

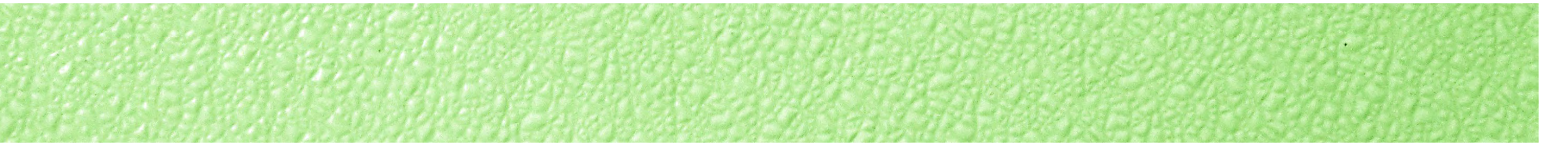


ENVIRONMENT AUDIT REPORT

**ST MICHAEL'S COLLEGE
CHERTHALA**

2024

Executed by



ENVIRONMENT AUDIT REPORT

ST. MICHAEL'S COLLEGE

CHERTHALA

2024





Environment Audit Report
ST. MICHAEL'S COLLEGE, CHERTHALA
Report No: EA 1112
2024

Environment Audit Team

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About OTTOTRACTIONS

OTTOTRACTIONS, established in 2005, is a distinguished organization with a proven track record and extensive expertise in the fields of energy, engineering, and environmental services. As the first Accredited Energy Auditor from Kerala, OTTOTRACTIONS specializes in conducting Mandatory Energy Audits in Designated Consumers, in accordance with the Energy Conservation Act-2001. Acknowledging its outstanding contributions, the Government of Kerala has recognized and commended OTTOTRACTIONS. In 2009, the organization was honored with the prestigious "The Kerala State Energy Conservation Award" for its exemplary performance as an Energy Auditor. OTTOTRACTIONS takes pride in its commitment to quality, holding ISO 9001-2015, ISO 17020-2012, and ISO 14001-2015 certifications. These certifications underscore the organization's dedication to delivering high-quality services in energy, engineering, and environmental sectors.

Acknowledgement

Our collaboration with the administration and staff of St. Michael's College, Cherthala, was a privilege, and we extend our sincere gratitude for their invaluable assistance. Their support played a pivotal role in the timely completion of the environmental audit and the subsequent preparation of this report.

In sincere appreciation, we acknowledge the diligent efforts and commitments of all individuals involved in contributing to the development of this report. Their steadfast support has been indispensable in bringing this project to fruition.

We would like to express our gratitude to the dedicated audit team for their unwavering support throughout the audit process. Their genuine efforts have significantly contributed to the successful execution of the audit.

A special recognition is extended to our consultants, engineers, and backup staff for their steadfast dedication, which has been pivotal in ensuring the quality and accuracy of this report. We value their tireless efforts in making this collaboration a resounding success.

Thank you,

B V Suresh Babu
Accredited Energy Auditor
AEA 33, Bureau of Energy Efficiency

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INTRODUCTION

St. Michael's College, Cherthala, has entrusted Ottotractions to conduct a comprehensive environmental audit of their campus building. This collaborative effort aims to assess and enhance the college's environmental practices and sustainability initiatives. The audit report is structured into different sections, each focusing on specific aspects of environmental performance within the campus. These sections meticulously outline recommendations for improvements pertaining to various environmental issues. These could range from energy efficiency and waste

management to water conservation and overall ecological impact. The culmination of these recommendations is presented in Section 4, where an action plan is consolidated. This action plan serves as a strategic guide for the college, providing a clear roadmap to address and implement the suggested improvements. It outlines specific steps, timelines, and responsible parties, fostering a systematic approach to environmental enhancement.

By entrusting Ottotractions with this environmental audit, All Saints' College is taking a proactive stance toward sustainable practices and demonstrating a commitment to fostering an eco-friendly campus. The collaboration emphasizes the importance of continual improvement and responsible environmental stewardship within the educational institution.



