



# PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institute, Approved by AICTE, New Delhi & Affiliated to Kurukshetra University, Kurukshetra)



## SDG 13 Climate Action



**Goal 13: Take urgent action to combat climate change and its impacts**

Panipat Institute of Engineering and Technology (PIET) is deeply committed to addressing global environmental challenges and contributing to the achievement of **SDG 13: Climate Action**. Recognizing the urgent need to combat climate change and its impacts, PIET actively integrates sustainable practices, innovative solutions, and awareness programs into its operations and academic ecosystem.

With a focus on sustainability, PIET has taken significant strides to reduce its carbon footprint, conserve natural resources, and promote eco-friendly initiatives. From renewable energy adoption to biodiversity conservation, the institute is dedicated to fostering a culture of environmental responsibility among students, faculty, and the wider community.

Through partnerships, green infrastructure, and proactive awareness campaigns, PIET empowers individuals to take meaningful actions toward mitigating climate change. As a center of academic excellence, PIET not only educates future leaders but also inspires them to drive sustainable solutions for a healthier and greener planet.

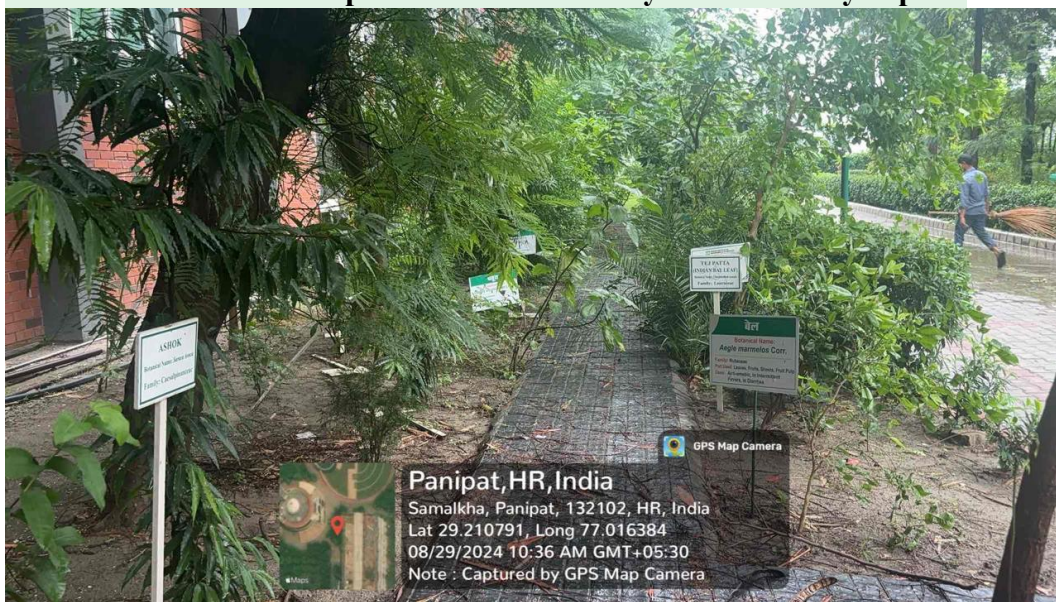
The institute's initiatives under SDG 13 demonstrate its unwavering commitment to creating a sustainable future while instilling a sense of environmental stewardship in the next generation.

### 1. Green Infrastructure Development

- **Herbal Garden:** PIET's herbal garden is a green initiative promoting sustainability, biodiversity, and education. Home to medicinal plants like Tulsi, Neem, Ashwagandha, Insulin plant, and Vajradanti, the garden serves as a natural pharmacy and an educational resource, fostering innovation in herbal medicine while preserving traditional knowledge. It contributes to climate resilience by reducing carbon footprints and enhancing air quality. The garden also revitalizes biodiversity, creating a habitat for indigenous bird species and restoring ecological balance. Through active participation in its upkeep, students learn practical sustainability practices, fostering environmental responsibility. This initiative not only enhances the campus environment but also inspires the broader community to adopt eco-friendly practices.



