Centre for Environment and Life Care

Nurturing Lifes. Sustaining Futures

CENTRE FOR ENVIRONMENT AND LIFE CARE

GREEN AUDIT REPORT

2023 - 2024

Executive Summary

The Institute for Education's initiative to conduct a Green Audit of its campus is a commendable step toward sustainable development. The strategies involved included the preparation of questionnaires and subsequent action plans to implement the project.
The Green Audit aligns with Criteria 7 of the National Assessment and Accreditation Council (NAAC), an autonomous organization in India that grades institutions as Grade A, Grade B, or Grade C based on their accreditation scores.

The Green Audit aimed to analyze the environmental practices within the campus, which affect the university's eco-friendly ambiance. The primary goal of the Green Audit is to secure best practices for environmental sustainability, thereby reducing potential health hazards and threats to students. The audit helps ensure compliance with various environmental management norms and standards and identifies protocols to develop a sustainable ecosystem on campus.

Questionnaires for the Green Audit were prepared based on guidelines, rules, acts, and formats set by the Government of India, the Ministry of Environment and Forest, New Delhi, and the Central Pollution Control Board, New Delhi. These questionnaires covered aspects such as solid waste, energy, water, hazardous waste, and e-waste. For the audit, suitable data analysis required the study area to be grouped into various Blocks and Departments. The audit examined areas including solid waste, electricity and energy, water and wastewater, illumination, noise levels, and green inventory. It also highlighted the green initiatives undertaken by the university to conserve environmental resources.

CERTIFICATE

PRESENTED TO

INSTITUTE FOR EDUCATION

ASSESSED BY CENTRE FOR ENVIRONMENT AND LIFECARE FOR THE COMPREHENSIVE STUDY OF ENVIRONMENTAL IMPACTS ON INSTITUTIONAL WORKING TO FULFIL THE REQUIREMENT OF

GREEN AUDIT

THE GREEN INITIATIVE CARRIED OUT BY THE INSTITUTION HAVE BEEN VERIFIED ON THE REPORT SUBMITTED AND WAS FOUND TO BE SATISFACTORY,

THE EFFORTS TAKEN BY THE MANAGEMENT AND THE FACULTY TOWARDS ENVIRONMENT AND SUSTAINABILITY ARE APPRECIATED AND NOTEWORTHY

SIGNATURE

02/06/2024 - 16/06/2024
DATE OF AUDIT

INTERNATIONAL IAF ACCREDITATION FORUM

mms

EGAC Accredited CAB # 011805

Centre for Environment and Life Care
Nurturing Lifes, Sustaining Futures

1.0 Introduction

1.1 Need for Green Audit

A Green Audit is a systematic process involving the identification, quantification, recording, reporting, and analysis of components of environmental diversity. It aims to evaluate environmental practices both within and outside the concerned sites, impacting the eco-friendly ambiance. The steps involved in a Green Audit include water audit, waste disposal audit, energy audit, and environmental quality audit, which covers illumination and noise levels on campus. By analyzing the audit reports, universities can recognize cost-effective waste management methods, promote an enhanced learning ecosystem, and strive for top accreditation grades. Additionally, it bolsters the university's credibility and branding.

1.2 Objectives of the Audit

The main objective of the Green Audit is to assess current sustainability practices concerning natural resource use, energy utilization, waste generation, and management in an environmentally friendly manner. The audit focuses on establishing a baseline of existing environmental conditions, emphasizing the natural and physical environment. It aims to raise awareness among students and staff about environmental issues and sustainability, document baseline data of good practices, and provide strategies and action plans for improving future environmental quality.

1.3 Green Audit Process

1. Understand the scope of the audit.
2. Analyze the strengths and weaknesses of the internal environment.
3. Conduct the audit.
4. Evaluate the observations of the audit program.
5. Prepare a report documenting the observations.

1.4 Benefits of Green Audit

- Cost Savings: Identifies cost-saving methods through waste minimization and management strategies.
- Problem Identification: Highlights existing and potential environmental issues.
- Enhanced Environmental Performance: Enables organizations to improve their environmental performance.
- Increased Awareness: Raises awareness of environmental guidelines and responsibilities.

1.5 Methodology of Green Audit

- Formation of the core team for the Green Audit and conducting a kick-off meeting and discussions.
- Primary data collection of energy, water, and solar plant details, as well as monitoring environmental parameters such as noise levels and illumination.
- Analysis and representation of the collected data.

1.6 Audit Participants

On behalf of INTITUTE FOR EDUCATION :

Sl No	Name	Position	Qualifications/Experience
1	Dr Om Prakash	College Coordinator	PHD (Education)
3	Sharboni Mukherjee	Assistant Professor	M.ed
3	Nisha Rani Burh	Assistant Professor	M.ed

On behalf of Center for Environment and Life Care:

Sl No	Name	Position	Qualifications/Experience
1	Ajit Kumar Singh	Lead Auditor	M.Sc., PGDEPCT, PGDEMS, Lead Auditor ISO 14001: 2015, 20 years' experience in EMS & Compliance.
3	Shubhro Praksh das	Co-Auditor	Bachelor in political science, MSW
3	Dipak Soni	Co-Auditor	Post graduate in Environment Management; Project Manager. Working in social and environment sector last 5 years.

1.7 Onsite Visit

The Green Audit was conducted with the help of co-associates, involving various student groups, teaching, and non-teaching staff. The audit began with a kick-off meeting with the core team, followed by teams walking through all the facilities . They determined the various utility patterns, waste management practices, and environmental parameters. Staff and students were interviewed to gather details

on usage, frequency, and general characteristics of environmental parameters. Data collection covered sectors such as energy, waste, green areas, and water use. College records and documents were verified multiple times to ensure the accuracy of data obtained through surveys and discussions.

1.8 Focus Group Discussion

Pre-audit discussions focused on the scope and objectives of the audit, considering the green initiatives already taken and the current scenario of the college campus. This meeting was a crucial step for the Green Audit as it was the first opportunity to understand concerns and gather information for the audit team to review before the onsite visit. The audit protocol and plan were distributed and discussed during this meeting. The necessary documents were collected from the college prior to the start of the audit processes. During this meeting, the audit team was selected with the help of staff and college management. The pre-audit meeting ensured successful planning and coordination of the audit processes.

