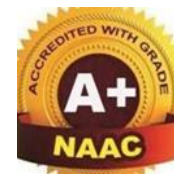




**K.L.E Society's  
S. NIJALINGAPPA COLLEGE  
II Block, Rajajinagar, Bengaluru- 560 010,  
Permanently affiliated to Bengaluru City University  
Re-accredited by NAAC at 'A+ level' grade with 3.53 CGPA**



# **Environment, Energy and Green Audit Report 2022-23**

**AUDITED BY**

**DEPARTMENT OF BOTANY  
&  
ECO-CLUB**

## **Introduction**

The term “Green” means eco-friendly or not damaging the environment. This can acronymically be called as “Global Readiness in Ensuring Ecological Neutrality” (GREEN). Green Audit can be defined as systematic identification, Quantification, recording, reporting and analysis of components of environmental diversity. Green accounting can be defined as systematic identification quantification, recording, reporting & analysis of components of ecological diversity & expressing the same in financial or social terms The ‘Green Audit’ aims to analyze environmental practices within and outside the college campus, which will have an impact on the eco-friendly ambience. Through Green Audit, one gets a direction as how to improve the condition of environment and there are various factors that have determined the growth of carrying out Green Audit.

Educational institutions have both negative and positive impacts on the world around them,. The activities organized by campus can create a variety of adverse environmental impacts. But they are also in a unique position as educational institutions to be the leaders in pursuing environmentally sustainable solutions.

### **Objectives**

- Assess the institution’s compliance with laws and regulations and other relevant requirements.
- Establish a performance basis for planning and developing an environmental management system.
- Promote good environmental management.
- Maintain credibility with the public.
- Raise awareness and enforce the institution’s internal commitment to environmental policies.
- Minimize risk exposure from environmental issues to health and safety.

### **About the college**

K.L.E. Societys S. Nijalingappa college was established in the year 1967. Further it has progressed leaps and bounds and presently the institution is located in heart of the city which sprawls over 4.97 acres which has more than 50 percent green cover. The institution has fully established departments in Science, Arts and commerce with sufficient infrastructure Further the post graduate departments in Physics, Chemistry, Mathematics, Commerce and Computer applications has been added. The college has been accredited by NAAC at 3.53 with A+ grade. The institution provides serene and picturesque atmosphere with beautiful corridor with lawns, medicinal plant gardens. Many potted plants add a lot to aesthetic ambience to the campus.



## **The Green Audit Process**

1. Constitution of green monitoring cell with specific tasks & time schedule
2. Visiting the area to discuss about the audit process.
4. Preparing the plan of action
5. Data collection pertaining to identified parameters for green auditing.
6. Collection of background information on the identified activities and other parameters
7. Collection of information on green activities being organized in the campus including flora, fauna, water usage and waste segregation , etc.
- g. Audit team visit to the campus, Data analysis and evaluation
- t0. Discussion on the findings
11. Report preparation

### **Onsite audit activities**

1. The preliminary visit and meeting with the campus authorities was the first step between the audit team and auditee
2. Site inspection for determining parameters for audit
3. Evaluation of collected information of the audit team
4. Meeting with the audit team for evaluation and clarifications
5. Meeting with the Principal, IQAC coordinator & faculty members

### SECTION I –General information

Name and Address of the college with contact numbers	K.L.E. Societys S. Nijalingappa College 08023325020
Building area (in sq.meter.)	2,000 square metres
Area already under Green covers in sq.meter	2500 aquare metres
Area of Gardens (in sq.meter)	1500 sq metres
Number of lawn stretches and area covered (in sq.meter)	3
Number of trees in the campus	57
Number of fruit bearing trees in the campus	12
Number of medicinal plants	158
Number of sacred plants	23
Number of rare / endangered plants	07
Number of shade houses	02 (Sanjeevini and Dhanvantri)
Number of Vermicompost units	01
is there any Eco-club / Green club?	Yes Eco club –by name <b>Prakruthi</b>
Are there any plant nurseries? If Yes, what is the number of units	Nil