**Herbal Garden developed and maintained by the Pharmacy department**



**Herbs and shrubs nomenclature plate in the herbal garden**

**Massive Tree Plantation Drives:** PIET actively engages in large-scale tree plantation drives every year, both within and outside its campus. These campaigns reflect the institute's dedication to enhancing green cover and combating the adverse effects of climate change. Despite being a relatively small institution on the global stage, PIET recognizes the critical importance of local efforts in addressing global environmental challenges. The plantation drives contribute significantly to carbon sequestration by absorbing atmospheric carbon dioxide, thus playing a vital role in mitigating climate change. Moreover, the increased green cover improves air quality by reducing air pollutants and releasing oxygen. The trees also provide shade, reduce the urban heat island effect, and support local biodiversity, creating a more sustainable and ecologically balanced environment.



**Chief guest and NSS volunteers planting trees during the tree plantation drive at the PIET campus**



**04 आज समाज**  
पानीपत, रविवार, 13 जुलाई 2024

**पाइंट में एनएसएस टीम ने " एक पेड़ मां के नाम" के तहत लगाए पौधे**

**आज समाज नेटवर्क**  
पानीपत। प्रधानमंत्री नरेंद्र मोदी द्वारा शुरू की गई स्वच्छता अभियान के अंतर्गत में समाजवादी विचार धारा के अंतर्गत एनएसएस टीम ने पौधे लगाए।  
पाइंट की एनएसएस टीम ने एक पेड़ मां के नाम अभियान में भाग लेते

कॉलेज में सैब-टो-सैब टोपे। छात्र-छात्राओं को भी पौधे लगे। अभियान का शुभारंभ कॉलेज के प्रिंसिपल अशोक कुमार ने किया। इसी अवसर पर विद्यार्थियों के साथ-साथ पाइंट में एनएसएस टीम के सदस्यों ने भी भाग लिया।  
पाइंट के वाइस चैंसलर प्रोफेसर जयपाल, प्रिंसिपल अशोक कुमार, एनएसएस टीम के सदस्यों ने पौधे लगाए। कार्यक्रम के अंतर्गत एनएसएस टीम ने एक पेड़ मां के नाम अभियान में भाग लेते

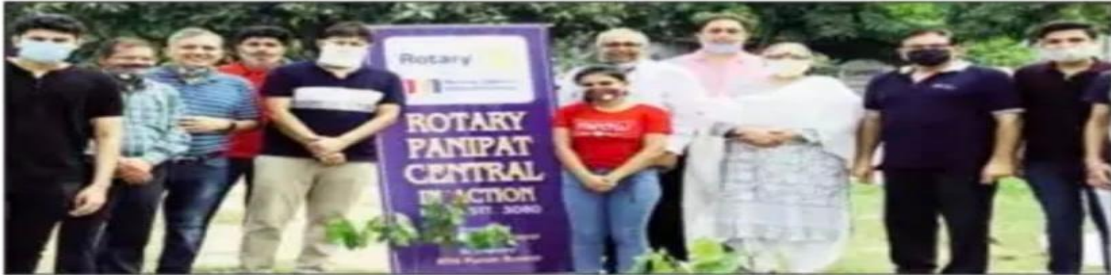
विभाग अध्यक्ष डॉ. राहुल अरोड़ा, डी.सी.ओ. विभाग अध्यक्ष डॉ. सुदर्शन शर्मा, एनएसएस अभियंता गीतम अरोड़ा, प्रिंसिपल अशोक कुमार ने कार्यक्रम के शुभारंभ में भाग लिया। कार्यक्रम के अंतर्गत एनएसएस टीम ने एक पेड़ मां के नाम अभियान में भाग लेते

**Chief guests, faculty members, and students planting trees during the tree plantation drive and news cutting of the events**



