

**M.S.M. COLLEGE, KAYAMKULAM**

**INTERNAL ENVIRONMENTAL AUDIT REPORT**

**2020-2021**

**Audit Report submitted by**

**Dr Mumtaz**

**Convenor**

**Internal Audit committee**

## GREEN/ENVIRONMENTAL/ECO AUDIT

Green audit, also known as an Environmental Audit or Eco-Audit, is an independent assessment conducted to evaluate an educational institution's environmental performance, resource utilisation, and compliance with environmental regulations.

It aims to identify areas of improvement and suggest measures to reduce environmental impact and enhance sustainability.

In the current situation, it is mandatory for all Higher Educational Institutions in India to get audited and work on the yearly Green Audit Report outcome.

### Concept








The environment audit aims to analyse environmental practices within and outside the College campus, which will have an impact on the eco-friendly atmosphere. Environment 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.

### Introduction

M.S.M. College, Kayamkulam aims at producing awareness about the environment consciousness. The institute takes initiatives to organize different events of green practices to percolate the knowledge amongst students, teachers, and nonteaching staff. This green message being transferred along with its practical dimensions among the families, societies and thereby to the stakeholders, forms a chain and network to spread the message at large.

The college binds itself to go along with the new initiatives taken by the government to sensitize mass with environment protection. To conserve the environment within the campus and to solve the environmental problems, the college through various clubs and committees related to environmental activities takes steps for the promotion of the energy savings, energy conservation, water reduction, water harvesting, solid waste management, improvement in the air quality of the campus, control on noise pollution, and minimizing the use of Plastic, etc. is one of the prime objectives of the college. Environment audit report is one such initiative that has been introduced to make the college environmentally sustainable and active in spreading the education about the same. It is a tool to assess general practices implemented by the organization in terms of the impact on environment. The report also aims to spread the awareness on the adverse practices that are responsible for the degradation of the environment and how strongly the institute is involved in curtailing those practises. It helps in recognizing the need of a college to work around the year for environment sustainability thus, Environment audit forms the base line survey to decide for the green policy.

### Internal Audit Committee Members

INTERNAL AUDIT COMMITTEE		
Members		
Serial Number	Name	Signature
1	Dr K Geethakumari	
2	Dr Mumthaz P Hameed	
3	Dr Bindu L	
4	Smt Shabnam A	
5	Smt Thushara T	
6	Sri T Nishad	
7	Dr Zameer K H	

**Dr.K Geethakumari**

**Dr. Mumtaz**

**Dr. Bindu L**

**Sri. T Nishad**

**Smt. Shabnam A**

**Dr. Zameer K H**

**Smt. Thushara T**

## **An overview of the Institution**



M.S.M College is situated in the side of the national highway itself covering a total campus area 1.782 hect. The college has a total strength including degree and post graduating students, respective teaching, non-teaching and administrative staff. The working hours of the college is from about seven hours which includes a lunch break. Pre and post working hours include the workinghours of the library. The hostel is active with students and administrative staff. The administration gives priority to waste management & waste minimization to maintain hygienic campus and to keep the area clean and tidy at all times.

The wastes generated in the campus can be categorised into:-

- i)Biodegradeable and**
- ii)Non-Biodegradable wastes.**

### **Biodegradeable wastes**

Organic wastes – biodegradable materials that come from living things- have been an important source of pollution in the environment. Even though most of the organic wastes in the soil add up nutrients and minerals, inappropriate disposal practices might cause severe damage to the environment. Waste systems produce physical, chemical, and biological stressors that may harm ecosystems and may be manifested in many ways, including loss or diminished quality of habitats, reduced integrity and decreased biodiversity. In order to maintain the quality of the environment this waste should be recycled in a sustainable manner.

Being an institution with more than 2000 students, a considerable amount of food waste is generated every day and if the food waste generated can be managed in the place of origin itself, a

big dilemma can be contained and managed. The institution has adapted several steps to keep our surroundings clean and environment friendly. Two large **earthen pits/ landfills** are constructed in two corners of the campus for the dumping of biodegradable waste materials.

In order to maintain a sustainable cycle, the biodegradable fraction of organic waste is converted into useful organic manure or fertilizer through various recycling techniques. Composting is the process of decomposition of organic material where the organic material is acted on by soil organisms resulting in the recycling of nitrogen, phosphorus, potassium, and other soil nutrients into humus-rich components. A full-fledged vermicomposting unit is functioning in the campus which is sustained by student's participation. AFRP molded biogas plants with water jacket are installed in the campus and college hostel, which is used to convert the food waste in to other product and the natural gas produced from these plants are utilized in the canteen and college hostel kitchen.



