Green Audit Report

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MITE

Invent Solutions

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

MANGALORE, KARNATAKA – 574225

INNOWELL

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1. INTRODUCTION:

The green audit aims to analyse environmental practices within and outside the university campuses, which will have an impact on the eco-friendly atmosphere. Green audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of university environment. It was initiated with the motive of inspecting the effort within the institutions whose exercises can cause threat to the health of inhabitants and the environment. Through the green audit, a direction as how to improve the structure of environment and there are include several factors that have determined the growth of carried out the green audit.

1.1. NEED FOR GREEN AUDITING

Green auditing is the process of identifying and determining whether institutions practices are eco-friendly and sustainable. Traditionally, we are good and efficient users of natural resources. But over the period of time excess use of resources like energy, water, are become habitual for everyone especially, in common areas. Now, it is necessary to check whether our processes are consuming more than required resources? Whether we are handling resources carefully? 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.

1.2. GOALS OF GREEN AUDIT

University has conducted a green audit with specific goals as:

1. Identification and documentation of green practices followed by university.
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.

1.3. 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

1.4. BENEFITS OF GREEN AUDIT TO EDUCATIONAL INSTITUTIONS

There are many advantages of green audit to an Educational Institute:

1. It would help to protect the environment in and around the campus.
2. Recognize the cost saving methods through waste minimization and energy conservation.
3. Empower the organization to frame a better environmental performance.
4. It portrays good image of institution through its clean and green campus.

Finally, it will help to build positive impression for through green initiatives the upcoming NAAC visit.

2. OBJECTIVE AND SCOPE

The broad aims/benefits of the eco-auditing system would be

- Environmental education through systematic environmental management approach
- Improving environmental standards
- Benchmarking for environmental protection initiatives
- Sustainable use of natural resource in the campus.
- Financial savings through a reduction in resource use
- Curriculum enrichment through practical experience
- Development of ownership, personal and social responsibility for the College campus and its environment
- Enhancement of College profile
- Developing an environmental ethic and value systems in young people

3. EXECUTIVE SUMMARY

An environmental audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes outdated unless there is some mechanism in place to continue the effort of monitoring environmental compliance.

This audit report contains observations and recommendations for improvement of environmental consciousness.

4. MITE INFRASTRUCTURE

DETAILS OF TREES AND PLANTS IN CAMPUS

S.No	Botanical Name	Common Name
1	Citrus × aurantiifolia	Lime
2	Psidium	Guava
3	Manikara zapota	Sapota
4	Artocarpus heterophyllus	Jackfruit
5	Syzygium aromaticum	Clove
6	Annona reticula	Custard Apple
7	Ananas comosus	Pine Apple
8	Durio	Durian
9	Terminalia catappa	Badam Tree
10	Vitis	Grapes
11	Cyanococcus	Blueberry
12	Mangifera indica	Mango
13	Cocos nucifera	Coconut
14	Phyllanthus emblica	Gooseberry
15	Hibiscus	Hibiscus
16	Polianthes tuberosa	Sampagi
17	Synsepalum dulcificum	Miracle fruit

ROOF TOP SOLAR PANELS

Roof top solar water heaters are installed in the hostel building.

Details of Solar Cells Used for Water Heating

S.No	Hostel	No. of Panels	Capacity of Water Tank (lts)
1	Girls Hostel - 03	88	4000
2	Boys Hostel - 03 and 04	48	4000

LIBRARY

The college library is fully automated and it has a collection of over 26,500 books and a subscription of about 7,631 e- journals and 10000+ e-books for Engineering & Management. Internet browsing and mobile library app is also available.

AUDITOIRUM

The auditorium can accommodate 250 students, aimed at conducting events like department functions, club activities and meeting of various student support organization.

ATM FACILITY

ATM facility is provided inside the campus for easy accessibility to the students.