## Section II-Energy Conservation

<b>1. Steps taken by the college to conserve energy</b>	
Use of CFL bulbs	Yes
Use of LED bulbs	Yes
Use of energy efficient tube lights	60%
Use of energy efficient refrigerator	08
Use of energy efficient fans / ACs	Yes 14 ACs
Use of microwave ovens	03
Use of Induction stoves	03
Use of Steamers	Yes
Use of energy efficient solar lights If Yes, what is the number?	Yes, 10 Campus lights- <b>PHYSICS LAB</b>
Use of energy efficient solar water heaters If Yes, what is the number?	No
Amount spent for electricity per month in the campus	<b>Rs. 2,50,000 pm.</b> Efforts are on to reduce the bill through use of solar lights and LED lights
Is there Thin Client Technology in the computer lab too save electricity?	No
Are there any sensitization programmes adopted by the college for staff/ students to minimize use of electricity and to avoid unnecessary use of fans and lights?	Yes Eco club conducts awareness programmes including issues on energy conservation
<b>2 Use of diesel</b>	
Number of generators and capacity	02, & 125 KVA
Is maintenance and service of generator regular?	Yes
Is there a technician to do the job of maintenance?	Yes
Steps to minimize dependence upon Generators	<ul style="list-style-type: none"> <li>• Class rooms have sufficient cross ventilation &amp; natural light so that the use of electricity can be minimized during day time.</li> <li>• Installation of solar lights.</li> <li>• Installation of solar powered labs</li> </ul>

<b>3. Use of LPG in Hostels</b>	
<b>Steps taken to minimise Use of LPG in different departments</b>	
Use of Cookers /Steamers	Yes
Use of Hot cases	Yes
Use of thermos urns	Yes
Is there any fire extinguishing arrangement in hostels	Yes
<b>4. L.P.G.in Chemistry, Zoology and Hotel Management departments</b>	
Use of auto start burners	NO
What steps are taken to minimize use of LPG?	Curbing unnecessary use of LPG by structured plan during practicals experiments
is there any fire extinguishing arrangement made in laboratories?	Yes In all the laboratories there are easily usable fire extinguishers
Do you use renewable energy (non-conventional Energy) in your campus? If Yes, name them	Solar energy Solar energy for lighting and energy and solar powered lab in physics lab
Is there any biogas plant in your campus? No	No
If Yes, how the remnant of the biofuel is used?-	NA
• Converted into compost -	NA
• Disposed off	Yes, partially
<b>5. Rain Water Harvesting</b>	
• Open well	Nil
• Borewell	Six borewells
• Municipal water supply	Yes, stored in sumps and tanks
<b>Are there any special water saving techniques followed in the campus like sprinklers or drip watering?</b>	
<b>Sprinklers</b>	Yes
Drip watering	No
Is there water harvesting facility?	Yes
<b>If yes what is the method of rainwater harvesting</b>	Rainwater harvesting pit and recharging bore well
<b>Lis the ways that could reduce amount of water usage om the campus</b>	Sprinklers for lawns Spring action taps
<b>Are there drinking water purifying plants?</b>	Yes there are 4 RO purifiers and 8 Aquaguard units are installed in the campus. The mega reverse osmosis unit is installed with capacity of 250 ltrs /hour

## 6. Efforts for Carbon neutrality

### Steps taken to reduce emission of CO<sub>2</sub>

Minimum use of generators	Yes
Prohibition or minimization of parking vehicles in the campus	Yes No vehicles are allowed inside the campus
Mandatory Carbon emission test for vehicles of staff/students.	Yes --
Using common transport facility	Yes, Maximum Students & staff use public transport
Regular plantation	Yes, Eco club organizes plantation programmes regularly
What are the efforts made to go organic?	Using Vermicompost and vermiwash as Manure for the gardens
What is the quantity of compost used in the garden	Around 100 Kg Vermicompost 8 tractor loads manure
Are there nursery units?	No
Are there vermicomposting units?	Yes 1 unit
Do you use hazardous chemicals for academic purposes ? If yes name them	Yes Hydrochloric acid, Nitric acid, Sulphuric acid and organic solvents, these chemicals will be Neutralized and Disposed after using in the Labs
How do you dispose of the chemicals used for academic purposes?	<ul style="list-style-type: none"> <li>• Water based chemical reactions are carried out for minimizing usage of hazardous solvent</li> <li>• chemical usage- The chemicals used are diluted and rendered harmless before disposing them</li> </ul>
What are the precautions taken while using hazardous chemicals for academic purposes?	<ul style="list-style-type: none"> <li>• Students should conduct the experiments under the close supervision of teachers</li> <li>• Students are made mandatory to use personal protective equipment's like hand gloves, full length chemical resistant aprons etc.</li> <li>• Providing detailed instructions in the practical manuals</li> <li>• By displaying the important instructions in the labs.</li> <li>• Using respirator &amp; Face mask</li> </ul>
Do you have any non-usable chemicals?"	No
What are the steps taken to prevent chemical accidents?	<ul style="list-style-type: none"> <li>• Students should conduct the experiments under the supervision of teachers</li> <li>• students should use personal protective equipment's like goggles, disposable hand gloves &amp; full length chemical resistant aprons during practical sessions.</li> <li>• Providing detailed instructions in the practical manuals</li> <li>• By displaying the important safety in the Laboratories</li> </ul>