BACKGROUND

St. Michael's College, Cherthala essentially epitomizes the lofty pedagogical mission of the Diocese of Alappuzha which has been devoting long years to the grooming of erudite citizens for the nation by imparting value-based education materialised through the selfless service of committed and dedicated group of visionaries. The college is situated on the highway, 18 kms north of Alappuzha town, silhouetted against the captivatingly verdant scenery. The sprawling campus of the college with its solemn and serene air is a magnificent sight to behold from the national highway

– NH 66. However, the grandeur duly adorns the prime institute under the Diocese of Alappuzha. As the well-deserved outcome of the determined effort of the stalwarts of the Diocese, a long-treasured dream found its realization in this citadel of knowledge which took its birth on 19 June 1967. The construction of the infrastructure began in the middle of July 1964 itself and the foundation stone was blessed by His Excellency Bishop Michael Arattukulam and was laid by the then Vicar General Msgr. Silverious Jackson. Pledging its loyalty and coalescence, the community joined this noble endeavour quite enthusiastically by setting apart their ‘Kettuthengu’ to give their mite towards the construction of the college. The pace of progress in its development was duly accelerated by the proper guidance of Msgr. Joseph Thekkepalackal and the institution was initially named as ‘St. Michael’s Institute’. The college chapel that was built opposite to the college in 1973 later grew into a full-fledged parish church.



Occupancy Details					
Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
Total Students	1121	1098	1137	1179	1177
Staffs	58	58	53	58	60
Total Occupancy of the college	1179	1156	1190	1237	1237

Total student strength of the campus is 1237. For calculating per capita carbon emission estimation, the student strength is taken into account.



ENVIRONMENTAL ISSUES

This section is broken down into the following different areas: waste, water, energy, resource and materials use and procurement. A final 'other' section is also included for any additional issues.

1.1. Waste

The manner in which communities handle their waste is pivotal in determining their efficiency in resource utilization. In our buildings, dedicated bins for general waste and mixed recyclables, including plastic bottles, cardboard, cans, and paper, are strategically placed. On average, each floor in the building areas is equipped with its own general waste bin and a recycling bin.

To tackle the issue of plastic recycling, the campus utilizes diverse collection strategies, such as curbside pickup, designated drop-off locations, buy-back initiatives, and deposit/refund programs. The most convenient method, curbside collection, entails the routine retrieval of recyclables, including plastic bottles and containers, by the "Haritha Karma Sena." Strategically positioned bins across the campus facilitate the collection of plastic bottles and single-use plastics.

In addition to infrastructure, the college actively promotes awareness regarding plastic waste issues. Students and teachers are encouraged not to bring plastics onto the campus, aligning with the college's commitment to minimizing the environmental impact of plastic waste. This multi-faceted approach reflects the institution's dedication to effective waste management and sustainability practices.



The primary emphasis in waste management on the campus revolves around the handling of solid waste. These solid wastes primarily fall into three categories: food waste, paper waste, and plastic waste.

Food waste generated on campus stems from two primary sources. Firstly, there is vegetable waste generated in the kitchen during food preparation. Secondly, food waste is generated by students and staff after the consumption of meals. To address the organic component of these wastes, a biogas plant is employed for the treatment of degradable waste.

This approach underscores the campus's commitment to sustainable waste management, particularly in dealing with diverse types of solid waste. By categorizing and addressing each waste stream effectively, the campus aims to minimize its environmental footprint and promote responsible waste disposal practices.

Degradable Waste Generation					
St. Michael's College, Cherthala					
Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
Total Occupancy	1179	1156	1190	1237	1237
Waste generated in kg /day	23.58	23.12	23.8	24.74	24.74
Waste generated in kg /Yr	5187.6	5086.4	5236	5442.8	5442.8

Burning plastics shall be strictly restricted inside the campus. **Burning plastic** and other wastes releases dangerous substances such as heavy metals, Persistent Organic Pollutants, and other toxics into the air and ash waste residues. Such pollutants contribute to the development of asthma, cancer, endocrine disruption, and the global burden of disease.

Solid non degradable Waste Generation					
St. Michael's College, Cherthala					
Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
Total Occupancy	1179	1156	1190	1237	1237
Waste paper generated in kg /day	0.2358	0.2312	0.238	0.2474	0.2474
Waste plastic generated in kg /day	0.3537	0.3468	0.357	0.3711	0.3711
Waste paper generated in kg /Yr	51.88	50.86	52.36	54.43	54.43
Waste plastic generated in kg /Yr	77.81	76.30	78.54	81.64	81.64