Vermicomposting



**BIOGAS Facility**

## Liquid Wastes

Liquid waste also is collected and disposed in safe manner ensuring that they are not leaked in to the surrounding. Chemical liquid waste generated from laboratories are collected in separate underground pits without contaminating nearby soil and waterbodies.

## Non Biodegradeable wastes

### Plastic wastes

Plastic and other non-biodegradable wastes are collected separately and handed over to government as well as private agencies for the further recycling. Haritha Karma Sena or the Green Task Force collects plastic wastes from the institution.

## Incinerators



Incinerators are installed near to ladies' toilets which provide clean, environment friendly method for the disposal of waste.

The college has adopted various measures to keep the campus ecofriendly by prompt and safe disposal of all types of waste materials. The college has been notified as a plastic free environment. The college encourages handling of college and hostel food products either using steel implements such as containers, spoons, plates etc or biodegradable paper cups, plates etc. To sensitise and create awareness among students, conspicuous boards have been set up against the use of plastic. The college also adopts the efficient concept of Repair, Reuse and Recycle to dispose waste. For handling of handling of day-to-day waste generated due to consumption by the students and teachers, the dust bins have been segregated into dry and wet waste. All such wastes are disposed into two deep pits one each for dry and wet inside the college premises. The most packaging material is reused for transportation from college to other places. All the used newspapers and magazines are disposed through scrap dealers.

The dust bins and eco-friendly trashes are kept in different places across the campus to provide a dust free atmosphere to the stakeholders which are labelled properly for the indication of degradable and non-degradable items. Swachh Bharath Abhiyan and National service schemes are implemented

effectively towards sanitation, solid waste management and refining drinking water quality to promote cleanliness to rural and tribal people across Kayamkulam. In addition to Natural Ventilation exhaust fans are made available in all buildings to replace 'stale' air with 'fresh' air which helps to create favourable microclimate during the occupied periods.

### **ENERGY CONSERVATION:**

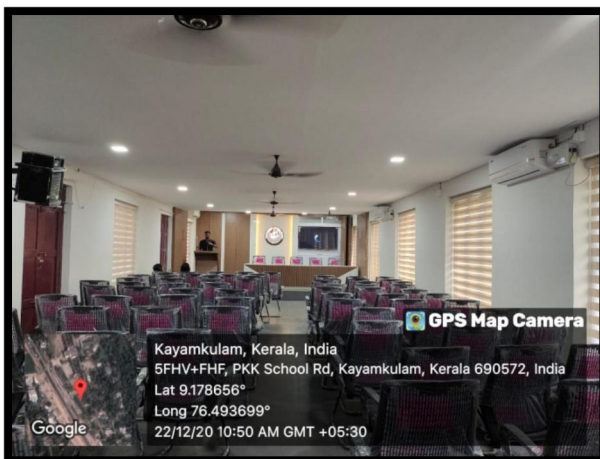
The energy is utilized in the Campus for lighting, space heating and cooling, running of laboratory instruments, appliances, water heating, ground water pumping, cooking and transportation. The structure and design of the college is based upon use of natural lighting and ventilation. LED bulbs are used in rooms. Energy is also conserved by using natural light in the classrooms. The college has a canopy of trees and plants that make the environment carbon dioxide free and to maintain health of all the inmates. The college organises the lectures on Energy conservation in order to give awareness to the students. It is made mandatory that fans and bulbs are turned off while leaving the rooms. The College encourages using bicycle by students and staff to maintain eco-friendly atmosphere in the campus and to reduce carbon-di-oxide. It is recorded that the College has a large number of ventilators for effective air circulation. It is further revealed that all the selected locations are having pure air without any air contaminants with good air exchange/circulation in the campus. The team noted that some areas like the Examination Centre, auditorium are recorded with high level of carbon dioxide level due to student mobilization and the maximum number of electrical items fixed from which the carbon dioxide emission was found to be higher. Well maintained generator system is there in the campus.



**Generatorsystems**



**Green Office System aimed at minimising the use of Paper**



**Use of LED lights**

**WATER CONSERVATION:**

The basic use of water in the college campus:

Drinking

Laboratory

Gardening  
Kitchen and Toilets  
Others

Water is stored by following methods:

- Water tanks
- Rain water storage tanks
- Waste water is used for Garden in the campus.