Shri Rakesh Tayal, Member B.O.G PIET and NSS Volunteers during Tree plantation

## दशहरा ग्राउंड में 1001 पौधे और फलदार वृक्ष लगाकर एक मिनी फारेस्ट बनाया



पानीपत रोटरी सेंट्रल के सदस्य पौधारोपण करते हुए।

**समालखा/अशोक शर्मा**  
पानीपत रोटरी सेंट्रल, रोट्रेक्ट क्लब पाईट और एनएसएस समालखा पाईट के संयुक्त प्रयास से जिमखाना क्लब के सामने दशहरा ग्राउंड में 1001 पौधे और फलदार वृक्ष लगाकर एक मिनी फारेस्ट बनाया गया। इस कार्यक्रम के मुख्य अतिथि डिस्ट्रिक्ट गवर्नर 3080 रमेश बजाज और फर्स्ट लेडी रेखा बजाज रहे। अति विशिष्ट अतिथि सेक्रेटरी अतुल चोपड़ा, विवेक गर्ग, नीरज शर्मा,

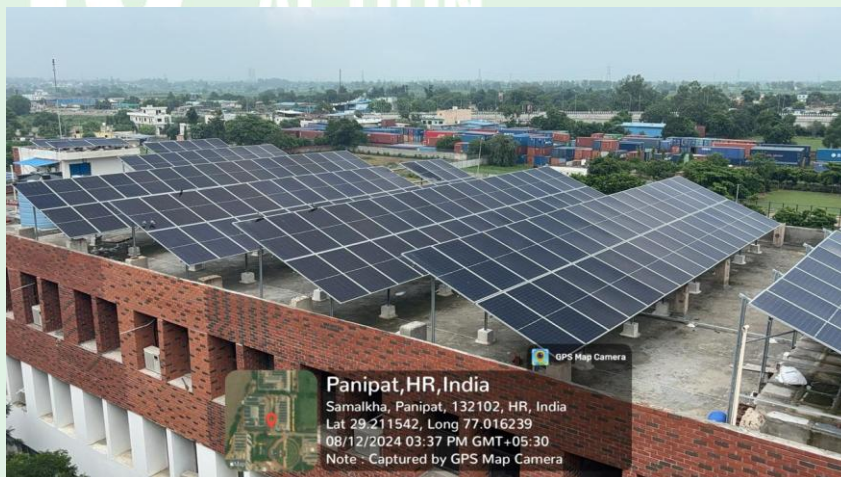
प्रोजेक्ट चेयरमैन, सुरेश काबरा, मुख्य संयोजक, सर्व संगठन सेवा संस्थान, राकेश तायल, प्रेजिडेंट, रोटरी पानीपत सेंट्रल, पूर्ण रावल, सेक्रेटरी रहे। पाईट कालेज समालखा के प्रबन्धक राकेश तायल ने बताया 200 पौधे लगाकर हमने अंसल से शुरुआत की थी और आज हमने 1001 औषधियों और फलों के पौधे और वृक्ष लगाए हैं। अगले रविवार हमारा 2000 और एक साल में 1 लाख पेड़ पौधे लगाने का संकल्प है।

Tree plantation drive activity News cutting

PIET's tree plantation initiatives extend beyond the campus boundaries, involving students, faculty, and community members in creating a greener and healthier landscape. These efforts not only foster environmental stewardship but also raise awareness about the importance of reforestation in climate mitigation. Through its sustained commitment to tree plantation drives, PIET exemplifies how even small institutions can make a meaningful contribution to global climate action.

## 2. Renewable Energy Integration

PIET has achieved a remarkable milestone in renewable energy adoption by generating 21% of its electricity requirements from solar power. This is made possible through the extensive installation of solar panels on all building rooftops across the campus. By utilizing this renewable energy source, PIET significantly reduces its dependence on grid electricity and fossil fuels, thereby contributing to a substantial decrease in greenhouse gas emissions and air pollution. The rooftop solar installations not only maximize the use of available space but also ensure that the campus operates efficiently with a cleaner energy mix. Furthermore, it serves as a practical example for students and staff, inspiring them to explore and adopt similar eco-friendly practices in their personal and professional lives. Through this strategic deployment of solar energy, PIET reinforces its commitment to fostering a greener, more sustainable future.