1.9 Management Commitment

The management of the college has demonstrated a strong commitment to green auditing during the pre-audit meeting. They are prepared to encourage and support all green activities. Following the green audit, the management plans to promote various environmentally friendly initiatives, such as awareness programs on environmental issues, campus farming, and planting more trees on the campus. They are also willing to formulate policies based on the green audit report to ensure ongoing environmental sustainability.

2.0 About INSTITUTE FOR EDUCATION

The importance of Values and Morals is sky-high when it comes to talking about the Institute for Education. We, at IFE give a lot of prominence to virtues like honesty, diligence, courtesy, punctuality and respect towards women. Moral is the life-line of the body called Character. Someone has rightly said, “If you lose money, you lose nothing. If you lose health, you lose half. And, if you lose character, you lose everything.” Through moral values, we at IFE impart quality education and try to develop an individual to become an unbiased leader who values courage and truth.

2.1 Focus

We as an Institution focus on our students who provide us a reason for our existence. All our efforts are directed towards inculcating a constant yearning for learning.

2.2 Vision & Mission

2.2.1 Vision

The Vision of Institute for Education is to build a strong foundation in the realm of education and social upliftment where the stakeholders of IFE and the students from all walks of life rise from the darkness of ignorance to reach till the zenith of enlightenment. "तमसो मां ज्योतिर्गमय" , the motto of the organization envisions the holistic development of the society by and large.

Mission

Institute for Education, a progeny of the Educational and Social Development Trust, aims to achieve perfection and excellence in education and learning through practice and training. It has also modelled its team which works diligently to empower the seekers of extraordinary education. This empowerment builds a society that has youth with erudition.
The mission in objective terms is:

- Affordable education to everyone
- Learning made practicable and suitable to meet industry standards
- Nurturing respect in anyone and everyone who joins
- Development of Soft-skills and Technical-skills through rigorous practice
- Making leaders who are fit to lead teams, organizations, parties and the state

2.2 Geographical Location

PXVJ+3GG, Bijay,
Saraikela Sini,
PS : Saraikela Anchal,
Saraikela-Kharsawan,
Jharkhand, India

2.2.1 Buildings/Blocks

Block A

- Administration
- B.ed
- D.El.ed

Block B

- Proposed BCA and BBA

2.2.2 Facilities Available in the College

The college provides a comprehensive infrastructure that includes a spacious playground, modern auditorium, and dedicated common rooms for both boys and girls. Facilities like a well-stocked library, specialized language room, and visitor's room enhance the academic environment. The college also offers smart classrooms, IT infrastructure, sports and recreation areas, and medical facilities. Faculty enjoy a comfortable staff room, while students have access to a social science room, fully-equipped computer lab, canteen, finance and GIS resources. This infrastructure supports both academic and extracurricular activities, fostering a well-rounded educational experience.

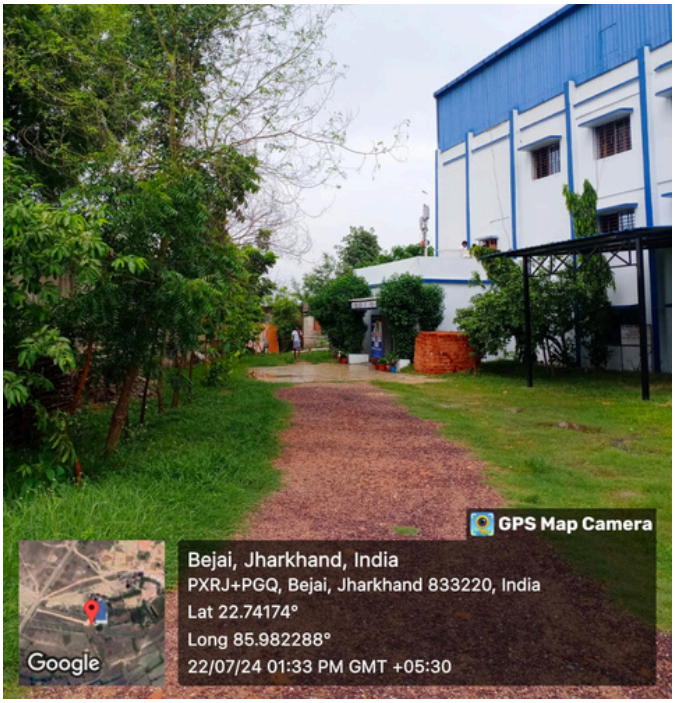
COURSES

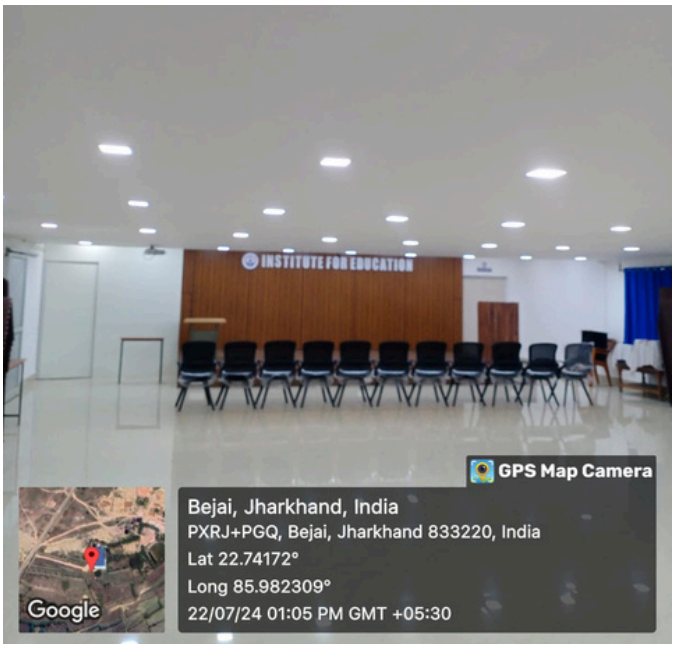
The college offers a diverse range of courses to cater to different academic interests and career aspirations.

These include :

- Bachelor of Education (B.Ed.),
- Diploma in Elementary Education (D.El.Ed.),
- Bachelor of Business Administration (BBA), and
- Bachelor of Computer Applications (BCA).

These programs are designed to provide students with a strong foundation in their chosen fields, combining theoretical knowledge with practical experience to prepare them for future professional challenges.