<b>7. Effluent Management</b>	
Domestic effluent management	All bath rooms are networked through UGD lines, collected in a septic tank and then let off in a municipal drain.
Sewage water discharged into drains	Yes, BOD less than 100 mg/l —
Have you banned the use of plastic bags in the campus?	Yes, Usage of plastics below 200 microns are banned
<b>Solid waste disposal or Management:</b>	
How solid waste is disposed?	<ul style="list-style-type: none"> <li>• Biodegradable and non-biodegradable wastes are duly segregated before disposing</li> <li>• Biodegradable solids disposed of in the vermicompost units for vermicomposting</li> <li>• Waste papers sold for recycling</li> </ul>
<b>Pollution: -Noise pollution</b>	
What are the steps taken to reduce noise levels to less tolerance limits?	<ul style="list-style-type: none"> <li>• By regular plantation</li> <li>• By conducting awareness programmes</li> <li>• Displaying poster and placards</li> <li>• Entry of vehicles inside the campus is prohibited</li> <li>• Use of horns inside the campus is prohibited</li> <li>• Creation of silence zones</li> </ul>
Is there ban on the use of Dolby sound system?	Yes
Is ambient air quality tested Scientifically? If yes what are the parameters of the test <ol style="list-style-type: none"> <li>1. Ambient temperature</li> <li>2. Dry bulb temperature</li> <li>3. Wet bulb temperature</li> <li>4. Relative humidity</li> <li>5. Sot</li> <li>6. NO<sub>2</sub></li> <li>7. Particulate matter pm.0.0 Particulate matter pm.2.5</li> </ol>	<p>Yes</p> <p>Duration of sampling was 480 minutes Protocols were:</p> <p>IS:5182(P2)-2001 IS:5182(P6)-2006 IS:5 82(P23)-2006 USEPA 40 CFR(P53)</p> <p>Report status: The measured values are within the standards</p>

## **SUMMARY**

Green audit at times makes the campus authority to understand the effect of implications towards greenery and conservation of natural resources. The management and other authorities are keen to make the campus a green one. We are making learning process by practical approach as faculty members of Green monitoring cell are aware about the commitment towards the Institution. The campus thus functions as an eco-friendly approach that enables the student community to develop a genuine approach towards conservation of nature & the natural resources (Water, Energy etc.) KLE SNC has been conducting a "Green Audit" every year to monitor the green practices followed by the Institute and to understand whether the Institute is on the track of sustainable development. Hope the audit finding would help to implement better plan to execute & achieve a complete green campus.

## **CONCLUSION**

Our Institution puts into practice the optimization of energy consumption to conserve & improvise the energy efficiency. LEDs are used in place of incandescent bulbs as these consume less energy and are more efficient. The solid waste management is done on regular basis. Vermicomposting unit has been well maintained for the production of Bio-fertilizers which is harvested and later used as organic manure for the plants on Campus. E-waste management is carried out by enlisting the non-functional electronic equipments and storing at E-waste room and scientifically disposed in collaboration with licensed vendor. Water resource management is a part of planning, developing, distributing and managing the optimum use of water resources. Rain water harvesting units are well maintained & distribution of water is on need basis.

Eco club Prakruthi regularly conducts a number of awareness programmes observing various theme days related to environment and creates environmental consciousness among students and staff. Various interactive workshops, intercollegiate competitions, film shows etc.

## RECOMMENDATIONS

1. Implementation of 90% Paperless documentation
2. Integrate Digitalization to improve efficiency & facilitate better for informational exchange.
3. Disposing chemical liquid waste by dilution method
4. Set up waste water recycling unit where the recycled water can be used for gardening
5. Install Chemical liquid wastewater treatment plant.
6. Organize Outreach Programmes for Public on awareness of environmental management system and sustainable practices.
7. Ensure participation of students and teachers in local environmental issues.
8. Frame an eco-friendly and energy saving Purchase policy.
9. Introduce eco-friendly add-on courses which are income generating to all interested students.

\*\*\*\*\*

# **Environment, Energy and Green Audit Report 2022-23**

**Convener**

**Smt. Roopashree M G**

**Members**

**Dr. Tejaswini V Nandi**

**Mrs. Yashodha H Yadahalli**

**Dr. Mahesh H M**

**Dr. Narayanaswamy**

**HOD-Botany & Eco-club Convener**

**PRINCIPAL**