INNOVATION CENTER

MITE has a state-of-the-art incubation Center with 120 Pcs with the latest configuration, video conferencing facilities

HEALTH CENTER

These centers often provide medical facilities on campus where students can receive emergency treatment and preventive care.

SEWAGE TREATMENT PLANT

3 No's of Sewage Treatment Plants are installed in the College campus. The total Sewage Treatment Plant Capacity is 300KLD.

S.No	Description	Capacity in (KLD)
1	Sewage Treatment Plant - 01	100
2	Sewage Treatment Plant - 02	100
3	Sewage Treatment Plant - 03	100

RO PLANT

RO plant is provided inside the campus to supply water to the entire campus.

GYMNASIUM

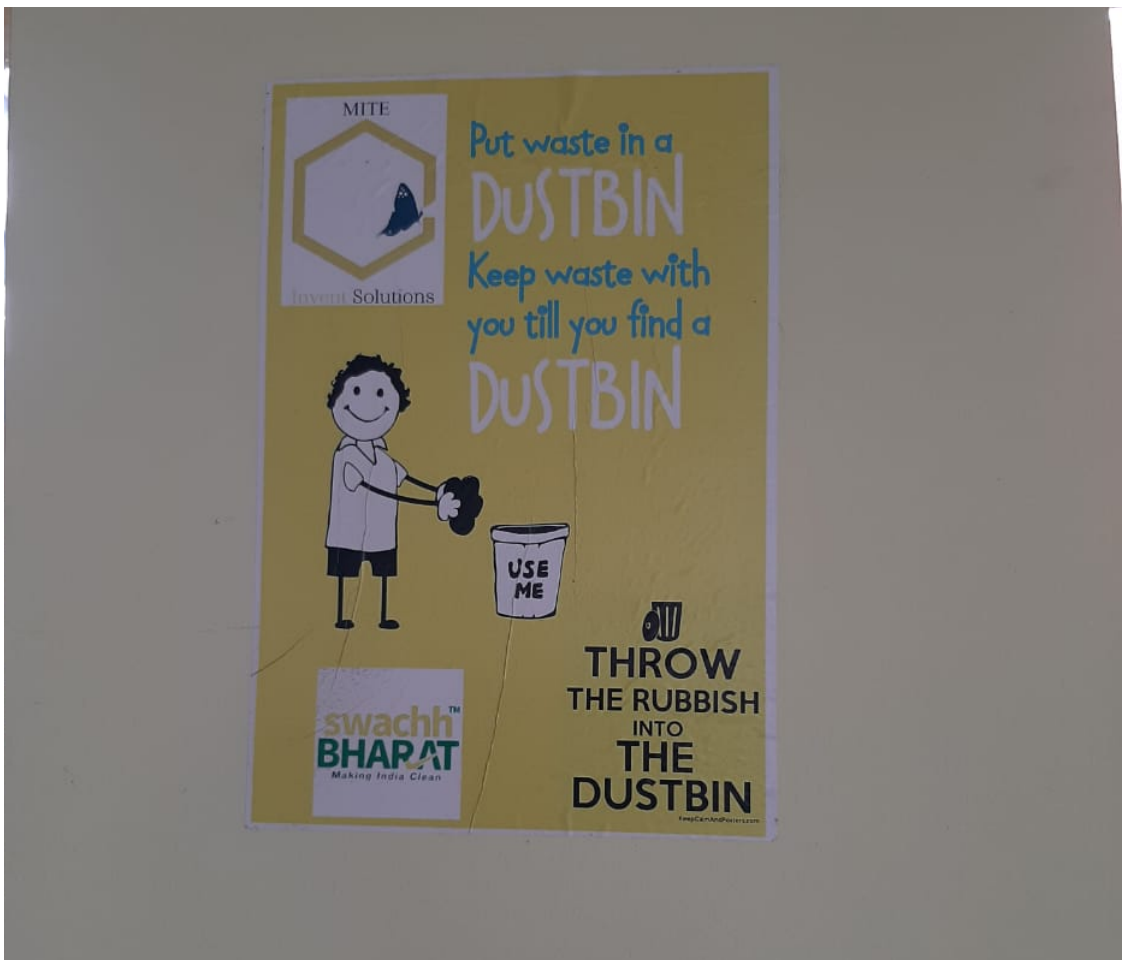
Gymnasium is provided inside the campus facility to encourage physical activity among the students.

