

K.M.G COLLEGE OF ARTS & SCIENCE, GUDIYATTAM

Permanently Affiliated to Thiruvalluvar University and
Recognized by UGC under Section 2(F) & 12(B) of the UGC Act 1956.

Accredited with B+ Grade by NAAC

Associate Member of ICT Academy



GREEN AUDIT REPORT

2019-2020

AUDIT COORDINATOR

1.	Dr.M.VALARMATHI Principal	Chairperson
2.	Prof.J.SRINIVASAN IQAC	Coordinator
3.	Dr.D.MANIKANDAN Head, PG and Research Department of Microbiology	Coordinator
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Green Audit Report (2019- 2020)

This report describes the status of environmental management at K.M.G College of Arts and Science, Gudiyattam. The report provides an overall idea about existing conditions, efforts in use to make the area green and to increase the awareness among stakeholders etc.

It helps in understanding the activities carried out by the college team as a responsible enlightening citizen and provides guidance on further scope for improvement. This report is prepared based on the evidences produced during the course of audit.

Introduction:

K.M.G. College of Arts & Science was established in the new millennium 2000 and the visionary was the philanthropist Shri.K.M.Govindarajan, the founder of KUNJA KOUSALYA AMMAL GOVINDARAJAN EDUCATIONAL AND CHARITABLE TRUST, GUDIYATTAM. His mission was to offer Higher Education in the fields of Arts, Science and Teacher Education to the needy, poor and middle class students belonging to this area at an affordable cost and make them fully employable and economically self dependent.

The maximum support given by the management and the staff made it possible for the Institution to achieve human excellence and to mould the students in the path of success through Education.

Our college Milestone started with of 5 Under Graduate courses and now it offers ten Under Graduate courses, 8 Post Graduate courses,5 M.Phil Research Programs and 4 Ph.D Programs at the sprawling campus of 15 acres of land in Gudiyattam.

VISION:

Empower young men and women by educating them in the pursuit of excellence, character building and responsible citizenship.

MISSION:

Through the Vision of the founder, the College offers Higher Education to the Socially, Economically offer Higher Education in the field of Arts, Science and Management to the needy and make them fully self dependent.

- The Total strength of the college -2202
Teaching Staff-117
Non Teaching - 64
Students -2021
- Our College has class rooms with good infrastructure and well equipped laboratories for Microbiology, Biochemistry, Computer science, BCA, Chemistry, Physics and common

instrumentation lab. Separate staff rooms and study rooms are also available in our campus.

- Adequate Sanitary facilities provided for both boys and girls separately.
- Library has plenty of subject books, e-books, books related to competitive examination and journals intended for all subjects.

Activities organized to create greenery and maintenance at college campus:

- Plantation of diversified species
- Vegetative propagation
- Uses of medicinal plants
- Identification of plants species

Scope of Work:

The following Environmental Issues were studied from the above mentioned campus area.

- Water Environment including rain water harvesting of the campus.
- Plant diversity.
- Chemical Waste Management.

Based on the available data information provided by the K.M.G officials this report has been prepared and the recommendations have been given for the betterment of campus environment are provided.

The aim of the Environmental policy:

The policy aims to eliminate or reduce all forms of environmental pollution and encourage all faculty members, students and other stakeholders to do the same. The college always raises awareness about on environmental issues. It encourages initiatives leading towards a clean environment through academic departments, NSS units, Women Cell collectively.

The policy promotes the 3 R's for waste in the following order: Reduce, Reuse and Recycle and provide convenient waste collection points and guidance for the disposal of

- ✓ Paper
- ✓ Cardboard
- ✓ Glass
- ✓ Plastic
- ✓ Electrical items and white goods
- ✓ Hazardous waste
- ✓ e-wastes

Water Supply:

Water is a key driver and it is vital for the development of Biodiversity, Agriculture, Humans as well as the Economy. The state of Tamil Nadu has also faced severe impact due to water scarcity in the recent past. Therefore water management is a crucial step of sustainable development and it also makes an integral part of the Sustainable Development Goals (SDGs). In our college we are providing a proper and adequate chlorination process to water periodically, to avoid water borne contamination and also reverse osmosis treated for drinking.