INSTITUTE FOR EDUCATION DUGNI

3.0 Green Audit

3.1 Questionnaires

Sl No	Audit Questions	Answers/Remarks
1.1	**General information**	
1	Does any Green Audit conduct earlier?	YES
2	What is the total strength (people count) of the Institute?	200
3	What is the total number of working days of your campus in a year?	210
4	Where is the campus located?	DUGNI
5	Municipal waste, Sewer line, waste water managed by?	Municipal waste in the college are effectively managed through a systematic approach. Waste is segregated at the source and then sent for recycling and composting. Sanitary waste is disposed of responsibly through incineration. No Sewer line, as it is under Gram Panchayat.

Sl No	Audit Questions	Answers/Remarks
1.2	**WASTE MINIMIZATION AND RECYCLING**	
1	Does your institute generate any waste? If so, what are they?	Solid waste.
2	What is the approximate amount of waste generated per day? (in KG approx.)	15 kgs
3	How is the waste generated in the institute managed? By Composting, Recycling, Reusing, Others (specify)	• Single use plastic is banned on the campus. • Composting is done for horticulture waste management. • Solid waste (Both dry and wet) is managed by segregation in recycle. • Paper waste is sent to scrap vendor periodically. • signed MOU with Koru Foundation for Recyclables AND E-WASTE.
4	Do you use recycled paper in institute?	YES INSTITUTE FOR EDUCATION COLLABORATES WITH THIRD PARTY RECYCLE VENDOR.
5	How would you spread the message of recycling to others in the community?	• Seminars and webinars for students and faculty. • Nukkar-Natak by Students to increasing awareness. • Various campaigns for awareness are organised by NSS team.

Sl No	Audit Questions	Answers/Remarks
1.3	**GREENING THE CAMPUS**	
1	Is there a garden in your institute?	Yes
2	Total number of Plants in Campus?	~ 200 , Full Grown Trees, Small Trees, Hedge Plants.
3	How many Tree Plantation Drives organized by campus per annum?	Yes. 5+ plantation drives in last years.
4	Is there any Plant Distribution Program for Students and Community?	Yes

Sl No	Audit Questions	Answers/Remarks
1.4	**WATER AND WASTEWATER MANAGEMENT**	
1	Sources of water	Ground water.
2	Water usage details.	Drinking, Gardening, Kitchen & Toilets.
3	How does your institute store water? Are there any water saving techniques followed in your institute?	Sump tank and Overhead Water tanks.

3.2 Data analysis and final report preparation

Proper analysis and presentation of data produced from work are vital elements. In the case of a green audit, the filled questionnaires from each group's survey were tabulated according to their modules in Excel spreadsheets. This tabulated data was then used for further analysis. To enhance understanding and avoid complications, averages and percentages were calculated. Graphical representations of these results were created to provide a quick overview of the status. The overall outcomes were interpreted by incorporating all primary and secondary data, references, and interrelations. This interpretation was used to prepare the final report.

The study covered the following areas to summarize the current status of environmental management on the campus:

As part of the green audit, the Green Audit Assessment Team conducted environmental monitoring of the campus, including illumination and noise levels in the classrooms. It was observed that the illumination and ventilation are adequate, considering natural light and air velocity. Additionally, noise levels on the campus are well below the permissible limits.

3.2.1 Air Quality:

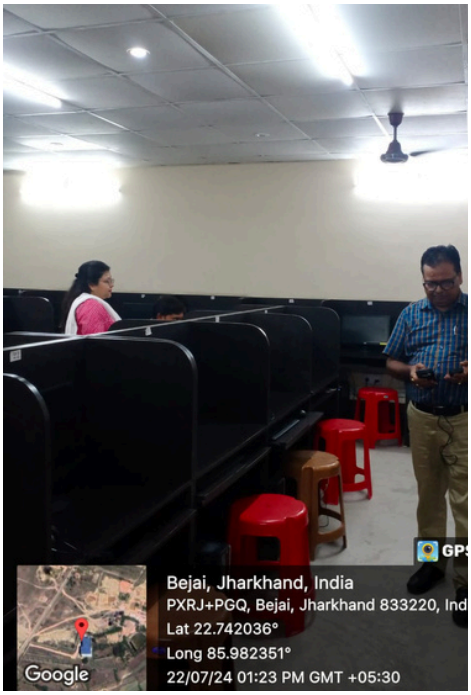
The air quality is monitored by the local authorities of the township. The campus is located in the heart of Jamshedpur. The air quality index (AQI) forecast for Jamshedpur is as follows:

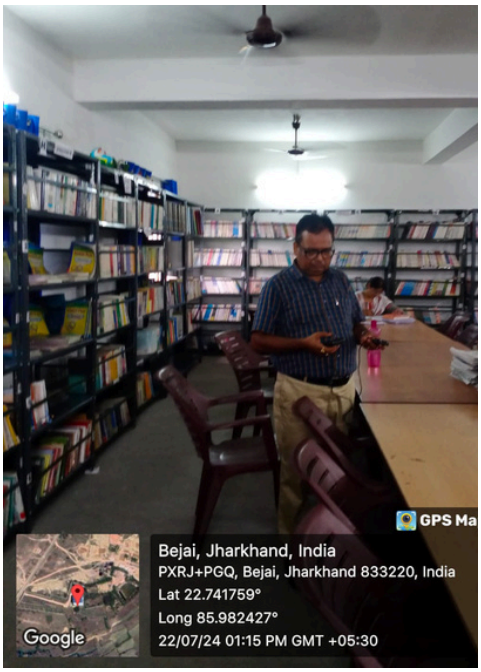
Pollution level	**Wind**
Moderate 90 AQI	**13.5 km/h**

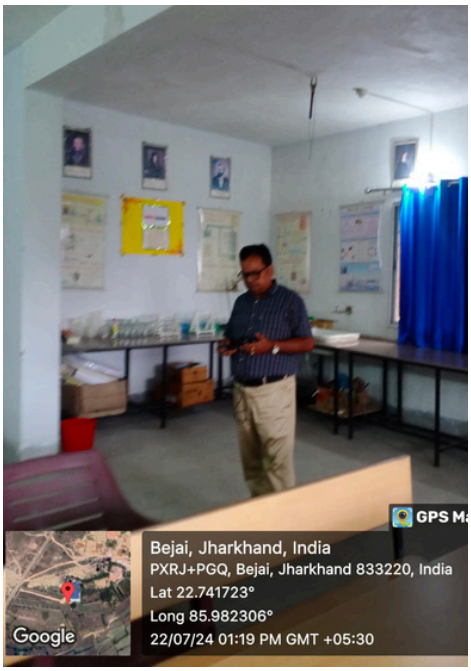
3.2.2 Illumination level

To improve the educational environment, classrooms need good lighting. Good lighting makes students feel safe and enhances learning. Additionally, it strengthens the school's brand value. Many studies have shown a close relationship between lighting and student performance.