WASTE MINIMIZATION AND RECYCLING		
1	Does your institute generate any waste?	Yes, Solid waste, Canteen Waste paper, plastic, Horticulture Waste etc.
	If so, what are they?	
2	What is the approximate amount of waste generated per day? (in Kilograms/) (approx.)	24.74
3	How is the waste generated in the institute managed? By	Optimize the use of single-sided printed paper for internal communication. Convert kitchen waste into valuable resources, including manure and biogas. The campus is equipped with three distinct waste bins for efficient segregation of biodegradable and non-biodegradable waste.
	1 Composting	In-house
	2 Recycling	In-house
	3 Reusing	In-house
	4 Others (specify)	
4	Do you use recycled paper in institute?	Yes
5	Do you use reused paper in institute?	Yes
6	How would you spread the message of recycling to others in the community? Have you taken any initiatives? If yes,	Awareness programs through Nature Club, Exhibition and NSS
	please specify.	
7	Can you achieve zero garbage in your institute? If yes, how?	Yes

Green Cover Audit		
1	Is there a garden in your institute?	Yes
2	Do students spend time in the garden?	Yes
3	Total number of Plants in Campus	Plant type
		Trees
		Ornamental
		Approx. number
		462
		Not estimated
4	Number of Tree Plantation Drives organized by School per annum. (If Any)	Yes, through Nature club plantation drives are organized.
5	Number of Trees Planted in Last FY.	5
	Survival Rate	100%

All activities conducted on the campus, encompassing energy consumption and waste management, contribute to the overall carbon footprint. Carbon sequestration acts as the counterbalancing process, wherein emitted carbon dioxide undergoes sequestration based on the chosen method. While various natural sequestration processes occur on a campus, tree-based carbon sequestration stands out as a prominent method.

Trees play a pivotal role in sequestering carbon dioxide through the biochemical process of photosynthesis. During this process, carbon is stored in various parts of the tree, including the trunk, branches, leaves, and roots. The quantification of carbon sequestered by a tree involves various parameters, and this study adopts a volumetric approach. This method considers factors such as Circumference at Breast Height (CBH), height, average age, and the total number of trees on the campus.

For detailed insights and calculations, please refer to the technical supplement, which includes a comprehensive table outlining the necessary details for

understanding the carbon sequestration capacity of the campus trees. This approach underscores the campus's commitment to quantifying and understanding its carbon balance and promoting initiatives that contribute to carbon sequestration.

Carbon Sequestration					
Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
Total No of Trees	462	462	462	462	462
Carbon sequestered by trees in the campus (tCO ₂ e)	8.44	8.71	8.98	9.25	9.54

Carbon sequestered by a tree can be found out by using different methods. Since this study is employed the volumetric approach, the calculation consists of five processes.

- Determining the total weight of the tree
- Determining the dry weight of the tree
- Determining the weight of carbon in the tree
- Determining the weight of CO₂ sequestered in the tree
- Determining the weight of CO₂ sequestered in the tree per year

Carbon sequestered by each species of trees in the campus compound is given in the Table. Detailed calculation results are listed out in the tables provided in the technical supplements of 'Carbon sequestration'.



3.1.1 ENERGY

a. Electricity

The total emission of the carbon dioxide per student is 55.45 kg per year. Emission reduction plans were prepared to bring the existing per capita carbon footprint to zero or below so as to bring the campus a carbon neutral or carbon negative campus. All energy efficiency projects shall be implemented, So, the effective specific carbon emission per student is -2.26 kg of CO₂ per year only. This can be achieved in many ways but, every alternate plan must be in such a way that, it must fulfill the actual purpose of each activity that is considered.

Here, three major methods are taken in to account as the plans for reducing the carbon emission of the campus.

- Resource optimization
- Energy efficiency
- Renewable energy

Electricity Consumption

Electricity Connection Details		
St. Michael's College, Cherthala		
1	Name of the Consumer	St. Michael's College, Cherthala
2	Tariff	LT-6A/Ndom
3	Consumer Numbers	1155209003214, 1155200018399, 1155208020126, 1155207021332, 1155201018481
4	Connected Load Total (kW)	-
5	Annual Electricity Consumption (kWh)	31831

Annual Electricity Consumption (kWh)					
Consumer No	2018-19	2019-20	2020-21	2021-22	2022-23
1155209003214	38424	15502	8761	16953	18462
1155200018399	1987	802	453	877	955
1155208020126	5962	2406	1360	2631	2865
1155207021332	662	267	151	292	318
1155201018481	19212	7751	4381	8476	9231
TOTAL	66248	26728	15106	29229	31831

