Green Audit Report

(2022-23)



Hutatma Govindrao Pansare Shikshan Prasarak Mandal's

Pansare Mahavidyalaya, Arjapur

At Post : Arjapur Tq. Biloli Dist. Nanded 431711 (Maharashtra)



Green Audit report Submitted by



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ACKNOWLEDGEMENT

We express our sincere gratitude to the management of Pansare Mahavidyalaya, for awarding us the assignment of Green Audit of their Arjapur Campus.

We are thankful to: Honorable Principal Dr. A.H. Shrirame Sir given opportunity to conduct audit.

We are also thankful to various Head of Departments & other Staff members for helping us during the field measurements.



Certified by Bureau of Energy Efficiency, Ministry of Power, Gov. of India Empanelled Consultant MAHAURJA (Govt. of Maharashtra Institution

Date of Audit : 23.12.23

प्रतिज्ञा

हम सत्यनिष्ठा से प्रतिज्ञा करते हैं कि अपने सभी कार्यों में पेट्रोलियम उत्पादों के संरक्षण हेतु सतत प्रयासरत रहेंगे, ताकि देश की प्रगति के लिए आवश्यक इन सीमित संसाधनों की आपूर्ति अधिक समय तक सम्भव हो सके। आदर्श नागरिक होने के नाते हम लोगों को पेट्रोलियम पदार्थों के न्यर्थ उपयोग से बचने तथा पर्यावरण संरक्षण हेतु स्वच्छ ईधन का प्रयोग करने के लिए जागरूक करेंगे।

EXECUTIVE SUMMARY:

Objective	Observation	Remarks / Recommendation			
Green Cover - Plantation of Trees	Plantation of trees is started in the campus and the green cover is extended every year in the campus. At Present 13% area campus is having the Green cover.	It is recommended to increase the Green Cover Further.			
Use of Renewable Energy	Institute is Planning to install 7 KW rooftop Solar Power Plant.	Students and staff using as much natural light as possible. Good awareness was found in electricity conservation			
Water Conservation	Recommended to Install Sign Boards. Awareness for Water Conservation.	It is recommended to install taps with reduced water flow			
Rain Water harvesting	Absorption pits have been constructed to absorb rain water into the ground.	Institute has been taken good initiative for water conservation			

Avoid Misuse/ wastage of water	RO water providing safe drinking water.	Waste water can used for Gardening.		
	Encourage to reduce the water usage	Recommended Water Sprinkler system to save water.		
Bio Waste Management	The Bio Waste – Food Waste generated in the campus is proposed to be feed stock for Bio Gas plant	Recommended for Bio gas plant.		
Non Bio Waste	Non Bio Waste – Plastic Bottles / Paper Waste Metals waste is being collected in the dust bins placed across the campus.	Do not burn garbage. It is proposed to install plastic bottle crusher, which can be sold as a Feed stock for the Plastic industry.		
E Waste	E Waste – All Electronic Junk is generated in the campus in the form of Used Computer key boards/ Mouse/ CPU's/ Damaged Printers etc.	An agreement is in place with local Company to pick up the E waste every six month		
Carbon Foot Print	Mostly Students commute in the ST Bus from City / rural Areas	Found Awareness in the Staff		
Transportation	Mostly Students & Staff using EV Vehicles	Found Awareness in the Students		

Chapter No.1 Scope of Work & Green Audit Methodology

Pansare Mahavidyalaya entrusted the work of conducting a detailed Green Audit of campus with the main objectives are as bellows:

Objectives of Green Audit:

1. To examine the current practices, which can impact on environment such as of resource utilization, waste management etc.

- 2. To identify and analyze significant environmental issues.
- 3. Setup goal, vision, and mission for Green practices in campus.
- 4. Establish and implement Environment Management in various departments.

5. Continuous assessment for betterment in performance in green

Need of Green Audit:

Green auditing is the process of identifying and determining whether institutions practices are eco-friendly and sustainable. Green audit regulates all such practices and gives an efficient way of natural resource utilization. In the era of climate change and resource depletion it is necessary to verify the processes and convert it in to green and clean one. Green audit provides an approach for it. It also increases overall consciousness among the people working in institution towards an environment.