A light level of 250 lux is sufficient in classrooms where students spend most of their time and focus on learning. To draw attention to the area where the teacher is located and to enhance students' concentration, a light level of **750 lux** can be used in that area. An illumination study was conducted in different classrooms, with values ranging from **350 to 600 lux.**







3.2.3 Noise Level

The human ear is constantly bombarded by man-made sounds from all directions, and there are few places in populated areas where relative quiet prevails. Sound has two basic properties: loudness and frequency.

Loudness is the strength of the sensation of sound perceived by an individual. It is measured in decibels (dB). For example, a whisper is about 20 dB, a library is around 30 dB, normal conversation ranges from 35-60 dB, heavy street traffic is about 60-70 dB, boiler factories are around 120 dB, jet planes during takeoff reach about 150 dB, and a rocket engine is about 180 dB. The loudest sound a person can endure without much discomfort is around 80 dB. Sounds beyond 80 dB can be considered pollutants as they harm the hearing system. The World Health Organization (WHO) has set 45 dB as the safe noise level for a city, while international standards consider up to 65 dB tolerable. Loudness is also expressed in sones, with one sone equaling the loudness of a 40 dB sound pressure at 1000 Hz.

Frequency is defined as the number of vibrations per second and is denoted in **Hertz (Hz).**

A Lutron noise level meter was used to measure the noise levels at different locations on the university campus.

Sl No	Locations	Sound level (dB)
1	At court yard of college at Dugni	**64dB**
2	At Main Gate at Institute for Education	**66 dB**
3	Teachers common room at Institute for Education	**64 dB**
4	In office entrance area at Institute for Education	**68 dB**

NOISE LEVEL MONITORING AT INSTITUTE FOR EDUCATION

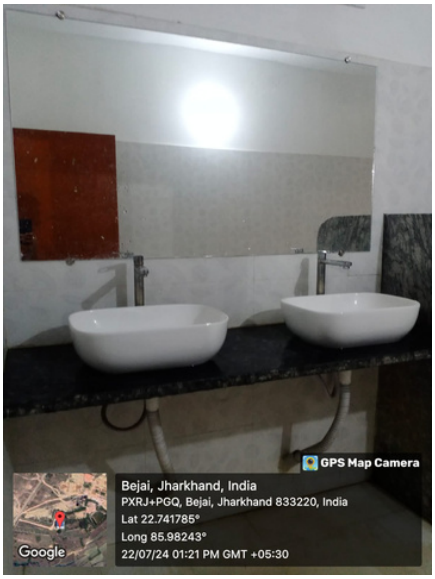
3.2.4 Water management

Water is one of the most crucial elements in our environment. At the university, water is primarily used for drinking, cleaning, gardening, food preparation, recreational purposes, laboratories, and bathrooms.

Water quality testing is vital because it identifies contaminants and prevents waterborne diseases. Drinking or using contaminated water can lead to severe illness or even death. Therefore, it is essential for INSTITUTE FOR EDUCATION to ensure that drinking water is safe, clean, and free from bacteria and disease. Water quality parameters are determined by the intended use, with a focus on water treated for human consumption or environmental purposes.

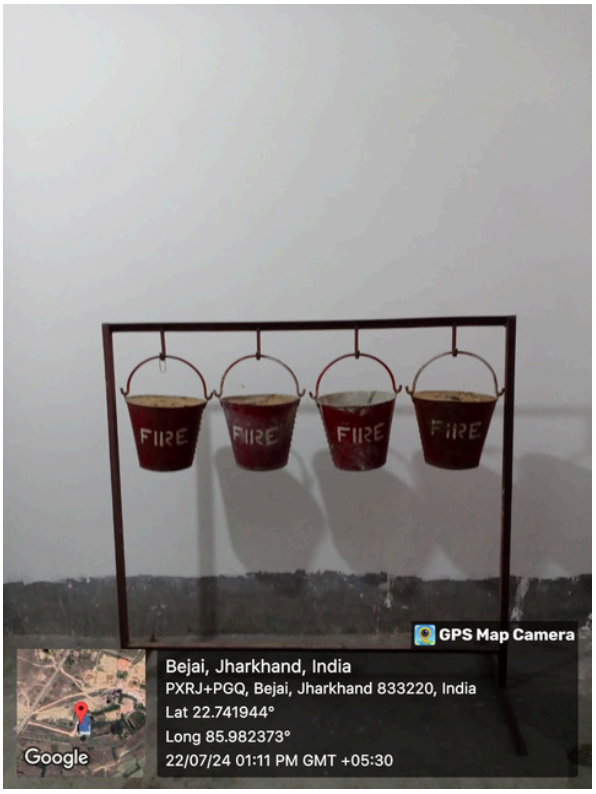
The INSTITUTE FOR EDUCATION uses ground water . The buildings are connected, and storage tanks are installed on top of the buildings. Approximately two tanks, each with a capacity of 1000 liters, are installed.