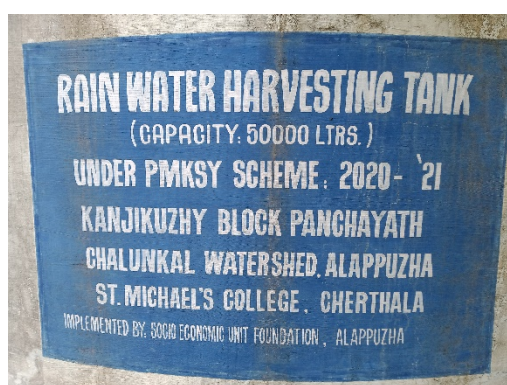
RESOURCE OPTIMISATION

The effective use of resources can limit its unnecessary wastage. Optimal usage of the resources (such as fuels) can save the fuel and can also reduce the carbon emission due to its consumption. This technique can be effectively implemented in the 'transportation' and 'waste' sectors of the campus.

WASTE MINIMISATION

Optimal utilization of paper and plastic stationaries can reduce the frequency of purchase of items. This can reduce the unnecessary wastage of money as well as the excess production of waste. In the case of food, proper food habits and housekeeping practices can optimize its usage.

Currently, College is taking an appreciable effort to reduce the unnecessary production of wastes. But the campus still has opportunities to reduce the generation of waste and can improve much more. Resource optimization can be effectively implemented in all type of waste generated in the campus and the campus can expect about 50% reduction the total waste produced.



ENERGY EFFICIENCY

Energy efficiency is the practice of reducing the energy requirements while achieving the required energy output. Energy efficiency can be effectively implemented in all the sectors of the campus.

FUELS FOR COOKING

The campus was installed a solar water heater to rise the water temperature to a much higher level, then it has to consume only very less amount of thermal energy for preparing the same amount of food. This can make a positive benefit to the campus by saving money, energy and can reduce the carbon emission of the campus due to thermal energy consumed for cooking.

TRANSPORTATION

Energy efficiency of the transportation sector is mainly depended on the fuel efficiency of the vehicles used. Here mileage of the vehicle (kmpl - Kilometres per Litre) is calculated to assess the fuel efficiency of the vehicle. Percentage of closeness is the ratio of actual mileage of the vehicle to its expected mileage. If the percentage of closeness of mileages of each vehicle is greater than that of its average, then the efficiency status of the vehicle is considered as 'Above average' and else, it is considered as 'Below average'

Renewable Energy

Solar power plant can be installed in the campus which helps offsetting the carbon foot print. The details of these projects are given in the concerned chapters.

After analyzing the historical and measured data the following projects are proposed to make the campus carbon neutral. The projects are from energy efficiency and renewable energy. The further additions in the green cover increase will also give positive impact in the carbon mitigation.

OTTOTRACTIONS- ENERGY AUDIT						
St. Michael's College, Cherthala						
Greenhouse Gas Mitigation through Major Energy Efficiency Projects						
Sl No	Projects proposed	Energy saved (Yearly)		Sustainability (Years)	First year ton of CO2 mitigated	Expected Tons of CO2 mitigated throughout life cycle
		(kWh)	MWh	Years		
1	Energy Saving in Lighting by replacing existing 3 No's T8 (40W) Lamps to 18W LED Tube	63	0.06	10	0.05	0.46
2	Energy Saving in Lighting by replacing existing 6 No's T12 (55W) Lamps to 18W LED Tube	159	0.16	10	0.12	1.16
3	Energy Saving by replacing existing 147 No's in-efficient ceiling fans with Energy Efficient Five star fans	2766	2.77	10	2.02	20.19
Total		2989	3	10	2.18	21.82

OTTOTRACTIONS- ENERGY AUDIT						
St. Michael's College, Cherthala						
Greenhouse Gas Mitigation through Renewable Energy Projects						
Sl No	Projects	Energy saved (Yearly)		Sustainability (Years)	First year ton of CO2 mitigated	Expected Tons of CO2 mitigated throughout life cycle
		(kWh)	MWh	Years		
1	Installation of 25kWp Solar Power Plant	34219	34.22	25	24.98	624.49

