



J.K. Jadhav Arts Commerce and Science Mahavidyalaya Vaijapur

Tq. Vaijapur Dist. Aurangabad

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Maharashtra

Green Audit Reports

Table of Contents

Executive Summary

1. Introduction

1.1 About the College

2. Objectives of the Study

3. Methodology

4. Observations and Recommendations

4.1. Water Use:-

- a) Observations
- b) Recommendations

4.2. Energy Use and Conservation:-

- a) Observations
- b) Recommendations

4.3. Waste Generation:-

- a) Observations
- b) Recommendations

4.4. Vermi Composting Projects:-

- a) Recommendations


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4.5. E- Waste Generation:-

- a) Observations
- b) Recommendations

4.6 Green Area:-

- a) Observation

5. Conclusions

6. Acknowledgement



Executive Summary

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institute which will lead for sustainable development. J. K. Jadhav College Vaijapur Tq. Vaijapur Dist. Aurangabad is deeply concerned and unconditionally believes that there is an urgent need to address these fundamental problems and reverse the trends. Being a premier institution of higher learning, the college has initiated 'The Green Campus' program two years back that actively promote the various projects for the environment protection and sustainability.

The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution. The methodology include:, physical inspection of the campus, observation and review of the documentation, measurements and recommendations. It works on the several facets of 'Green Campus' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity. It can make a tremendous impact on student health and learning college operational costs and the environment.

1. Introduction

Green Audit can be defined as systematic identification, quantification, Recording, reporting and analysis of components of environmental diversity. The 'Green Audit' aims to analyze environmental practices within and outside the college campus, which will have an impact on the eco-friendly ambience. It was initiated with the motive of inspecting the work conducted within


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the Organizations. Through Green Audit, one gets a direction as how to improve the Condition of environment. Green audit is assigned to the criteria 7 of NAAC, National Assessment and Accreditation Council which is a self governing organization of India which declares institutions as Grade A, B or C according to the scores assigned during the accreditation.



1.1 About the College

J. K. Jadhav Mahavidyalaya, Vaijapur Tq. Vaijapur Dist. Aurangabad, Maharashtra is a young college having three program - Arts, Commerce, and Science. The college is located on a beautiful campus of 01 acre. There are separate laboratory buildings of Chemistry, Botany, Zoology, and Computer Science.

The college has also adopted the 'Green Campus' system for environmental conservation and sustainability. There are main three pillars i.e. zero environmental foot print, positive impact on health and performance and 100% graduates demonstrating environmental literacy. The goal is to reduce CO2 emission, conservation of energy and conservation water use, while creating an atmosphere where students can learn and be healthy. The 'Green Campus' has been active since last 2 years both as an assembly group of sub committees that actively promote the various projects. The college administration works on the several facets of 'Green Campus' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, and Alternative Energy.

2. Objectives of the Study

The main objective of the green audit is to promote the Conservation of Environment in the College Campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are:

- To introduce and aware students to real concerns of environment and its Sustainability
- To secure the environment and cut down the threats posed to human health.
- To establish a baseline data to assess future sustainability by avoiding the Interruptions in environment.


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3. Methodology

In order to perform green audit, the methodology included different tools such as, physical inspection of the campus, observation and review of the documentation, Measurements and recommendations. The study covered the following areas to summaries the present status of environment management in the campus:

- Water management
- Energy Conservation
- Waste management
- Green area management



4. Observations and Recommendations

4.1. Water Use

This indicator addresses water consumption, water sources, irrigation, and storm water. A water audit is an on-site survey and assessment to determine the water use and hence improving the efficiency of its use.

a) Observations

The study observed that bore well & pipeline water supply by Municipal Council through pipe line is the major sources of water. Water is used for drinking purpose, toilets, laboratory and gardening. During the survey, loss of water is observed, by leakages, over flow of water from over head tanks during raining. The data collected from all the departments is examined and verified. On an average the total use of water in the college is 6,000 L/day, which include 2,000 L/day for domestic purposes, 2,000 L/day for gardening and 2,000 L/day for different laboratories. Gardens are watered by using pipeline.

b) Recommendations

- Need of monitoring, controlling overflow is essential and in campus small scale/medium scale/ large scale reuse and recycle of water system is necessary.


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- Minimize wastage of water and use of electricity during water filtration process, if used, such as RO filtration process and ensure that the equipment's used for such usage are regularly serviced and the wastage of water avoid.
- Ensure that all cleaning products used by college staff have a minimal detrimental impact on the environment substance.