RAINWATER HARVESTING

The rainwater harvesting strengthens the water supply to the campus lakes as well as enhance water level of wells in the campus through ground water recharging process.

VIEWS OF GREENERY

SIGN BOARDS IN CAMPUS OF MITE



AERIAL VIEW OF GREENERY IN CAMPUS

5. WASTE MANAGEMENT

The food waste generated inside the campus is diverted to a nearby farm on a daily basis. The farm owner takes the food waste and uses it to his needs. An average of 25 kilos of food waste is generated per day.

E-WASTE MANAGEMENT

E-waste generated in the campus is disposed in scientific and eco-friendly manner.

6. WATER MANAGEMENT

Water conservation is a key activity as water availability affects on the development of the campus as well as on all area of development such as farming, industries, etc. Keeping this view water conservation activity is carried out.

SOURCES OF WATER

- Open Well water
- Bore water

A Main source of water is Ground water is extracted to full the requirement. At present there are 5# wells out of which with 1# has open well structure whereas remaining 04 are bore wells. The college stores the water in overhead tank.

The source of wastewater is Domestic Waste Water i.e., Sewage water. The Sewage water mainly comes from Toilets of college, hostel, kitchen and canteen. 3# of Sewage Treatment Plant was installed in the campus of each 100 KLD. Total sewage treatment plant capacity is 300KLD.

7. ENERGY MANAGEMENT

DIESEL GENERATOR DETAILS

The Mangalore Institute of Technology has installed 3# of Diesel Generator. The following table provides the Diesel generator capacity in the college campus.

S.No	Equipment Name	Make	Capacity in (kVA)
1	Diesel Generator - 01	Cummins	380 kVA
2	Diesel Generator - 02		250 kVA
3	Diesel Generator - 03		125 kVA