The basic ways practised in the campus to reduce the amount of water usage:

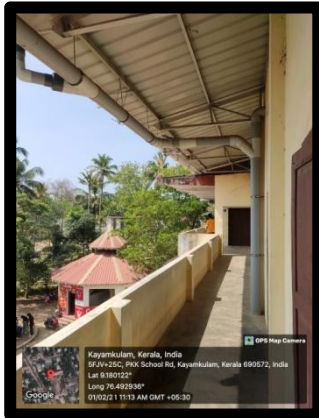
- Closing the taps after usage.
- Regular maintenance and monitoring of valves in supply system to avoid over flow, leakage and spillage.
- Water conservation awareness for students.
- The college attempts to manage wastewater coming out from Department laboratories, canteen and hostel. The college has four wells and a borewell to provide water in the campus.



**Borewell**



## Rainwater Harvesting



Rainwater harvesting is an easy and simple technology used to conserve rainwater by collecting, storing, conveying and purifying of rainwater that runs off from rooftops, parks, roads, open grounds, etc. for later use. Rain water falling on the rooftop of 'C' bloc building is collected with the help of artificially designed systems and the collected water is passed through a purifier tank filled with charcoal, boulders, gravels and coarse sand, which will act as a filter for the impurities that are carried along with the first flow of water, and the purified water is flushed in to a well where it is stored. From the well it is pumped in to the reservoir tank with 35000 litre capacity and is utilised for various purposes.

## Green Campus

The management has created a very good campus ecosystem for making a coexisting and sustainable environment which includes natural and planted vegetation supporting a rich biodiversity of flora and fauna. The students of M.S.M. College conduct more awareness programmes on cleanliness, need for prevention of plastics, solid waste management and sanitation and importance of environment to the

rural people, throughNSS and NCC. The students collected and disposed the wastes in the trash by using eco-friendly covers. They created awareness among the rural and urban people to keep the surroundings clean and hygiene.

A number of programmes and rallies are conducted periodically during the celebration of various events such as 'Independence Day', 'Republic Day', 'World Environmental Day' and 'Biodiversity Conservation Day' events The environmental activities in the campus is implemented through the Eco club, Nature club, Science club, Fine Arts club, Women cell, Associations, Forums, NCC (National Cadet Corps) unit and NSS (National Service Scheme) unit. The students and staff are members of the club and actively participate in maintaining a Green Campus . Conducting frequent seminars, conferences, workshops, awareness rallies, etc. on topics relevant to the environment is necessary to educate and create awareness among the students and staff members.The College has taken sufficient attempts to disseminate the green campus motto and green pledge as well as awareness programmes such as 'Don't cut trees', 'Don't use plastic bags', 'Don't waste waters', 'Plastic Free Zones' and 'Preserve the Natural Resources' etc. among the students and staff members in the campus

Plants are distributed on **World Environment Day** every year. Saplings are distributed to the visitors and guest on various occasions.



**Planting Saplings**



**Awareness Drives**



**Cleanliness week**

The Milad-E-Sherief Memorial (MSM) College provides the vocational training on, mushroom cultivation, vermi-composting, bee keeping, ornamental fisheries, organic farming and medicinal plant cultivation to students in order to overcome seasonal employment problem. The students join with the farmers to practice what they learn. Rice plantation was also done in a nearby location under the ownership of the management. The Campus helps to cultivate social commitment and to expose the students to get exposure to the social realities and to build a relation between student community and the other communities which in turn facilitate social interaction, inter-personal communication skills and develop emotional maturity of students. The College also supports the students to improve their personality. On the whole, the Institution accelerates the activity of preparing the students to face emerging tasks by developing qualities such as cooperation, team spirit, leadership, discipline and development of creative talents including to boost their self-confidence.