Rain Water Harvesting:

A 5-7 feet pit was dug at the lowest elevation to save the draining water runoff water from the campus. An embankment or a bund was constructed at the lower elevation of the pit to restrict the flow of water. An interesting thing about this effort is that the dug well from which water is drawn out for daily use is located in the right middle of the pit. Beside, there is a bore well in our campus and the storage capacity of the water tank around 1,00,000 to 1,50,000 liters of water. This makes us self-sufficient for around 3 to 4 months and it is also used for Campus plantation after the rainy season.



Composting:

The Greenery Club members conducted the process of Composting for recycling the organic waste through decomposition which can be used as a manure for plantation. Composting helps us to eliminate greenhouse gases as less methane-producing wastes go as landfills. This in turn aids in reducing the carbon footprint. It also helps us to reduce the use of pesticides on the plants and inturn the ground, because the compost has nutrients which helps the plants to grow health. Through decomposition process, it takes organic waste and turns the matter into a “topsoil-like” material called compost, which has environmental and economic value. Nearly 50 students 2 faculties were involved in this process.



Plant Diversity:

To create green cover with eco-friendly atmosphere and pure oxygen in the college campus, plantation program is organized every year with all students, Principal, and all department faculty members. This year about 50 ornamental, avenues, medicinal plants with rare and exotic beautiful trees were planted in the botanical garden and in other parts of the college campus. To maintain the greeneries in the campus, we regularly maintain the gardens which was taken care by paid staff under the guidance of garden committee members. Moreover, every year we try to plant new trees.



Identification of Plant Species:

There are many plant species in our college campus. The faculty members of Microbiology department audited and identified various plant species with the help of flora.

The plant species suggested for green belt development to the present layer of vegetation on the boundary would be helpful for mitigating gases and particulate matter.

List of plants in the college campus

S.No	Botanical Name	Local Name	Family	Uses
1	<i>Azadirachta indica</i>	Vembu	Meliaceae	Anti inflammatory, Antimicrobial
2	<i>Ficus religiosa</i>	Arasa maram	Moraceae`	Anti ulcer, anti bacterial and anti diabetic
3	<i>Cocos nucifera</i>	Thennai maram	Arecaceae	Avenue tree
4	<i>Saraca asoca</i>	Ashoka maram	Legume	Avenue tree
5	<i>Syzygium cumini</i>	Naval Maram	Myrtaceae	Antidiabetic, Avenue Tree
6	<i>Pongamia pinnata</i>	Pungai Maram	Fabaceae	Anti tumour, Avenue Tree
7	<i>Magnolia champaga</i>	Shenbaga Maram	Magnoliaceae	Anti Rheumatoid, Avenue Tree
8	<i>Citrus limon</i>	Elumichai Maram	Rutaceae	Blood pressure treatment
9	<i>Muntingia calabura</i>	Then pazha Maram	Muntingiaceae	Anti diabetic
10	<i>Phyllanthus emblica</i>	Nelli Maram	Phyllanthaceae	Antioxidant, Anticancer, Avenue Tree
11	<i>Nyctanthes arbor-tristis</i>	Pavalamalli chedi	Oleaceae	Antimalarial, Ornamental plant
12	<i>Ocimum tenuiflorum</i>	Thulasi	Lamiaceae	Anti aging
13	<i>Aloe vera</i>	Katrashai	Asphodelaceae	Improves digestive health and heal burns
14	<i>Curcuma aromatica</i>	Manjal chedi	Zingiberaceae	Anticancer
15	<i>Solanum torvum</i>	Sundakkai chedi	Solanaceae	Hypertension treatment
16	<i>Solanum melongena</i>	Kathari chedi	Solanaceae	Antidiabetic
17	<i>Fargesia nitida</i>	Moongil chedi	Bambosoidae	Ornamental
18	<i>Psidium guajava</i>	Goyya chedi	Myrtaceae	Antidiabetic, Antiinflammatory
19	<i>Musa paradisiacal</i>	Vazhai maram	Musaceae	Antiulcer
20	<i>Clitoria ternatea</i>	Sangu poo chedi	Fabaceae	Antistress, Antidepressant



Cordyline terminalis



Cycas revoluta



Clitoria Ternatea



Fargesia nitida



Canna Tropicana



Selection of tree species:

The choice of species is based on the adaptability to the site, early returns, multiple uses, complimentary role to the system and its possible role during the lean/critical periods. The key factor contributing to the success of tree planting for the selection of suitable tree species. Some of the considerations for selection of tree species are:

- Adaptation to local soil and agro-climate condition.
- Drought resistant species that can survive long dry periods.
- Multipurpose use species.
- Species that can serve for soil and water conservation.
- Species that help in building up soil fertility.
- Species that have good coppicing ability.
- Eco-friendly management

Chemical Waste Management:

Proper chemical waste management is necessary to protect the safety of the college campus and surrounding communities of the environment. Inspect their entire reagent chemicals in all laboratories based on the hazards they create. Look for chemicals that are no longer needed, old and out of date or unusable. Use only common chemical names or IUPAC (International Union of Pure and Applied Chemistry) nomenclature when listing the chemical constituents on the label. Solid waste includes any laboratory material that comes in contact with a chemical.

Chemical Waste Disposal in Biochemistry Lab:

Deep well or underground injections are the common hazardous waste management techniques being used in our Department to dispose waste chemicals and broken glasswares. Concentrated acids and bases are disposed to the sewer after dilution.

Chemical Wastes Generated in Chemistry Lab:

The following methods are adopted in chemistry laboratory for the disposal of broken glasswares, fumes, solid wastes and harmful chemicals.

Concentrated acids and bases were diluted using water and sent into drainage. Sometimes concentrated acids and bases are neutralized using washing soda or bicarbonates and discharged into drain in order to minimize soil pollution. Broken glasswares are stored in a labeled robust waste bin separately from other solid waste for recycling. Exhaust fans and fumehoods are used to remove the fumes and waste chemicals are disposed in a pit far away from the laboratory.

Microbiological Wastes:

Microbiological wastes might have chances of being contaminated with microbial pathogens. So all the liquid and solid wastes generated during the microbiological lab practices were put into an autoclavable plastic covers and decontaminated properly using autoclave and Steam under pressure. The autoclave cycle parameters are 121°C for 15 minutes at 15 lbs pressure. After proper decontamination only all the microbiological wastes were disposed.

After the completion of decontamination cycle, the autoclave is run with empty cycle of same parameters mentioned above without any glassware and microbial culture media. Only then the normal sterilization cycle can be carried out.



E-Waste Management

The department disposes all the old peripherals and condemned items with the help of scrap dealers every year, This work has been done after the annual stock verification was completed at the end of every academic year based on the recommendations of the committee.

Solid Waste Management:

The food waste material generated in the college canteen is converted into valuable compost and it is used as a compost to enrich the soil quality. Vegetable peels, fruit peels and wasted cooked food which is generated in college canteen are considered as wet waste. The dried leaves and plant materials collected from the garden are considered as dry waste. Wet waste from the canteen and dry waste from college garden are dumped in alternate layers. Every few days this pile will be turned up and down for aeration and within 70-80 days these materials are converted to compost. This compost is used as a biofertilizer in the college garden.

Other Environmental Activities:

Environmental activities are conducted every year and also specific activities are carried out each year differently.

A competition in association with Tamil Nadu Water Supply and Drainage Board. It gave valuable information was conducted about the conservation of water. Nearly 80 students participated in this Program. The best slogans were selected and the prizes were distributed to the winners. It helps the campus to execute as well as to maintain the provision of water supply and sewerage facilities.





Safety Aspects in the campus:

- Teaching and non-teaching staff of the college were trained to help during emergency situations.
- Fire extinguishers and sprinklers are placed as per fire safety rules at appropriate locations.
- Safe parking was followed.
- First aid box was installed in labs to help students who can possibly be injured while performing an experiment.

Conclusion:

The institution makes all its efforts sincerely towards the well being of our Environment. The institution has applied innovative ideas on Waste Water management. It will be meaningful to say about the compost used as fertilizer, this process gives successful waste management system of our campus. Through this any common individual can visibly identify the commitment and responsibility towards the nature of our generous institution.

Environmental awareness is the primary initiation. The installation of Solar panels and Rain Water Harvesting systems are noteworthy. Besides, environmental awareness programmes initiated by the administration shows that how the campus is getting greenery atmosphere. Few more recommendations were added to control the threat of waste management using eco-friendly and scientific techniques. These fruitful efforts will definitely lead to the prosperous future in milieu of Green Campus towards the sustainable Environment and community development.

COORDINATORS:

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2. Prof.A.M.Rajalakshmi,

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Enviro Club Convener

MEMBERS:

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