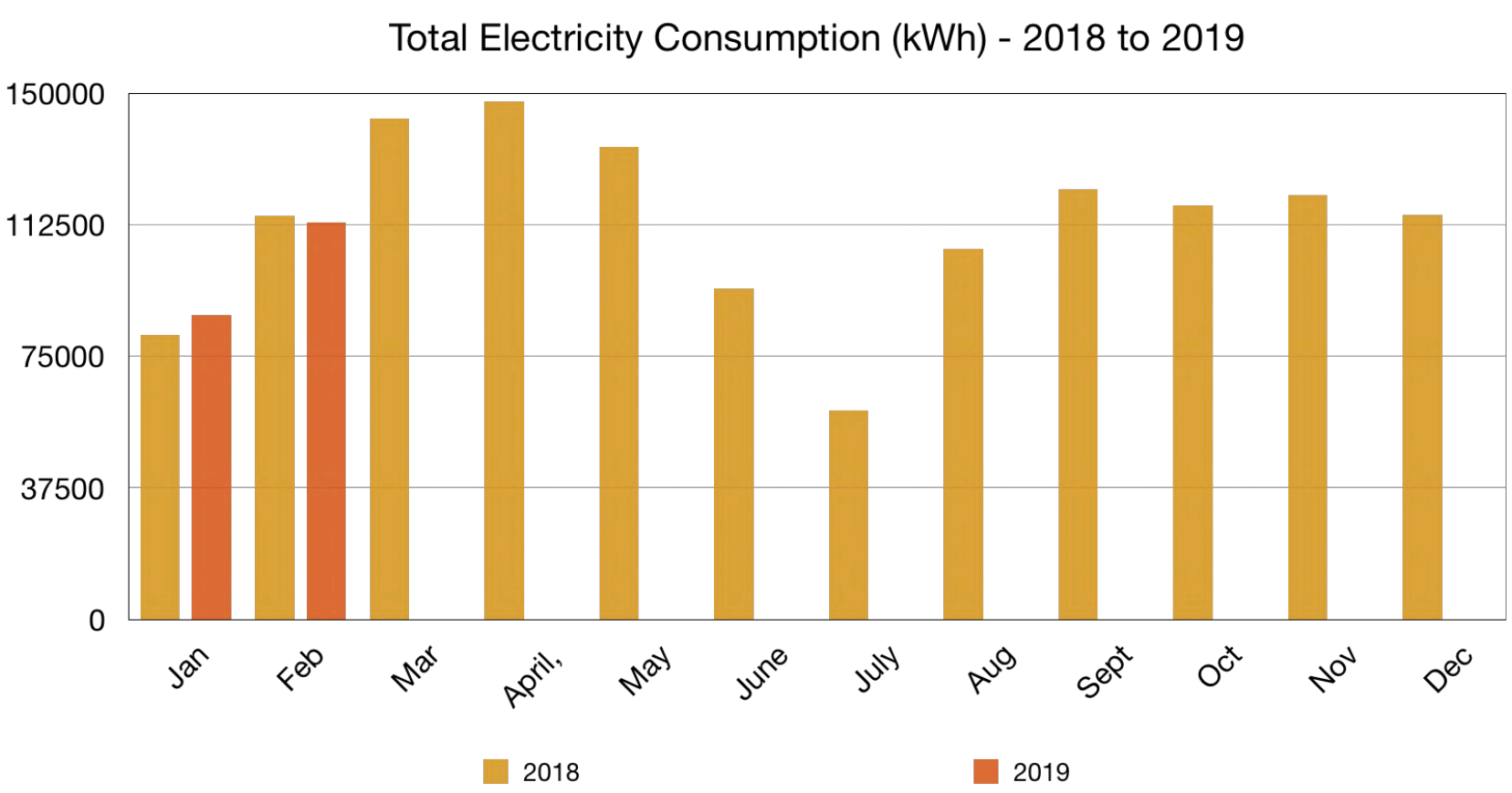
TRANSFORMER DETAIL

The Mangalore Institute of Technology has installed 2# of Transformer. The following table provides the transformer capacity in the college campus.

S.No	Equipment Name	Capacity in (kVA)
1	Transformer – 01 @0.9 PF	500
2	Transformer – 02 @0.9 PF	400

ELECTRICITY TREND

The below graph represents the total electricity consumption trends for the year 2018 & 2019 of MITE.



8. SUMMARY

Green Audit is one of the important tools to check the balance of natural resources and its judicial use. Green auditing is the process of identifying and determining whether institutional practices are eco-friendly and sustainable. It is a process of regular identification, quantification, documenting, reporting and monitoring of environmentally important components in a specified area.

Mangalore Institute of Technology and Engineering has conducted a "Green Audit" in the academic year 2018 - 2019. The main objective to carry out green audit is to check the green practices followed by MITE and to conduct a well-defined audit report to understand whether the MITE is on the track of sustainable development.

9. CONCLUSION

From the green audit following are the conclusions, which can be taken for improvement in the campus.

1) All departments generate paper waste. Especially, academic building is using more one paper for printing and writing is good practices.
2) Food waste generated in campus is mostly from is collected from dining areas. The food waste is diverted to nearby farm.
3) E- waste are segregated, handled and disposed properly in a eco-friendly manner.
4) Rainwater is collected from rooftop to recharge the ground water level table.

10. RECOMMENDATIONS

Following are some of the key recommendations for improving campus environment:

1) A frequent visit should be conducted to ensure that the generated waste is measured, monitored and recorded regularly and information should be made available to administration.
2) The solid waste should be reused or recycled at maximum possible places

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