Water Conservation Activities	
List four uses of water in your institute	Basic use of water in campus:
	1. Drinking – Ground Water
	2. Gardening – Rain water
	3. Kitchen and Toilets –Ground water
	4. Others – Lab
How does your institute store water? Are there any water saving techniques followed in your institute?	Overhead Water Tanks and Sumps installed for storage of water.
	Rain Water Harvesting system in place
If there is water wastage, specify why and How can the wastage be prevented / stopped?	No
Record water use from the institute water meter for six months (record at the same time of each day). At the end of the period, compile a table to show how many liters of water have been used.	No logbooks are available
Does your institute harvest rain water?	Yes
Is there any water recycling system?	Yes

General Environmental Awareness Questionnaire	
Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
Does your institute have any rules to protect the environment? List possible rules you could include.	Yes
Dose Environmental Ambient Air Quality Monitoring conducted by the Institute?	No
Dose Environmental Water and Wastewater Quality monitoring conducted by the Institute?	Yes
Dose stack monitoring of DG sets conducted by the Institute?	No
Is any warning notice, letter issued by state government bodies?	No
Dose any Hazardous waste generated by the Institute? If yes explain its category and disposal method	No
Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
Does your institute have any rules to protect the environment? List possible rules you could include.	Yes
Does housekeeping schedule in your campus?	Yes
Are students and faculties aware of environmental cleanliness ways? If Yes Explain	Yes
Does Important Days Like World Environment Day, Earth Day, and Ozone Day etc. eminent in Campus?	Yes
Does Institute participate in National and Local Environmental Protection Movement?	Yes
Does the institute have any Recognition/certification for environment friendliness?	Yes
Does the institute use renewable energy?	Yes
Does the Institution conduct a green/environmental audit of its campus?	Yes
Has the institution been audited / accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	Yes (NAAC)

Best Practices and Initiatives	
Renewable Energy	Yes
Solar Power Plant	Yes
Energy Audit and Green Audit Conducted	Yes
Biogas Plant installed	Yes
Biodiversity Conservation	Yes
Green Cover	Yes
Tree Plantation Drives	Yes
ECO clubs	Yes
Groundwater Recharge	Yes
Rain Water Harvesting System.	Yes
Pollution Reduction Public Transportation	Yes
E Waste Management	Yes
Connected to authorized recycler	Yes
Solid Waste Management	Yes
Lifting of garbage from the campus on alternate days by the Municipal Corporation.	Yes
Adoption of Village	Yes
CSR	Yes
Water Conservation	Yes
Energy Conservation	Yes