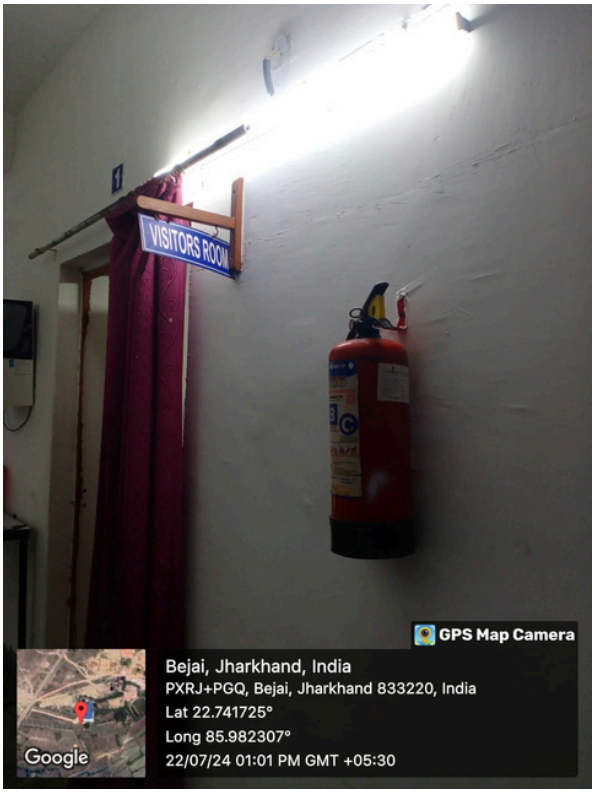
The college’s water quality is regularly analyzed by an RO technician using a TDS meter to ensure safety and standards. The daily water consumption on campus is approximately 2,000 liters, which is carefully monitored to maintain optimal usage and sustainability.

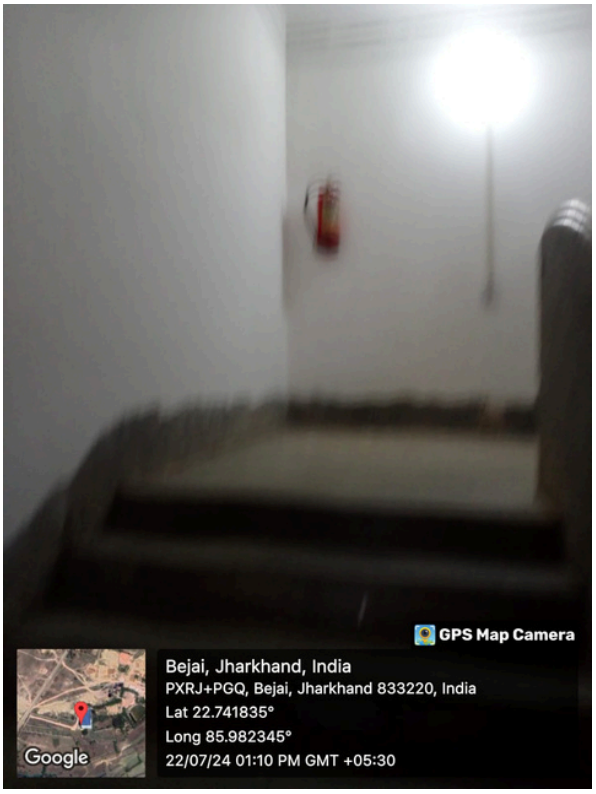


WATER STORAGE AT INSTITUTE FOR EDUCATION :

SUMP TANK, OVERHEAD TANKS, AND DRINKING WATER FACILITIES







FIRE HYDRANT INSTITUTE FOR EDUCATION

3.2.5 Drinking water

The water used for drinking purposes is clean and well-maintained. A total of three RO units are installed on the campus, ensuring safe drinking water is available on all floors of the university.

Water Quality Assessment

Water samples from INSTITUTE FOR EDUCATION were collected and analyzed for quality parameters. The major parameters analyzed include color, pH, total dissolved solids, and total suspended solids.

Microbial Analysis Worldwide

water-borne infections are a major contributor to illness and fatalities. Routine microbiological testing of drinking water sources, recreational waters, and environmental waters is essential for protecting public health.

WATER SOURCES AND RO WITH WATER COOLERS AT INSTITUTE FOR EDUCATION

3.2.6 Rain Water harvesting system

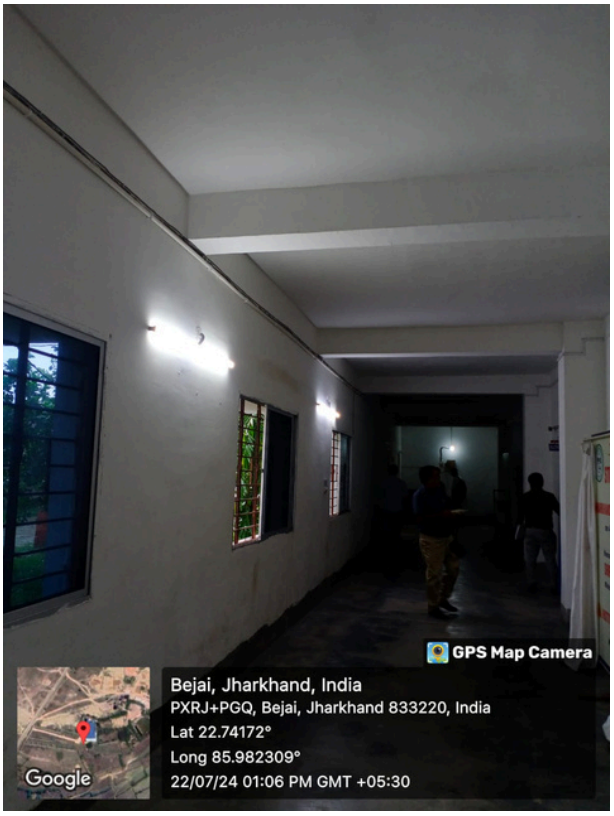
The campus features a rainwater harvesting system equipped with recharge pits located throughout the premises. These units effectively recharge the groundwater level by utilizing soaking pits spread across the campus. Rainwater collected from rooftops is directed into these recharge wells.