**Medicinal garden**



### **Noise**

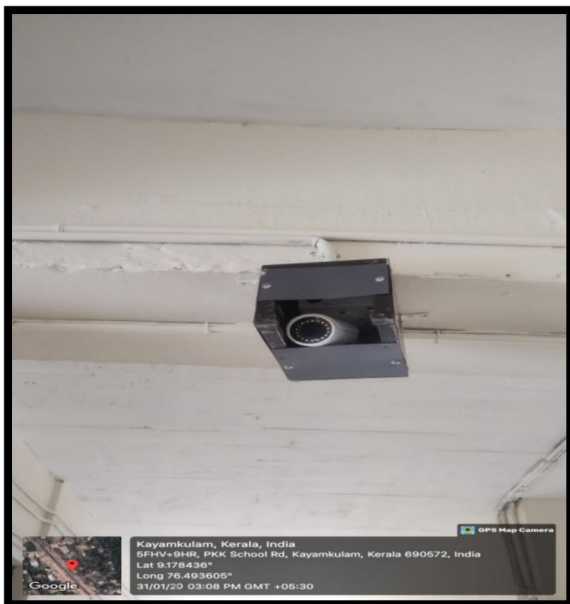
Noise is all unwanted sound or set of sounds that causes annoyance or can have a health impact and noise level are measured in decibels (dB). Noise pollution is defined as consistent exposure to elevated sound levels that may cause adverse effects in humans or other living organisms. It is found from the evaluation made by the team that most of the noise level values across campus are as per the normal permissible range. Within the auditorium the noise levels were within range. Sound levels in other areas of campus are largely due to the traffic and interactions of people on campus.

### **Clean Air**

All the rooms are well ventilated. Windows are designed in such a way that the flow of air is at ease. The college has a canopy of trees and plants that make the environment carbon dioxide free and to maintain health of all the inmates. The garden has wide variety of trees which provide shade and a beautiful ambience. Heavy duty vehicles are strictly prohibited in the campus.

### **Safety Measures**

College has very good safety measures as per the green building conservation code such as fire extinguisher and fire bell and alarms in apt spots of the campus. Surveillance camera is placed all over the campus.



**Surveillance Cameras**

## Steps towards cleanliness

**Swachh Bharath Abhiyan under Clean India Mission** is the new initiative and a step towards sanitation, solid waste management and cleanliness to promote cleanliness across India. It is the country-wide campaign applied on a large scale in India for both the rural and urban place, producing needs for the bathrooms and providing hygienic atmosphere amongst the population by household members was the main purpose of this. The NSS, NCC and the other clubs participate in this mission.

## Green Campus

The botanical garden of MSM College is a space of greenery and it is a visual treat to public by offering a wide variety of flora. It imparts awareness on conservation and natural propagation of different plant species. The botanical garden includes trees, shrubs and herbs of different medicinal, botanical and ethnic importance. Garden conserves indigenous and rare plant genera. The flowering plants and herbs invite various species of flies, wasps, bees etc. One corner of the garden comprises different bamboo species. The up keeping and maintenance of garden has being done regularly. Many fruit trees are also deep rooted in the garden. The following medicinal plants can be found in the lot:-

*Biophytum Sensitivum*

*Boerhaavia diffusa*

*Murraya*

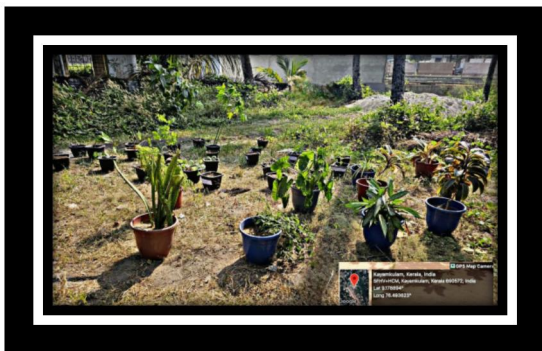
*Aloe vera*

*Elephantopus Scaber*

*Piper nigrum*

*Sida acuta*

*Andrographis Paniculata*





### Suggestions

- A proper step may be taken to minimize the environmental degradation by means of developing 'Sanitation and hygiene policy', 'Water conservation policy', 'Waste management policy' and 'Green campus and Environment policy' in collaboration with Governmental and Non-Governmental Organizations.
- Students may be taken to some industrial areas including the waste management sites to teach about the recycling of wastewaters, solid wastes, natural ecosystem, pollution-free environment and environmental education.
- Renovation of Tanks and water bodies, groundwater recharge and maintenance of water balance, reuse and recharge structures and preservation of existing water bodies.
- A wastewater treatment plant should be installed to recycle and reuse the waste water generated from domestic use. Use reusable resources and containers and avoid unnecessary packaging wherever possible.

### Conclusion: -

Milad E Sherif Memorial (MSM) College Kayamkulam, Alappuzha takes effective steps to maintain sustainable environmental practices. The environmental awareness initiatives taken by the management are substantial. Environmental awareness programmes initiated by the administration proves that the campus is going green. The college campus maintains variety of plants which is highly appreciable. Few recommendations are added for waste management and waste reduction using alternate eco-friendly and scientific techniques. This may lead to the prosperous future in context of Green Campus and thus aid in a sustainable environment and community development. Further the team recommends the college for going for an external audit in future.