**An array of solar panels installed on the rooftop of a B-Block building in PIET**



**An array of solar panels installed on the rooftop of a G-Block building in PIET**



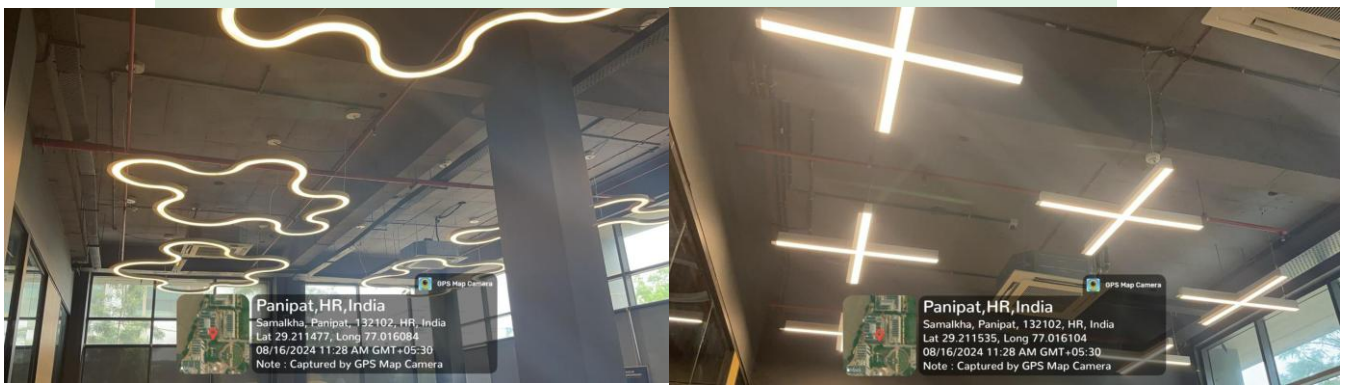
**An array of solar panels installed on the rooftop of an E-Block building in PIET**



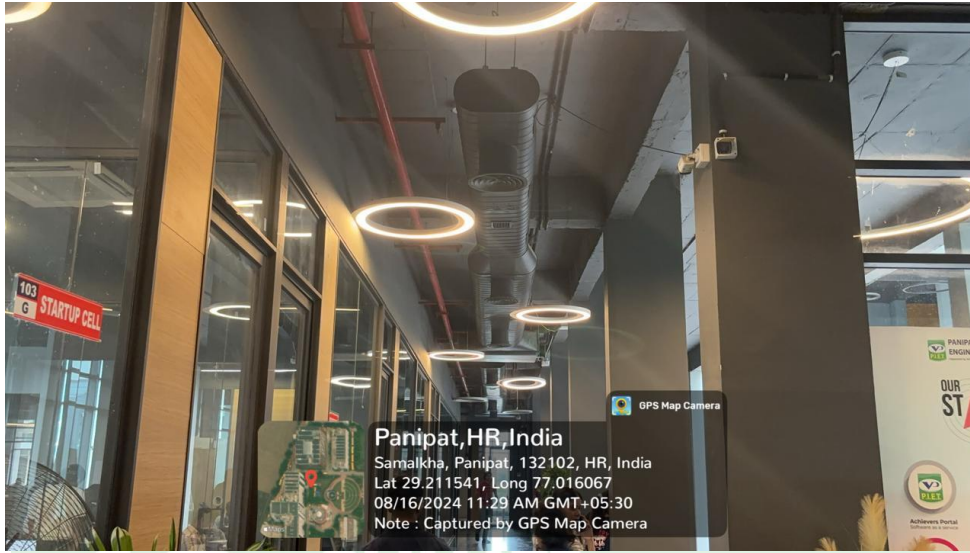
**An array of solar panels installed on the rooftop of a D-Block building in PIET**