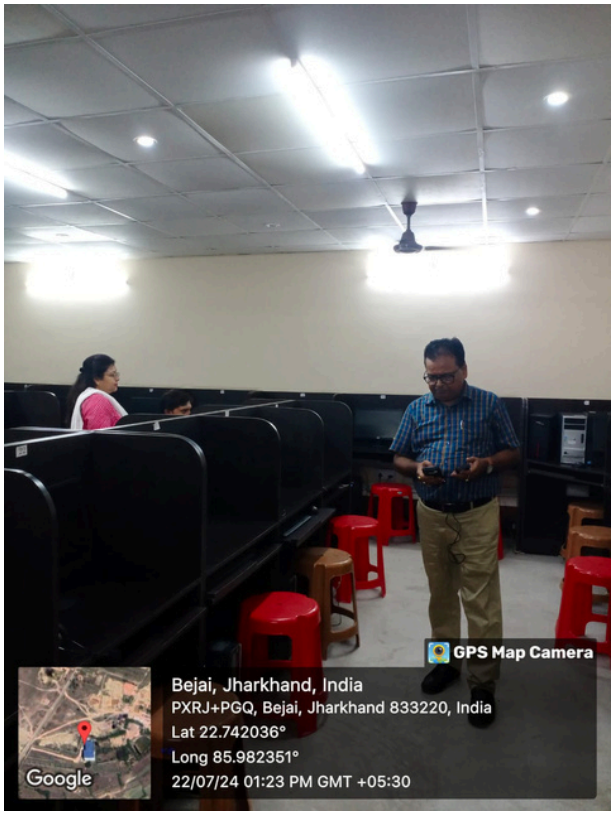
RAINWATER HARVESTING SYSTEM WITH DOWNPIPES AND WATER COLLECTION CIRCUITS AT INSTITUTE FOR EDUCATION

3.2.7 Energy Conservation

This indicator focuses on energy consumption at the Institute for Education, encompassing energy sources, monitoring systems, lighting solutions, appliances, and the efficient use of natural resources. Energy management is a crucial aspect of campus sustainability, significantly influencing the institution's environmental footprint. The Institute is dedicated to optimizing energy use, thereby reducing operational costs and contributing to global efforts against climate change.

To enhance energy efficiency, the Institute has implemented various strategies, including the widespread use of **LED tubes,** which significantly conserve energy compared to traditional lighting. Additionally, energy-saving appliances and sustainable lighting systems are utilized, and natural resources are integrated wherever possible. Regular monitoring of energy consumption is conducted to identify areas for improvement and ensure responsible resource use. Currently, the Institute's monthly average energy consumption is **1,708 kWh,** reflecting its ongoing commitment to balancing operational needs with sustainable energy practices across the campus

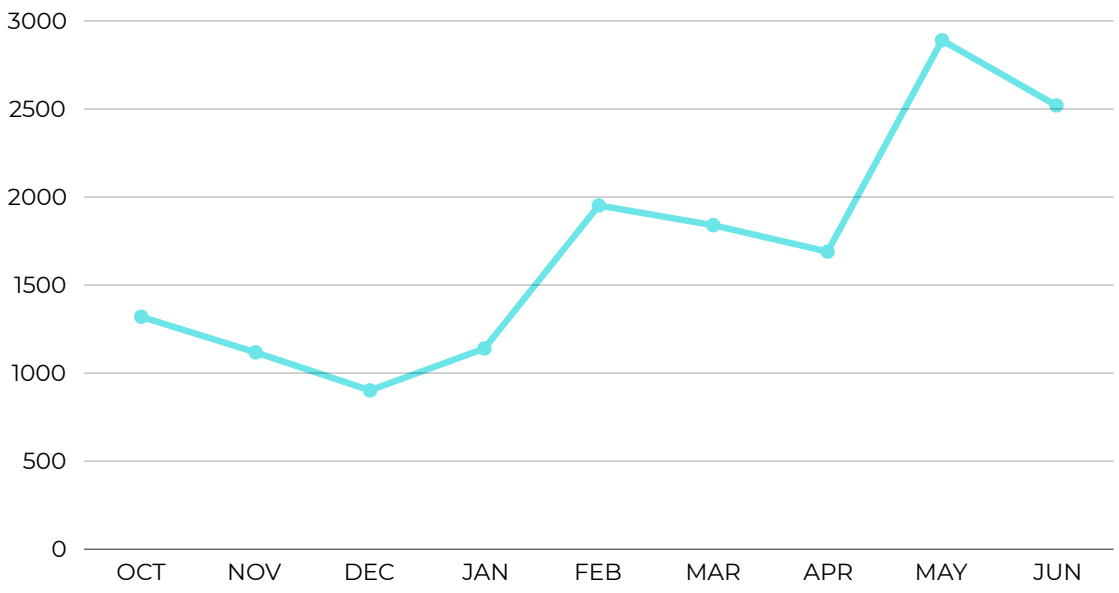




Electrical equipments at the college

Equipment	Number
FANS	58
LED TUBE LIGHTS	54
CFL	25
WATER COOLERS	2
COMPUTERS	57
SMART BOARDS	2
FRIDGE	1
AIR CONDITIONERS	2

Power Consumption at campus



3.2.9 Waste Management

Institute for Education recognizes that proper waste management is essential for a well-defined ecosystem and is a crucial aspect of campus development. The college is committed to the “Clean and Green Campus” mission, which encompasses the management of solid waste, liquid waste, biomedical waste, and e-waste. Collaborating with various NGOs, the college continually introduces new initiatives to sustain and energize this mission.

Key Initiatives:

- Waste Collection and Segregation:
  - Installation of Waste Bins: Multiple waste collection containers have been strategically placed around the campus. Students are encouraged to correctly identify and dispose of waste in these bins.
  - Training of Utility Staff: A team of trained utility workers is engaged on campus, proficient in waste segregation and management

- Recycle Station Collaboration

  - Partnership with KORU FOUNDATION: A “Recycle Station” has been established in collaboration with KORU FOUNDATION. The station promotes the concept “Waste is not waste until we waste it.”
  - Concept: The Recycle Station encourages the community to view waste as 'recyclables,' fostering resource conservation and environmental protection.

- Awareness and Education:

  - Waste Management Drives: Regular awareness drives are conducted to educate students on proper waste management.
  - Community Outreach: Nearby villages are educated on waste management basics and encouraged to adopt sustainable practices.

- 3R Strategy Implementation:

  - Reduce: Efforts to minimize waste generation.
  - Reuse: Promoting the reuse of items after proper segregation and cleaning.
  - Recycle: Segregated recyclable items are handed over to appropriate agencies.

Plastic Ban Initiatives:

- Campus Messaging: Clear messages about the plastic ban are displayed campus.

Composting Initiative:

- Composting Mesh at Campus: A composting mesh has been set up at the campus for organic and garden waste, converting it into useful compost for campus gardens.

