Solar Water Heaters

30 solar water heaters are strategically installed across the campus, providing hot water while reducing reliance on conventional energy sources. This initiative aligns with Karunya Institute of Technology and Sciences commitment to sustainability by lowering carbon emissions and promoting renewable energy use, contributing to SDG 7: Affordable and Clean Energy and SDG 13: Climate Action.

Solar Power Plants

The Institution operates a 95kW solar power plant in the Admin Block and a 20kW plant at the EVR/Oprah Mess Building. These installations significantly reduce electricity costs while contributing to eco-friendly power generation on campus, supporting SDG 7: Affordable and Clean Energy and SDG 12: Responsible Consumption and Production.

Biogas Plants

Five biogas plants convert organic waste into clean energy, supporting the Institution's waste management efforts. This eco-friendly solution not only reduces waste but also produces biogas for cooking and other energy needs in Hostel, aligning with SDG 12: Responsible Consumption and Production and SDG 13: Climate Action.

Rainwater Harvesting Systems and Infiltration Wells

A total of 33 rainwater harvesting systems and 15 infiltration wells are implemented across the Karunya Institute of Technology and Sciences campus to effectively manage storm water and recharge groundwater levels. This initiative supports the institute’s sustainability goals by conserving water resources, minimizing surface runoff, and promoting sustainable water management practices.