### **3. Energy Efficiency Measures**

PIET has made substantial strides in enhancing energy efficiency by transitioning to energy-saving lighting systems across its campus. Approximately 80% of the lights installed on campus are energy-efficient LED lights, reflecting the institute's commitment to reducing electricity consumption and promoting sustainable practices. LED lights consume significantly less energy compared to traditional incandescent or fluorescent bulbs, making them an optimal choice for large-scale adoption. This shift has resulted in a notable decrease in the campus's overall power consumption, contributing to lower operational costs and a reduced carbon footprint.



**Energy-efficient LED lights in**



### Energy-efficient LED lights in Cyber Securities lab, G-Block, AR-VR lab and corridor of G-Block

The widespread use of LED lights ensures that energy is utilized efficiently in classrooms, laboratories, administrative offices, and outdoor spaces. These lights not only provide high-quality illumination but also have a longer lifespan, which reduces maintenance costs and the frequency of replacements. By prioritizing energy-saving measures like LED lighting, PIET demonstrates its dedication to sustainable resource management and environmentally conscious infrastructure. As a result of its commitment to energy conservation, PIET has been recognized with multiple awards, including the Platinum & Gold Appreciation Certificates and the Gold Climate Clock from the Energy Swaraj Foundation in April 2023 and July 2024, in acknowledgment of its achievements in energy literacy and conservation practices.



### Awards Received for Energy Literacy from Energy Swaraj Foundation (An Initiative from Prof. C. S. Solanki (IIT, Bombay))



# Certificate



This is to certify that **PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY** is now a **Recognized Swachhta Action Plan Institution**. The Institution has successfully formed the Swachhta Action Plan Committee and constituted the working groups Post COVID-19 for **Sanitation & Hygiene, Waste Management, Water Management, Energy Management** and **Greenery** along with the observation of two environment related days to inculcate in faculty, students and community, the practices of Swachhta and Reduction, Reuse and Recycling of Resources.

*Dr. W G Prasanna Kumar*  
Dr. W G Prasanna Kumar  
Chairman

Mahatma Gandhi National Council of Rural Education  
Department of Higher Education, Ministry of Human Resource Development  
Government of India

Cert:SAP/MGNCRE/MHRD.0022/1508

## Certificate by MHRD as a Recognised Swachhta Action Plan Institute

### 4. Waste and Water Management

PIET has implemented robust systems for managing water and waste, emphasizing sustainability and environmental responsibility. The institute has established 20 rainwater harvesting pits across its campus, designed to efficiently collect rainwater from rooftops, roads, and garden areas. This collected water is transmitted into the groundwater through deep boreholes within these pits, significantly contributing to groundwater recharge. It not only conserves water resources but also addresses the critical need to maintain and replenish groundwater levels in the region.



Few Rainwaters underground harvesting pits in PIET



In addition to rainwater harvesting, PIET follows a comprehensive green policy to ensure the safe management of wastewater. The institute does not discharge its wastewater inland, on land, or into streams. Instead, all wastewater is treated in an on-campus sewage treatment plant with a capacity of 35,000 liters per day. The treated water is recycled and repurposed for gardening, which provides multiple benefits. This practice significantly reduces water pollution while ensuring a steady and sustainable water supply for the extensive gardens and green areas on campus. Moreover, the treated water retains essential nutrients, offering natural and cost-free nourishment for plants, enhancing soil quality, and reducing the need for chemical fertilizers.