3.2.10 Solid waste management:

Institute for Education is committed to effective waste management as part of its “Clean and Green Campus” mission. This mission includes the management of solid waste (biodegradable and non-biodegradable), liquid waste, biomedical waste, and e-waste. The college collaborates with various NGOs to sustain and enhance these initiatives.

Key Initiatives:

- Solid Waste Management:

- Biodegradable Waste:
  - Types: Includes vegetable peels, dry leaves, and food waste.
  - Usage: Segregated and used as bio-fertilizers for the campus gardens.
  - Composting: A composting pit measuring 2m x 2m x 2m converts these wastes into organic fertilizer.

- Non-Biodegradable Waste:
  - Types: Includes minimal use of polythene bags, plastic, glass, and metal wastes.
  - Reduction Measures: Polythene bags are minimized or avoided entirely to maintain a plastic-free campus.
  - Alternatives: The campus café has replaced disposable plastic cups and plates with steel plates and earthen cups.

Recycle Station:

- Location: Situated in front of the student canteen.
- Function: Glass and metal wastes are collected in well-marked bins and sold to recyclers.
- Awareness: Notifications and signs promoting the ban on single-use plastic are displayed at strategic locations.

Waste Segregation:

- Binning System:
  - Separate Bins: Provided for biodegradable and non-biodegradable waste at source.
  - Dedicated Bins: Specific bins for biodegradable, plastic, food waste, and non-biodegradable waste.

- Metal and Wooden Waste: Stored and sent to authorized scrap agents.

Garden and Lawn Waste:

- Tree Droppings and Lawn Management: Major sources of solid waste, handled through separate dustbins for biodegradable and plastic waste.

Awareness and Training:

- Ground Staff Meetings: Regular meetings with ground staff to discuss campus cleanliness and proper waste disposal practices

3.2.11 E-waste management

Overview:

Institute for Education is dedicated to the proper management of e-waste, which consists of electronic devices discarded after they have reached the end of their useful life. The e-waste generated on campus primarily includes outdated computer systems, keyboards, electronic kits, battery cells, calculators, CDs, and similar items.

Key Initiatives:

- Systematic Collection and Disposal:
    - E-Waste Types: Includes out-of-use electronic devices such as computer systems, keyboards, electronic kits, battery cells, calculators, CDs, etc.
    - Collection Process: E-waste is systematically collected on campus and prepared for appropriate disposal.
- Partnership for Disposal:
    - MoU with Koru Foundation: The college has signed a Memorandum of Understanding (MoU) with Koru Foundation to ensure smooth and proper disposal of e-waste.
    - Purpose: This partnership aligns with the E-Waste Management Rules, 2016, and ensures compliance with government regulations.

Impact and Benefits:

- Environmental Compliance: Ensures that e-waste is disposed of in an environmentally friendly manner, complying with legal requirements.
- Sustainable Practices: Reinforces the college's commitment to sustainable waste management practices.

3.2.12 Green area management

Overview:

Institute for Education feature diverse tree species that provide numerous environmental benefits. These trees, planted through various university programs, have become integral to the institution.

Key Contributions:

- Environmental Benefits:
  - Oxygen Production and Air Quality: Trees supply oxygen and improve air quality.
  - Climate Regulation: They moderate the effects of sun, rain, and wind, and help conserve water and soil.
  - Wildlife Support: Trees provide food and shelter for various bird species and other wildlife.

- Biodiversity and Aesthetics:
  - Species Variety: A wide range of tree species enhances biodiversity.
  - Seasonal Beauty: Trees display changing shapes, forms, textures, and colors throughout the year.

- Quality of Life:
  - Enhanced Environment: Trees improve the quality of life for the college community and nearby residents by cooling the campus and providing aesthetic and health benefits.

Recommendations:

- Ongoing Plantations: Continue tree planting programs.
- Biodiversity Monitoring: Regularly monitor tree health and diversity.
- Community Involvement: Engage the local community in conservation activities.

Table: List of tree species at all campuses -

S.N.	COMMON NAME	BOTANICAL NAME	USES	NUMBER
1	Sagwan	*Tectona grandis*	used for treating gastrointestinal disorders such as dysentery, stomach ache, piles and constipation	126
2	Mahogany	*Swietenia mahagoni*	Anti-inflammatory, Antimicrobial, Anti-diabetic, Anti-HIV, Anti-ulcer, Anticonvulsant, Hepatoprotective, Anticancer, Antiseptic, and Insect repellent	72
3	Kusum	*Schleichera*	Used as an astringent to treat skin inflammations, ulcers, itching, acne, and other skin infections. analgesic and antibiotic against dysentery.	4
4	Mango	*Mangifera indica*	Anti-bacterial, anti-fungal	10
5	Lal Chandan	*Pterocarpus Santalinus*	antipyretic, anti-inflammatory, anthelmintic	9
6	Chandan	*Santalum album*	Anti-fungal, anti-bacterial	3
7	Neem	*Azadirachta indica*	anti-inflammatory	3
8	Amla	*Phyllanthus emblica*	Anti-inflammatory, Anti-diabetic Anti-hyperlipidaemic	9
9	Guava	*Psidium guajava*	antioxidant, antimicrobial, anti-inflammatory, antispasmodic	1
10	Kadamb	*Neolamarckia cadamba*	Analgesic and anti-inflammatory Antifungal, anti-filarial, and antimalarial Antibacterial Diarrheal	6
11	Kathal	*Artocarpus heterophyllus*	antioxidant, anti-inflammatory, antibacterial	2
12	Imli	*Tamarindus indica*	Anti-inflammatory, antidiabetic, antimicrobial, anti-venomic, antioxidant, antimalarial, cardioprotective, hepatoprotective, antiasthmatic, laxative, and anti-hyperlipidemic	2
13	Karanj	*Millettia pinnata*	antioxidant, antimicrobial, anti-inflammatory, and anti-diabetic	4
14	Saal	*Shorea robusta*	Anti-inflammatory, Analgesic, Anti-nociceptive, Antioxidant, Hypolipidemic, Hepatoprotective, Expectorant, Anti-obesity, and Immunomodulatory	71
15	Ber	*Ziziphus mauritiana*	anti-inflammatory	1
16	Bel	*Aegle marmelos*	antibacterial, antiviral, antidiarrheal, gastroprotective, anti-ulcerative colitis	2
17	Belly	*Jasminum sombac*	Infections	4
18	Rose	*Rosaceae*	Anxiety	4
19	China rose	*Hibiscus rosa-sinensis*	antioxidant	5
20	Garlic	*Allium sativum*	Anti-biotic, anti-inflammatory, anti-fungal, anti-oxidant	5
21	Aloe vera	*Aloe vera*	Anti-inflammatory, anti-oxidant, anti-bacterial, anti-viral, antiseptic, anticancer, antidiabetic, antihyperlipidemic	4
22	Turmeric	*Curcuma longa*	anti-inflammatory, anti-oxidant, anti-microbial, anti-septic, and anti-cancer	4
23	Ashoka	*Saraca asoca*	Anti-bacterial, anti-inflammatory, anti–oxidant	2