4.2. Energy Use and Conservation

This indicator addresses energy consumption, energy sources, energy monitoring, lighting appliance, natural gas and vehicles. Energy use is clearly an important aspect of campus sustainability.



a) Observations

Energy source utilized by all the departments, The total energy consumption is determined as about 14000 KWH/Year by major energy consuming equipment's. All the departments and common facility centers are equipped with LED lamps. Approximately 20 LEDs (Capacity) are counted during survey. The college has Inverters and battery backup which is useful for all campus during load shading. Equipment's like Computers are used with power saving mode. Also, campus administration runs switch –off drill on regular basis. In science department like Physics, Chemistry, Mathematics, Botany and Zoology electricity was shut down after occupancy time, is one of green practices for energy conservation.

b) Recommendations

- Increase Installation of LED in campus.
- Minimize the use of fans during winter session.

4.3. Waste Generation

This indicator addresses waste production and disposal of different wastes like paper, food, plastic, biodegradable, construction, glass, dust etc and recycling. Furthermore, solid waste often includes wasted material resources that could otherwise be channeled into better service through recycling, repair, and reuse. Solid waste generation and management is a burning issue. The

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survey focused on volume, type and current management practice of solid waste generated in the campus. The different solid wastes collected as mentioned above.

a) Observations

The total solid waste collected in the campus is 08 Kg/day. Waste generation from tree droppings is major solid waste. The waste is segregated at source by providing separate dustbins for Bio-degradable and Plastic waste. Segregation of chemical waste generated in chemistry and zoology laboratories is also practiced. Single sided used papers reused for writing and printing in all departments' very less plastic waste (0.1Kg/day) is generated by some departments and office.

4.4. Vermi composting Project:-

The institute has adopted vermin culture composting in culture house on 10 sqft land. The main purpose of this is to reduce disposable waste in the college campus. After complete process of vermin composting, it is used as manure in the garden.



b) Recommendations

- Reduce the absolute amount of waste that it produces from college staff and offices.
- Provide sufficient, accessible and well-publicized collection points for Waste.
- Single sided papers to be used for writing and photocopy.

4.5. E-Waste Generation

E-waste can be described as consumer and business electronic equipment that is near or at the end of its useful life. This makes up about 4% of all municipal solid waste worldwide but is much more hazardous than other waste because electronic components contain cadmium, lead,


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mercury, and Polychlorinated biphenyls (PCBs), which can damage human health and the environment.

a) Observations

E-waste generated in the campus is very less in quantity. The cartridges and printers are refilled outside the college campus. The E- waste and defective item from computer laboratory is being stored properly. The institution has decided to contact approved E-waste management and disposal facility in order to dispose E-waste in scientific manner.



b) Recommendations

- Recycle or safely dispose of goods, computers and electrical appliances.
- Use reusable resources and containers and avoid unnecessary packaging where possible.

4.6. Green Area

This includes the plants, greenery and sustainability of the campus to ensure that the buildings conform to green standards, This also helps in ensuring that Nomenclature of each plant is done scientifically which helps the students of botany for their study.

a) Observations

Campus is located in the vicinity of trees. Various tree plantation programs are being organized during the month of July and August at college campus and surrounding villages through NSS unit. This program helps in encouraging eco-friendly environment which provides pure oxygen within the institute and awareness among villagers. The plantation program includes various types of indigenous species of ornamental and medicinal, wild plant species. The seed ball making campaign is organized by NSS unit which encourages the importance of tree plantation among the students.


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Following plants are found in campus



1	Millingtonia hortensis Common Name : Indian cork tree	04
2	Azadirachta Indica Common Name: Neem	02
3	Acacia Common Name: Wattles	03
4	Delonix regia Common Name: Royal Poinciana	01
5	Saraca asoca Common Name: Ashoka Tree	01
6	Alstonia Scholaris Common Name: Blackboard Tree	01
7	Morus alpa Common Name: Mulberry Tree	02

5. Conclusions

Considering the fact that the institution is predominantly an undergraduate college, there is significant environmental research both by faculty and students. The environmental awareness initiatives are substantial. The installation of solar panels, paperless work system and practices are noteworthy. Besides, tree plantation, seed ball making programs initiated by the NSS Unit, administration shows how the campus is going green. As part of green audit of campus, we carried out the environmental monitoring of campus includes Illumination, Ventilation and Indoor Air quality of the class room. It was observed that Illumination and Ventilation is adequate considering natural light and air velocity is present.

6. Acknowledgement

We are grateful to the committee members of JKJM to allow us to enter the new era of Green audit in the College Campus. Further we sincerely thank the college staff for providing us necessary facilities and co-operation during the audit. This helped us in making the audit a success. Further we hope this will boost the new generation to take care of Environment and propagate these views for many generations to come.


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