Methodology of Green Audit:

Green Audit of Pansare Mahavidyalaya, Arjapur Campus has been conducted with specific methodology as follows:



Goals of Green Audit:

Conducted a green audit of Pansare Mahavidyalaya, Arjapur Campus with specific goals as:

1. Identification and documentation of green practices followed by the Institute.

- 2. Identify strength and weakness in green practices.
- 3. Analyze and suggest solution for problems identified.
- 4. Assess facility of different types of waste management.
- 5. Increase environmental awareness throughout campus
- 6. Identify and assess environmental risk.
- 7. Motivates staff for optimized sustainable use of available resources.

8. The long-term goal of the environmental audit program is to collect baseline data of environmental parameters and resolve environmental Issue before they become problem.



Chapter No.2 Introduction about the Institute

The college was started in a small building in huge campus of 24 acres in 1972.

The teaching and non-teaching staff have been put their efforts and commit to their profession and contribute their best in the development of the college and welfare of the students in the rural area.

Sr.	Head	Particulars				
1.	Name	Pansare Mahavidyalaya, Arjapur (Degree)				
2.	Address	Tq. Biloli Kundalwadi Dist. Nanded 431711 (Maharashtra)				
3.	Degree Courses Offered	B.A.; B.Com.; M.A.				

Location: The College is situated at At Post : Arjapur



HUTATMA PANSARE MAHAVIDYALAYA ARJAPUR हुतात्मा पानसरे महाविद्यालय अर्जापूर 4.0 ★★★★ (4) School



ARIAL VIEW OF COLLEGE CAMPUS (SOURCE GOOGLE EARTH)



Chapter No.3 CATEGORIES OF LAND USE

Plantation of trees is started in the campus and the green cover is extended every year in the campus. At Present **16**% area campus is having the Green cover.





Chapter No. 4 Green Cover - Plantation of Trees

Green Landscaping with Trees and Plants – the campus is beautifully landscaped.



Chapter No. 5: Use of Clean & Green Energy Natural Daylight Natural light positively contributes to a higher academic performa

Natural light positively contributes to a higher academic performance in reading as well as in science. It also supports attention, the stability of the circadian cycle and overall health, mental health and comfort5, which in turn, leads to better academic performance.



Observations :

- 1. Students & Staff using maximum Natural Sunlight
- 2. College is planning to install rooftop solar power plant of 7kw capacity in their campus

Suggestions :

- 1. Install Occupancy Sensors to minimize electricity unknown losses.
- 2. Install Solar Street Lights to Minimize Electricity Import during Night.

Chapter No. 6: Study of Waste Management

Environmental consciousness and sustainability friendly initiatives

Observations : Institute has been done Good Management of the various types of degradable and non-degradable waste

1. Solid waste management

- The college is taking utmost care of cleanliness and hygiene. Daily waste is collected by the cleaning staff and segregated into degradable and non-degradable waste.
- The leaves, all non-toxic and biodegradable waste, are collected and used to make compost through the composting process, for which pit was made in the campus.
- Solid waste is generated in the form of plastic, glass, metal, newspapers, lab manuals, etc. is stored at one place and scrapped periodically for recycling.
- Non degradable waste (Dry and wet) is collected separately empty bottles, cartons are collected regularly at one place and handed over to the municipal vehicle for collection and proper disposal.
- College is using number of software's Tally, for digitalization concept that made steps towards way to less paper use.
- Use of paper printed on one side is encouraged for printing drafts before final document, meeting minutes, and institute level notices in office practices reducing paper based waste.



2. Liquid Waste Management

Liquid waste is generated in the form of solvents, solutions, reaction mixtures, preparations, etc. It is scientifically disposed as per waste management norms. The liquid waste generated during practical is disposed through well-constructed drainage system which is flushed with water from wash basins.