3.2.13 Use of Bicycles :

At Institute for Education, students and non-teaching staff commute by bicycle, supported by a dedicated cycle shed for vehicle safety. This green initiative helps reduce environmental pollution and carbon footprints. Additionally, the college pathways are laid with permeable paver blocks, facilitating rainwater seepage and ground water recharge.

Key Initiatives:

- Sustainable Transport:
  - Bicycle Commute: Encourages students and staff to use bicycles, reducing environmental pollution and carbon emissions.
  - Cycle Shed: Constructed to provide secure parking for bicycles.

- Eco-Friendly Infrastructure:
  - Permeable Pathways: Pathways with paver blocks allow rainwater to seep through, recharging the groundwater and preventing waterlogging.

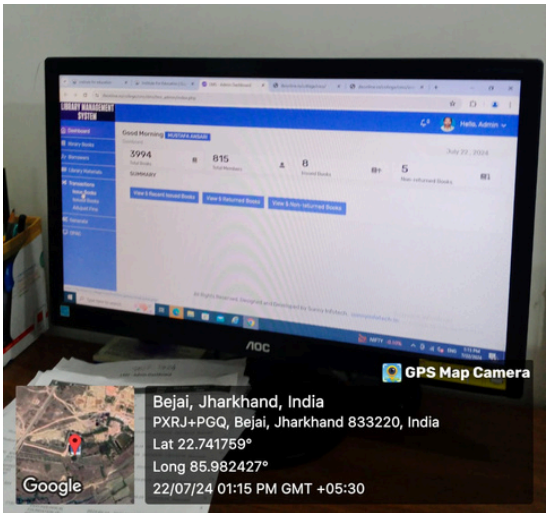
3.2.14 E - communication

Institute for Education has implemented efficient e-governance and digital infrastructure to enhance communication and reduce paper usage.

Key Initiatives:

- LAN Network:
  - Connectivity: All departments, the examination cell, and laboratories are well-connected through an efficient LAN network.
  - Digital Communication: Inter-office correspondence is conducted via email, significantly reducing paper usage.

- E-Governance Implementation:
  - Areas of Operation: E-governance is implemented across various areas of operation within the institution.
  - Collaboration: The college partnered with Master Soft in the 2021-2022 session to implement these digital solutions.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4.0 Conclusion

This audit involved discussions, questionnaires with various teams, and interactions with key personnel on a wide range of environmental issues. The college is dedicated to considering the environmental impacts of its actions and strives to act in an environmentally responsible manner.

Key Findings:

- LED Lighting: Classrooms, lecture halls, and many strategic locations are fitted with LED lights and tubes.
- Solid Waste Management: Solid waste is segregated and collected at the recycle station for appropriate recycling and disposal.

5.0 Recommendations

- Energy Efficiency:
- Renewable Energy: Support more renewable and carbon-neutral electricity options in any energy-purchasing consortium, aiming to supply all college properties with such sources.
- LED Lighting: Increase the installation of LED lights to reduce power consumption for lighting.
- High-Efficiency Appliances: Use 5-star rated air conditioners, fans, and CFLs.
- Switch-off Drills: Conduct regular switch-off drills and shut down electricity from the main building supply after occupancy hours to prevent power loss due to eddy current.
- Regular Cleaning: Clean tube-lights and bulbs periodically to remove dust and maintain efficiency.

4.0 Conclusion

This audit involved discussions, questionnaires with various teams, and interactions with key personnel on a wide range of environmental issues. The college is dedicated to considering the environmental impacts of its actions and strives to act in an environmentally responsible manner.

Key Findings:

- LED Lighting: Classrooms, lecture halls, and many strategic locations are fitted with LED lights and tubes.
- Solid Waste Management: Solid waste is segregated and collected at the recycle station for appropriate recycling and disposal.
- Rainwater Harvesting: The main administrative buildings are equipped with a rainwater harvesting system.
- Noise Reduction: Generators are fitted with acoustic chambers to minimize noise pollution.
- Greenery and Landscaping: The campus features extensive greenery and well-maintained landscaping.

Recommendations:

- Water Audit: Conduct a water audit and balance to ensure efficient water usage.
- Reuse of Treated Water: Implement the reuse of treated water for gardening purposes.

5.0 Recommendations

- Energy Efficiency:
  - Renewable Energy: Support more renewable and carbon-neutral electricity options in any energy-purchasing consortium, aiming to supply all college properties with such sources.
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  - Regular Cleaning: Clean tube-lights and bulbs periodically to remove dust and maintain efficiency.

- Water Management:
  - Overflow Monitoring: Implement monitoring and control measures for water overflow and arrange periodic supervision drills.
  - Water Audits: Conduct water audits and balancing to ensure efficient water usage.
  - Treated Water Reuse: Reuse treated water for gardening purposes.

- Waste Management:
  - Biogas Unit: Introduce a biogas unit to utilize biodegradable and food waste.
  - Waste Recycling Plans: Develop various recycling plans for different types of waste.
  - Paper Waste: Send paper waste, such as answer sheets, old bills, and confidential reports, for shredding, pulping, and recycling after their preservation period.

- Environmental Impact:
  - Eco-Friendly Cleaning Products: Ensure that all cleaning products used by staff have minimal environmental impact.

- Green Initiatives:
  - Tree Management: Periodically review the list of trees planted in the garden, allot numbers to the trees, and maintain records.
  - Indoor Plantation: Encourage indoor planting to foster interest in students, with bonsai plants in corridors to strengthen their connection with nature.
  - Greenery and Landscaping: Continue to enhance the campus with extensive greenery and well-maintained landscaping.