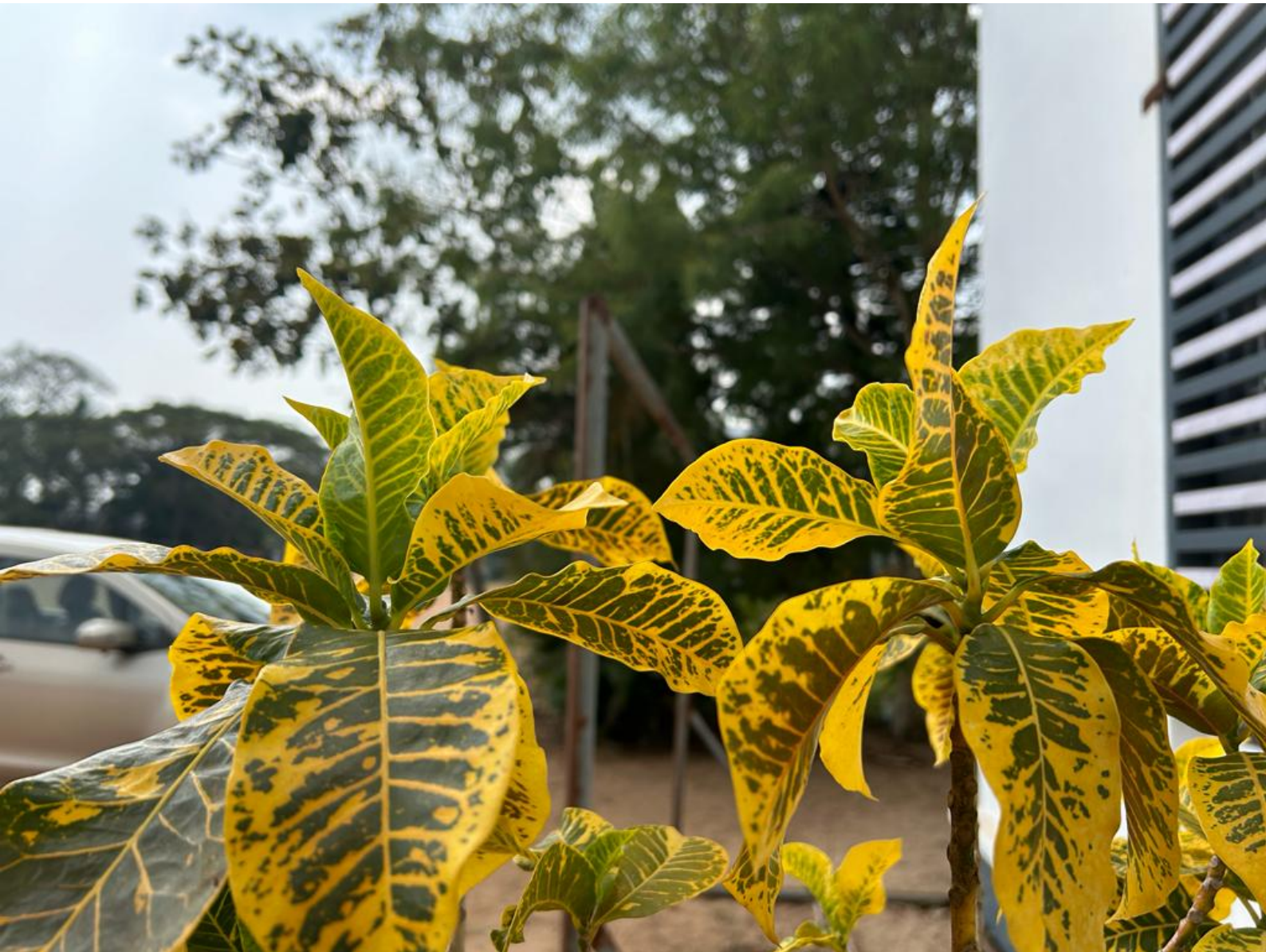


RECOMMENDATIONS

1. Implement a utility monitoring program.
 - Allocate staff to carry out meter readings for electricity, waste and water on regular basis
 - Add monitoring data to spreadsheet so results can be viewed graphically
 - Compare with the utility bills meter readings in order to ensure accuracy;
2. Consider adopting and implementing a sustainable procurement policy which takes into account the whole life cycle of a product, and make sure environmental issues are written into tenders when contracting out.
3. Consider trialing recycled paper again – many recycled brands today, such as

Evolve, are just as good as virgin paper.

4. The institution chooses re-manufactured (refilled) ink and toner cartridges over purchasing new ones, a best practice recommended for sustainability.
5. Consider producing some designated 'environmental' pages on the intranet to make it easier for staff to find environmental information. If possible, a discussion forum could be set up to allow easy internal communications and staff to make suggestions for environmental improvements.
6. Environmental training could be formalized and carried out for all staff. It does not have to be too long or onerous, providing it covers key points, particularly in relation to waste so all staff are aware of the legal requirements. At the very least, environmental information should be included in the induction pack.
7. It is strongly recommended that environmental information is also given to students and staff during induction. It is particularly important for them to be aware of what waste they can dispose of on site and where they can dispose of it, and what waste streams they must take away with them.
8. Consider implementing an environmental management system to incorporate all improvements and monitoring requirements. It does not need to be a complex system certified to any particular standard, merely a way of ensuring that baselines are set and progress is measured. Formation of Environment Policy and communicated to all faculties and other staff.
9. Plan for Zero Waste Campus Project
10. E-waste monthly inventory be maintained at campus as per E waste rules 2016.
11. A Water Meter should be installed at the institute for monitoring of water consumption per capita.
12. Increase in Environmental promotional activities for spreading awareness at campus.
13. Environment/Green committee formation for regulating eco-friendly initiatives at campus premises and periphery.



CONCLUSION

This audit involved extensive consultation with all the campus team, interactions with key personnel on a wide range of issues related to Environmental aspects. The audit has identified several observations for making the campus premise more environmentally friendly. The recommendations are also mentioned with observations for St. Michael's College, Cherthala team to initiate actions.

