

GREEN PROTOCOL AT IIT PALAKKAD

This report summarizes the activities at IIT Palakkad that have taken as part of the green campus initiative. The green campus activities are planned based on different sustainability perspectives like solid waste management, water conservation and reuse, green energy and development of green belt inside the campus. A brief description of the activities planned or already implemented under each category are presented below.

Solid Waste Management

Measures Implemented

- IIT Palakkad is collecting waste into different bins. Three types of bins have been installed on campus.
 1. Food waste,
 2. Recyclable plastic, paper and glass
 3. Non-recyclable, Single use plastic, Plastic coated paper cup and plates
- IIT Palakkad made it compulsory to use cloth banners/digital display instead of flex.

Measures Planned

- A Waste Survey is planned to assess the quantity of different waste generated inside the campus.
- An orientation program is planned for students, staff and faculty on waste minimization, segregation and proper disposal of waste, energy and water utilisation etc. by Haritha Kerala Mission Team.
- Implementation of mini Material Collection Facility inside the campus is planned. We need to identify agencies for further processing of the segregated waste material.
- Waste paper is now getting used by making handicraft, memento etc. IIT Palakkad is exploring the possibility of installing paper recycling machines on campus jointly with some other organization.
- We are also working on the development of an anaerobic composting unit for biodegradable waste management.
- IIT Palakkad is planning year long **awareness** generation activities including road shows, skits, posters, pamphlets, group meetings, and assembly announcements, etc and to display adequate sign boards at appropriate places across the Institution to prompt action.

Development of Greenbelt with in the Campus

Measures Implemented

IIT Palakkad has started the process of development of Greenbelt within the Campus. To increase greenery we are doing tree saplings by students and faculty members on special occasions.

Measures Planned

- A zone to develop forest belts in permanent campus has been identified. In collaboration with Kerala Forest Research Institute(KFRI), we are planting tree saplings with appropriate biodiversity. KFRI is a multidisciplinary team of experts conducting research on tropical forests and forestry for biodiversity conservation over the past three decades.
- We are also planning a Miyawaki method of planting to rejuvenate forest habitat.

Water Conservation and Management

Measures Implemented

IIT Palakkad is doing following for **water conservation and management**

- IIT Palakkad has constructed storage ponds for rainwater harvesting on campus.
- IIT Palakkad has implemented a Sewage Treatment Plant (STP) of capacity 40,000litres/day for water recycling. The recycled water is getting used for flushing and horticultural purposes.
- Water metering system has been installed in each building to analyse the usage of water from each building.

Measures Planned

- It is planned to improve the efficiency and quality of existing STP to increase the amount and quality of recycled water.
- In our campus we are working on implementation of more Rainwater harvesting measures.
- Implement measures to reduce over usage of water in each building based on the records from the water metering system.

Energy Conservation

Measures Implemented

- IIT Palakkad uses only the DC Power system along with energy efficient, LEDs, 30Watt Fans etc in the whole campus.
- Orientation programme has been organised among the students and staff on Optimum Energy Usage
- IIT Palakkad has already implemented solar energy of 83.8 kWp capacity.

Measures Planned

IIT Palakkad is exploring various possibilities for design and implementation of **renewable energy sources** and its usage. For example

- Biodegradable waste can be further used for waste to energy methods such as an anaerobic biogas plant (for kitchen waste), pyrolysis (dry waste) etc may be considered)

How to follow Green Protocol?

- Use cups and containers that can be washed and reused instead of those made of plastic or paper.
- Avoid plastic materials.
- Segregate wastes into Food waste, Recyclable waste and Non- recyclable waste and use the respective bins.
- Keep the non-bio degradable wastes clean and dry and deposit it in the bin.
- Avoid 'use and throw' carry bags. Always use bags made of eco-friendly materials.
- Always use cloth banners instead of flex.
- Always use eco-friendly materials like leaves flowers etc for decoration and while making bouquets for felicitating guests.
- Ensure optimum usage of electricity in the classrooms and hostels.

Types of Waste

Food Waste	Recyclable waste	Non-Recyclable waste
Leftover food	Newspapers / cardboards	Soap covers / pockets / sachets
Vegetable peels Fruit peels	Leather, rexene, rubber	Empty shampoo bottles
Rotten fruits and vegetables	Paper napkins, Tetra packs	Empty perfume bottles / containers of deodorants / shaving creams
Used tea / tea bags		Milk covers
Used coffee ground		Used toothbrush
Used flowers / dry flowers		Chocolate wrappers
Floor sweeping dust		Package / polythene covers / plastic covers
Meat and Non-veg remains		Cosmetics containers
Expired bread, biscuits and other food items		Chips packets
Hair		Sachets (of shampoo, creams, etc.)
		Packaged water bottles
		Used toothpaste tubes, etc.