4. E-waste management

The college is having facility to collect and disposed off periodically the ewaste from institutes, E-wastes such as old computers, printers, laptops, scanner, CD's etc. batteries are collected centrally. E-waste is given to authorized vendors for possible recycling. We have put the collection box in the institute, where e-waste is collected. Students are also made aware of E-waste issues and its safe disposal.

5. E. Hazardous chemicals and radioactive waste management

Campus is free from any kind of radioactive waste. Hazardous chemicals like strong acids, strong alkalis and oxidizing agents are used in restricted and small quantities during practical's and research. Separate space is provided for storage of hazardous chemicals with highly visible sign. Chemicals are diluted sufficiently and then released into soak pits. Use of hazardous liquid chemicals generating hazardous fumes is carried out strictly in fuming cupboard to avoid spread of fumes. Inorganic waste is disposed off with water, while organic waste is burned out.



Chapter No. 7 : Carbon Foot printing

A Carbon Foot print is defined as the Total Greenhouse Gas emissions, emitted due to various activities. In this we compute the emissions of Carbon-Di-Oxide, by usage

of the various forms of Energy used by the College for performing its day to day activities. The College Imports Electrical Energy during Night for various Electrical gadgets.

Basis for computation of CO2 Emissions:

The basis of Calculation for CO2 emissions due to Electrical Energy are as under

1 Unit (kWh) of Electrical Energy releases 0.8 Kg of CO2 into atmosphere

Based on the above Data we compute the CO2 emissions which are being released in to the atmosphere by the College due to its Day to Day operations

Month wise Electricity Import details:



MAR-	FEB-	JAN-	DEC-	NOV-	OCT-	SEP-	AUG-	JUL-	JUN-	MAY-	APR-
23	23	23	22	22	22	22	22	22	22	22	22
138	135	125	134	145	158	175	168	130	180	123	170

MAR-	FEB-	JAN-	DEC-	NOV-	OCT-	SEP-	AUG-	JUL-	JUN-	MAY-	APR-
23	23	23	22	22	22	22	22	22	22	22	22
151	172	185	170	179	209	184	201	340	345	276	177

Observations: The College Imports Electrical Energy during Night for various Electrical gadgets. Annual Electricity Import = 6596 KWH/year Calculations:

Electricity: Input value (in KWh/Yr) X 0.85 (Emission Factor)

= Output value in (Kg of CO₂)

Calculation for CO2 emissions due to Electrical Energy = 5606.6 Kg of CO₂ /year **Suggestions:**

- 1. Reduce the Electricity Import during Night install Solar Streetlights.
- 2. Install Occupancy Sensors to minimize losses in Lighting System



Chapter No. 8: Best Practices & Activities

Institute has been declared their Environment Policy

Policy Document On Environment and Energy Usage

- To install LED bulbs in the complete campus to save energy
- To operate institute building in most efficient energy manner.
- Maximum use of Renewable Energy.
- Encourage a culture of Energy conservation on campus.
- To take additional measures to continuously improve our energy consumption.
- To develop and maintain Energy Management System based on ISO: 50001.
- To encourage use of advanced technology to minimize energy consumption.
- To engage in dialogue with the government agencies, and actively work with the local

organizations in the areas of environment, energy efficiency and sustainable development.

- To strengthen our employees' and students' environmental knowledge and skills in order to improve our own environmental performance.
- To provide information and training opportunities on energy saving measures.
- To train our employees and students through our Enviro Club to make them 'Go Green Specialists' and partners to plant trees each year.

Principal



प्रतिज्ञा

हम सत्यनिष्ठा से प्रतिज्ञा करते हैं कि अपने सभी कार्यों में पेट्रोलियम उत्पादों के संरक्षण हेतु सतत प्रयासरत रहेंगे, ताकि देश की प्रगति के लिए आवश्यक इन सीमित संसाधनों की आपूर्ति अधिक समय तक सम्भव हो सके। आदर्श नागरिक होने के नाते हम लोगों को पेट्रोलियम पदार्थों के न्यर्थ उपयोग से बचने तथा पर्यावरण संरक्षण हेतु स्वच्छ ईधन का प्रयोग करने के लिए जागरूक करेंगे।