Carbon Foot Print											
Sl. No	Particulars	2018-19	tCO ₂ e	2019-20	tCO ₂ e	2020-21	tCO ₂ e	2021-22	tCO ₂ e	2022-23	tCO ₂ e
1	Electricity (kWh)	81320	66.68	55182	45.25	42136	34.55	56011	45.93	60510	49.62
2	Diesel (L)	0.00	0.00	0	0.00	0	0.00	0	0.00	0.00	0.00
3	LPG (kg)	0.00	0.00	1102	1.65	304	0.46	1216	1.82	1273.00	1.91
4	Biogas (m3)	0.00	0.00	0	0.00	0	0.00	0	0.00	330.00	0.462
5	Degradable Waste in kg/yr.	5187.6	3.27	5086.4	3.20	5236.0	3.30	5442.8	3.43	5442.8	3.43
6	Paper Waste in kg/yr	51.88	0.03	50.86	0.03	52.36	0.03	54.43	0.03	54.43	0.03
Total Carbon Foot Print tCO₂e/yr			69.98		50.13		38.34		51.21		55.45

Specific Carbon Footprint						
SI No	Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
1	Total carbon emission tCO ₂ e	69.98	50.13	38.34	51.21	55.45
2	Total carbon sequestration tCO ₂ e	8.44	8.71	8.98	9.25	9.54
3	Amount of carbon mitigated through renewable energy tCO ₂ e	10.48	20.95	20.95	20.95	21.41
4	To be mitigated tCO ₂ e	51.06	20.48	8.41	21.01	24.50
5	Total No of Students	1179	1156	1190	1237	1237
6	Specific Carbon Footprint kg CO ₂ e/Student/Yr	43.31	17.71	7.07	16.98	19.80

However, there is scope for further improvement, particularly in relation to waste minimization and energy monitoring. By implementing a basic environmental management system, current good practice can be formalized and a framework can be set up for monitoring, implementation of action plans and continual improvement

Net Carbon Emission after implementing Energy Efficiency projects and Renewable Energy Projects Proposed		
1	Total Carbon Foot Print tCO ₂ e/yr	55.45
2	Carbon Sequestered tCO ₂ e/yr	9.54
3	Carbon mitigated by Renewable Energy tCO ₂ e/yr (Installed)	21.41
4	Carbon mitigated by Renewable Energy tCO ₂ e/yr (Proposed)	24.98
5	Carbon mitigated by Energy Efficiency (Proposed) tCO ₂ e/yr	2.18
6	Effective Carbon footprint tCO ₂ e/yr	-2.66
7	Total No of Students	1177
8	Specific Carbon Footprint kg CO ₂ e/Student/Yr	-2.26

The audit team observed that the overall site is maintained well from an environmental perspective. There are no major observations but few things are important to initiate urgently are waste management records by monthly inventory of hazardous waste, rainwater harvesting recharge; water balance cycle and periodic inspection of buildings; environment policy and initiation of composting at campus.

References

- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle
- Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The Water [Prevention & Control Of Pollution] Cess Act-1977 (Amended 2003) and Rules- 1978
- The Air [Prevention & Control Of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982
- The Gas Cylinders Rules – 2016 (Replaces the Gas Cylinder Rules – 1981
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- The Batteries (Management and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices



TECHNICAL SUPPLEMENTS

Technical Supplements

St. Michael's College, Cherthala														
SI.No	Locations	Lights						Fans				IT		AC
		LED-T	LED - 40W	LED-sq(40W)	LED B	T8	T12	CF	WF	PF	EF	Projector	PC	1.5 TR
1	First floor	Top					2							
2		Manager Room	2			4			2					1
3		Lab	10						6					
4		IQAC	10						4					2
5		Seminar Hall				14								6
6		Conference Room	6											2
7		Class x 4	12						16					
8		Zoology Lab	5						4					
9		English Department	3						3					
10		Botany Lab					4		8					
11		Office	4						4		1			
12		Auditorium	2	5					19					
13		Canteen	2		5				6					
14		Class x 6	12						12					
15		Class x 4	16						24					
16	Ground Floor	Chemistry Department						3	1					
17		Lab			10				1		4			
18		Class x 8	24						24					
19		Fitness Centre	2			3	2		5					