**Sewage treatment plant of capacity 36000 litres per day**



**Side view of sewage treatment plant**



**Wastewater Recycled Pump used to recycle the wastewater for the entire campus**

## **5. Awareness Programs and Collaborations**

PIET has demonstrated a strong commitment to environmental conservation and sustainability through a variety of workshops, campaigns, and activities aimed at raising awareness among students, staff, and the surrounding community. The institute organizes regular sessions on critical issues such as climate change, sustainability, and environmental conservation, empowering participants to adopt eco-friendly practices. Over the years, PIET has conducted multiple initiatives, including the Swachhta Hi Sewa (SHS) Rally (2023-24), pollution awareness programs, and save water campaigns, emphasizing the importance of water conservation and pollution control. The institute has also undertaken large-scale activities such as the Clean India Campaign 2.0 MEGA Swachhata Drive (2022-23) in the village of Pattikalyana, tree plantation drives under the "Developing Mini Forest" initiative (2020-21), and Swachhta Pakwara campaigns focused on reducing single-use plastics and promoting cleanliness. Creative programs like poster-making competitions and "Best out of Waste" activities have further engaged students in sustainability efforts. Additionally, the NSS 7-Day Special Camp (2019-20) emphasized cleanliness, environmental responsibility, and anti-drug abuse awareness under the "Nasha Mukta Bharat" initiative. These sustained efforts highlight PIET's dedication to fostering an environmentally conscious community while contributing to global climate action and the United Nations' Sustainable Development Goals (SDGs).

**Table 1: Awareness Activities by PIET**

<b>Name of the activity</b>	<b>Year of the activity</b>
Swachhta Hi Sewa (SHS) Rally	2023-24
Pollution Awareness Program	2023-24
Save Water Campaign	2023-24
Pollution Awareness Program	2022-23
Clean India Campaign 2.0 MEGA Swachhata Drive at village pattikalyana	2022-23
Save Water Campaign	2022-23
Pollution Awareness Program	2021-22
Save Water Campaign	2021-22
Tree Plantation under the "Developing Mini Forest "	2020-21
Awareness on Importance of Cleanliness and Collection of Single Used Plastic under Swachhta Pakwara	2020-21
Awareness on Plastic Pollution and Cloths Bag Distribution under Swachhta Pakwara	2019-20
Awareness program on Single use Plastic Pollution and cloths bags distribution drive	2019-20
Awareness program on Say not to Plastic	2019-20
Poster making Competition on Swachh Bharat	2020-21
Awareness program on Best out of Waste	2019-20
Awareness against drug abuse, Cleanliness drive, Nasha mukt bharat under NSS 7-Day Special Camp	2019-20

The above-mentioned activities were completed with the help of various organizations working in the field of climate change, including the NSS Units, Gram Panchayats of Pattikalyana, Dehra, and Chulkana, Red Cross Society, National Social Organisation, Youth Red Cross PIET, and Unnat Bharat Abhiyan, among others. These collaborations have played a crucial role in supporting PIET's initiatives aimed at environmental sustainability and climate action. By conducting large-scale community initiatives like tree plantation drives, the Clean India Campaign, and pollution awareness programs, PIET is contributing to mitigating climate change impacts. These efforts help foster a climate-conscious community, empower individuals to adopt eco-friendly practices, and encourage collective action toward reducing carbon emissions, enhancing resilience to climate impacts, and preserving natural resources for future generations.

The institute has implemented sustainable practices, including the establishment of a herbal garden housing medicinal plants like Tulsi and Neem, promoting biodiversity and reducing carbon footprints. Large-scale tree plantation drives and renewable energy adoption, with 21% of electricity generated through solar panels, demonstrate PIET's dedication to reducing greenhouse gas emissions. Energy efficiency measures, such as the widespread use of LED lighting, further highlight its commitment to sustainability. Water management systems, including rainwater harvesting and a 35,000-liter sewage treatment plant, emphasize resource conservation and pollution reduction. Additionally, PIET raises environmental awareness through campaigns, workshops, and community collaborations, fostering climate consciousness and collective action. These efforts showcase how PIET integrates education, sustainability, and innovation to address global environmental challenges and inspire a greener, more resilient future.