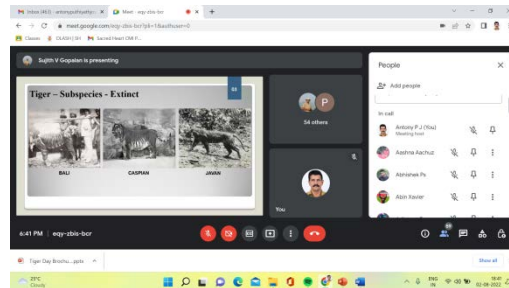
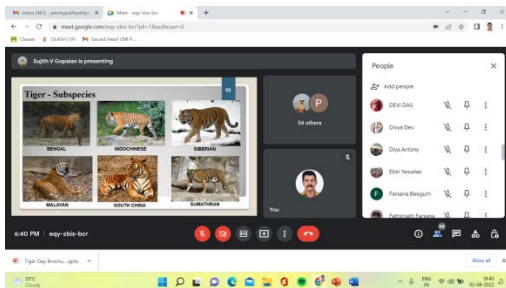
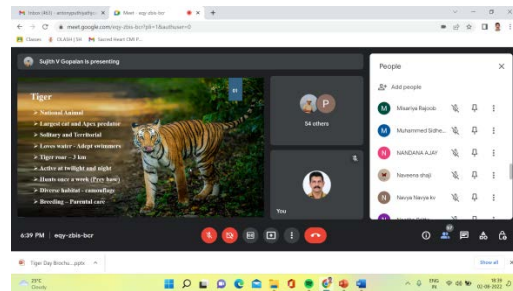
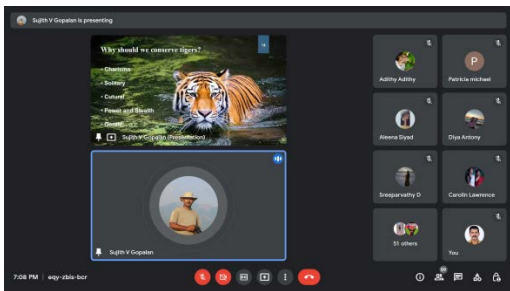
20	Physics Department	2						3						
21	Economics Department	3						4						
22	Riffle Club	5			35				4					1
23	Library	13				1			4					2
Total		133	5	15	56	3	6	147	10	1	4			14

Total number of Computers & Projectors with Allocation			
Sl. No.	Allocation	Computers	Projectors
1	College Office	15	1
2	Principal	1	
3	Vice-Principal	2	
4	Manager	1	
5	B.Voc Hardware Lab	13	
6	B.Voc Software Lab	30	
7	Department of Chemistry	2	
8	Department of Chemistry FIST Computational fac	14	
9	Department of B.Voc Software Development	1	
10	Department of B.Voc Tourism	2	
11	Department of Physics	1	1
12	Department of BBA Logistics	3	
13	Department of Physics-Electronics Lab	6	
14	Department of Economics	3	
15	Library	11	
16	NSS	1	
17	NCC	1	
18	CBCSS	1	
19	Examination	3	
20	Department of Zoology	1	
21	Department of Zoology-Instrumentation	2	
22	Botany Lab		1
23	Department of English	1	1
24	Language Lab	11	
25	Reprographic Centre	3	
26	Department of Commerce	3	
27	No. of Classrooms		19
TOTAL		132	23

REPORT OF ACTIVITIES OF NATURE CLUB 2022-2023

Observance of International Tiger Day(02.08.2022)

An Invited online talk was organized by the **Nature Club** and Department of Zoology in Google Meet platform on 2nd August 2022, in connection with the International Tiger Day celebration. Dr. Sujith V Gopalan, Consultant Conservation Biologist, WWF delivered the talk from 6.30 pm to 8.00 pm. The program was organised with the intention to create awareness about the ecological importance, status of tiger population in India and its conservation needs and measures. The talk was attended by 60 students and staff from the department in online platform.



Study tour (28.01.23 – 01.02.23)

Study tour was conducted for the final year BSc Zoology students to **Thrissur, Wayanad and Ooty** during 28.01.202 - 01.02.2023. The team of 32 students and 4 staff departed from the College on 28th morning at 8 am and reached **Thrissur Zoo** at 10.30 am. It was a nice experience for the students in the zoo that they could observe and understand about many of the birds, wild animals and reptiles that they have studied in their animal diversity courses. After the zoo visit the journey resumed the way to Wayanad, reached the destiny at 9 pm and halted in a hotel. On 29th morning students were visited **Edakkal cave, Meenmutty waterfalls and Banasurasagar Dam**. On 30th morning the tour team went to **Kuruvaidweep** and after the lunch moved to Ooty. In Ooty the team visited a Tea factory and experienced the processes involved in tea and chocolate preparations. After the lunch students went to the

Botanical Garden and OotyLake. The journey back to college started in the evening and reached Cherthala at 6 am on 1st February 2023.

